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A statement of program for a library building for Oral Roberts University

William H. Jesse

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A Statement of Program for a Library Building for Oral Roberts University

William H. Jesse
University of Tennessee
Knoxville 16
February 1963
Library
The University of Tennessee
Knoxville
A STATEMENT OF PROGRAM

FOR A

LIBRARY BUILDING FOR

ORAL ROBERTS UNIVERSITY

Prepared By
William H. Jesse
The University of Tennessee
Knoxville 16

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The document provides a selective guide to contents of a book, listing various topics and their corresponding pages. The layout is straightforward, with each topic followed by its page number. The topics include bookshelving, carrels, elevators, flooring, lighting, loading platform, lounge furniture, modular planning, outlets, electrical, sound treatment, space per reader, and windows. The page numbers range from 8 to 26, indicating a comprehensive overview of the book's contents.
A STATEMENT OF PROGRAM FOR A LIBRARY BUILDING FOR

ORAL ROBERTS UNIVERSITY
TULSA

Prepared by William H. Jesse
February 1963

BOOK AND READER CAPACITY OF THE PROPOSED LIBRARY

BOOKS

The latest available library statistical summaries from the United States Office of Education* show that in 1959/60 the fifty-nine reporting private university libraries had 450,900 volumes as a median. For the eighty-nine public universities, the median was 405,500 volumes. The last study made by the Association of College and Research Libraries** was in 1958/59 and listed 116 major private and public university libraries. Their medians were 469,877 volumes owned and 22,080 volumes added for that year.

Oral Roberts University plans to begin its academic program in 1965 with an initial library bookstock of 50,000 volumes, to which it will add, each year for twenty years, between 20 and 25,000 volumes to reach its stated goal of 500,000 volumes.

The average university, with its book collection of about 450,000 volumes, has around 6,000 undergraduate and about 1,000 graduate students. It can probably be assumed to be giving at least adequate

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attention to its book collection and supporting reasonably well its instructional and research programs. There are, of course, many, dangerously below the median, where this is not the case, but an equal number comfortably above the median have book collections which stimulate research and study rather than merely support it.

A book collection of 500,000 volumes for Oral Roberts University, with its 3,000 students (up to one third of them graduates) would seem to be a sound objective, book-wise. Too, the plan to add between 20 and 25,000 volumes a year seems an equally progressive but reasonable program, since the proposed 22,500 annual addition is almost exactly the median for the 116 public and private institutions cited above. It is unlikely that a new university could carefully select and properly process many more books than this per year, yet to fall very much below that figure would be to make small progress toward an objective of library excellence.

Various formulas are used in ascertaining the number of square feet needed to house book collections, some making allowances for a great deal of low shelving, for very high shelving, and even for the use of compact storage devices (which make the collection relatively inaccessible, but do store many more books per square foot than does ordinary shelving). The reading areas of ORU will have much uncrowded low shelving, but the vast majority of the collection will be housed in the stacks on normal-height shelving. Studies have demonstrated that shelves filled to capacity in such a library can be expected to hold up to 15 volumes per square foot.

To house 500,000 volumes, ORU will need 33,333 square feet of floor space.
READERS

One must attempt, in planning a library building, to determine the number of readers who will be using it at a given time. This is usually done by arriving at a percentage of the student body which can be seated in the library. The American Library Association's Standards* suggest that library space be provided for one third of the students. For a long time, 20 to 25 per cent was used, but in recent years (and much before, in the better institutions) this would not suffice. All institutions of higher education worthy of the name today are finding that the pressure upon education in general is causing the student, pressured in turn, to spend much, much more time in the library than was formerly the case. Many institutions have discovered that the space they had provided for growth of the student body has been absorbed by sheer increased use by their currently enrolled students. At a recent meeting, three consultants (Keyes Metcalf, Ralph Ellsworth, and William Jesse) agreed, in the light of their own experience and observation, that they were unwilling to recommend, for the average college, any percentage going more than a fraction under 40.

Discussions at Tulsa with the University's officers of Administration, the librarian, architect, and others, led to an agreement that 33 1/3 per cent would be used. This means that 1,000 students must be seated in the library.

Space Needed Per Reader:—Throughout this report, unless otherwise specified, 28 square feet per reader is used, because the 25 square feet which was long a standard only resulted in constant overcrowding. The 28 square feet allows for adequate aisle space and space in public service areas for a reasonable number of librarians, their desks and their paraphernalia. Thirty square feet is often used today for open-shelf, small, liberal arts college libraries, and they need it, but ORU is to be somewhere between a large college and a small university, for which 28 square feet per reader is felt to be adequate.

The total space needed for readers can be estimated at this point by applying the formula, but greater accuracy will result from drawing the figures from the various areas of the building as they are described later.

To seat one third of its students in the library, ORU will need 1,000 reader stations.

THE SITE, ITS ACCESSIBILITY AND EXPANSIBILITY

There is a campus plan, but fortunately it is not considered unalterable by the University Administration and Board. If it were, specific location of the library would be necessary at this time. It is much better, however, to consider certain principles regarding the location of the library and then apply them to a revised campus plan.

Many colleges and universities attempting to put the library in the most favorable spot have created insurmountable problems of access and expansibility, two extremely important considerations in
a library building. Often the center of the academic campus is selected, ostensibly making the library immediately accessible to the students and faculty in the surrounding buildings. Actually, the reverse is true, for, since most libraries should have only one main entrance and exit, the central location means that people coming from most of the buildings must circle the library to make entrance. This is a source of constant inconvenience and irritation, for the person walking around a building, especially a large one, feels he should have been able to enter it at the most immediate point of contact. It is much better to have him head toward the building entrance during his entire walk, even though he travels the same distance. The one exception to this is that he does not seem to resent parking at the rear or side of a building and then walking around it. He is accustomed to this.

Most planners agree that the best location of the library, with relation to other campus activities and structures, is not in the center of the academic campus nor in the center of the student housing and activities buildings, but, whenever possible, in line with the traffic between these two areas. If men's and women's housing are in different directions, preference should be given to women's housing, but (as is the case at ORU) where both lie in one general direction, this is not a problem.

Many colleges and universities (which do not move to an entirely new campus) outgrow their library buildings even if enrollments do not expand. This is because of the indefinite growth of the book collection. In most colleges and in practically all universities, the
sorting, weeding, discarding of library books that can be done amounts, percentage-wise, to only a fraction of the growth of the collection. The library building, then, must be capable of almost indefinite expansion. Many, many library buildings are now three to five times the size of their originally planned structure. And in book strength these same libraries are among the best in the world.

Expansibility of a library building may be vertical in part, but should be horizontal primarily, or a very odd type of service structure may result. For this reason the site for expansion must be kept free of permanent encumbrances. Interior vertical and horizontal traffic facilities should be thought of with reference to the expanded structure. If necessary, a compromise should be made between the first unit and its additions.

If the following principle is not heeded, the results can be tragic:

A university library may well face the interior of the academic campus just like any other building, but it should be on the periphery of this campus for free expansion to the rear (and quite possibly to the sides).

There are other principles for determining site with regard to extremes of terrain, many existing buildings, etc., but these do not apply to this new campus. The ones already mentioned here that do apply, however, are of the utmost importance, and a violation of them could be truly unfortunate for succeeding generations of students, faculty, and others on this hopeful and promising campus.
NUMBER OF FLOORS

College librarians seem to have a strong preference for operating their libraries in a three-floor building, with entrance made at the ground floor, which is the middle and Main Level. In other words, the student walks into the library, roughly on a level with the ground, finds on that level the principal aids to use of the library (such as the public catalog, the circulation desk, reference books, etc.) and then needs to go up or down only one floor to have access to the entire building. Universities, on the other hand, have traditionally had this Main Floor as one level above the ground-level entrance floor. (Washington University at St. Louis is an exception rather than a rule.)

With so many functions needing to go there, the Main Floor of a library must be a very large one. If plans for the ORU library building seem best suited for four floors or more, it might be well to have the Main Floor one level above the ground-level entrance, so that the ground level can take care of the general traffic entering the building and dispersing itself on the various floors. If, however, the building can be kept to three floors, it is suggested that this institution (because it is a large college/small university) use the ground-level floor (2d floor-level) for its Main Floor.

With regard to these matters the architect should have complete freedom to initiate plans attempting to work out problems of number of floors, accessibility, traffic, service, orientation, design, etc. Because of the advantages of horizontal over vertical traffic-handling,
it is suggested that not too many floors be considered. The overall square feet called for in this building, if distributed over five or more floors, could well result in an unnecessarily nonfunctional building.

Elevators should be provided in any event, but if the building has more than three floors, or if the Main Floor is not the middle level, elevator service would be needed for the general public. Even if the building is on the three levels already described, with only one floor to go down and one to go up, one elevator is needed to carry loaded booktrucks for distribution to the various levels and to transport physically incapacitated persons to these same floors.* The elevator or elevators (like stairways) should be located with some thought to servicing an expanded building.

**TYPE OF FACILITY**

Librarians and architects were somewhat slow in adopting and adapting modular planning, which actually is well suited to library use, since libraries do grow and are expanded, and many functions need to be moved from what was once considered permanent quarters.

The pre-modular buildings are accurately described as "fixed-function" buildings, and it was virtually impossible to anticipate the exact size a room should be, with the number of people and books constantly changing. Practically every room was too small or too

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large at one time or another. Even worse, the fixed-function build-
ings separated the bookstacks from the reading rooms and other li-
brary functions. Attempts to use bookstacks for reading rooms, and
vice versa, resulted in extremely cumbersome library-service situ-
atations. Not only did bookstacks not make good reading rooms, but
many of the reading rooms were not structurally floored to support
bookstacks which needed to be placed in them.

The modern modular-planned building is merely a slab-floor
type of structure where, for the vast majority of the space, either
books or readers may be placed. Many parts of the building, such as
entrance ways, certain corridors, stairwells, toilet facilities, etc.,
remain constant, for it is not necessary, as librarians thought ten
years ago, to have every square foot of a new building completely
flexible. However, most of the building should be, which means that
the walls are nonsupporting, with few exceptions.

Another generalization which might apply is that, by and large,
it is best to avoid chopping the building up into any more "rooms"
than is absolutely necessary. It is better to see if an "area" will
not suffice before a wall is put in. There are a number of exceptions,
and these will be enumerated later.

Air conditioning, with strong attention to humidity control,
dust filtering, heat, and proper movement of air, is requisite,
since the relatively low ceilinged, deep interior floors of a
modular-planned building require this.

Lighting--While it is possible to second-guess the location
of some of the free-standing bookcases, it has proved dangerous in
new installations to carry this to an extreme. Stack lighting, as opposed to reading room lighting, should be used only on non-main-floor levels and only where the space will be used eventually merely for the storage of books. The new building should provide lighting adequate for readers (60 foot-candles maintained at reading height).

**Outlets:**--The advances being made in reader devices and non-book teaching machines make it advisable to supply potentially a great many electrical outlets, both for readers and for staff.

The flooring, too, should anticipate the possible location of readers as well as books in a particular area.

**Sound treatment:**--The building should be carefully planned with reference to proper acoustical treatment. Acoustical materials, flooring materials, acoustical boards and other devices, plus the use of counter-noise, etc., should result in a situation where normal conversation, carried on in normal tones, can be tolerated without undue irritation to other readers. As far as reader comfort is concerned, a good acoustical situation is almost as important in a library of this type as the quality and intensity of the lighting.

The architect should attempt to create a reasonably subdued, yet informal, atmosphere in which normal activity will not appear abnormal to other normal people. Admittedly, this is quite a task, but it should at least be attempted.

**Items to be remembered:**--It is much too early in the planning stages to be specific about such things as intercom systems, light-switch control, type and size of area air-conditioning control, etc., but all of these can make a building appear to be extremely unsuccessful or extremely successful.
THE BUILDING ITSELF

ENTRANCE-EXIT

The building should have one public entrance-and-exit point. There may be any number of doors involved here, but they should all be in the same area.

The use of a foyer is an engineering-architectural consideration which lies outside the competence of a library consultant. Whether there should or should not be one will not be treated here.

CIRCULATION-LOBBY----------------------------- 3,000 sq.ft.

When a reader enters the building, he should be able to go upstairs or downstairs without having to cross areas assigned to library use. This does not necessarily mean that the stairways and elevators need to be in a corridor separate from the main lobby. It could be handled either way.

Exhibit space:--Upon entering the library, the reader should encounter exhibit space, where interesting and perhaps rare books and manuscripts may be seen. These can be placed in counter-type exhibit cases, but this consultant prefers wall cases which can be shut off from view by attractive draperies when exhibits are not being displayed. This space could be estimated at 100 square feet.

Control:--Discussions at Tulsa resulted in the agreement that control of the collection would be to have assistants (with or without actual turnstiles) at the exit, where books might be checked and briefcases examined. 150 square feet.

Public catalog:--The reader should find a large lobby which features the public dictionary-catalog, well equipped with catalog-tray reference tables and spread out considerably, rather than restricted
to a few cabinets. In the early years, ORU will have a low ratio of books to readers consulting the catalog, which will cause considerable congestion around a small, compact public catalog. The catalog, with its reference tables, will require 1,000 square feet.

The Circulation Area, containing a long counter with an enclosure to the rear where several people can work and, in front of it, space for traffic, will require an estimated 1,000 square feet.

Bibliographical Bay:—There are a great many reference books, generally known as national and trade bibliographies, which list the holdings of the large national libraries, such as the Library of Congress, or the books which are being currently printed or are in print. These are used by the faculty, the students to some extent, the technical services librarians, and by both circulation and reference staff members. For this reason it is best to have them centrally located and not off in the Reference Area or locked into the Technical Services Area when that staff has gone home. 500 square feet.

Traffic space:—When the Circulation-Lobby functions just enumerated are totalled, 2,750 square feet are indicated. To this should be added some additional space for general traffic through and about the lobby. This is very difficult to estimate, and the architect should have considerable leeway in determining what it should be, but as a result of the conference attended by the architect, the agreement was to use a tentative total of 3,000 square feet for the Circulation-Lobby Area.
The Administrative Offices, located insofar as possible with ready accessibility to the public and the Technical Services Area, should provide space for the librarian, one assistant librarian, one secretary, some waiting-room space, a small cloak room, and a toilet. This is estimated at 900 square feet.

The Reference Area, like Current Periodicals, should be an evident function directly off the Main Lobby. The Reference librarian or librarians should be at desks, not in offices and not surrounded on all four sides by counters or other barriers. There should merely be a desk, with vertical files at the rear if necessary, not separated from the reader, so that staff-reader consultation can be intimate...
and does not have to be conducted in a loud voice because of distance. Too often, offices for these staff members are provided, but this is not deemed necessary by this consultant, except in the very, very large libraries where there are many people on the reference staff. It is estimated that there should be seats in the Reference Area for 50 readers, 25 in carrels and 25 at regular library tables. Using 28 square feet per reader, this would require 1,400 square feet of floor space. There must be room, of course, for several thousand volumes of books as a minimum (and the more, the better), but estimates of space needed for them are not included here, but in the calculations for the entire library later in the report.

SEMINAR-CONFERENCE ROOMS--------------------------- 1,955 sq. ft.

There should be two of these on each floor. Assuming for the moment that there will be three floors involved, this would make a total of six. One of these rooms should be capable of holding 40 people, the others from 12 to 20 people. The total number of people involved is estimated at 115, requiring approximately 17 square feet per person. This is 1,955 square feet.

FACULTY STUDIES--------------------------------------- 2,520 sq. ft.

There should be 40 faculty studies, each with 63 square feet per study. The plan here is to exploit this space for interim as well as long-time use. When the University opens, it may not have faculty offices in other academic buildings, and these studies can serve until such offices are provided in the new classroom and other buildings. As the faculty grows, so will the building program. Eventually, there might be a situation where all faculty members have
offices in their own buildings. When this happens, the 40 studies would have been (gradually) converted from "offices" to "library faculty studies" purposes. The location of these for interim as well as long-haul use is of the utmost importance and presents many problems which cannot be attacked until the general concept of the building begins to evolve.

RESERVE BOOKS----------------------------------------- 2,000 sq. ft.

If space permits, it is desirable to have this facility on the Main Floor, but it is not absolutely requisite, as in the case of the public catalog, the Circulation Desk, and Reference, Technical Services, and Administration. This facility will probably consist of a long counter over which the books can be passed and an enclosure, probably against a wall but not necessarily so, for a couple of work desks and about two thousand books. The enclosed part of the facility would be about 320 square feet. In this area, immediately adjacent, should be space for 60 readers who, at 28 square feet per reader, will require 1,680 square feet of floor space. Because of the nature of the use of reserve books, the group felt that half of the thirty should be at typical library tables, with another fifteen in lounge furniture and another fifteen seated at small carrell-type reading tables. The total space needed for a reserve-book facility would be about 2,000 square feet. If there is not space on the Main Floor for the reserve-book facility, it could go on either the floor above or below in the 3-level structure, but in a 4-level building, with the Main Floor as probably the third level, it seems best to have the reserve-book facility on the ground-floor level. This would permit those merely using the reserve
books to enter the building and leave it on the same level without having to traverse other service areas.

SPECIAL COLLECTIONS----------------------------------- 1,000 sq.ft.

At the present time provision needs to be made for two special collections: the Oral Roberts Archives Room and the Pentacostal Room, both estimated as requiring 500 square feet each. These should be adjoining rooms, and it should be possible for specially privileged readers to use the material in a caged portion of the stacks, under the supervision of the librarians. Metal lattice caging materials can be quite attractive, and some attention should be given to its appearance, since actually this lattice will be the "wall" to the special collections "room," as it would at one time have been called. One advantage of using the lattice as opposed to a wall is, of course, that the area need be no larger or smaller than required by the number of materials and their use. This is a distinct advantage over having a rare-books room of a given dimension.

The number of square feet required to house special collections other than the two described above is not estimated here, because they will constitute part of the regular book collection, as far as space is concerned.

SCHOOL OF EVANGELISM

In the discussion at Tulsa, the group agreed that the best way to provide for these intermittent readers was in a part of the regular reader-book areas. If the materials and the tables, carrells, etc., were locked off, full and desirable exploitation of the space would be denied. Should the materials themselves, however, at any time need
to be given special protection, they could be enclosed by the metal lattice already described.

TECHNICAL SERVICES--------------------------------------------- 3,000 sq. ft.

It is desirable to have Technical Services housed in a room. A long rectangular shape is also desirable to help facilitate the flow of work from receiving through final processing. Workers in this area, with their typewriters and various machines, give the area a general appearance of a shop-general office facility. This is another reason for having it walled off. Still another is that it can be locked in the afternoon when the Technical Services staff leaves, and the Public Services staff will not then have to worry about people going into it and disturbing or removing the equipment.

While some new technical services areas have temporary walls separating the various departments, this consultant prefers (and has in his library) one without any walls, using filled double-faced bookshelving, card files, etc., to create partial barriers between the various areas of supervision, but making it possible to have everything under one department head, if ever so desired.

Assuming that the professional catalogers at ORU will be able to process a high, but not unreasonable, number of volumes per person, the Librarian and the consultant, with contributions from certain officers of Administration at the University, calculated that ORU will need six professional catalogers, with six clerk-typists, to catalog the books. For the order or acquisitions work, there will need to be two professional librarians assisted by four clerical workers and one check-in clerk. Marking, labelling, pasting, etc., will require
probably three nonprofessional workers, and binding preparations probably two nonprofessional workers. This makes a total of twenty-four people who will be working in the Technical Services Area. Experience has shown that these workers, their equipment, work space, and bookshelving, will require 125 square feet per person. This is 3,000 square feet. It is suggested, however, that if possible this area be located and arranged so that, when the building is expanded, it may be enlarged proportionately to the increase in acquisition rate, which would probably follow. It is difficult to see how much expansion would be necessary, but a minimum should be 1.5 times the figure suggested above.

Location of Technical Services:--The area should be located with that part devoted to order and cataloging work as accessible as possible to the public catalog. If the Receiving and Shipping Room is located on another floor, having the elevator reasonably near Technical Services will prevent the pushing of carts across public areas and through the stacks. If the Receiving Room is on this same level, deliveries should be made into an area which is immediately adjacent to Technical Services. It is hoped, however, that Receiving and Shipping can be on the level immediately below this Main Level.

Lighting and Outlets:--As already stated, many electric machines are necessary in this area, and numerous outlets, therefore, should be conveniently placed to permit the proper arrangement of furniture without distortion of the picture because of their awkward locations. Lighting in quality and quantity should be given special attention here, for it is necessary for workers to read extremely fine print over a period of many hours.
RECEIVING, SHIPPING, MAILING, BOOK STORAGE, SUPPLIES CLOSET—1,200 sq.ft.

With few exceptions, even in new buildings, adequate provision is not made for these materials, work, and services. Actually, it is very difficult to estimate accurately how much space should be provided, but 1,200 square feet will probably be the minimum needed. This area should be on the basement level, with delivery being made onto a tail-gate height loading platform, with overhead canopy high enough to permit large trucks to back up to the platform.

STAFF LOUNGE----------------------------------------------- 500 sq.ft.

The staff lounge should include kitchenette facilities, and there should be a cot in a screened-off area for indisposed persons. This room is not for staff meetings, but for coffee breaks, lunch, etc., for staff members who must remain in the building all day. Provision should be made for some staff lockers, although many staff members prefer to keep their personal belongings at their work stations.

AUDITORIUM & MATERIALS CENTER----------------------------- 4,450 sq. ft.

A small auditorium to seat 250 people (at 7 square feet per person) will require 1,750 square feet. To this should be added another 500 square feet for a small stage. The total space for this auditorium, then, would be 2,250 square feet. It should be possible to use the auditorium without necessarily having to open the rest of the library, for there will be times when this will be highly desirable. Also, while it should be possible to reach the auditorium from inside the library building, it may be, in order to reduce noise and disturbance, that outside groups who use the auditorium should be routed into it
and out of it without coming through the library proper, even if the library is fully open.

The Materials Center is definitely related to the auditorium, but the degree of physical proximity desirable might not necessarily be as great as would at first appear. However, everything else equal, it would seem that the Materials Center should be as near the auditorium as is architecturally and functionally possible. Space estimates for the Materials Center are based on seating 40 readers at audio stations, using 28 square feet per reader. This is 1,120 square feet. The Librarian, who is an experienced materials-center worker, thinks that these students would be using plug-in earphone equipment, so it might not be necessary to undertake special sound-conditioning treatment. However, this consultant is less familiar with this type of facility, perhaps, than with any of the others being treated in this report, and, as he pointed out in Tulsa, feels careful scrutiny of plans for the Materials Center should be undertaken by more experienced people before final plans are made.

There would be need for a film-preview room, estimated at 120 square feet. The materials themselves, plus work space, is estimated at 960 square feet. The space for the audio stations, the film-preview room, and the materials totals 2,200 square feet. This, added to the 2,250 square feet for the auditorium, gives a total of 4,450 square feet for this category.

READER-BOOK AREAS----------------------------- 51,813 sq. ft.

The reader-book areas themselves will occupy a majority of the space in the new building. They are in a sense the library. Fortunately,
it was possible for most of the people involved with planning this new building to visit together two new modular-planned buildings, so that the reader-book areas are thoroughly understood by the Librarian and Administration, the architect, the engineer, and others at ORU. Had this not been the case, it would have been necessary at this point in the report to attempt a description of this type of facility and what principles and practices are involved. Even though no description is necessary, space estimates do need to be made for the 660 readers not allocated in the facilities described thus far. The planning group at Tulsa very definitely felt that most of these 660 readers should be placed in individual reader stations, primarily small carrell tables, and 155 in group (not over four) seating at regular library tables. In deciding to do this, ORU would be going along with what appears to be a strong national trend in new library buildings, the trend having been given considerable validity by the college report, "Student Reactions to Study Facilities, with Implications for Architects and College Administrators," made to the Presidents of Amherst, Mount Holyoke, Smith, and the University of Massachusetts. [Copies may be obtained from Amherst, The Committee for New College, Amherst, Mass.]

As already mentioned, the average student now desires to be in an individual station and to have considerable privacy, but not so much privacy that he will feel completely isolated from other human beings.

To describe the carrell tables would be merely to describe furniture rather than a part of the building, for these carrells should not in any way be fixed or built in. They should vary in size, with
They should be housed on free-standing bookshelving which is completely self-supporting. It is essential that the manufacturer supplying this bookshelving understand clearly that the specifications call for equipment which does in no way need bracing from the ceiling, from bookcase to bookcase, or even by cross-bar bracing within the stack itself. All three of these devices defeat the purpose of the shelving in that it cannot be moved freely; the appearance is extremely bad; and cross-barring within the book range itself causes deep books to protrude, as well as causing damage to the fore edges. These statements are not intended to anticipate specification drawing for the furniture itself, but so many libraries have had their appearance spoiled and their functions disturbed by improper stack installations that it seems best to caution against it, even at this early a point.

When completely filled, the bookstacks will hold an average of 15 volumes per square foot. To house a collection of 500,000 volumes would, then, require 33,333 square feet.

The reader-book areas total 51,813 square feet.
### SUMMARY OF SPACE ESTIMATES, BOOKS AND READERS HOUSED

<table>
<thead>
<tr>
<th>Area</th>
<th>Square Feet</th>
<th>Readers</th>
<th>Books</th>
</tr>
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<tbody>
<tr>
<td>Circulation-Lobby</td>
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<tr>
<td>Exhibits</td>
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<td></td>
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<tr>
<td>Control Point</td>
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<tr>
<td>Public Catalog</td>
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<tr>
<td>Circulation Area</td>
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<tr>
<td>Bibliographical Bay</td>
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<td>Traffic</td>
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<td>Seminar-Conference Rooms</td>
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<td>Faculty Studies</td>
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<td>Reserve Books</td>
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<td>Oral Roberts Archives</td>
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<td>Pentacostal Room</td>
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<td>Administrative Offices</td>
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<tr>
<td>Technical Services</td>
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<td>Receiving, Shipping, Etc.</td>
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<td>Staff Lounge</td>
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<td>Reader-Book Areas</td>
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<td>Auditorium-Materials Center</td>
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<td>Auditorium</td>
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<tr>
<td>Materials Center</td>
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<tr>
<td><strong>Totals</strong></td>
<td><strong>76,338</strong></td>
<td><strong>1,000</strong></td>
<td><strong>500,000</strong></td>
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<td>Architect's Space</td>
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<tr>
<td><strong>TOTAL ESTIMATED SQUARE FEET</strong></td>
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</tbody>
</table>
APPENDIX

Comments on Specific Questions Addressed to the Consultant

**Temporary use of the building:** There is nothing whatsoever wrong with this University's plan to put to immediate use certain portions of the new library building which will not be needed for a period of perhaps eight to twelve years.

Those portions so used, however, should be selected with regard to separate access to the building and with some thought to noise factors and other possible disturbances to the regular library users. It will probably be necessary to modify slightly the design of the building in order to accommodate these temporarily assigned functions, but the building should be designed primarily as a library, and the temporary assignment should be definitely secondary, as far as affecting building design.

**Module size:** The following quotation from Keyes Metcalf's book (still in preparation) on college and university library buildings may prove helpful:

Under many circumstances one of these sizes, 22 1/2' x 22 1/2' or 25 1/2' x 25 1/2', is as close to an ideal as can be found. The bay is large enough to prevent the columns being too numerous; small enough to prevent an increase in the cost of construction by making larger columns and thicker floors necessary; being square it permits shelving to be turned in either direction. Other things being equal, it represents an economical bay.

At the University of Tennessee most of the building has 22'6"x23'6" modules. The principal thing about module size is to have one large enough not to cause a cluttered-up appearance and at the same time have one small enough not to make construction costs too
expensive. As was observed at Washington University, the bookshelving can give a poor appearance if module dimension does not come out even with 3-foot sections of bookshelving. In some cases, and this will probably be done at Washington University eventually, the stack manufacturers will fill out the rest of the ranges. This is usually not too expensive an undertaking if it is part of the original stack contract.

**Fenestration:** This consultant is not necessarily an advocate of windowless buildings. In fact, he likes windows very much when they do not cause more trouble than they do good. Unfortunately, they usually do more damage than good. Ellsworth's "golden rule" is that in this northern hemisphere there should be windows only on the north side of library buildings, except where the view out the window is so important and excellent as to make an exception in order. This would seem to be a very good rule. There should be no windows on the south side of the building, unless they open into non-reader areas, for it is the glare on the reading surface that causes the most trouble. Not too many university students use the library in the early morning hours, so some windows on the east side can be permitted. Because of the heavy use of libraries from mid-afternoon until dark, windows on the west side should be avoided as much as possible. If it is absolutely necessary to put windows on the west side, they should be narrow and deep, or else shielded or screened in some fashion.

Before windows are put in the ORU Library, the Administration should request the architect to make studies of the result so that the aesthetic and psychological considerations can be weighed against the functional ones.
Carpeting:--Actually, the officers responsible for planning the ORU Library have had more experience with carpeting than has the consultant. As suggested by the University, the consultant called the University of South Carolina, where full carpeting was installed in 1959 in the new undergraduate library building. Mr. Alfred Rawlinson, the librarian at South Carolina, stated that their experience could be considered quite satisfactory, and that he has submitted a full report to the Library Technology Project [Frazer Poole, Director, American Library Association, 50 East Huron Street, Chicago, Illinois]. It is suggested that in writing ALA for the South Carolina report, ORU request Mr. Poole to send copies of any other reports or conclusions drawn from such reports by his office in the investigation of carpeting as a floor covering for libraries.

Humidity control:--The consultant hesitates to suggest an ideal here, because further research in such technical areas often indicates changes from time to time. At the University of Tennessee, however, we attempt to maintain a relative humidity of 50 per cent.

Classification system:--This question lies outside the area of building consultant work, but nevertheless, as a practicing librarian the consultant does not hesitate to state his preference for the Library of Congress classification for a university of the type being planned at Tulsa. This is an administrative and fiscal opinion, rather than a technical one, for the consultant is not qualified to make a technical one.

Before final decision is made by the University, the opinion of an expert should be sought. Perhaps the world's greatest authority
in these matters is Dr. Maurice F. Tauber, Professor of Library Administration at Columbia University. Another eminently qualified consultant would be Dale Bentz, Associate Librarian, State University of Iowa, Iowa City, who understands both the theory and the application of various classification systems, especially LC. He initiated and organized the reclassification project from Dewey to LC at the University of Tennessee, and has done the same thing at the University of Iowa. Both of these men have served as consultants to universities planning to change from Dewey to LC.