

AD HOC COMMITTEE ON LIBRARIES FACILITIES MASTER PLAN

APPENDIX D

Ad Hoc Committee for Libraries Facilities Master Plan

February 11, 2000

REPORT ON LIBRARIES SPACE AND FACILITIES

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The University of Washington libraries are housed in approximately 680,000 assignable square feet of space in nineteen libraries, making up a total of almost 14% of the total space on campus. The unprecedented rate of change in “cutting edge” technological advances combined with the linear growth of libraries space needs will challenge us to provide space and facilities to support these evolving functions in the context of constrained campus space availability.

I. INTRODUCTION

This report provides an overview of the University of Washington library spaces and facilities including a general history for approximately the past decade, current spaces and uses, and growth information where available. There are two distinct categories of spaces included in this report, library space and department library space. Library space includes space assigned to the UW Libraries central system for major and branch libraries (referred to in this report as “Libraries Space”) and the Law Library. Table 1 shows the current library space for all of the University of Washington Libraries except Bothell and Tacoma. Space assigned to various departments that use small amounts of space for “library-type” functions, such as study rooms or collections, and which is used for departmental use only, is referred to as “department library space”.

II. SPACE HISTORY

The major UW Libraries buildings on the Seattle campus are the Allen Library, the Suzzallo Library and the Odegaard Undergraduate Library (OUGL). (Refer to Table 1). There are also major libraries (Health Sciences, East Asia and the Law Library) which are located in the Health Sciences Center T-Wing, Gowen Hall and Condon Hall. The Law Library, currently located in Condon Hall, will be relocated, with the School of Law, into the newly constructed Law School building when it is completed. There are two off-

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Table 1
Libraries Space by Type

Library	Building(s)	User Assistance Space	Study Space	Collections Space	Office and Technical Processing Space	Subtotal Library Space
Allen and Natural Sciences	Allen	9,172	39,028	85,737	12,144	146,081
Suzzallo Library	Suzzallo	18,598	34,176	96,625	54,363	203,762
Odegaard Undergraduate Library	Odegaard	29,126	42,811	11,147	8,267	91,351
Architecture/Urban Planning Library	Gould Hall	790	1,324	2,642	455	5,211
Art Library	Art Building	512	823	1,874	443	3,652
Chemistry Library	Chem Lib Bldg	1,199	824	3,049	850	5,922
Drama Library	Hutchinson	0	227	1,696	526	2,449
East Asia Library	Gowen, Smith	972	2,667	16,645	2,852	23,136
Engineering Library	Engr Lib Bldg	1,966	8,556	11,738	1,878	24,138
Fisheries-Oceanography Library	Ocean Teach	1,529	2,862	3,163	484	8,038
Foster Business Library/Balmer Hall	Ex Ed Ctr, Balmer	0	12,115	3,490	532	16,137
Forest Resources Library	Bloedel Hall	972	1,684	2,850	945	6,451
Health Sciences Library	HSC T, A-C	8,594	11,590	24,026	11,564	55,774
Mathematics Research Library	Padelford Hall	550	683	2,367	226	3,826
Music Library and Listening Center	Music Bldg	842	1,416	2,576	104	4,938
Physics - Astronomy Library	Physics/Astron	614	1,182	1,688	594	4,078
Social Work Library	Social Work	1,111	4,679	2,108	473	8,371
Kane Hall Basement Storage	Kane Hall	0	0	12,294	1,691	13,985
Subtotal Seattle Campus		76,547	166,647	285,715	98,390	627,299
Not on Seattle Campus						
K.K. Sherwood Library	Harborview Hall	617	0	1,197	0	1,814
Friday Harbor Library	Friday Harbor	0	0	1,840	115	1,955
Oaktree Building	Oak Tree	0	0	8,380	0	8,380
Total UW Libraries Space		77,164	166,647	297,132	98,505	639,448
Law Library	Condon Hall	1,848	7,603	31,048	429	40,928
Total Library Space		79,012	174,250	328,180	98,934	680,376

campus branch libraries, the K.K. Sherwood Library at the Harborview Medical Center and the Friday Harbor Library. (The Bothell and Tacoma campuses are not included in this report.)

The Suzzallo Library was built in 1923 and includes additions constructed in 1935, 1949, and 1963. The southwest wing was added in 1935, and an addition on the northeast was constructed in 1949. The last addition, completed in 1963, enclosed the 1949 addition. The Suzzallo Library now a total of 218,400 asf was funded for major renovation in the 1999-2001 biennium and is scheduled to begin construction in 2000.

The Allen Library, comprising 150,400 asf, was completed in 1990 with both underground and outside connections to the Suzzallo Library. The two buildings function as a single library.

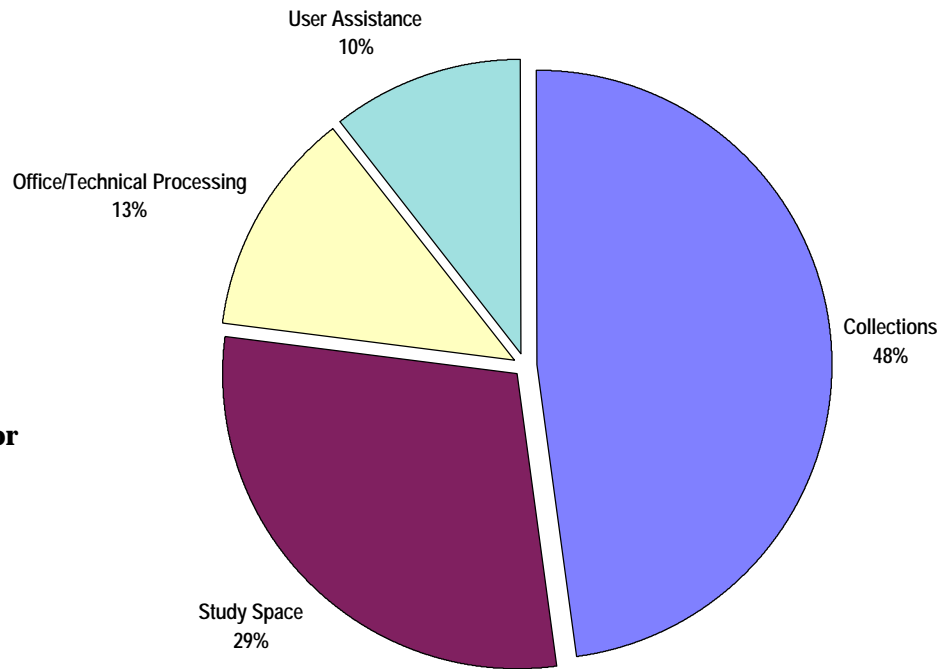
In 1994 three branch libraries were closed and consolidated into the Suzzallo and Allen Libraries. The Geography (1,870 asf), Philosophy (2,756 asf) and Political Science (4,089 asf) branch libraries were closed in response to a budget reduction. In 1995, two-thirds of the space vacated by the Libraries was reassigned to each of the three departments in response to departmental proposals and the remaining space was assigned to the Dean of Arts and Sciences to solve other important space problems. The proposals were developed with the contribution of the Libraries and added important dimensions to both the teaching and research capabilities of each department. The centerpiece of the Geography proposal was a collaboratory to support courses in Geographic Information Systems, including an interactive computer workstation classroom for 30 students. The Political Science proposal added a student information and resource center, including a writing center and access to computers, and solved other existing space problems. The Philosophy department proposal was to provide a center for enhanced student interaction and support services, including a graduate student computer area, writing center and seminar room. These projects were funded and completed.

The Odegaard Undergraduate Library was constructed in 1972 and is approximately 114,400 asf. When OUGL was built, it supported the needs of students very well by providing a discrete collection of print materials and study spaces designed primarily for independent, individual work. The OUGL instruction programs, which initially focused on how to use library materials in a narrow sense, have evolved into integrated programs focusing on information literacy in its broadest sense.

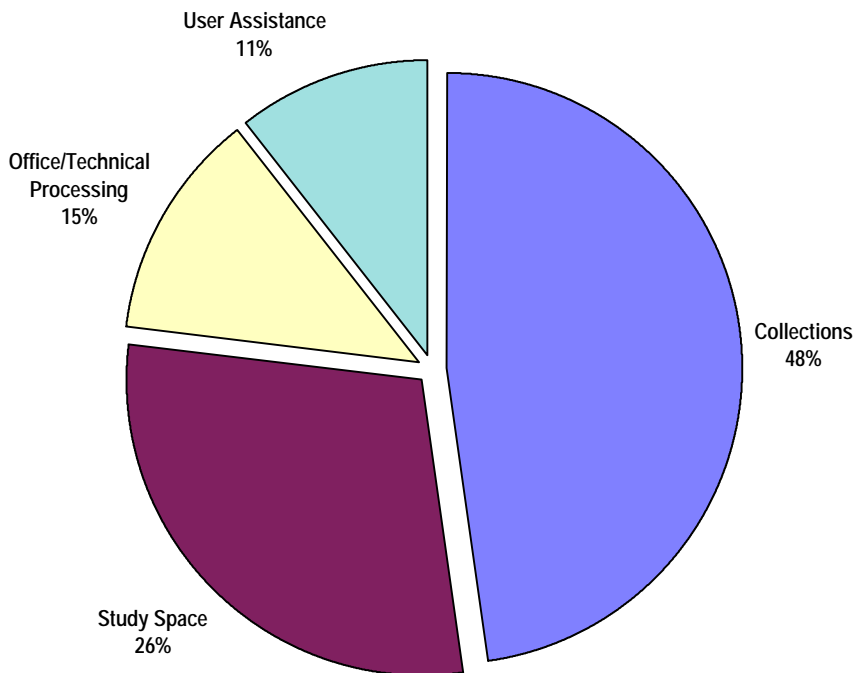
The UWired program, a collaborative initiative involving the University Libraries, Educational Partnerships, Computing and Communications and Undergraduate Education has planned and developed general access computer "commons" within the OUGL and will soon open additional facilities in Mary Gates Hall. This program is currently being expanded through the construction of UWired 2 Computer Commons, which will add 116 new general access computer stations in OUGL, bringing the total to 356 stations. (Refer to section IV.B.2). UWired has allowed the Libraries to fundamentally change the way that information support is provided to undergraduate students.

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Figure 1**

**Library Space 1993
(includes Law Library; does not
include department library space or
Bothell and Tacoma campuses)**



**Library Space 1999
(includes Law Library; does not
include department library space or
Bothell and Tacoma campuses)**



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Table 2
History of UW Libraries and Law Library Space
ASF by Type

	1993	1994	1995	1996	1997	1998	1999
Collections	316,199	316,130	316,096	318,532	318,285	317,960	319,800
Central Storage	7,763	7,763	7,763	8,380	8,380	8,380	8,380
Collections Subtotal	323,962	323,893	323,859	326,912	326,665	326,340	328,180
Study Rooms	172,283	169,857	163,160	156,444	147,247	153,372	153,372
Study Service	26,712	26,728	26,436	27,403	25,962	20,878	20,878
Study Space Subtotal	198,995	196,585	189,596	183,847	173,209	174,250	174,250
Staff Office	48,541	47,953	48,444	50,882	50,382	51,645	50,981
Sec/CI Office	2,428	2,207	1,901	1,901	1,901	1,901	1,901
Std A Office	750	750	750	637	637	637	637
Office Service	6,651	6,651	7,715	7,831	8,267	10,897	10,897
Dept Comp Sup	1,522	1,522	405	405	405	405	405
Dept Lounge	832	4,951	4,915	4,954	4,960	4,960	4,960
Conference	4,709	4,472	3,606	3,184	3,184	3,300	3,300
Tech Processing	19,651	25,121	26,638	26,252	26,646	25,853	25,853
Office/Technical Processing Subtotal	85,084	93,627	94,374	96,046	96,382	99,598	98,934
User Assistance	57,716	56,472	58,571	53,112	55,452	51,338	51,343
Meeting	5,662	4,914	8,065	8,065	10,353	8,572	8,572
Comp Labs	3,711	3,711	4,443	4,443	7,272	4,906	3,204
Open Labs		796	796	6,547	6,547	13,672	13,672
Miscellaneous	4,152			1,859		2,221	2,221
User Assistance Subtotal	71,241	65,893	71,875	74,026	79,624	80,709	79,012
TOTALS	679,282	679,998	679,704	680,831	675,880	680,897	680,376
% change		0.01%	-0.04%	0.01%	-0.73%	0.74%	0.35%

III. CURRENT SPACES AND USES

Slightly less than one-half of total library space is devoted to collections (48%), about one-fourth is used for study space (26%) and the remaining one fourth is used for office/technical processing (15%) and user assistance (11%) space. Comparison profiles of Libraries space distribution by type for 1993 and 1999 are illustrated in Figure 1. In addition to collections growth and growth in the numbers of users, the impacts of computer technology and learning approaches are having significant implications for the type and growth of library spaces. These “cutting-edge” technological advances create the need to consider library spaces differently in order to ensure effective facilities planning.

The categories described below comprise the types of spaces that are currently utilized for library functions, along with the recent trend of growth or decline in specific types of spaces. Specific definitions of these space categories are provided in accordance with the Facilities Evaluation and Planning Guide (FEPG), which is used by the Capital and Space Planning Office (CASPO) to define and manage campus space. These definitions were last revised in 1994 by representatives from each of Washington State’s public four year colleges and universities, the State Board of Technical and Community Colleges, the Governor’s Office of Financial Management and the Higher Education Coordinating Board.

A. Collections - Collections include catalogued volumes, manuscripts and archives, microforms, government documents, technical reports, maps and architectural drawings, photos and slides, audio materials, films, videos and other library material. UW Libraries is one of the largest academic libraries in the nation, regularly ranked in the top fifteen in size, collections, and service. Faculty in all disciplines rate collection quality as their highest priority and also report that they highly value web-based access to electronic information. The University’s libraries’ collections are built and maintained to support campus research and instructional programs.

The history of growth in collections is shown in Table 2. Although collections have grown steadily each year, Libraries collection space has not changed significantly since 1993 and is approximately 297,000 asf. The current total libraries collection space, including the Law Library, is 328,180 asf, of which 316,763 asf is located in nineteen on-campus buildings. Most of this collections space is in Suzzallo and Allen (182,000 asf). Of the remaining space, the largest amounts of space devoted to collections are located in the Law (31,000 asf), Health Sciences (24,000 asf) and East Asia (17,000 asf) Libraries. Collections are also stored in Kane Hall (12,000 asf) and at a remote site in the Oak Tree building (8,400 asf).

B. Office/Technical Processing - Office space includes staff offices, conference rooms and other administrative spaces. Technical processing space includes processing rooms for specific library functions. These rooms usually contain specialized equipment used by staff to prepare materials as requested by users. Offices/Technical Processing space assigned to the Libraries increased by 14,000 asf (2%) since 1993 (8,000 asf for

staff office and support functions and 6,000 asf for technical processing space). Library staffing has varied slightly on a yearly basis but generally remained relatively constant for the last decade. Since 1980, the number of librarians has increased slightly and the number of support staff has decreased.

Current total libraries Office/Technical Processing space is 98,930 asf, of which 26% is used for technical processing and 74% is used for staff offices and other related support spaces. Total current UW Libraries staffing (excluding the Law Library) for 1999 is 459 FTE including 125 FTE for librarians, 206 FTE for support staff and 128 FTE for student hourly assistants.

C. Study Space - Study space includes areas in a campus library used by individuals to study books, audio-visual, and other materials; this space includes reading rooms, carrels and study booths. Study space that is not located in a library and assigned to a department is non-library study space, which includes rooms or areas assigned to departments and often used to serve multiple purposes. Study space assigned to the UW Libraries has decreased by 21,000 asf (3%) since 1993. The number of users in all categories (students, faculty, staff, and public users) has of course increased during that time.

Current total library study space is 174,250 asf, including the Law Library. Most study space is located in the Suzzallo and Allen Libraries (73,000 asf), Odegaard Undergraduate Library (43,000 asf) and Health Sciences Library (12,000 asf).

D. User Assistance and Collaboration Space - User Assistance space includes areas in which users gain assistance and collaborate in accessing library collections or resources, such as computer laboratories or meeting rooms. This space includes the areas of a library where users are assisted in their access to collections, computers and other resources. UW Libraries user assistance space increased by 8,000 asf (2%) from 1993 to 1999 primarily due to the increase of computer lab space in the libraries. The number of users in all categories (faculty, staff, and students, public) has increased. Current UW Libraries user assistance and collaboration space is approximately 77,000 asf of which approximately 64% (49,000 asf) is general user assistance processing space, 14% (11,000 asf) is meeting rooms and 22% (17,000 asf) is computer laboratory space.

E. Department Library Space - The total current department space classified under library-type functions (assigned to room codes for collections, study, processing or user assistance space) is 43,434 asf distributed in thirty-eight buildings. Of these buildings, eight also have libraries located in them, seven are student housing and the remaining twenty-three have small amounts of space with no other central library space located in them. Almost all of this is study space, coded as non-library study rooms.

IV. GROWTH AND TRENDS

A. Growth Context – Libraries growth is related not only to the expanding enrollments of the University of Washington, but also to the explosion in information technologies and publishing, which are creating new needs for space and facilities. The current context for space and facilities planning for the Libraries is characterized not just by change, but by an unprecedented rate of change. Emerging needs in space planning will require the review of traditional ways of defining and managing library spaces.

Growth in Seattle campus student enrollment is projected to be approximately 40,000 over the next ten years with associated needs for libraries services. Growth of the Bothell and Tacoma campuses will also provide new opportunities for information sharing. The University will have opportunities to determine how the Seattle campus libraries will relate to the branch campus libraries in Bothell and Tacoma, not only in terms of shared materials, but also in terms of facilities.

As discussed above, ways of utilizing library space are evolving and include activities such as training in information systems, communication facilities, networked information resources, collection development facilities (equipment and the expertise for digitizing information), physical collections and workspaces for faculty, students, staff and other users.

B. Projections – The expansion of the Libraries facilities that would be necessary per year to accommodate only the collections growth of its cataloged volumes, assuming open access shelving, is estimated to be between 5,000 and 7,000 square feet. Whether the average growth over the next ten years will be comparable to the last ten years is unknown. However, while predicting future growth has a high level of uncertainty, most academic librarians still see significant collection growth in print collections, at least for the next ten years. Different subject areas or disciplines will embrace electronic publishing more heavily than others will, but most information searches will still be supported by print collections.

The dramatic expansion in the number of electronic resources offered by the Libraries and the space required to support these virtual services is not currently well defined. While the “e-collections” require relatively little square footage except for space for servers and central systems support, the general access computers required to enable user access to the online resources as well as the growing need for collaborative learning and study spaces, previously discussed, will require considerable space.

The development of (and growth in demand for) collaborative learning spaces has resulted in a functional melding of two traditional major categories of space; user assistance and study space. These spaces will require further discussion between the Libraries, the Capital and Space Planning Office, and the UWired program to develop an appropriate definition for space management purposes.

1) Collections: The collections of the University Libraries continue to grow, albeit at differing rates for various segments of the collections. Over the last ten years, the largest components of the collections—cataloged volumes, microform units, manuscripts and University archives—have grown at an average of over 2% per year. Net cataloged volumes added per year to the UW collections averaged 96,853 during the 1990's. On average, 93,812 volumes were added during each year of the first half of the decade and an average of 99,894 volumes per year have been added in the last four years. Some of the collections, notably printed government publications and technical reports, are stable or increasing at a slower rate because much of the material is now issued in non-print formats.

In 1997 the Libraries projected a shortfall of collections space of approximately 15,000 square feet by 2004. Additional capacity was projected to be gained through conversion to compact movable shelving, and in fact, capacity in existing collections space has been increased through the use of compact shelving in several areas. While it is possible that the growth rate in space devoted to collections of physical information objects may decrease in the future, the rate of growth in space devoted to people, information processing and digital objects will likely increase. Information in all formats continues to grow and delivery becomes more complex as the UW strives to meet the challenge of desktop delivery. Retroactive conversion of collections to electronic formats is costly (estimated to average \$40-\$50 per item excluding the costs of repurchasing copyrights and refreshing the electronic copy every ten years as may be needed to maintain compatibility with technology).

2) UWired: UWired is a collaboration of the University Libraries, Undergraduate Education, Computing & Communications, and the Office of Educational Partnerships. Since its inception in 1994, UWired's comprehensive approach aims to improve access to information technology and resources, improve fluency with information technology and resources, and promote and support innovation in technologically-enabled teaching and learning. These goals are addressed by creating and operating facilities and infrastructure for students and faculty, developing and implementing new curricula, and working with faculty and diffuse users to foster instructional innovations.

The Odegaard Undergraduate Library has become the UWired library. In addition to the UWired Commons, OUGL houses two hands-on teaching collaboratories and the faculty UWired Center for Teaching, Learning, and Technology (CTLT). Locating the UWired services and facilities in the library is particularly advantageous for undergraduates and faculty. The UWired Commons is more than just a computer lab. Students can consult not only with computing professionals, but also with librarians (the campus information experts) who can guide them in research. Nearly 6,000 undergraduates stream into OUGL daily to access online information, participate in discussions, consult electronic reserves, submit homework electronically, collaborate with fellow students, and study, read, learn, and reflect. The UWired CTLT logged over 1,400 faculty visits in 1999 and transformed into a research, development, and demonstration space, with the Catalyst web site as its centerpiece.

The UWired Program has grown to occupy approximately 16,000 asf within Libraries space. The development of the UWired program is generally outlined below:

- 1994 - First UWired Collaboratory*
(28-seat plug and play collaborative electronic classroom)
- 1995 - Second UWired Collaboratory*
(28-seat equipped collaborative electronic classroom)
- 1995 - Third UWired Collaboratory*
(60-seat, drop-in computing space - became part of UWired Commons in 1997)
- 1996 - UWired Center for Teaching, Learning, and Technology*
(For faculty, librarians, and teaching assistants)
- 1997 - UWired Commons I*
(240-seat computer lab)
- 2000 - UWired Commons II*
(116-seat computer lab and enlargement of copy center for 24-hour digital copying service)
- 1997 - OUGL Collaboratories*
(Refurbishment and enhancement of two collaborative electronic classrooms.)
- 1997 - UWired Center for Teaching, Learning, and Technology*
(Expanded facility to provide more consultation and training space for faculty.)
- 1997 - Demonstration/meeting room on third floor*
(Collaborative and group projects and planning.)

UWired general access computer stations are summarized as follows:

TABLE 3

Current UWired General Access Computer Stations

Computing Resources Center Lab located in Suzzallo Library
(will be moved when Suzzallo Library is renovated):

PCs	82 plus 17 training machines*
Macs	38 plus 17 training machines*
X-terminal	<u>4</u>
Total	124

**34 training machines not included in the total*

OUGL UWired Commons I	240 general access computer stations
OUGL UWired Commons II	<u>116</u> general access computer stations
Total	356

Odegaard Undergraduate Library

OUGL Collab1	28 student	2 instructor*
OUGL Collab2	24 student	1 instructor*

**collabs are not counted as general-access seats*

Mary Gates Hall

The Mary Gates Hall Computer Lab will hold 180 seats, putting the grand total at 536 general access computer stations.

**The three MGH collabs will comprise 124 seats, however UWired does not include the collab stations in the general-access seat count.*

Planning Considerations: It will be important to assess the implications of libraries growth projections in the context of constrained campus space availability and to consider different scenarios of facilities, operations, services, and resources. In acknowledging that expansion space on campus is very constrained, and that the Libraries need additional capacity to accommodate projected growth, planning considerations might include options such as remote storage, additional compact shelving, reduction in growth rates, or collaboration in space utilization on the campus.

The role of electronic resources in future libraries facilities planning is a key consideration. While there has been extensive discussion regarding the impact of electronic resources on Libraries space needs, the real effect of electronic alternatives remains a matter of debate.

As collections have continued to grow and collections space has declined, additional capacity has been achieved through investment in compact shelving. The use of compact shelving can increase storage capacity by 100%. An illustration of the capacity gain from the use of compact shelving is shown below.

Capacity Gain from Use of Compact Shelving

	Without Compact <u>Shelving</u>	With Compact <u>Shelving</u> **	<u>Gain</u>
Suzzallo Sub-basement	8,400	15,540	7,140
Suzzallo 1925 ground floor	11,000	20,350	9,350
Allen B2 (vol. storage)	2,000	4,000	2,000
Total Gain			<u>18,490</u>
Available Growth Capacity, 2004			<u>3,564</u>

***These figures are square footage equivalents created by installing compact mobile shelving. While the capacity increase from the use of compact shelving is normally estimated at 100%, these estimates were based on an increase of 85% due to the low ceilings in the Suzzallo sub-basement and the ground floor of Suzzallo.*

The continued use of compact shelving will however be limited by the physical facilities constraints of libraries spaces, such as floor loading capacity, ceiling heights, access issues, and other considerations. A facilities survey would be a useful tool in defining the potential for further use of compact shelving as well as other facilities opportunities and constraints.

V. UW LIBRARIES FACILITIES MASTER PLAN

The current Libraries Facilities Master Plan presents a vision of a library system which occupies fewer, more consolidated locations, and includes as a cornerstone, electronic distribution of many services to the researcher's desktop in the faculty office, the residence hall, and the home. The Libraries Facilities Master Plan relies to a considerable extent on the availability of a remote shelving facility. This facility, in conjunction with increased use of compact shelving in the Suzzallo and Allen Libraries would allow relocation of lesser used materials and more intensive use of core campus spaces for more frequently accessed resources.

In addition to the remote shelving facility, three major capital projects have been identified:

1. *Suzzallo Renovation Project*
2. *Fine Arts Library*
3. *Natural Sciences/Natural Resources Library*

A. UW Libraries Facilities Master Plan - In preparation for the University of Washington's 1999-2001 Capital Budget Request to the state, the Libraries prepared an update to the 1994 Libraries Facilities Master Plan.

The Libraries Facilities Master Plan proposes a series of capital projects designed to address the space and facilities needs of the Libraries as driven by the changing nature of scholarship, increased emphasis on interdisciplinary work, enrollment increases, new technologies, planning for the move of the life and natural sciences departments to the southwest campus, and the requirements of the Americans with Disabilities Act. The related benefit of releasing on-campus space for other units is also listed as part of the implementation of the 1999-2001 Facilities Master Plan Update.

Central to the Libraries Facilities Master Plan is the availability of an off-campus or "remote" shelving facility, identified in the 1999-2001 Update as Building 5 at Sand Point. In addition to the proposal to establish a remote shelving facility, the following capital projects were identified:

1) Suzzallo Renovation Project, Phase I: Phase I of the Suzzallo Library Renovation Project includes essential infrastructure renewal to address seismic, HVAC, fire alarm and fire safety systems, emergency egress, disabled access, and electrical and communications issues. This project was funded by the state in 1999-2001 at a total project cost of \$42.6 million and is planned to begin construction in 2000.

2) Construction of a Fine Arts Library: This project proposes to construct approximately 33,000 asf of new space as a state-of-the-art multi-media, collection, study, instruction, and research facility to combine the existing Art (4,884 asf) and Drama (2,432 asf) Libraries, and the Music Library and Music Listening Center (4,938 asf). The need for this facility is driven by crowded conditions in these existing branch libraries.

3) Construction of a new Natural Sciences/Natural Resources Library: This project proposes a new facility of approximately 47,000 asf to combine the current Natural Sciences, Fisheries-Oceanography, and Forest Resources Libraries, and components of the Maps and Cartographic Information Service. The planning for the Life Sciences buildings on the southwest campus drives this proposal.

4) Remote Storage Facility: A majority of academic research libraries use secondary storage facilities. While these are first and foremost a strategic response to space crises, they have other strategic advantages as well. During the past decade, design specifications have evolved and consensus has emerged on key characteristics of climate-

controlled, high-density environments. Because of the pressure to house collections at lower costs, many academic research libraries will accelerate the migration of major parts of their collections to secondary storage. (Spec Flyer, 242, Library Storage Facilities, Management and Services, May 1991 by the Association of Research Libraries).

A pivotal requirement for the success and acceptance of offsite storage is effective inventory control and rapid delivery systems. Libraries have invested extensively in educating users regarding the need for alternatives to traditional library practice. Web sites are becoming a standard tool for providing up-to-date information for users. Electronic document delivery will be increasingly employed to offset diminished onsite access. Finally, hospitable environmental conditions will buy libraries the time required to undertake long-range preservation reformatting and conservation programs.

The Libraries 1994 long-range facilities master plan called for an off-campus storage facility within ten years to handle lesser-used research material. The plan also included a series of minor capital projects that would convert some existing collection storage areas on Suzzallo and Allen to compact shelving. By 1997 the time frame for the needed remote storage was being reevaluated in the context of the Suzzallo Renovation project. In order to maintain operations in Suzzallo during the renovation, some of the lesser used collections as well as staff to manage the facility would have to be accommodated off campus. A minimum of 20,000 square feet of space was determined to be necessary (10,000 square feet of space equipped with compact shelving).

Although the original proposal for a remote storage facility envisioned the facility as surge space during the Suzzallo Renovation project, the plan provided for the conversion of this space to permanent remote storage when the renovation was completed. While the facility could be located off-campus, a location as close as possible to the University, preferably no more than a 30 minute drive from the UW Seattle campus, would be most desirable. The Sand Point Naval Base property, acquired by the UW from the federal government, was identified as an excellent location for a remote facility.

In the UW Libraries proposal to utilize a remote shelving facility, approximately 7,000 asf of the 12,000 asf of Kane Hall Auxiliary Stacks space, which was developed in the mid-1980s as an on-campus storage facility, would be returned to the Provost for reassignment to other space needs. Approximately 5,000 asf would be used for materials from the East Asia Library.

The UW Libraries have consulted with other major libraries and institutions of higher education in the region to determine whether there is an opportunity for collaboration in the development of a regional libraries remote storage facility. Due to the timing of facilities development and differences in the scale of the need, this opportunity does not appear to exist at present. Washington State University recently completed a major expansion to their largest library facility, which will provide growth capacity through 2010. Other potential partners such as Central Washington University and Evergreen State College have significantly smaller storage needs and would therefore not be a critical factor in reviewing the feasibility of a remote storage facility for the UW.

As other university research libraries across the country have faced this same dilemma, they have developed multi-campus remote storage facilities, such as the University of California's northern and southern regional repositories, which together serve all ten campuses within the UC system. Others have utilized the high-density shelving or "Harvard University Depository" model. This model uses 20 to 30 foot high four-post industrial shelving that is accessed by a mobile electric cart or forklift. Aisle width is approximately four feet. Books are stored in open bins shelved like file drawers. This high-density model can house 100 volumes per square foot in 20-foot high space or 140 volumes per square foot in 30-foot high space. At 100 volumes per square foot, this space would hold approximately five times the number of volumes housed in traditional campus collections space.

Yet another model, compact mobile shelving in a warehouse type structure, utilizes shelving on movable carriages set on tracks. Materials are accessed by moving the stacks to create an aisle. This type of shelving accommodates about 50 volumes per square foot, but requires less ceiling height. It does require heavy duty structural floor support (measured in pounds per square foot of floor loading capacity) beyond what exists in many buildings.

B. Odegaard Undergraduate Library Master Plan – The Odegaard Undergraduate Library was completed in 1972 to meet the library and information needs of undergraduate students at the University of Washington. The library was designed to house 180,000 volumes with approximately 2,200 study stations. It was conceived as a series of reading rooms that were grouped around a central three-story atrium. OUGL had four primary purposes:

- Provision of a highly selective collection of books and periodicals to meet course needs, including a course reserve collection.
- Provision of reference service to meet the needs of undergraduate students.
- Provision of audio-visual materials.
- Provision of a program to teach undergraduate students the proper use of library materials.

A separate Facility Master Plan was completed for the Odegaard Undergraduate Library in 1998. The Master Plan is summarized as follows:

The OUGL master plan was conceived in phases. Phase I was completed in 1997. This phase included the first UWired Commons, an expanded UWired Center for Teaching, Learning, and Technology and improvements to Room 320 to provide greater flexibility for training uses. Phase II is funded and will be completed by May 2000. This phase includes a second phase of the UWired Commons, expansion of digital copy and print services, and revisions to reference and office spaces.

As discussed earlier in this report, much has changed in libraries over the past 25 years, including how faculty teaches and students learn. The physical arrangement of OUGL

has become outdated as the teaching and learning roles of libraries and librarians have expanded. Several minor remodeling projects have occurred in the last few years to accommodate new services, approaches, and programs. These projects have included the UWired spaces previously discussed. UWired also allowed OUGL to prototype new learning environments - places, which take full advantage of collaboration and networked information within the context of the library. The master planning process allowed OUGL to learn from the UWired experience to further reshape OUGL as an undergraduate learning environment into the next century.

VI. CONCLUSIONS

Libraries spaces are experiencing an unprecedented rate of change in utilization, challenging our ability to respond with the facilities development needed to support these evolving uses. We are beginning to see a new category of space utilization emerging from the collaborative use of technology, new pedagogy, a customized approach to user needs, and information assistance. A further exploration and definition of this new way of utilizing library spaces may help us to better plan to accommodate this space need. The Capital and Space Planning Office, University Libraries, and the UWired partners would be an appropriate team to undertake this further exploration.

A survey of the physical spaces that house the libraries functions would allow for more informed space planning decisions with regard to accessibility issues, floor load bearing capacity vis-à-vis the capability to support expansion of compact shelving, and other physical facilities factors key to space planning and management.

Finally, facilities options for addressing growth, including the remote shelving proposal in the Libraries Facilities Master Plan, should be evaluated in the context of campus resource management priorities, operational issues, and customer needs. This evaluation should look at the broad picture of space options, including the ability of departmental space or perhaps residential space to meet some computer access and study space needs.

Annex 1

Room Use Definitions by Space Category

Collections

Collections: A room or portion of a room in a campus library used to provide shelving for library printed materials or audio-visual materials.

Central storage: A room used to store materials, limited to a central storage warehouse and central inactive storage.

Study Space

Study Room - A room located in a campus library used by individuals to study books, audio-visual materials, including reading rooms, carrels and study booths.

Study Service - A room that directly serves one or more study rooms as an extension of the activities of those rooms.

Offices/Technical Processing

Staff Office - A room used by academic or administrative staff.

Secretarial/Clerical Office - A room used primarily by secretarial and clerical staff, as well as general office space (such as space for files).

Student Assistance Office - A room used by students, including teaching and research assistants, student activity assistants, counseling assistants, etc.

Conference Room - A room serving an office complex that is primarily for staff meetings and departmental activities.

Office Service - A room that directly serves one or more offices as an extension of the activities of those rooms (for example, a computer server room).

Departmental Computer Support - A room used for college or department computers used directly for departmental administration, instruction, or research.

Departmental Lounge - A room used for rest and relaxation, usually generally available.

Technical Processing - A processing room intended for specific library operations, which support the overall library mission. This space often includes specialized equipment used by staff to prepare materials as requested by users.

User Assistance

User Assistance Processing - Areas where users gain assistance in accessing library collections and resources.

Computer Laboratory - A specially designed and equipped room for individual or group use that has computers and/or terminal workstations for student participation, experimentation, observation or practice.

Class Laboratory - A specially designed and equipped room used primarily for group instruction in regularly scheduled classes that requires special purpose equipment for student participation.

Open Laboratory/Meeting Room - A room used primarily for individual or group instruction that is informally scheduled, unscheduled or open for general access.

Department Library Space

Departmental space classified under library-type functions (assigned to room codes for collections, study, processing, or user assistance space). There is also a special room type category for non-library study space.

Non-Library Study Room - A study room located in areas not assigned to libraries. These rooms are assigned to departments, include collections and computers and are often used to serve multiple purposes, such as department meetings, copy rooms, etc.

Annex 2
Department Library Space *

Building	Ft²
3930 Brooklyn Building	316
Art Building	2,034
Balmer Hall	8,517
Benson Hall	888
CHDD Clinic	661
Communications Building	251
Condon Hall	1,754
Eagleson Hall	110
Engineering Annex	269
Graves Hall	244
Guggenheim	659
Health Sciences Center	1,439
Hitchcock	253
Instructional Center/Theater	2,252
Isaacson Hall	811
Johnson Hall	287
Lewis Annex 1	209
Lewis Hall	454
More Hall	429
Mueller Hall	129
Parrington Hall	223
Physics/Astronomy Building	260
Raitt Hall	294
Russian House	470
Savery Hall	1,301
Sieg Hall	284
Smith Hall	281
Social Work	163
Student Union Building	2,303
Wilson Annex	453
Subtotal	27,998
Residential Buildings	
Haggett	2,055
Hanse	1,369
Lander/Terry	5,656
McCarty	2,388
McMahon	1,849
Mercer	677
Stevens Court	1,442
Subtotal	15,436
Total Department Library Space	43,434

*Source: CASPO Inventory as of October 1, 1999 as categorized and reported by the units; the Committee has not verified the use of this space for library purposes.