University of Oregon

STUDENT RECREATION CENTER
Conceptual Study

Yost Grube Hall Architecture
June 30, 2004
# Table of Contents

1.0 Executive Summary  
   1.1 Description of Need  
   1.2 Process  
   1.3 Project Goals  
   1.4 Project Patterns  
   1.5 Building Design Concept  
   1.6 Program Synopsis  
   1.7 Cost Analysis  
   1.8 Schedule and Phasing Considerations

2.0 Project Patterns  
   2.1 Vision Statement  
   2.2 Patterns and Design Principles  
   2.3 Patterns from LRCDP

3.0 Site Analysis  
   3.1 Existing Conditions  
   3.2 Site Design Concept

4.0 Building Design Concept  
   4.1 Architectural  
   4.2 Structural  
   4.3 HVAC  
   4.4 Plumbing  
   4.5 Fire Protection  
   4.6 Electrical  
   4.7 Lighting  
   4.8 Fire Alarm  
   4.9 Recommendations

5.0 Sustainability Considerations  
   5.1 Site  
   5.2 Water  
   5.3 Energy  
   5.4 Materials  
   5.5 Lighting Design and Daylighting

6.0 Program Requirements

7.0 Cost Analysis

8.0 Appendix  
   8.1 Workshop Schedule  
   8.2 Workshops 1-7 (with Meeting Minutes)  
   8.3 Photographs of Existing Building  
   8.4 Gerlinger Hall Renovation

### U of O Student Recreation Center Phase Three Study  
### Yost Grube Hall Architecture
Participants

SRC Phase Three Planning Team
Dennis Munroe
Drew Gilliland
Brent Harrison
Marisa Hastie
Nancy Heapes
Lani Loken
Peg Rees
Gregg Smith
Michael Strong
Jan de-Vries
Sandy Vaughn
De Bowden
Molly Kennedy
Cindy FitzGerald
Jeff Fryer

Student Advisory Committee
Den Toole
Casey Mulvihill
Jessica Garaci
Noah Glusman
David Jackson
Gina Dhom
Courtney Warner
Paitra Sharp
Hanna Jones
Jessica Conlee
Paitra Sharp
Ben Straw
Jonah Lee
Jesse Harding

University Planning Office
Dorene Steggell

Yost Grube Hall Architecture
Nels Hall
Rob Curry
Jamin AASum

Design Consultants
Steve Straus - mechanical
Nathan Charlton - structural
Jim Jerde - cost
Richard Scott - aquatics

U of O Student Recreation Center - Conceptual Study
Yost Grube Hall Architecture
Executive Summary

Description of Need
In 1994 a programming needs assessment created by the Sports Management Group recommended adding almost 14,000 SF of new aquatic space. Further analysis in 2001 revealed the need for 19,000 SF of aquatic space, 4,100 SF of locker space and 4,800 SF of racquetball court space. 2001 recommendations for renovations to existing spaces included multipurpose spaces, an auxiliary weight training room and upgrades to Leighton Pool.

The Student Recreation Center (SRC) expansion phases One and Two created a facility for the expressed use of recreational fitness and physical education. The Phase One and Two projects, including 79,000 SF of renovation and 49,000 SF of additional recreational space and six covered tennis courts, were completed in 2000. Planning for Phase One and Two projects anticipated Phase Three, the addition of a natatorium complex that was eliminated as scope reduction to Phase One as well as future expansion of the Student Indoor Tennis Center.

Process
The Student Recreation Center Phase Three Planning Team identified an inclusive process for this study that included representatives of the following groups:

• PE & Rec - Physical Education and Recreation
• U of O Planning Office
• EMU Club Sports
• Student Recreation Center Advisory Board

Two committees were established to participate in the development of the project. The SRC Phase Three Planning Team is made up of PE & Rec (Physical Education and Recreation), the U of O Planning Office and the SRC Advisory Board. The SRC Advisory Board is made up of U of O students. The consultant team met monthly with the SRC Phase Three Team and held two workshops with the SRC Advisory Board.

Project Goals
The SRC Phase Three Planning Team developed the following project and process goals:

1. Learn from the recent program work and incorporate relevant analysis in Phase Three planning.
2. Use the committee of experienced staff to evaluate to define optimum program and prioritize space needs:
   • Evaluate the needs of the various user groups; PE & Rec, Club Sports, etc.
   • Make aquatics the central priority of Phase Three.
• Prioritize aquatic program options like lap swimming, spa, recreation pool, water polo, wet classroom.
• Evaluate design options like the use of daylighting strategies, views in and out and outdoor areas.

3. Project future long-term needs and plan for them where possible.

4. Create a unified facility:
   • Upgrade the existing “back” portion of the facility and integrate with the Phase Three additions.
   • Evaluate a second public entry and service access.
   • Make wayfinding and accessibility better throughout the facility.
   • Evaluate a controlled access point to the tennis center.

5. Incorporate spaces for formal and informal gathering and social interaction.

6. Create a flexible, low-maintenance, economical facility using sustainable strategies.

7. Improve existing HVAC in some areas.

8. Have space for student workers.

9. Review needs for each activity (such as aquatics) for privacy and visibility, and provide choices and flexibility where possible.

10. Evaluate existing meeting and conference spaces to determine need for additional meeting space.

11. Wet/dry classroom needs both pool and corridor connection for flexible use.

12. Look at family changing rooms with showers (possibly used by staff/faculty).

Project Patterns
The design of the SRC Phases One and Two were guided by the Long Range Campus Development Plan and the Campus Design Patterns. The SRC Phase Three Team refined previous SRC Project Patterns and also created additional project patterns:

• More than just going to classes.
• Creating an environment that supports social interaction.
• Physical activity: a critical component of holistic health.
• Maximize income opportunities.
• Circulation, sight lines, and adjacency
• Fresh air.
• Rooms that fit and that are flexible.
• Activity storage.
• Maximize outdoor playing field use.
• Organizational meeting space.
• Leave the good part alone.
• Energy saved is good for the environment.
• Access to all.
• Comprehensive yet complementary activities.
• Easily supervised.
• Technology integration
• Easily maintained and durable.
• Maximize value.
• A good fit with the campus architecture.
• A unified facility.

The U of O Long Range Campus Development Plan (LRCDP) requires every project to consider the following patterns:
• Site repair.
• Main gateways.
• University street.
• South facing outdoors.
• Accessible green.
• Promenade.
• Quiet backs.
• Positive outdoor space.
• Four story limit.
- Connected buildings.
- Building complex.
- Family of entrances.
- Activity nodes.
- Small public squares.
- Operable windows.

**Building Design Concept**

The Building Design Concept presented in this report resulted from the development of three options for SRC Expansion leading to definition of the final expansion concept. The design process included review of program priorities and phasing options leading to definition of three phases of expansion for the existing SRC with separate project scopes for the Tennis facility expansion and Gerlinger renovation.

**Program Synopsis**

Using the 1997 Concept and Schematic Design Report as a starting point, the consultant team combined the program requirements developed by the SRC staff with information gathered in the meetings and workshops to establish firm program and space requirements. The program was divided into prioritized program elements which comprise five potential phases of construction totaling approximately 143,000 S.F. of new and renovated area.

**Cost Analysis**

The project team reviewed existing building conditions and generated a quantity based cost estimate divided into five phases of proposed work. The estimate is not included in this report because its detail could be misleading since it is based on many assumptions regarding existing building conditions and phased construction logistics necessary to accommodate the ongoing operation of the SRC.

The project direct construction costs were divided into five phases of work including contingencies which total 21,000,000 in 2004 dollars.

*NOTE: A re-evaluation for construction inflation in January 2008 revealed an alarming increase to 43,650,000. This updated evaluation was conducted by Rob Curry, YGH Project Leader (now with McKenzie Group Architecture) and Cathy Soutar, UO Planning.*

**Schedule and Phasing Considerations**

To accommodate incremental funding, the program priorities were divided into three potential construction phases for the existing SRC / Gerlinger Expansion with the Tennis Expansion and Gerlinger Pool conversion defined as potential phase four and five projects.

The total time required to design and construct the projects will depend on the final funding and number of actual phases of work. An estimated 24 months are required for new
construction, with phasing options adding 7 more months to finish renovations of existing buildings (from “Capital Construction Budget, Project Narrative”, U of O).

Program Areas Phasing Possibilities

The following sub-sections describe the design concept of the SRC Phase Three expansion. Each individual program area is presented below in order of its priority, and grouped into potential phases of construction – from Phase One to Phase Five. The priority based construction phasing system organizes all of the projects so that the expansion can proceed depending on the amount of financial resources available.

To organize and rank the program requirements, the U of O Phase Three Team, the SRC Advisory Board, and the design team conducted extensive, in-depth discussions on the allocation of program in the renovated parts of the existing building and in the proposed additions; a full list of the priorities is in the “Program Requirements” portion of this report. All of the program areas are depicted graphically in the Floor Plan Diagrams at the end of this section.

Phase One

As the Aquatic facilities were judged to be a top priority by all stakeholders, a new Natatorium is proposed. This phase accounts for approximately 53% of the total cost of the project and is a prerequisite to beginning the second phase. The natatorium will be adjacent to Leighton pool, thereby creating an aquatic environment of multiple pools. The Leighton Pool will be separated from the two new pools by glass walls with operable doors to create a flexible space.

As part of the natatorium, a Lap Pool is proposed in a dimension of 25 meters by 25 yards, with depths ranging from 3’-6” (for floor-based exercise classes) to 7’-0” (for safe starting block usage) to a 6 ft. minimum for water polo. In addition to the Lap Pool, a warmer Recreational Pool will be designed and built to be flexible for many uses, including to splash around, play water volleyball or play water basketball. Also a new Wet / Dry Classroom will be built with access from both the natatorium and the new gymnasium. Besides these new additions, the renovation and refurbishment of the existing 25 yard by six-lane Leighton Pool is planned as a top priority.

During the design investigation process, students indicated a high level of interest in a spa component, so Two Spas have been planned. One spa is located directly adjacent to the Recreational Pool, while the other is located next to a glass wall to capitalize on the views to the outdoors. Together, the spas and the Recreational Pool offer areas for socialization.

Current estimates are that there is demand for up to 600 Additional Lockers which have been incorporated in this design. The preferred architectural approach is to refurbish the existing Men’s and Women’s locker rooms, while enlarging the locker rooms by expanding
into the existing Leighton Pool deck and racquetball court area. Planning Team members expressed a preference to keep all of the locker room facilities consolidated, rather than creating a new set of locker rooms elsewhere in the facility, due to the ability to capture efficiencies and reduce operations and maintenance costs. At the same time, new Day Lockers will be dispersed throughout the building complex to better address needs at their source. An Equipment Check-out Area with storage will be combined with the PE & Rec Store and located near the entry of the locker rooms.

A new **Auxiliary Weight Training** area will be located on the main level between proposed the natatorium and existing gym. Areas for free weights, weight machines and cardiovascular training will be placed on the upper level, on both sides of the building ‘heart’, thus offering views into the natatorium and outdoor environments from an elevated position for the exercisers.

**A Bouldering Area** is proposed as an addition to the popular Rock Climbing Wall by converting the former juice bar, adjacent to the existing Rock Wall.

Finally, special program elements are necessary to support the safe and active use of the facility. First, the **Lifeguard Room** will be relocated to address the supervision needs of the aquatic facilities; the specialized design and location of the supervisory station will maximize control and supervision with minimal personnel. The new **Pool Mechanical Room** will be located at the Lower Level and is directly connected to the existing pool mechanical area to facilitate chemical deliveries.

**Phase Two**

Key program elements that are included in the Phase Three Study as a ‘Priority Two’ include a new gymnasium, Support Space for the Outdoor Fields, new Racquetball/Handball courts, renovations and an Event Staging area. This phase accounts for approximately 20% of the total cost of the project.

A new **Gymnasium or Multiple Activity Court (MAC)** facility is planned for the area south of the natatorium addition. The design of the gymnasium allows for three courts (each 50’ x 85’), plus a classroom and gym storage. MAC courts differ from traditional gymnasiums in that they have dasher boards and netting to accommodate indoor soccer and floor hockey while still accommodating traditional activities such as basketball and volleyball.

Five new **Racquetball/Handball Courts** are also planned south of the natatorium addition in this phase.

**Support Space for the Outdoor Fields** has been identified as a key need which the design addresses. Rest rooms and storage – all for the outdoor fields - will be incorporated in the building. More broadly, the relationship between indoor and outdoor activities will be
reinforced by visual connections between the two, plus the exit stairs will lead directly to the fields and will act as a physical connector.

A Reception Area and **South Entry Point** are proposed, as well as a general storage area for building operations.

An **Event Staging** Room with a service kitchen is proximate to the new gym. The university may, potentially, be able to lease this space for certain events to generate income to support operations. Its location will allow for easy service and delivery access.

**Phase Three**
To make the delivery of service to students more efficient, the design team realized the need to renovate the **PE & Rec Administration Offices**. This phase accounts for approximately 7% of the total cost of the project. The second floor offices are proposed to be reconfigured to achieve better administrative efficiency and to improve circulation. To integrate the offices on the upper level with the offices below, a new stair location was identified. The staircase will be located near the main entry to the building, allowing for convenient student access and movement of office staff. The reconfigured office layout will provide support facilities, waiting areas, conferences, work and lunch rooms that are currently lacking.

**Phase Four**
The two additional Tennis Courts are proposed on the east side of the existing Tennis Center. A viewing platform can be added later. This phase accounts for approximately 12% of the total cost of the project.

**Phase Five**
With the addition of new aquatic program space in the SRC, the old Gerlinger pool will be converted into a large, single Multi-Purpose Room. The existing locker rooms in Gerlinger will be remodeled to support the new multi-purpose room. This phase accounts for approximately 7% of the total cost of the project.
2.0 Project Patterns

2.1 Vision Statement
The Student Recreation Center demonstrates the University of Oregon’s commitment to physical activity as a necessary component of the healthy development of its students, faculty and staff. The center complements the university’s academic mission by providing comprehensive, high-quality programs and facilities available to all members of the campus community. The center’s design will facilitate positive social interaction among its users, fostering an increased sense of belonging and identity with the university.

2.2 Patterns and Design Principles
The use of patterns in a design process creates a common ground that allows designers and users to efficiently discuss issues related to the project and to create meaningful and remarkable architectural spaces. These patterns and principles represent an ongoing process and further refinements and additions to this list and are expected to evolve. Each pattern generated by the user group consists of a title, identification of an issue, and a policy statement. Phase three revisions shown in italics.

- **ONE: More than just going to classes**
  Issue: Today’s students recognize that attending a university involves more than just attending classes and that fully formed individuals should be challenged both intellectually and physically. *Research conducted in 2003 reveals that students who participate in recreation and fitness activities are more likely to succeed at their college work and be more satisfied with their overall college experience.*
  Policy Statement: The university needs to provide opportunities for students to address their intellectual and physical needs. Therefore, students should have access to recreational facilities that offer a comprehensive range of physical activities and provide balance to the traditional academic focus.

- **TWO: Creating an environment that supports social interaction**
  Issue: Leaving home and stepping up to the academic rigors of university life can be very stressful, especially for new students. The current facility lacks social gathering spaces and interaction nodes and has no identifiable “hearth” or building “heart”.
  Policy statement: Research shows that students who have developed peer support groups and feel a sense of belonging and identity with their college or university have higher grades and are more likely to graduate. Therefore, the recreation and fitness center’s open areas, activity spaces, and service areas should showcase activity and facilitate social interaction through locating activity spaces off circulation paths, establishing social nodes and levels of transparency through spaces based on activities. *Incorporate “levels” of transparency to accommodate varying needs for privacy and exposure for different activities. Also have control over privacy with screens / shades, etc. Create an identifiable building “hearth”.*

- **THREE: Physical activity: a critical component of holistic health**
Issue: The daily pressures of keeping up with classes, homework, papers and exams, in addition to working part-time jobs, often leave students few outlets for tension and stress.

Policy Statement: Exercise and recreation can reduce emotional stress and are critical components in the holistic health of students. Therefore, recreation and fitness facilities should provide safe, on-campus environment for students to pursue a broad range of recreational activities.

• FOUR: Maximize income opportunities

Issue: The cost of obtaining higher education in the state of Oregon has increased dramatically in recent years, limiting access to college for many. Every aspect of the student's higher-education experience must be delivered in the most cost-effective manner possible.

Policy Statement: The student recreation center depends on student fees for operational and equipment expenses. These expenses are subject to ASUO scrutiny and annual approval. As inflation drives up operation costs and as student-fee support for operations reach limits of tolerance, the recreation center must become increasingly self-supporting. Therefore, while the center's purpose is to provide recreation facilities for students, the design should maximize current and new opportunities for generating income by developing versatile spaces that are adaptable to a variety of uses, both in the short and long term, and to the specific needs to fee-paying groups. Flexibility of lighting / HVAC and AV in activity spaces can promote multi-use and "rental opportunities" for social or meeting functions. The center should have sufficient power, storage, doorway access, access to toilets and flexibility for separate off-hour use.

• FIVE: Circulation, sight lines, and adjacency

Issue: The current facilities have been altered several times. Although the maze-like series of corridors have been improved, they still frustrate the user and lack nodes for interaction and gathering.

Policy Statement: People find it easier to get around in large buildings if paths are logically arranged. Therefore, the recreation and fitness center should have easy circulation patterns with a system of corridors, stairways, ramps, and elevators that provide clear sightlines and common-sense adjacencies. The elimination of dead-end corridors and the establishment of a main loop circulation system are priorities.

• SIX: Fresh air

Issue: People are sensitive to odor, often associating cleanliness with smell, and are not likely to frequent a place that lacks fresh air or holds unpleasant odors.

Policy Statement: Recreational activities necessarily engage people in close proximity to each other in team or group-use activities. Clear, fresh air, free from high concentrations of carbon dioxide, chemical smells, and high levels of moisture, is necessary to encourage use of the facility and to maximize health benefits. Therefore, air
temperature and humidity levels should meet or exceed standards for the special needs of varying recreational activities such as weightlifting, jogging, and swimming. The systems must be flexible enough to adapt to desired adjustments in air quality and to future recreation trends.

- **SEVEN: Rooms that fit and that are flexible**
  
  **Issue:** The current recreation facility contains rooms of many sizes.
  
  **Policy Statement:** Spaces should be the right size for the activities they support and should be adaptable as the activities change. Therefore, the recreation and fitness center should contain spaces that are a good fit for the activities within them, that are adaptable to multiple activities, and that may be changed to meet future needs.

- **EIGHT: Activity storage**
  
  **Issue:** There is never enough storage. And over time, storage areas tend to be converted to other uses — in the university's case, for use as offices!
  
  **Policy Statement:** Storage needs vary with each activity housed in the building. Additionally, some recreation and fitness activities not housed within the building need storage areas as well. Therefore, the recreation and fitness center should contain a variety and an abundance of accessible, appropriately-sized storage spaces, including, at a minimum, centrally-located storage and one storage space for each activity space, with adequate shelving, locked areas where appropriate, and sufficient lighting.

- **NINE: Maximize outdoor playing field use**
  
  **Issue:** The university has limited year-round field space, and the new artificial turf fields lack support spaces.
  
  **Policy Statement:** The university is undersupplied with outdoor recreation fields and the problem is exacerbated by the weather, which makes some fields unusable from November to March. The new artificial turf fields ease this problem and provide an outdoor extension of the SRC. Therefore, the recreation and fitness center should maximize the use of outdoor playing fields by lighting those fields for late-afternoon and evening use, providing adequate support facilities (restrooms and storage) and reinforcing their connection to the SRC by orienting activity spaces to face the fields.

- **TEN: Organizational meeting space**
  
  **Issue:** Campus-wide tournaments are popular recreation events. The current facility does not contain a gathering space to support the organization of large events.
  
  **Policy Statement:** Campus-wide tournaments or competitions should be held inside the new recreation and fitness center. Therefore, make a comfortable, easily accessible gathering space that is conducive to social interaction and that can accommodate the organizational needs of such events.

- **ELEVEN: Leave the good part(s) alone**
Issue: Some spaces within the existing building work well as they are. Other elements of the building, including wood flooring materials, are worth keeping as well. Additionally, the Esslinger Hall portion of the building is considered a primary candidate for City of Eugene landmark status because its architect, Ellis Lawrence, played a prominent role in creating the campus and designed many of its finer buildings, including five that are on the National Registry of Historic Places (Art Museum, Knight Library, Gerlinger Hall, Susan Campbell Hall and Hendricks Hall).

Policy Statement: It makes economic sense to retain the parts of the building that work as they are and focus the renovation efforts on the parts that do not work. Therefore, when the renovation plans are made, those areas thought to work well as they are should be left alone.

• TWELVE: Energy saved is good for the environment

Issue: Recreation centers are traditionally high energy consumers. With energy costs rapidly escalating, using less energy makes economic sense. Energy creation and consumption also places stress on the environment.

Policy Statement: Sustainability should be considered when planning the building’s form and organization. Materials, as well as supporting systems, should be chosen to enable the efficient use of energy. Passive alternatives to mechanical systems such as exterior sunscreens and natural ventilation should be considered. Investments in building fabric, materials and mechanical and electrical systems should be viewed on a life-cycle basis, and follow campus sustainability guidelines. Therefore, use sustainable design practices.

• THIRTEEN: Access to all

Issue: Facilities designed without considering the needs of individuals who have mobility, hearing, or vision restrictions may exclude those potential users.

Policy Statement: All university facilities must accommodate the full range of potential users, including those with restrictions of mobility, hearing, or vision. Therefore, the new recreation and fitness center should be designed to accommodate all potential users. (All work must confirm to the standards of the ADA universal design standards for new construction and other applicable disability legislation as interpreted by the university).

• FOURTEEN: Comprehensive yet complementary activities

Issue: In the Erb Memorial Student Union, the newly renovated activity spaces include billiards, a video arcade, and social-gathering spaces.

Policy Statement: The university needs to provide the full range of recreation facilities without creating a wasteful duplication of those facilities. Therefore, the new recreation and fitness center should include activities that complement those already in place in the student union and create a complete range of activities available in the recreation center itself. It is desirable to have social gathering space associated with
all new facilities.

• FIFTEEN: Easily supervised
  Issue: Supervision required to ensure safe and effective use of facilities and equipment varies considerably from activity to activity.
  Policy Statement: Labor costs associated with activity supervision account for a major portion of operational expenses in recreational facilities and can result in reduced facility-access hours. Therefore, the design of the facility should consider the unique supervision needs of each activity, including specialized design of supervisory stations, as appropriate, maximizing spatial control with minimal personnel. Sight lines, electronic communication systems, and video cameras, for example, may help facilitate supervision.

• SIXTEEN: Technology integration
  Issue: The recreation center’s potential for meeting recreational needs is linked to a number of factors, such as maximizing operational efficiency, limiting personnel costs, ensuring safety in routine and emergency medical situations, planning for building and occupant security, providing customer-oriented user services, and maximizing the potential for income generation.
  Policy Statement: Readily available applications of technology can improve operational efficiency and facility flexibility and can increase user safety. Therefore, the design of the recreation and fitness center should consider possible applications of technology such as a public address system, music systems, communication for instruction and training, fiber-optic cabling, wireless network, fire and emergency systems, satellite linkage, etc. Where possible and desirable, centralized control systems, integrated systems, and wireless should be considered.

• SEVENTEEN: Easily maintained and durable
  Issue: An inviting and safe environment for recreational users depends on a clean, attractive, well-maintained facilities with equipment in proper working order.
  Policy Statement: Several characteristics contribute to making the maintenance of recreational facilities especially challenging: high student usage, the physical nature of recreational sports, and the variety of activities and types of equipment and facilities. Therefore, the recreation center should employ architectural designs that maximize maintenance efficiency by using proven materials and surfaces. Appropriate space should be dedicated to storage and repair of equipment.

• EIGHTEEN: Maximize value
  Issue: Funds for major construction are difficult to obtain. As a partially self-supporting entity the new recreation and fitness center must operate as efficiently as possible.
  Policy Statement: Expenditures for new construction must be spent in ways that balance cost against a variety of factors, including building longevity, ease of maintenance, and
appearance. Therefore, the value of the materials to be used in the recreation and fitness center must be determined by comparing the cost of the materials, their longevity, their maintainability, and their appearance.

- **NINETEEN: A good fit with the campus architecture**
  
  **Issue:** The University of Oregon’s Long Range Campus Development Plan states: “The continuity of the University’s campus environment over time also is materially affected by the character and architectural style of the buildings that are constructed. In order to achieve this continuity, the design of new buildings is to be compatible and harmonious with the design of adjacent buildings, though they need not to (and in some cases should not) mimic them.”

  **Policy Statement:** The exterior appearance of the recreation and fitness center should look like it belongs to the campus and, in particular, to this part of the campus. The materials used and the construction style selected should be considered carefully to create architectural continuity. Therefore, new construction of the recreation and fitness center should be designed to fit into its campus context.

- **TWENTY: A unified facility**
  
  **Issue:** The current facilities have been altered several times. Circulation and wayfinding is confusing and unclear, and there are few gathering spaces

  **Policy Statement:** There should be clear circulation and gathering hierarchies. Users should be able to find major program elements without the use of “maps”. There should not be drastic differences in the level of finishes and look between the old and new portions of the building. A high level of transparency through most activity and circulation spaces allows the activities to enliven adjacent spaces. Therefore, upgrade the existing “back” portion of the facility and integrate it with the 1999-2000 and Phase Three additions. (including HVAC and lighting). Evaluate a second public entry. Make wayfinding and circulation clear by creating major and minor circulation spines and gathering spaces and transparency through those spaces.

2.3 **Patterns from the Long Range Campus Development Plan (LRCDP)**

The LRCDP requires every project to consider the following patterns (from The Oregon Experiment, Christopher Alexander, Oxford UP, 1975, and A Pattern Language, Alexander, Oxford UP, 1977). At this point, the user group has not identified specific existing problems or issues to which these policy statements relate.

- **Site repair**
  
  Take advantage of opportunities to improve the overall quality of that part of the campus in which the project is situated. Build on the worst part of the site, preserve the best.

- **Main gateways**
Mark major entrances to the campus in a way that identifies the campus as a special precinct within the larger community.

- **University street**
  
  Major campus activities should front on public streets which are essentially pedestrian in nature; new buildings should either connect to or extend these streets.

- **South facing outdoors**
  
  Buildings should be designed to create south-facing outdoor spaces whenever possible.
• **Accessible green**  
  Maintain an open space in proximity to all buildings.

• **Promenade**  
  Maintain an open space in proximity to all buildings.

• **Quiet backs**  
  Connect buildings to a quiet space, removed and buffered from adjacent sources of noise.

• **Positive outdoor space**  
  Place and form buildings to define and partially enclose outdoor space.

• **Four story limit**  
  Generally avoid buildings which exceed four stories in height above grade.

• **Connected buildings**  
  Connect new buildings to existing structures wherever possible.

• **Building complex**  
  Generally, campus buildings should be built at a human scale; large space requirements should be met by grouping smaller buildings and connecting them.

• **Family of entrances**  
  Outside entrances to separate realms of a building or to separate buildings in a complex should be roughly similar and visible from each other.

• **Activity nodes**  
  Create small centers of activity, separated by quiet space.

• **Small public squares**  
  At activity nodes along important pathways, create small squares between 45 and 60 feet in width to accommodate small gatherings.

• **Operable windows**  
  In the absence of compelling reasons to the contrary, all exterior windows are to be operable.
3.0 Site Analysis

3.1 Existing Conditions
The Student Recreation Center (SRC) is located on the University Street north / south axis, in the main campus core as identified by the University Long Range Campus Development Plan (LRCDP). The facility occupies an important campus site located within a network of highly traveled pedestrian paths (see Fig. 3.1.1).

The SRC is surrounded by the numerous adjacent open spaces that are highly used by students and faculty. To the West is Gerlinger Field and Pioneer Cemetery, and to the North is Straub Quad and Outdoor Tennis Courts. East and South sides open up to the two Artificial Turf Fields and the very large Intramural Field.

The adjacent campus area is dominated by intercollegiate athletic facilities. McArthur Court is attached to the SRC and linked internally at the ground level. The EMU and PARS facilities, in Gerlinger and Gerlinger Annex, are located across the University Street to the West. Hayward Field with the West and East Grandstands, Hammer field and the practice track are just across the fields to the East.

3.2 Site Design Concept
The Student Recreation Center Phase Three Expansion will follow the master plan recommendation to increase university core density. However, technical adjustments need to be made to the LRCDP for allowing densities in this particular area of the campus. Until those adjustments are made, it is not possible to evaluate compliance of this project with those limits.

Special consideration is given to the fact that the complex has undergone numerous additions and renovations in its long history. The two original buildings, Esslinger Hall and the Leighton Pool Building, built in approximately 1935 make up the “original” complex. The last major expansion took place in 1998, with the addition of strength and fitness areas, a three court gym with a running track, and a rock-climbing wall with a juice bar at the end. The proposed Phase Three Addition
will complete the original programmatic requirements, and the new building masses will complete the SRC. The exterior appearance of SRC is designed to fit into its campus context. The materials, especially stucco and brick, will be selected to achieve continuity.

A new South Entry will be created as a second public entry to the SRC. The improved secure circulation will provide the Recreation Center with a safe, on-campus environment for students to pursue a broad range of recreational activities. A South public entry with strategically adjacent events kitchen and service access will promote the use of both future gymnasium and existing fields for campus-wide tournaments and other large recreation events.

Two existing service access areas are located on the North side of the building. The location of additional service entries were a subject of much discussion. The recommendations of this report are to provide main service access near the new South Entry with a close proximity to the proposed service elevator. The additional pool service access is considered to be necessary and can be located at the east side of the building. Two direct access areas to the proposed Bonus Room (that can be used as a general storage for SRC) and Student Tennis Courts / Artificial Turf Fields storage facilities are proposed from the south.

Despite the fact that the site is surrounded by open spaces and recreational fields, the university is still low on places for outdoor activities. On the East side, the building will form a protected (enclosed by the building mass) area for Volleyball courts. The space will create an activity filled link between SRC and its artificial turf fields. Two public exits, two Volleyball courts, and views up into the natatorium will revitalize this side of the facility. In the late-afternoon and evening the light coming from the new addition and strategically located street lights in that area will invite students to enjoy the outdoors even more.

The existing parking accommodations will be replaced by eleven faculty / staff parking lots at the South Entry with access from the University Street. There are no improvements anticipated to the adjacent roadways or parking areas.

The site work associated with the expansion and renovations are intended to enhance and separate pedestrian and vehicular circulation, as recommended by LRCDP. This portion of campus is planned to accommodate the expansion of the track program in the future. This project should therefore serve its expanded program as well as reinforce the campus development patterns found in this precinct of the campus.

Given the extent of the building expansion, nearly all areas of the site boundaries will be utilized. Site redevelopment will include new pedestrian circulation and outdoor gathering places, site furnishings, and planting modifications. Landscape materials used will be complementary to those used throughout campus and as called for in the Campus Guidelines. Paving materials will include concrete sidewalks and concrete
Fig. 3.2.1
Auto / Pedestrian Access, Sun and Wind Orientation Diagram

Fig. 3.2.2
Service and Fire Access Diagram
pavers in gathering places. Site furnishings such as benches, bike racks, and trash receptacles will match the campus standards.

Plant material will be selected based on the requirements of its planned location, will have low maintenance requirements, and will complement the established landscape patterns on campus. Some plant material, such as some of the small trees on site, may be reused depending upon the sequence and season of construction.
The program requirements call for the addition of a wide variety of spaces to the Student Recreation Center (SRC). Many of the program areas have height and size requirements that dictate their placement in the SRC and are located according to structural, mechanical, acoustical and site considerations. The remaining program areas are more flexible and have been placed according to required adjacencies. This section presents the design concept for the Phase Three Expansion. The graphic program analysis in this report illustrates the relative size and relationships of the program components.

4.1 Architectural

The Phase Three expansion will renovate existing spaces, add new program spaces and enhance the Student Recreation Center’s identity. As part of the design investigation process, three design options were created, refined and evaluated. At different stages, votes were taken to investigate the positive and negative aspects of all three options, as well as to rank overall preferences before Option One was ultimately selected.

All three options share the same program elements. The primary differences between the options revolve around the placement of the program areas in the SRC and the resulting relationships and adjacencies between these program areas. All three options are depicted graphically in the Appendix (See Workshop No.5 “Site Concepts – Mini Package”), and the primary differences between the options are outlined below:

- **Option One**: Locker room space was proposed to extended into the Leighton Pool deck and the existing racquetball court area, so that the locker room space remains as a whole. The new natatorium was to be constructed adjacent to Leighton Pool, and a future three-court gym was located south of the natatorium addition.

- **Option Two**: A new locker room area was proposed to be built separately from the existing locker room and was located between the new natatorium and the existing three-court gym. An open courtyard was planned for the middle of the building complex.

- **Option Three**: The future three-court gym was proposed to be directly adjacent to existing gym. A new natatorium addition be located south of the future gymnasium with separate new locker rooms located in between. An open courtyard was also proposed.

At Workshop No.4, Option One was selected by the Phase Three Team as the preferred design concept to develop and analyze further. The Team preferred the single aquatic environment with all of the pools arranged contiguously. In addition, the Team viewed having one set of locker rooms as a strong positive instead of creating two separate sets of locker rooms which would have required an expensive duplication of facilities, operations and maintenance. A more complete discussion of the strengths and weaknesses of each Option is presented in the Meeting Minutes of Workshop No.3 in the Appendix.

4.1.1 Overall Strategy

Some basic concepts fashioned the form of the Phase Three expansion. First, the introduction of **Natural Daylight** into the SRC was viewed as a key design concept, and the expansion features light monitors, glass walls, operable glass partitions and skylights in both the renovated areas and the new...
additions. The concept of ‘Transparency’ in the SRC was emphasized by the Phase III Team. The Transparency concept refers to establishing sight-lines and view corridors that extend through the SRC to knit together disparate activities and to provide visual activity and excitement across program areas. The diagrams (see Fig. 4.1.1 & 4.1.2) illustrate key areas where the design promotes transparency by replacing dead-ends and walls with glass and openness. Furthermore, a desire was expressed for a Dual-Use Circulation Space that functions both as a social space and as a recreation space. Finally, the Team stressed the need for a more complete and coherent Circulation System. Currently, the circulation system functions in a ‘U-Shape’; the Phase Three design concept reworks and clarifies the circulation system into a Circle shape. To this end, the new addition will serve as a connector, creating a circulation pattern that improves way-finding and unifies the entire SRC (see Fig. 4.1.3 & 4.1.4).

A North-South Circulation Spine is envisioned as a central organizing principle. Placed on the second level (the Running Track Level), the Spine will cross the natatorium in a glass-enclosed bridge. At this point, on the glass-enclosed bridge over the natatorium, the building’s heart, or Hearth, will be located. Wide stairs at each side of the natatorium will rise up to connect multiple program areas to the Hearth. Daylight from the north facing light monitors will bathe the Hearth in warm, natural light, and views into the pools below and the fitness areas will activate the space. Soft furniture groupings, video monitors, and magazine and newspaper racks will offer a place in the Hearth for students and other users to wait for friends to finish their workouts, to unwind or to chart workouts.

All along the entire length of the north-south circulation Spine, areas for social interaction and Gathering Nodes will be placed. These additional lounges and sitting areas will be created both in the renovated and new portions of the SRC (see Fig. 4.1.5 - 4.1.7).

4.2.2 Program Areas

The following sub-sections describe the Option One design concept of the SRC’s Phase Three expansion. Each individual program area is presented below in order of its priority, and grouped into potential phases of construction – from Phase One to Phase Five. The priority-based construction phasing system organizes all of the projects so that the expansion can proceed depending on the amount of financial resources available (see Fig. 4.1.5 - 4.1.7).

To organize and rank the program requirements, the U of O Phase Three Team, the Student Advisory Committee, and the design team conducted extensive, in-depth discussions on the allocation of program in the renovated parts of the existing building and in the proposed additions; a full list of the priorities is in the “Program Requirements” portion of this report. All of the program areas are depicted graphically in the Floor Plan Diagrams at the end of this section (see Fig. 4.1.8 - 4.1.10).

Phase One

As the Aquatic facilities were judged to be a top priority by all stakeholders, a new Natatorium is proposed. The natatorium will be adjacent to Leighton pool, thereby creating an aquatic
environment of multiple pools. The Leighton Pool will be separated from the two new pools by glass walls with operable doors to create a flexible space.

As part of the natatorium, a **Lap Pool** is proposed in a dimension of 25 meters by 25 yards, with depths ranging from 3'-6” (for floor-based exercise classes) to 7'-0” (for safe starting block usage) to a 6 ft. minimum for water polo. In addition to the Lap Pool, a warmer **Recreational Pool** will be designed and built to be flexible for many uses, including to splash around, play water volleyball or play water basketball. Also a new **Wet/Dry Classroom** will be built with access from both the natatorium and the new gymnasium. Besides these new additions, the renovation and refurbishment of the existing 25 yard by six-lane **Leighton Pool** is planned as a top priority.

During the design investigation process, students indicated a high level of interest in a spa component, so **Two Spas** have been planned. One spa is located directly adjacent to the Recreational Pool, while the other is located next to a glass wall to capitalize on the views to the outdoors. Together, the spas and the Recreational Pool offer areas for socialization.

Current estimates are that there is demand for up to **600 Additional Lockers** which have been incorporated in this design. The preferred architectural approach is to refurbish the existing Men’s and Women’s locker rooms, while enlarging the locker rooms by expanding into the existing Leighton Pool deck and racquetball court area (see fig. 4.1.11). Planning Team members expressed a preference to keep all of the locker room facilities consolidated, rather than creating a new set of locker rooms elsewhere in the facility, due to the ability to capture efficiencies and reduce operations and maintenance costs. At the same time, new **Day Lockers** will be dispersed throughout the building complex to better address needs at their source. Another related program area includes two **Family Changing Rooms** with showers and lockers to recognize the use of the aquatic facilities by families. These changing rooms will be located near the lifeguard room and aquatic personnel office to provide controlled access. An **Equipment Check-out Area** with storage will be combined with the **PARS Store** and located near the entry of the locker rooms.

A new **Weight Training Area** (labeled as the ‘**Auxiliary Weight Training Area**’ in the Program Requirements section) will be located on the main level between proposed the natatorium and existing gym. Areas for free weights, weight machines and cardiovascular training will be placed on the upper level, on both sides of the building ‘heart’, thus offering views into the natatorium and outdoor environments from an elevated position for the exercisers.

A **Bouldering Area** is proposed as an addition to the popular Climbing Gym by converting the underused juice bar, adjacent to the existing Climbing Gym.

Finally, special program elements are necessary to support the safe and active use of the facility. First, the **Lifeguard Room** will be relocated to address the supervision needs of the aquatic facilities; the specialized design and location of the supervisory station will maximize control and supervision with minimal personnel. The new **Pool Mechanical Room** will be located at the
Lower Level and is directly connected to the existing pool mechanical area to facilitate chemical deliveries.

**Phase Two**

Key program elements that are included in the Phase Three Study as a ‘Priority Two’ include a new gymnasium, Support Space for the Outdoor Fields, new Racquetball/Handball courts, Renovations and an Event Staging area.

*Support Space for the Outdoor Fields* has been identified as a key need which the design addresses. Rest rooms and storage – all for the outdoor fields - will be incorporated in the building. More broadly, the relationship between indoor and outdoor activities will be reinforced by visual connections between the two, plus the exit stairs will lead directly to the fields and will act as a physical connector.

A new *Gymnasium* is planned for the area south of the natatorium addition. The design of the gym allows for three courts (each 50’ x 85’), plus a classroom and gym storage. Five new Racquetball/Handball Courts, a separate program element that also is a ‘Priority Two’ project, are planned south of the natatorium addition as well.
A **Reception Area** and **South Entry Point** are proposed, as well as a general storage area for building operations.

An **Event Staging Room** with a service kitchen is proximate to the new gym. The university may, potentially, be able to lease this space for certain events to generate income to support operations. Its location will allow for easy service and delivery access.

**Phase Three**

To make the delivery of service to students more efficient, the design team realized the need to renovate the **PARS Administration Offices**. The second floor offices are proposed to be reconfigured to achieve better administrative efficiency and to improve circulation (see fig. 4.1.12). To integrate the offices on the upper level with the offices below, a new stair location was identified. The staircase will be located near the main entry to the building, allowing for convenient student access and movement of office staff. The reconfigured office layout will provide support facilities, waiting areas, conferences, work and lunch rooms that are currently lacking. The new offices will face Leighton pool and the new natatorium, offering multiple benefits: the offices will gain views and daylight, while facilitating supervision of all aquatic areas.

In addition to renovations within the Recreation Center, the team has discussed the need for improvement of other facilities under the same department.

**Phase Four**

The two additional **Tennis Courts** are proposed on the east side of the existing Tennis Center. A viewing platform can be added later.

**Phase Five**

The old Gerlinger pool will be converted into a large, single **Multi-Purpose Room**. The existing locker rooms in Gerlinger will be remodeled to support the new multi-purpose room.

**4.2 Structural**

Two original buildings, Esslinger Hall, circa 1935 and Leighton Pool Building, post 1935 make up the “original” complex. Several interior and roof top additions were completed in the late 1960’s. In 1998 the Leighton Pool area was renovated including a seismic upgrade (of yet to be determined extent). A new entry was added including exercise areas and offices. New basketball courts, an elevated running track and climbing wall were constructed.

Leighton Pool Building is constructed of reinforced concrete exterior walls. The single story building has a precast concrete roof. Included is a partial basement for pool equipment, boilers and electrical gear and a partial mezzanine level. Structured first floor areas above the basement are concrete pan joist and one-way slab. The facility includes locker rooms and front offices.
A seismic evaluation was performed based on the requirements of the 1993 Oregon Structural Specialty Code and FEMA 178. M.R. Richards’s seismic evaluation notes that a minimal seismic upgrade be performed to “tie” south wall removable concrete wall panels to concrete columns for shear transfer. The report goes on to note the minimum length of concrete shear wall required to resist prescribed lateral forces. This was pointed out to us during our 2/18/04 walk through.

Esslinger Hall is a two-story cast in place concrete/heavy timber structure. The building is built into a hillside to the west and interior spaces are stepped (see West East Section Rendering and Model NE view).

The North East portion of the building is constructed with a concrete roof the balance of the roof is wood heavy timber. Second floor structure is framed with heavy timber. Long span double angle steel trusses span the court spaces and support a heavy timber roof.

A seismic evaluation was performed based on the requirements of the 1996 Oregon Structural Specialty Code and FEMA 178. M.R. Richards’s seismic evaluation notes the building is “in good condition with no sign of major structural deterioration”. However, concrete walls are under reinforced per the 1996 OSSC (1994 UBC) requirements.

The report goes on to note that wood roof diaphragms are not capable of transferring lateral loads. It was suggested that much of the roof be resheathed with plywood to create a structural diaphragm including new in-plane and out-of-plane wall anchorage. Seismic anchorage of parapets was also suggested.

New Gym and Pool Spaces are conceived as being long span steel structures providing column free space. Roof framing would most likely consist of steel joists at 6-7 feet on center with metal roof deck or trusses at 30-40 feet on center with secondary steel joists.

New buildings would be seismically isolated from the existing buildings to avoid any additional seismic strengthening. As such, new open, long span structures could incorporate perimeter concrete walls similar to the existing to resist lateral loads or steel braced frames could be used creating more transparent exterior walls.

Construction of new foundations with existing below grade structure will be carefully coordinated. A geotechnical report has been performed by GRI dated 9/30/97. The report will need to be amended to conform to the requirements of the current code — we assume this to be the 2003 International Building Code.

### 4.3 HVAC

The existing HVAC systems consist primarily of roof mounted air handling units served by steam and chilled water from the central plan. Some of the air handling units are provided with heat and ventilation only including AHU-1 which serves the gym, and AHU-6 which serves the
natatorium. Most of the air handlers are in fair to good condition. They should be scheduled for a major cleaning and maintenance at five years of operation, which is coming up shortly. Reportedly, AHU-14, which serves a bank of classrooms, does not provide adequate cooling, either from lack of chilled water flow or inadequate capacity. Reportedly, AHU-15, which serves the second floor of Esslinger Hall, and a bank of offices and classrooms, does not provide adequate zone control and temperatures fluctuate between spaces.

The existing steam system is currently adequate and may be able to serve the building expansion but may be inadequate to also serve the new swimming pools. The chilled water service is currently marginally adequate and would not be adequate to serve the expansion. Consideration should be given to installing a water-cooled chilled water plant as part of the building expansion. This would not only reduce the load on central chilled water plant and piping distribution, but would accommodate the expansion and provide free heating for the swimming pool. Heat rejected from the chiller would provide free heating through a heat exchanger, for the pool. This may also negate the requirement to expand the existing steam service.

The expansion can be handled with a series of new air handling units connected to the existing chilled and heating hot water systems. Chilled water distribution would need to be upgraded to accommodate the additional load or piped separately to a new source. Ideally, the new air handling systems would be located within enclosed spaces, not exposed to the weather as the current units. This, however, results in higher construction costs. An alternative is to provide the air handling units with a maintenance vestibule as part of the custom air handling units. This allows for the access panels to be located within the enclosed maintenance chamber and allow mainte-
nance personnel to service and maintain equipment within a weather protected enclosure.

4.4 Plumbing
Plumbing systems appear to be adequate for their current use and have adequate capacity. All of the piping visually observed appear to use cast iron waste and vent lines and copper domestic water lines. As the domestic water piping is insulated, galvanized piping might exist, and probably does, within portions of the original Esslinger Hall.

The expansion will require the relocation of site utilities including the 10” storm main and 8” sanitary sewers at the north end of the facility. Domestic hot water is provided from steam to domestic hot water heat exchangers, which appear to be in good condition and may be adequate to serve the expansion, depending on the quantity of new showers that may be added.

4.5 Fire Protection
There is a 4” and 6” fire sprinkler service at the northwest corner. We anticipate these services will be adequate to serve the expansion. All portions of the building that we observed during our walk-through appeared to have fire protection systems installed and attic coverage was noted in areas where structure was utilized.

4.6 Electrical
The facility is served by two electrical services. One from campus feeder #1 – 4.16v from a junction cabinet located in the tunnel. This serves an 800 amp main distribution panel at the Leighton pool. The existing main distribution panel, located in Room 29 is a 1200 amp, 120/208 three phase four wire service. It serves multiple electrical panels throughout the facility. This service should be tested and consideration should be given to replacing this service and increasing it in size, as part of the expansion, to accommodate the additional load and to extend the life of the facility.

The quantity and location of power panels and convenience outlets appear appropriate.

4.7 Lighting
There are a variety of lighting schemes utilized throughout the facility. Much of the lighting was upgraded and replaced during the last remodel and expansion. New lighting technologies, however, have improved energy efficiency and can enhance the architecture. A lighting inventory and analysis should be conducted and fixtures should be scheduled for replacement, as part of future renovation and expansion, where energy efficiencies warrant this expense.

4.8 Fire Alarm
The building is served by a centrally monitored smoke detection and fire alarm system. All areas of the facility that were observed appear to have both smoke detection and annunciation including strobes and horns. An upgrade of the fire alarm system does not appear to be necessary, but care will need to be taken to interface the system serving the expansion with the
existing system.

4.9 Recommendations
The following are recommendations for further analysis:
- **Air Balancing** – Conduct an air balance on the main air handling systems (unless this information is already available) to determine the current airflows and excess capacity that may be available to serve the expansion. Utilizing all of the system’s current capacity, will reduce the cost of the expansion and renovation.
- **Pipe Samples** – Take piping samples at various locations throughout the facility and have them analyzed by a metallurgical engineer to determine the life expectancy of the original piping systems. This should not be necessary for the piping that was installed as part of the recent renovation/expansion.
- **Metering** – Add chilled water meters to the service to determine the consumption of chilled water.
- **Energy Model** – Develop a base energy model of the facility and calibrate it against the existing operating cost. Utilize this model to evaluate the effect of the expansion and renovation on operating costs.
- **Electrical Service Testing** – Employ the services of an electrical testing company to test the equipment and advise on its ability to be reused and extended to serve the expansion.
- **As-Built Documentation** – Develop an accurate set of mechanical and electrical as-built drawings. Start this process before the design begins.
5.0 **Sustainability Considerations**

The following is a list of sustainable building strategies for the Student Recreation Center Phase Three.

### 5.1 SITE
- Existing structures on site can be relocated or deconstructed for re-use and recycling by a rebuilding center.
- Existing younger trees on site could be transplanted to other campus locations.

### 5.2 WATER
- Rainwater retention and harvesting could reduce dependence on municipal water and stormwater systems, as well as provide gray water for field irrigation and flushing toilets.
- Automatic plumbing controls and low flow fixtures could reduce consumption of water.

### 5.3 ENERGY
- Daylight / energy analysis should result in efficiently sized systems that are fully integrated with natural daylighting and ventilation.
- Proper solar building orientation should make use of thermal mass to absorb heat and shift peak heating to off-peak hours. A heavyweight structure such as concrete should minimize temperature differential throughout the day and evening.
- Heating loads entering the building through walls, window and door systems should be reduced through careful selection of glass and wall assemblies.
- The building design should allow for the natural ventilation of stratified hot air. Night time flushing should reduce cooling costs in the summer months.
- In the summer the building utilizes chilled water for cooling and steam for pool heating. Providing a water-cooled chilled water plant as part of the building expansion, would not only reduce the load on the central chilled water plant and piping distribution but would accomodate the expansion and provide free heationg for the swimming pool.
- Rooftop solar hot water panels should be considered for supplementary pool heating.
- Use of pool blankets should be encouraged and deck level storage areas should be provided.

### 5.4 MATERIALS
- Materials should be researched to determine materials with the lowest amounts of off-gassing and embodied energy, and a high content of recycled material.
- FSC certified wood products should be specified when ever possible.
- Secondary finishes such as paint, carpet and stains should be minimized.
- Exterior materials should be low maintenance and high durability.
- Flyash should be included in the concrete mix specification.
- PVC and vinyl products should be avoided whenever possible.
- Carpet tiles should be specified to reduce long-term maintenance costs and waste.
- Natural, low maintenance materials such as Linoleum should be specified.
- The design should include a building waste management program both during construction and operation.
5.5 LIGHTING DESIGN AND DAYLIGHTING

- Rebate programs should be investigated to offset cost for lighting controls and sensors.
- Light fixtures, occupancy and daylight sensors should be designed to optimize energy efficiency and user comfort.
- T5/T8 HO direct/indirect light fixtures should be specified.
- Stepped compact fluorescent lighting in gyms should provide economical tuned lighting.
- Daylighting should be analyzed and designed for the maximum amount of indirect, diffuse light.
## 6.0 Program Requirements

<table>
<thead>
<tr>
<th>PHASE</th>
<th>PRIORITY</th>
<th>PROGRAM AREAS</th>
<th>RENOVATION NSF</th>
<th>NEW NSF</th>
<th>PLAN NSF</th>
</tr>
</thead>
<tbody>
<tr>
<td>ONE</td>
<td>1</td>
<td>AQUATIC FACILITIES</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Natatorium enclosure</td>
<td>19,000</td>
<td>19,000</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Lap pool (25 yd x 25 m, 10 lanes) 6,150 SF</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Recreational pool (40' x 35') 1,500 SF</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>(2) Spas, 200 SF EA</td>
<td>100</td>
<td>100</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Aquatics Office</td>
<td>200</td>
<td>200</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Lifeguard Room</td>
<td>800</td>
<td>800</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Pool storage</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Pool Filtration Equipment Room &amp; Pool Heater</td>
<td>2,600</td>
<td>2,600</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Chemical Feeder, Chemical Buffer</td>
<td>200</td>
<td>200</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>POOL RENOVATION</td>
<td>7,900</td>
<td></td>
<td>7,900</td>
</tr>
<tr>
<td></td>
<td></td>
<td>New tile surface</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>rim flow gutter system</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>two 1 meter boards</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>HVAC Upgrade</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>LOCKERS</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Women's General Lockers and Showers (+ 200 Lockers)</td>
<td>1,100</td>
<td>3,800</td>
<td>4,900</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Men's General Lockers and Showers (+300 Lockers)</td>
<td>2,500</td>
<td>2,400</td>
<td>4,900</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Family Changing Rooms</td>
<td>200</td>
<td>200</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Day Locker Areas</td>
<td>200</td>
<td>300</td>
<td>500</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>EQUIPMENT CHECKOUT</td>
<td>700</td>
<td></td>
<td>700</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Counter, and Storage</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>AUXILIARY WEIGHT TRAINING AREA</td>
<td>2,600</td>
<td></td>
<td>2,600</td>
</tr>
<tr>
<td></td>
<td>6</td>
<td>FITNESS AREAS</td>
<td></td>
<td>5,800</td>
<td>5,800</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Free Weights, Weight Machines, Cardiovascular Training Area</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>7</td>
<td>SOCIAL SPACE / HEARTH (first and second floors)</td>
<td>4,300</td>
<td>4,300</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Restrooms</td>
<td>800</td>
<td>800</td>
<td></td>
</tr>
<tr>
<td></td>
<td>8</td>
<td>BUILDING OPERATIONS</td>
<td></td>
<td>1,500</td>
<td>1,500</td>
</tr>
<tr>
<td></td>
<td></td>
<td>General Storage</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>9</td>
<td>STUDENT REC CENTER CLIMBING GYM</td>
<td></td>
<td>500</td>
<td>500</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Boulderin area</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TWO</td>
<td>10</td>
<td>ESSLINGER / HVAC &amp; RENOVATION</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Second floor of Converted Racquetball Courts</td>
<td>2,200</td>
<td></td>
<td>2,200</td>
</tr>
<tr>
<td></td>
<td>11</td>
<td>OUTDOOR FIELDS SUPPORT</td>
<td></td>
<td>800</td>
<td>800</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Rest Rooms, storage and office</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>12</td>
<td>GYMNASIUM</td>
<td></td>
<td>20,500</td>
<td>20,500</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Three Courts @ 50' x 85'</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Gym Storage</td>
<td>1,200</td>
<td></td>
<td>1,200</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Classroom</td>
<td>700</td>
<td></td>
<td>700</td>
</tr>
<tr>
<td></td>
<td>13</td>
<td>RACQUETBALL / HANDBALL COURTS (Five)</td>
<td>4,000</td>
<td></td>
<td>4,000</td>
</tr>
<tr>
<td></td>
<td>14</td>
<td>BUILDING OPERATIONS</td>
<td></td>
<td>200</td>
<td>200</td>
</tr>
<tr>
<td></td>
<td></td>
<td>New General Storage</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>15</td>
<td>SOUTH ENTRY POINT</td>
<td></td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Reception Area</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>16</td>
<td>EVENT STAGING</td>
<td></td>
<td>4,400</td>
<td>4400</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Kitchen and Bonus Room</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>THREE</td>
<td>17</td>
<td>ESSLINGER ADMINISTRATION AREAS</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Second Floor Office Renovation</td>
<td>4,000</td>
<td></td>
<td>2,200</td>
</tr>
<tr>
<td></td>
<td></td>
<td>EMS Relocation</td>
<td>300</td>
<td></td>
<td>300</td>
</tr>
<tr>
<td></td>
<td></td>
<td>New Stair</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PHASE</td>
<td>PRIORITY</td>
<td>PROGRAM AREAS</td>
<td>RENOVATION NSF</td>
<td>NEW NSF</td>
<td>PLAN NSF</td>
</tr>
<tr>
<td>-------</td>
<td>----------</td>
<td>--------------------------------</td>
<td>----------------</td>
<td>---------</td>
<td>----------</td>
</tr>
<tr>
<td>FOUR</td>
<td>18</td>
<td>STUDENT TENNIS CENTER</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>2 New Tennis Courts</td>
<td>12,000</td>
<td>12,000</td>
<td></td>
</tr>
<tr>
<td></td>
<td>19</td>
<td>NEW GENERAL STORAGE</td>
<td></td>
<td>7,900</td>
<td>7900</td>
</tr>
<tr>
<td>FIVE</td>
<td>20</td>
<td>GERLINGER ACTIVITY AREAS</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Pool Renovation into Multi Purpose Room(s)</td>
<td>4,200</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Locker Renovation</td>
<td>5,800</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Total Net New Construction: 96,300
Circulation, Mechanical, Walls, etc. (75% efficient): 14,700

Total Gross New Construction Area: 111,000
Total Gross Renovation Construction Area: 31,700
Total Gross Renovation And New Construction Areas: 142,700

*Total New Construction Footprint - 73,000 SF
7.0 Cost Analysis

This concept estimate of probable cost includes soft cost and program scope assumptions based on current market conditions. The cost includes estimating contingencies and assumes a single phase of construction with a design-bid building delivery process, general conditions, overhead, profit and site work costs.

Probable Cost Model - Summary
PHASE (from Program Requirements)
ONE 10,500,000
TWO 4,000,000
THREE 1,500,000
FOUR 2,500,000
FIVE 1,500,000
Contingency 1,000,000
Total (in 2004) 21,000,000

Probable Cost at 4% Inflation Rate per Year
2005 21,840,000
2006 22,680,000
2007 23,520,000
2008 24,360,000
2009 25,200,000

NOTE: A re-evaluation for construction inflation in January 2008 revealed an alarming increase to 43,650,000. This updated evaluation was conducted by Rob Curry, YGH Project Leader (now with McKenzie Group Architecture) and Cathy Soutar, UO Planning.