



UNIVERSITY OF MINNESOTA
TWIN CITIES

*Microbiology
Expansion*

Department of Microbiology
Medical School
1060 Mayo Memorial Building, Box 196
420 Delaware Street S.E.
Minneapolis, Minnesota 55455

December 6, 1977

RECEIVED

DEC 8 1977

Dr. Harry Hogencamp, Head
Department of Biochemistry
223 Millard Hall

UNIV. OF MINN.
HEALTH SCIENCE
PLANNING OFFICE

Dear Harry:

I am enclosing documentation relative to Microbiology expansion. You will note that occupancy of the 14th and 15th floors of Mayo was in the original plan (blue print copy attached) as far back as 1970. This was contingent upon Pediatrics moving to the B-C unit.

We understand that there is now a move to raise funds to finish the shell space (including Pediatrics) in the B-C building. Included in that fund raising should be money for renovation of space which our department will take over from those moving to the new building. We would anticipate moving to the 14th and 15th floors with a minimum of renovation (painting, refinishing, etc.). The major expenditure, I am sure, would be air conditioning of the 14th floor. However, renovation funds would be needed to remodel our present offices into a laboratory research suite for a major faculty member. We believe that this would be the best utilization of the space, and probably would not include any structural changes as such.

Even with our expansion we will still have less space than any other basic science department. Compare this to the fact that we are the only basic science department within the Medical School with major undergraduate teaching obligations to the whole University. Too, our graduate program over the years has been equal to, if not larger than, the others.

We believe that all of these facts should be brought to the attention of the planning committee, and ask that you do so as our representative.

Sincerely yours,

Dennis W. Watson
Professor and Head

DWW:p

Enc

CC: Dean N. L. Gault
Mr. Paul Maupin



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TWIN CITIES

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Medical School
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December 6, 1977

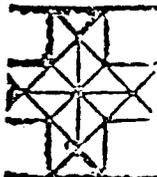
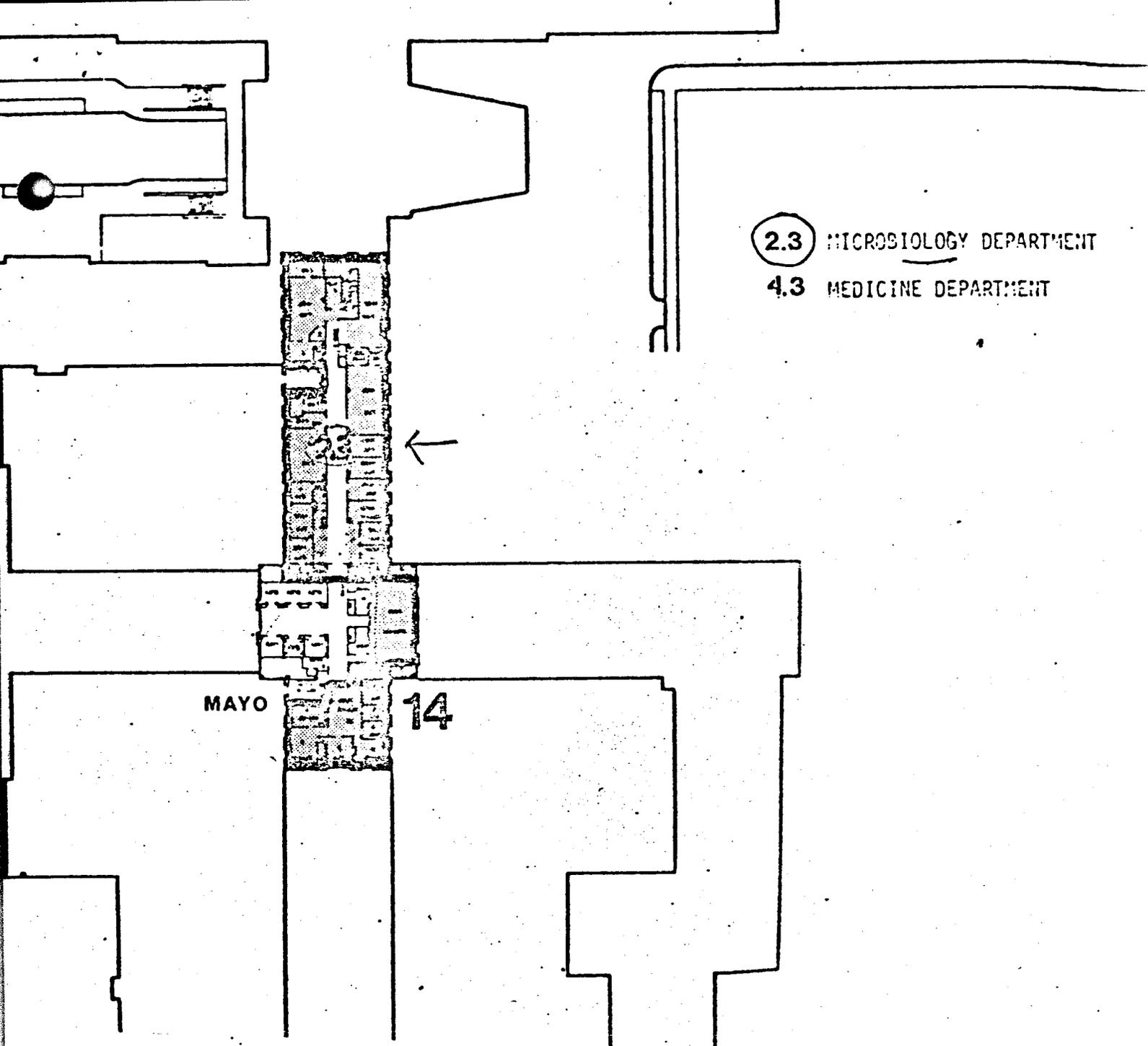
DEPARTMENT OF MICROBIOLOGY ANTICIPATED EXPANSION

Total Space--including research labs, teaching labs, offices, animals, support areas (January, 1978)	23,729
Expansion--animal facilities, 1978	4,168
Expansion--14th and 15th floors of Mayo as per long range plans (see prints) 1979	<u>7,684</u>
Total expansion	11,852

<u>Department</u>	<u>Present</u>	<u>Expansion</u>	<u>Total</u>
Microbiology	23,729	11,852	35,581
Anatomy	35,310	13,460	48,770
Biochemistry	30,901	17,644	48,545
Pharmacology	27,691	14,712	42,403
Physiology	36,575	7,774	44,289

Department	Personnel - No.				Space - sq. ft.					Expansio
					Currently occupied					
	Staff	Students	Civil Service	Hourly Help (FTE)	Research Labs.	Teaching Labs.	Offices	Animals	Support (Shop, Seminar, duplicating, etc.)	All Purpose
Anatomy	26	35	17	11	11,388	8,315	5,179	5,004	5,424	13,460
Biochemistry	25	51	28	5.5	14,358	8,928	3,563	1,964	2,088	17,644
Laboratory Medicine and Pathology	38	20	86	12.4	13,746	5,937	3,158	4,273	1,443	5,749
Microbiology	31	64	33	10.6	10,155	8,322	2,299	521	2,432	11,852
Pharmacology	26	59	44	6	12,109	6,854	4,212	1,649	2,867	14,712
Physiology	31	65	17	11.5	17,206	7,137	5,376	1,060	5,736	7,774

JANUARY 1978



UNIVERSITY OF MINNESOTA
HEALTH SCIENCES EXPANSION

MINNEAPOLIS

MINNESOTA

REVISED PHASE 1 SCHEMATICS

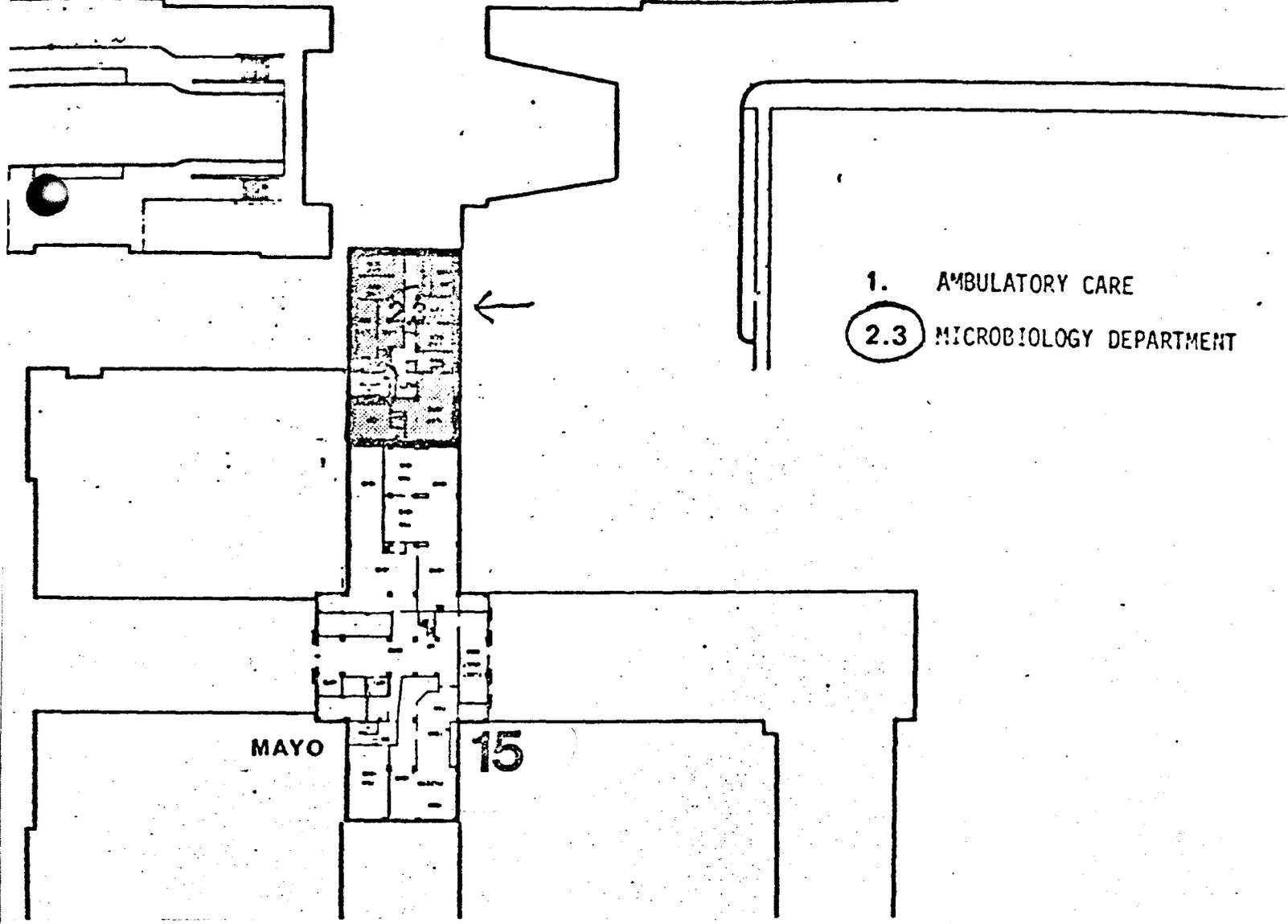
NO.	70046
DESIGNED BY	
CHECKED BY	
SCALE	1/84" = 1'-0"
DATE	11/1/70



REMODELED
AREAS

LEVEL

17



UNIVERSITY OF MINNESOTA
 HEALTH SCIENCES EXPANSION
 MINNEAPOLIS MINNESOTA

REVISED PHASE 1 SCHEMATICS

<p>70046 1/64 10 11/1/70</p>	<p> REMODELED AREAS</p>	<p>LEVEL 18</p>
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ROUTE SLIP 211100 INCL

W. FORSLUND INPO

R. SWANSON INPO

T. KYLE INPO 2-12-80

G. ZAWORSKI INPO

J. MARONEY PKE - NEW PROJECT

~~W. WAUGH~~

F MINNESOTA

Office of the Assistant Vice President

Physical Planning
340 Morrill Hall
100 Church Street S.E.
Minneapolis, Minnesota 55455

FEB 11 Rec'd

UNIV. OF MINN.
HEALTH SCIENCE
PLANNING OFFICE

TO: Cherie Perlmutter
FROM: Ron Holden *R. Holden*
SUBJECT: The Building Code and Other Regulations
Affecting the School of Public Health
Occupancy of Vacated Clinic Space

This is in response to your February 4th memo requesting clarification of the sprinkling requirements for remodeled and newly occupied spaces in the Mayo Hospital Complex.

The need for sprinklers is not related to the inpatient status or lack of it, but rather to the designation of the Complex as a hospital. The decision to protect the entire facility with sprinkling grew out of input from inspections by the Joint Commission on Accreditation for Hospitals, the University Building and Safety personnel, the University Hospitals, and the Minneapolis Fire Department. Once the decision was made to make necessary improvements several areas that were soon to be scheduled for remodeling were allowed to defer their sprinkler installation. Because the status of inpatient care is not involved, a waiver of the sprinkling requirements for relocating or remodeling departments, is not applicable. Any areas being remodeled must, of course, meet the current codes and be sprinkled. When a space is occupied by new tenants, the area must be maintained as a safe area for the occupants and be sprinkled as well. Energy and electrical issues will have to be addressed if any physical changes take place as would accessibility for the handicapped.

The University Hospitals (the Mayo Complex) must be treated as one large building. Smoke zones, mechanical systems, fire alarms and sprinkler flow alarms all cross the actual "building" walls in a fashion that's almost impossible to isolate with four hour walls and three hour doors. Because of that, it was decided to provide the alarms, proper exiting and smoke zone control and begin to sprinkle the entire complex.

Cherie Perlmutter
February 8, 1980
Page Two

If the legislature were to appropriate \$1 million instead of \$3.3 million as requested, the final program decisions would be required to take into account provision for the sprinkler requirements for all occupied spaces. Cosmetic, paint and carpet changes would not necessitate the code updating but would require sprinkling.

I realize that this may represent a large part of any given budget, but it was the chosen alternative to making the changes under the original fire protection project.

The School of Public Health, therefore, will be required to sprinkle those areas they intend to occupy. Please contact either Don Herron or myself if you have further questions.

RH:jr

cc: C. Hewitt
L. Stauffer
P. Maupin ✓
D. Herron
D. Kerkow
L. Larson



UNIVERSITY OF MINNESOTA
TWIN CITIES

Office of the Vice President for Health Sciences Affairs
432 Morrill Hall
Minneapolis, Minnesota 55455

August 6, 1980

TO: Clint Hewitt

FROM: Cherie Perlmutter *CP*

SUBJ: 1981-83 Capital Request - Remodeling Microbiology Department (Floors 11 and 12 of Mayo) and School of Public Health (Major Remodeling - vacated clinic space and minimal renovation - Upper Floors of Mayo) 6-2570

To review and follow up our recent conversation regarding the above projects, two items seem to merit consideration. First there has been a suggestion that Microbiology and Public Health exchange floors 11 and 14 in Mayo. This will result in space assignment for each on consecutive floors: Microbiology on 9, 10, 11 and Public Health on 12, 13 and 14. If this can be worked out easily, and both Dr. Watson and Dean Stauffer have indicated a willingness to have this reviewed by your shop, then a second consideration might be the separation of the projects into the five Mayo floors as one project and the vacated clinic space as a second project.

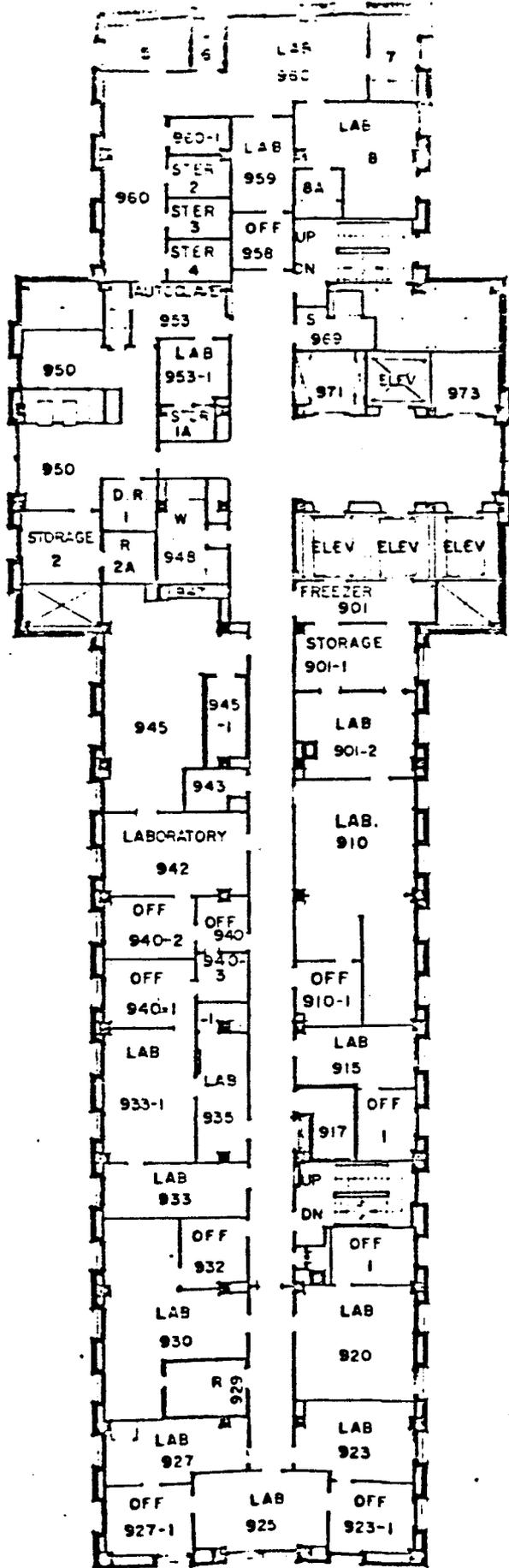
The two seem to break into much more logical building projects which might result in some cost savings based on the age of the Mayo building (1957) and the limited extent of remodeling planned for those floors versus the age of the vacated clinics (1910) and the major remodeling that is required there. One hope is that an air conditioning system for all six floors can be included in the project.

There are some constraints. The total of the two projects cannot exceed what is now included in the 1981-83 Capital Request, and assumes that both requests will be approved, since neither group wishes to place their request in jeopardy by this proposal.

Is there someone to whom you can assign this review in order to determine whether any advantages can be derived from this approach?

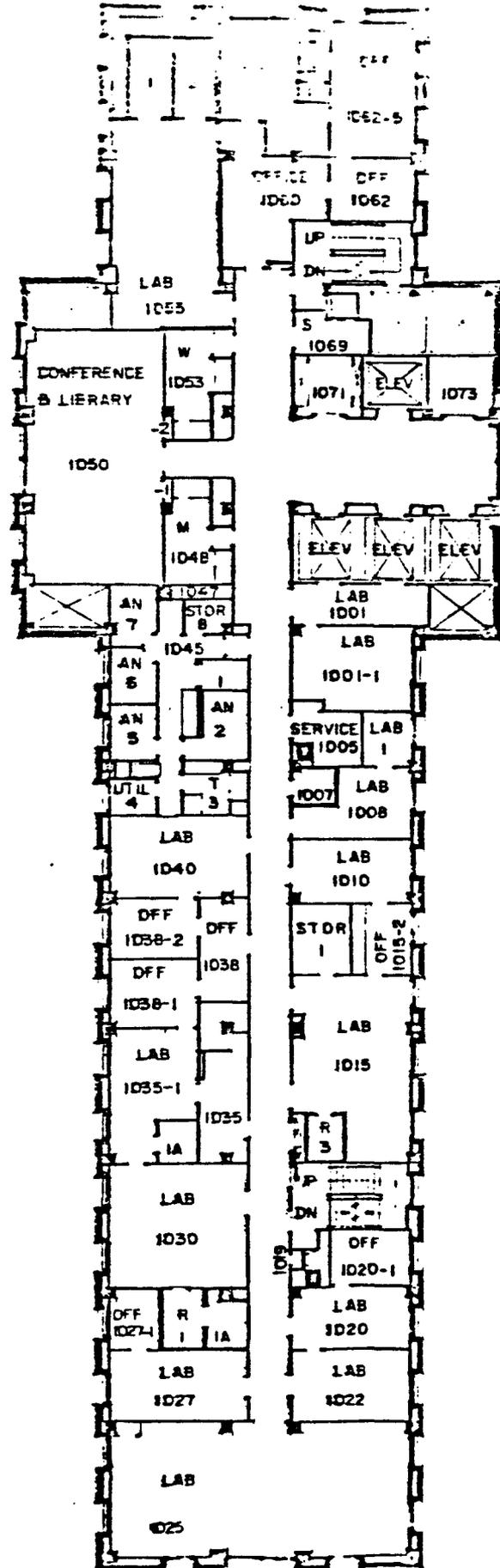
CP/kr

cc Dr. Lyle French
Dr. N.L. Gault
Dean Lee Stauffer
Dr. Dennis Watson *f*



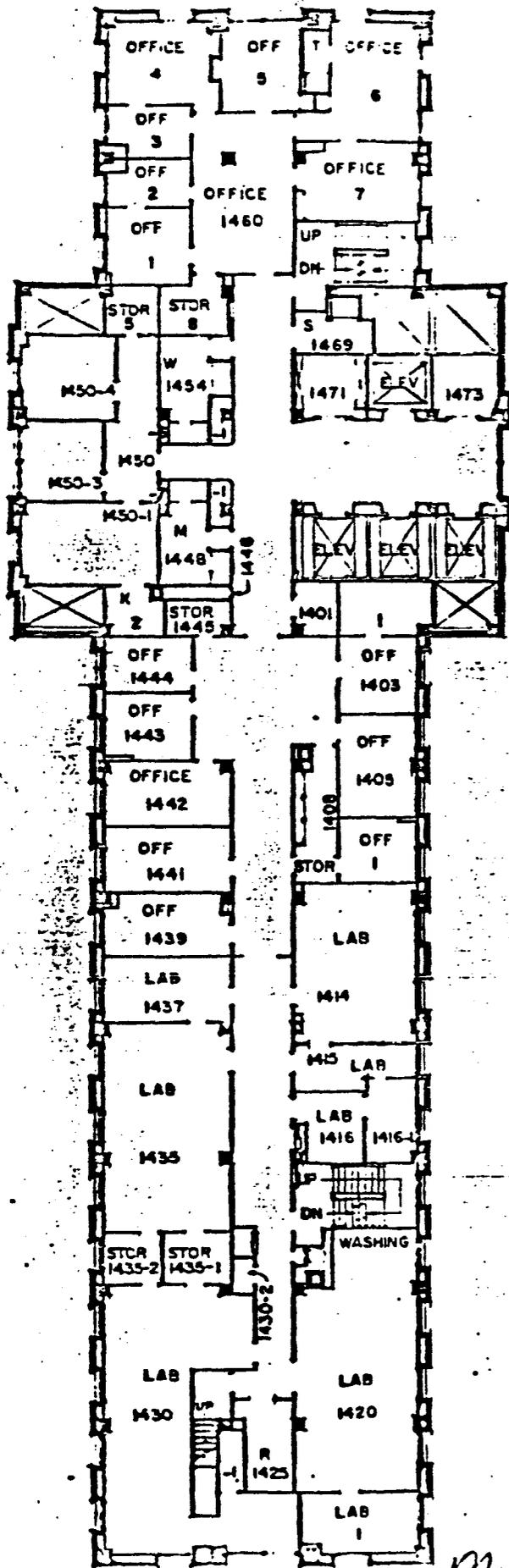
NINTH FLOOR

MAYO



TENTH FLOOR

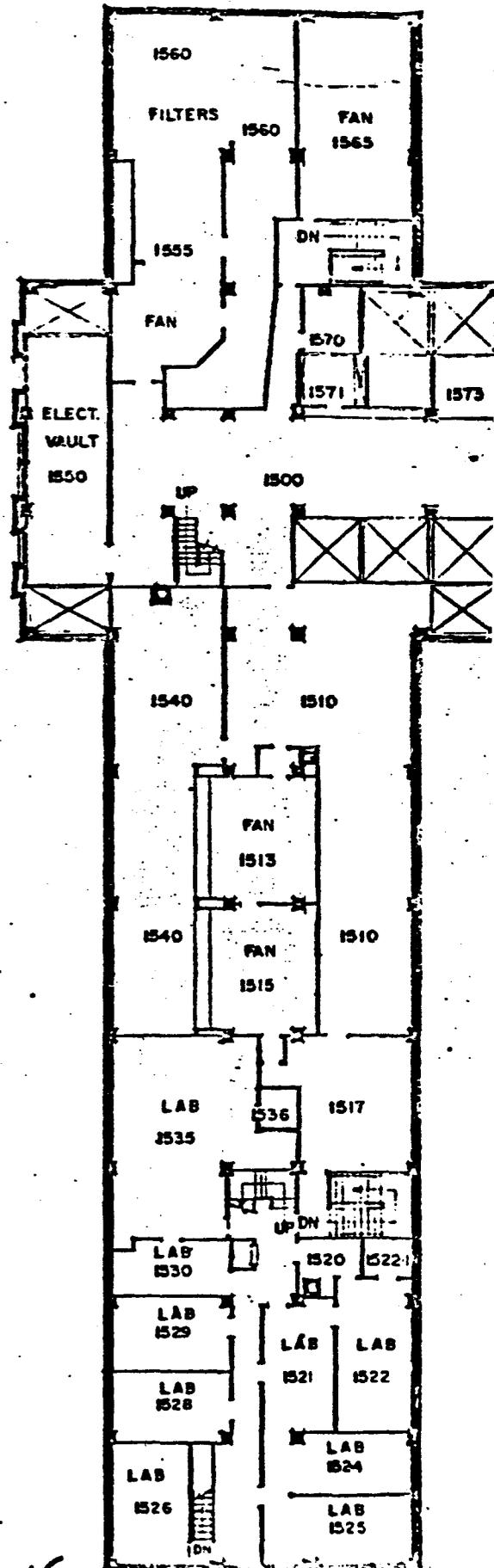
Microbiology



FOURTEENTH FLOOR

Microbiology

MAYO



FIFTEENTH FLOOR



UNIVERSITY OF MINNESOTA
TWIN CITIES

Department of Microbiology
Medical School
1060 Mayo Memorial Building, Box 196
420 Delaware Street S.E.
Minneapolis, Minnesota 55455

January 4, 1982

Health Science Planning Office

To the Office:

The field of microbiology has undergone an impressive expansion over the past decade. This has included such areas as recombinant DNA technology, the development and application of monoclonal antibodies, and microbial biotechnology. The Microbiology Department, once ranked among the top ten departments in the country (by the American Council for Graduate Education), has slowly slipped out of that category of excellence. To a large extent this has been due to our failure to keep pace with an expanded need for space, equipment, and personnel. (The Microbiology Department has had no net increase in faculty over a 20 year period!).

The facilities available presently to the Department of Microbiology include the 9th and 10th floors of Mayo (14,642 sq. ft.), some laboratory space in the basement of Diehl Hall (1,414 sq. ft.), an animal research unit in Building B (4,222 sq. ft.) and teaching facilities in Building A (8,743 sq. ft.). The teaching facilities and animal research units are modern, well-designed and adequate. The space on the 9th and 10th floors of Mayo, on the other hand, which represents the main research and research training facility of the department and also houses the administrative offices and library are greatly deficient for the conduct of modern microbiological research and are inadequate considering the responsibilities of the department. These deficiencies have greatly impeded progress in ongoing research, the expansion of existing programs, the development of new research areas, and the training of undergraduate, graduate and postgraduate students. These deficiencies can be summarized as follows:

1. Lack of space. A total of 98 faculty, staff and students are housed and conduct research on the 9th and 10 floors which have available only about 9300 sq. ft. directly usable for research. Not only is there insufficient bench space, there is also insufficient space for equipment. Research has become increasingly complex and sophisticated and requires a large variety of instruments, some of which, such as centrifuges, radioactivity counters, spectrophotometer, freezers, incubators, safety hoods, etc., require a lot of space. In recent years some necessary equipment could not be purchased because there was no place to put it. Overflow of equipment into hallways has been a continuous problem objected to by the Office for Environmental Health and Safety. There is also insufficient office space for faculty and students and there is a great need for conference rooms. Most faculty offices are too small to allow meetings with more than one or two persons. There is only one room available, namely a small departmental library, to hold research group meetings, seminars, journal clubs, staff meetings, etc. The administrative office space is also inadequate.

12,000 sq. ft.

2. Outmoded design of space and support facilities. Many of the laboratories are subdivided into small rooms of 30-40 sq. ft. or less which impairs efficient use of them. Only a few of the laboratories are equipped with safety hoods which are really essential for most microbiological research. They are rather bulky and none could be installed before because of lack of space. There is a need for darkrooms for photographic work. The chemical fume hoods are mostly antiquated and inefficient. Because of overcrowding with respect to people, instruments, and gas burners, etc. most of the rooms are continuously overheated, not only in the summer time, but also in winter, even though all heating units are turned off. The window air conditioners are inadequate to relieve the situation, particularly in winter. They operate very inefficiently and freeze frequently. They also often break down and repair bills are an unnecessary drain on available funds. All refrigerator and incubator rooms are old, inefficient, and in need of repair; temperatures fluctuate by more than 1-3°C. The deionizer which supplies deionized water to the 9th and 10th floors is not working properly most of the time. It is old and needs replacement inclusive of the piping. There is insufficient electrical power on either of the two floors which results in frequent short-outs. The benchtops and floors of many laboratories are excessively corroded and not up to standards required for work with radioisotopes.

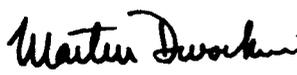
The proposed expansion of the department to the 14th and 15th floors of Mayo and the proposed remodeling and renovation of all the space will greatly relieve the deficiencies summarized above. The plan submitted includes the following:

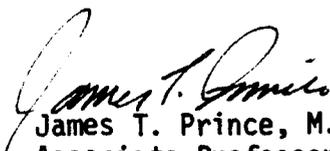
1. Enlargement of some laboratories by removal of walls.
2. Remodeling of some laboratories.
3. Refurbishing and replacement of benchtops and floor tiles because of corrosion and to make laboratories conform to code requirements for radioisotope use.
4. Updating of electric power supply to all floors.
5. Central air conditioning of all floors
6. Central facilities for deionized water on all floors with new pipes.
7. Renovation of all existing cold and warm rooms and chemical fume hoods.
8. Installation of some additional chemical fume hoods, warm and cold rooms and safety hoods.
9. Installation of darkrooms and updating of the general washing and sterilizing facilities.

This will accomplish three things: 1) It will allow us to carry out our existing research program more effectively and to use our financial resources more efficiently. 2) It will give us the option of expanding into new and exciting areas. 3) It will allow us to retain existing high quality faculty and to be competitive in our attempts to recruit a new Head and some new faculty.

Sincerely,


Peter G.W. Plagemann, Ph.D.
Professor


Martin Dworkin, Ph.D.
Professor


James T. Prince, M.S.
Associate Professor

MICROBIOLOGY FACULTY AND SPACE

Diehl Hall, Animal Research Unit,
Mayo Floors 9 and 10

<u>Name</u>		<u>Sq.</u> <u>Ft.</u>	<u>Ass't Post-</u> <u>Prof. doctorals</u>	<u>Graduate</u> <u>Students</u>	<u>Tech-</u> <u>nicians</u>	<u>Part-time</u> <u>Students</u>	<u>Senior</u> <u>Projects</u>	<u>Total</u>
Brand, K. G.	1	1480	1		4	5		11
Cleary, P. P.	1	1052	1	5	2	1	1	12
Dworkin, M.	1	799 ^{2,4}	1	3	1	1	2	9
Faras, A. J.	1	1607 ^{1,2}	3	5	3	2		14
Collett, M.	1	873			1	1		3
Gray, Beulah	1	980		2	2		4	9
Johnson, R. C.	1	1218 ²		3	2	2	2	10
Plagemann, P.	1	1332 ^{1,2}	1	3	5	2	6	18
Rogers, Palmer	1	575		1		1		3
Schlievert, P.	1	974		2	1	1		5
Schmidt, E.	1	194 ^{1,3}	1	2				4
Watson, D.W.	1	621	1		2	3		7
Zissler, J.	1	876 ⁴		1				2
Main Office	5	593				2		7
Teaching Facilities		8743	1		8			9

¹/₂ Share space in Diehl Hall ³/₄ Also has space on the St. Paul campus
²/₄ Share space in Graduate Student Laboratory ⁴/₄ Currently sharing space

SUMMARY

<u>Total Space</u>	<u>Sq. Ft.</u>
Research Laboratories (including Diehl Hall, Animal Res. Unit)	12,912
Cold and warm rooms	424
Faculty and student office space	2,414
Administrative office space	593
Central dishwashing, general instrument, and electron microscope facilities	1,783
Library - Conference Room	327
Teaching Facilities	8,743
	<u>27,506</u>

Sq. Ft.	LAB	OFFICE	WARM ROOM	REFRIG.	WASHING HW TOILET	DARK ROOM	INSTRUMENT	STORAGE	UTILITY	SERVICE AREA	CONFERENCE LIBRARY	KITCHEN	TOTAL Sq. FT.
<u>9th Floor</u>													
PRESENT	4599	1092	143	222	439	94	456			256			7301
PROPOSED	5154	813	143	222	721	108				140			7301
<u>10th Floor</u>													
PRESENT	4697	1376	28	258						255	727		7341
PROPOSED	5277	890	28	258						161	727		7341
<u>14th Floor</u>													
PRESENT	2715	3072		92				458		97	224	53	6711
PROPOSED	2683	1829	95	305		121	470	308		82	880	53	6826
<u>15th Floor</u>													
PRESENT	2143								30				2173
PROPOSED	1769	132	94	146					30				2173
<u>TOTAL</u>													
PRESENT	14,154	5540	171	572	439	94	456	458	30	608	951	53	23,526
PROPOSED	14,883	3664	362	931	721	229	470	308	30	383	1607	53	23,641

12/22/51



UNIVERSITY OF MINNESOTA
TWIN CITIES

Health Sciences Planning Office
Physical Planning
Health Sciences Complex
Box 726 Mayo Memorial Building
Minneapolis, Minnesota 55455
(612) 373-8981

January 11, 1982

TO: Paul Maupin
FROM: Tom Kyle *Tom*
SUBJECT: Microbiology & Public Health
Remodeling Projects

Attached is a reply to your request for an analysis of the above projects. If you require additional information let me know.

TK:mka

January 1982

Report prepared by the Health Sciences Planning Office Re:

1981 - 1983 Capital Request
Microbiology Department and
School of Public Health
Renovation in Mayo Building

In review of the proposals to remodel vacated clinic space and certain other areas of the Mayo Building for Microbiology and Public Health, questions arose as to what, if any, changes in planning might be made to conserve funds.

One suggestion was to exchange space assignments on floors 11, and 14 of Mayo Tower, giving 9, 10, 11 to Microbiology and 12, 13 and 14 to Public Health. Public Health presently occupies floor 11 and their program requires complete maximum renovation from office and small meeting rooms to large laboratories with full services. Floor 14 still requires extensive renovation regardless of which occupant uses it, as it is antiquated and unsuitable for either office or laboratory space.

If the space assignment is left the way it is the University will conserve the cost of maximum remodeling, including wall and door relocations, for an entire floor. The present space assignment is:

Microbiology - Floors 9, 10, 14 and 15
Public Health - Floors 1, 2, 3, 11, 12 and 13

We recommend continuing with this space assignment.

Another question arose as to the number of contracts that should be considered for construction in an effort to maximize the amount of construction that can be accomplished with available funds. We suggest that one single prime contract for both projects would accomplish the task better than any other arrangement of contracts.

Experience on other renovation projects show that one general contractor can be more efficient in a phased construction or renovation project. The coordination problems are better kept under one control and a single contractor will be able to move crews from phase to phase and project to project - thus keeping trades continuously on site. One continuous flow of activity is more assured.

Additionally in Mayo it would be wiser to have one Mechanical Subcontractor as the different phases and projects all share mechanical systems. This approach should limit the number of shut-downs and inconvenience to the ongoing programs in the rest of the Mayo structure. Having more than one contractor will complicate the coordination of plans, specifications, and approvals and supervision and we are sure it would be more costly.

In summary we recommend that the phased projects be designed as one project and awarded to a single prime contractor and that the space assignments remain as they are.

Both the School of Public Health and Microbiology Department remodeling projects need to employ phased construction as both departments can not vacate the spaces they now occupy. They will have to move out of specific areas to accomodate construction and then occupy the completed areas as they become available.

Floor 14 and 15 presumably will be vacated by moves to B/C and will be available for Microbiology. They do not occupy any of the space assigned to them on floors 14 and 15 at this time. The University has employed this method of construction progress successfully many times in the past, out of the same necessities. It works well as long as the planning and coordination of mechanical services is thoughtful and user cooperation is preserved.

Both projects should be examined and various areas assigned 'a degree of renovation number' to assist in planning, design and cost management. When the designers analyze the programs they will divide the areas into five groups with the least amount of work required being represented by number 1 and the maximum remodeling category represented by number 5. Each category can be assigned a probable cost per square foot to assist in computing construction costs and making adjustments to programs and schedules in an effort to reduce cost.

Preliminary investigation of the Departments Programs indicate the following assumptions:

Airconditioning is necessary for all spaces included in these projects. Electrical service improvements are required on all floors involved. Fire sprinklers are required according to the University's Code Officials.

School of Public Health

Assignable Space Involved in Remodeling

Category	1	2,430 SF
Category	2	5,881 SF
Category	3	3,987 SF
Category	4	6,906 SF
Category	5	10,142 SF

The general requirement by program for the School of Public Health is for offices, examinations rooms, and consultation rooms for faculty and research staff. Space requirements and functional adjacencies are for program divisions to be consolidated or expanded in present locations on Floors 11, 12 and 13 and in allocated space on floors 1, 2 and 3.

Preliminary Cost Assumptions Are:

Assignable Space	\$1,429,331.00
Non-Assignable Space	302,445.00
Mechanical Systems	1,356,824.00
Non-Building Cost	<u>940,400.00</u>

Project Total Cost \$4,029,000.00 escalated for 1982

Department of Microbiology

Assignable space involved in remodeling includes the 14th and 15th floors of Mayo and specific areas of floors 9 and 10. The proposal is to renovate 12,000 net square feet of which 9,000 n.s.f. is vacated space on the upper two floors and the remaining 3,000 n.s.f. to be identified on the lower two floors.

The general requirement by program for the Department of Microbiology is for laboratory and office space on floor 14 and 15 to fulfill their expansion commitment. Fume hoods, airconditioning, cold rooms, larger spaces for lab work, deionized water, and a dark room are primary directions to be taken in setting design criteria.

Preliminary Cost Assumptions Are:

Assignable Space	\$1,114,000.00
Non-Assignable Sapce	100,000.00
Mechanical Systems	650,000.00
Non-Building Costs	<u>700,000.00</u>

Project Total Cost \$2,564,000.00 escalated for 1982

School Public Health Schedule of Planning and Construction

Design	9-1-82	to	1-15-83
Contracts Documents	1-1-83	to	4-15-83
Bid/Award	4-15-83	to	6-1-83
Construction	6-1-83	to	6-1-84
Occupy			8-15-84

Department of Microbiology Schedule of Planning and Construction

Design	9-1-82	to	1-15-83
Contracts Documents	1-1-83	to	4-15-83
Bid/Award	4-15-83	to	6-1-83
Construction	6-1-83	to	6-1-84
Occupy			8-15-84

The schedules for each department are identical in a general sense but do not reflect the phases of construction which will be developed by the design team. The Mechanical systems will be common to both departmental areas thus they will determine final schedule.



UNIVERSITY OF MINNESOTA
TWIN CITIES

Health Sciences Planning Office
Physical Planning
Health Sciences Complex
Box 726 Mayo Memorial Building
Minneapolis, Minnesota 55455

(612) 373-8981

January 21, 1982

TO: Cherie Perlmutter
FROM: Paul Maupin *Paul*
SUBJECT: Microbiology and Public Health
Remodeling Projects

Attached is an analysis of the Microbiology and Public Health remodeling projects prepared by our staff. I hope you find the information useful. Please give me a call if you need additional material.

PJM:mka

cc: David Preston
Clinton Hewitt
Dennis Watson
Lee Stauffer
Jim Prince
Edith Layasmeyer

ENC



UNIVERSITY OF MINNESOTA
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In summary we recommend that the phased projects be designed as one project and awarded to a single prime contractor and that the space assignments remain as they are.

Both the School of Public Health and Microbiology Department remodeling projects need to employ phased construction as both departments can not vacate the spaces they now occupy. They will have to move out of specific areas to accommodate construction and then occupy the completed areas as they become available.

Floor 14 and 15 presumably will be vacated by moves to B/C and will be available for Microbiology. They do not occupy any of the space assigned to them on floors 14 and 15 at this time. The University has employed this method of construction progress successfully many times in the past, out of the same necessities. It works well as long as the planning and coordination of mechanical services is thoughtful and user cooperation is preserved.

Both projects should be examined and various areas assigned 'a degree of renovation number' to assist in planning, design and cost management. When the designers analyze the programs they will divide the areas into five groups with the least amount of work required being represented by number 1 and the maximum remodeling category represented by number 5. Each category can be assigned a probable cost per square foot to assist in computing construction costs and making adjustments to programs and schedules in an effort to reduce cost.

Preliminary investigation of the Departments Programs indicate the following assumptions:

Airconditioning is necessary for all spaces included in these projects. Electrical service improvements are required on all floors involved. Fire sprinklers are required according to the University's Code Officials.

School of Public Health

Assignable Space Involved in Remodeling

Category	1	2,430 SF
Category	2	5,881 SF
Category	3	3,987 SF
Category	4	6,906 SF
Category	5	10,142 SF

The general requirement by program for the School of Public Health is for offices, examinations rooms, and consultation rooms for faculty and research staff. Space requirements and functional adjacencies are for program divisions to be consolidated or expanded in present locations on Floors 11, 12 and 13 and in allocated space on floors 1, 2 and 3.

Preliminary Cost Assumptions Are:

Assignable Space	\$1,429,331.00
Non-Assignable Space	302,445.00
Mechanical Systems	1,356,824.00
Non-Building Cost	<u>940,400.00</u>

Project Total Cost \$4,029,000.00 escalated for 1982

Department of Microbiology

Assignable space involved in remodeling includes the 14th and 15th floors of Mayo and specific areas of floors 9 and 10. The proposal is to renovate 12,000 net square feet of which 9,000 n.s.f. is vacated space on the upper two floors and the remaining 3,000 n.s.f. to be identified on the lower two floors.

The general requirement by program for the Department of Microbiology is for laboratory and office space on floor 14 and 15 to fulfill their expansion commitment. Fume hoods, airconditioning, cold rooms, larger spaces for lab work, deionized water, and a dark room are primary directions to be taken in setting design criteria.

Preliminary Cost Assumptions Are:

Assignable Space	\$1,114,000.00
Non-Assignable Sapce	100,000.00
Mechanical Systems	650,000.00
Non-Building Costs	<u>700,000.00</u>

Project Total Cost \$2,564,000.00 escalated for 1982

School Public Health Schedule of Planning and Construction

Design	9-1-82	to	1-15-83
Contracts Documents	1-1-83	to	4-15-83
Bid/Award	4-15-83	to	6-1-83
Construction	6-1-83	to	6-1-84
Occupy			8-15-84

Department of Microbiology Schedule of Planning and Construction

Design	9-1-82	to	1-15-83
Contracts Documents	1-1-83	to	4-15-83
Bid/Award	4-15-83	to	6-1-83
Construction	6-1-83	to	6-1-84
Occupy			8-15-84

The schedules for each department are identical in a general sense but do not reflect the phases of construction which will be developed by the design team. The Mechanical systems will be common to both departmental areas thus they will determine final schedule.



UNIVERSITY OF MINNESOTA
TWIN CITIES

x-copy
Health Sciences Planning Office
Physical Planning
Health Sciences Complex
Box 726 Mayo Memorial Building
Minneapolis, Minnesota 55455
(612) 373-8981

May 27, 1982

Dean N. L. Gault
Medical School
1360 Mayo
Minneapolis Campus

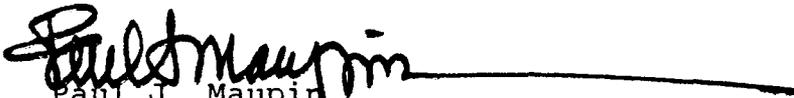
RE: 1983 - 1985 Capital Improvement Pre-Program

Dear Dean Gault:

In response to your request, we have prepared a pre-program document for your review for the Department of Microbiology's Legislative Request for Capital Improvement funds.

Please contact me if you need additional information or wish to discuss the pre-program.

Sincerely,


Paul J. Maupin
Health Sciences Planning Coordinator

PJM:mka

cc: Tom Kyle
File
Cherie Perlmutter



UNIVERSITY OF MINNESOTA
TWIN CITIES

Office of the Assistant Vice President

APR 19 1982

*J. J. ...
D. W. Watson*

Physical Planning
340 Morrill Hall
100 Church Street S.E.
Minneapolis, Minnesota 55455

April 15, 1982

Dean N.L. Gault
Medical School
1360 Mayo
Minneapolis Campus

RE: 1983-85 Legislative Request for Capital Improvements

Dear Dean Gault:

The Budget Executive has identified a preliminary list of 1983-85 Capital Request items. It includes the Microbiology Remodeling Project. Before making their final recommendations to the Central Officers, the Budget Executive will require more specific documentation of program content and project costs.

To accomplish this within the two month time period for receiving this information, a form of program documentation less detailed than a building program is needed. This program effort should not need to be duplicated when a full building program is needed. Therefore, we have chosen to identify this initial step in developing a building program documentation as the "pre-programming" phase. Essentially this phase provides two things: 1) a rationale and justification for the project which will support and validate the reasonableness and need of space improvements being requested and 2) for purposes of establishing cost parameters, define the function, quantity and quality of space improvements needed.

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To get the process started, I would like for you to appoint a key department person (or persons) who can work with representatives of my staff to provide information on project justification and specific needs. We will initiate "pre-programming" as soon as we are advised of your appointment(s).

If you have any questions or wish to discuss the procedure in more detail, please call me.

Sincerely,

Clinton N. Hewitt

Clinton N. Hewitt
Assistant Vice President
Physical Planning

CNH/hd
cc: Budget Executive



I. Introduction

A. Historical and General Background

The field of Microbiology has undergone an impressive expansion over the past decade. This has included such areas as recombinant DNA technology, the development and application of monoclonal antibodies, and microbial biotechnology. The Microbiology Department, once ranked among the top ten departments in the country (by the American Council for Graduate Education), has slowly slipped out of that category of excellence. This has been largely due to its failure to keep pace with an expanded need for space, equipment, and personnel. The Microbiology Department has had no net increase in faculty in twenty years, although the number students has dramatically increased.

The Basic Science Departments provide instruction for Health Science Students in all disciplines and approximately 20% of instruction is provided to other collegiate units. Microbiology also serves as a department in the College of Biological Sciences and is responsible for all instruction of Microbiology for the University of Minnesota.

The Health Sciences Master Plan and the resultant Health Sciences Expansion Project developed over ten years ago provided expansion space for 5 of the 6 Basic Sciences departments in the Jackson/Owre/Millard/Lyon Complex and in Unit A. Needed expansion space for the 6th department, Microbiology, was to be provided in Mayo Building vacated by departmental moves to the new Unit B/C (Phillips-Wangenstein Building).

Funds for planning and construction were included in the University's 1981 Capital Improvement Request to the State Legislature.

B. Current Status and Needs Statement

The facilities presently available to the Department of Microbiology include the 9th and 10th floors of Mayo (14,642 sq. ft.), some Laboratory space in the basement of Diehl Hall (1,414 sq. ft), and animal research unit in Building B/C (4,222 sq. ft.), and teaching facilities

in Unit A (8,743 sq. ft.). The teaching facilities and animal research areas are modern, well designed and adequate. The space on the 9th and 10th floors of Mayo, on the other hand, which represents the main research and training facility of the department and also house the administrative offices and library are extremely deficient for the conduct of modern microbiological research and are inadequate considering the responsibilities of the department.

A total of 98 faculty, staff and students conduct research on the 9th and 10th floors which have available only about 9300 sq. ft. directly usable for research.

Not only is there insufficient bench space, there is also inadequate space for equipment. As research becomes more sophisticated and complex, so does the requirement for equipment such as centrifuges, gamma counters, spectrophotometers, incubators, etc. Presently some necessary equipment can not be purchased because of the lack of space. Additionally, as far as equipment is concerned, there is insufficient electrical service to the area and cooling requirements demand improvement.

There is also insufficient office space for faculty and the student increase resulting from the Health Sciences Expansion Project. There are no conference rooms available in the Mayo Building for the department's need to hold research group meetings, seminars, journal clubs, or staff meetings.

The laboratories in the department are presently used as radioisotope labs are outmoded and depreciating rapidly. Only a few of the laboratories are equipped with safety hoods which are essential for most microbiological research. There is no space to install additional hoods without remodeling involving walls and casework changes. There is a pressing need for darkrooms for photographic work. Most of the rooms are continuously overheated because of overcrowding people and instruments and the existing window air conditioning units are not up to the task. All controlled environment rooms (incubation and refrigeration rooms) are old, inefficient and in need of repair as temperatures fluctuate more than 1-3°C. The deionized water system to the 9th and 10th floors is usually not working properly and a new system or partial system is required.

II. Academic Brief

The goal of the Department of Microbiology is (1) to educate and train professional microbiologists and (2) to provide the microbiology component of medical and paramedical education. We achieve this goal through the specific objectives outlined in graduate and undergraduate courses, research and graduate training.

Undergraduate Program

The Department offers two baccalaureate degrees in microbiology: The B.S. through the College of Biological Sciences and the B.A. through the College of Liberal Arts. An average of 60 undergraduate students annually declare microbiology as their major.

In addition, the Department serves the whole University in the discipline of microbiology. Following is an analysis of the departmental affiliation of non-health science students other than CBS or CLA enrolled in microbiology courses: College of Education, Institute of Agriculture, School of Public Health, College of Veterinary Medicine, Institute of Technology.

Professional Programs

The Department has the responsibility of teaching microbiology to medical students and dental students. In addition, the following paramedical students are serviced: Medical Technology, Dental Hygiene, School of Nursing.

Graduate Programs

The Department offers two graduate programs in microbiology:

1. The M.S. Degree in Medical Microbiology. This is a Plan B two-year program and requires course work, a research paper, and preceptorships at collaborating hospitals. Ten students are currently enrolled. All core faculty members are involved. These students are teaching assistants for the Microbiology Course for Medical Students.
2. The Ph.D. Degree in Microbiology. This is a Plan A program and requires course work, laboratory research, and a doctoral dissertation, and requires approximately five years to complete. It involves the core faculty housed in the microbiology department in addition to 30 faculty holding joint appointments in Microbiology but housed in other areas. This program also includes students from the University of Minnesota, Duluth and Mayo Clinic, who take their course work on the Minneapolis campus. Seventy-two students are currently enrolled. These students are the laboratory instructors for all microbiology courses in the department, other than the medical student course.

Continuing Education

The Department offers three courses (one each quarter) through the Extension Division. The number of students is included in the table under Registered Students.

Research

All members of the Department are engaged in research and graduate training. Eleven of the fourteen faculty members are funded from outside agencies for a total of \$1,031,899 in research grants annually. Graduate students are supported from those research grants or from Training Grants which total \$231,276 annually.

TABLE OF ORGANIZATION

Regents' Professor and Head: Dennis W. Watson

<u>Committee on Graduate Studies (Ph.D. Program)</u>	<u>Committee on Graduate Studies (M.S. Med. MicB)</u>	<u>Committee on Undergraduate Studies</u>	<u>Coordinators/ Instructors MicB Courses</u>	<u>Research and Graduate/Undergraduate Training</u>
P. P. Cleary, Chairman	J. T. Prince, Chairman	P. Rogers, Chairman	Medical School: K. G. Brand	K. G. Brand
J. F. Zissler	G. M. Ederer	B. H. Gray	Dental School: D. Anderson	M. Dworkin
R. C. Johnson	C. Wells	R. Crawford	Paramedical: J. T. Prince	A. J. Faras
E. L. Schmidt	B. H. Gray	Elected Student	R. C. Johnson	R. C. Johnson
P. G. Plagemann	R. Bey		P. P. Cleary	P. G. Plagemann
R. L. Mitchell (Student)	P. Schnitzer (Student)		P. M. Schlievert	P. Rogers
			B. H. Gray	E. L. Schmidt
			Basic Science: M. Dworkin	P. P. Cleary
			P. Chapman	B. H. Gray
			C. Woodward	P. M. Schlievert
			P. Plagemann	M. Collett
			P. Rogers	H. C. Tsien
			E. Schmidt	R. M. Wohlhueter
			J. Zissler	D. W. Watson
			R. Wohlhueter	
			A. Faras	

III. Facility Requirements

This proposal is for the expansion of the Department of Microbiology to the 14th and 15th floors of the Mayo Building and the proposed remodeling and renovation of all space in the department. Attached is a tabulation of the square footages in the department.

The planning criteria must include the following:

1. Enlargement of existing laboratories by removing all wall partitions.
2. Renovation of laboratories to current research standards.
3. Replacement of benchtops and installation of new casework where necessary.
4. Updating and improving electric power supply as necessary on all floors involved.
5. Central airconditioning of all spaces in department in Mayo.
6. New deionized water system.
7. Renovation of existing environmental rooms and chemical fume hoods.
8. Installation of additional environmental rooms, chemical fume hoods and radioisotope hoods.
9. Creation of darkroom areas.
10. Improved general washing and sterilizing facilities.
11. Creation of conference rooms.
12. Improved general office and faculty/staff office areas.

Attached here is a tabulation of the proposed functional activities (spaces) and a listing of the number of people occupying space.

The site selection was defined in the Master Plan, as stated in the introduction, as existing space on floors 9 and 10 in Mayo Building and the addition of floors 14 and 15 of the Mayo Building as Microbiology's space increase under the Health Sciences Expansion Project. The proposal is for 12,200 sq. ft., of expansion space.

	Lab	Office	Warm Room	Refrig.	Washing Autoclave	Darkroom	Instrument	Storage	Utility	Service Area	Conference Library	Kitchen	Total Sq. Ft.
<u>9th Floor</u>													
Present	4599	1092	143	222	439	94	456			256			7301
Proposed	5154	813	143	222	721	108				140			7301
<u>10th Floor</u>													
Present	4697	1376	28	258						255	727		7341
Proposed	5277	890	28	258						161	727		7341
<u>14th Floor</u>													
Present	2715	3072		92				458		97	224	53	6711
Proposed	2683	1829	95	305		121	470	308		82	880	53	6826
<u>15th Floor</u>													
Present	2143								30				2173
Proposed	1769	132	96	146					30				2173
<u>Total</u>													
Present	14,154	5540	171	572	439	94	456	458	30	608	951	53	23,526
Proposed	14,883	3664	362	931	721	229	470	308	30	383	1607	53	23,641

MICROBIOLOGY FACULTY AND SPACE

Diehl Hall, Animal Research Unit,
Mayo Floors 9 and 10

		Sq. Ft.	Ass't Prof.	Post- doctorals	Graduate Students	Tech- nicians	Part-time Students	Senior Projects	Total
Grand, K. G.	1	1480	1			4	5		11
Cleary, P. P.	1	1052		1	5	2	1	1	12
Dworkin, M.	1	799 ^{2,4}		1	3	1	1	2	9
Faras, A. J.	1	1607 ^{1,2}		3	5	3	2		14
Collett, M.	1	873				1	1		3
Gray, Beulah	1	980			2	2		4	9
Johnson, R. C.	1	1218 ²			3	2	2	2	10
Plagemann, P.	1	1332 ^{1,2}	1	3	5	2	6		18
Rogers, Palmer	1	575			1		1		3
Schlievert, P.	1	974			2	1	1		5
Schmidt, E.	1	194 ^{1,3}	1		2				4
Watson, D.W.	1	621		1		2	3		7
Zissler, J.	1	876 ⁴			1				2
Main Office	5	593					2		7
Teaching Facilities		8743		1		8			9

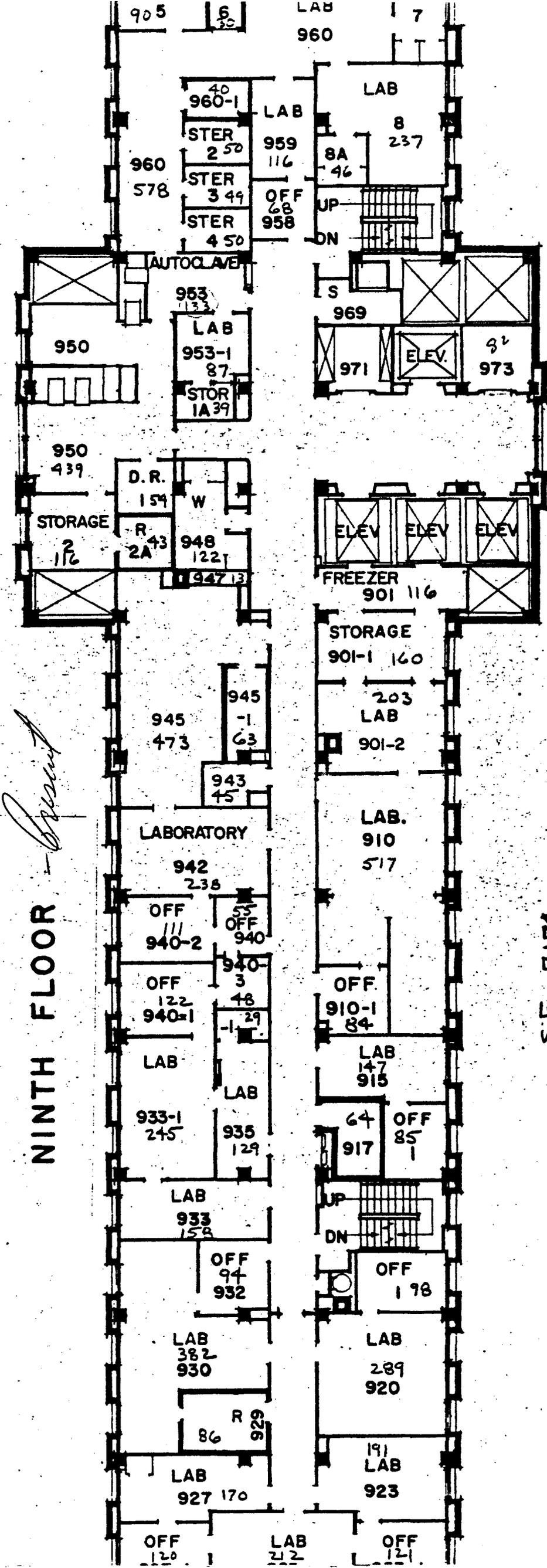
✓ Share space in Diehl Hall

✓ Share space in Graduate Student Laboratory

✓ Also has space on the St. Paul campus
Currently sharing space

SUMMARY

Total Space	Sq. Ft.
Research Laboratories (including Diehl Hall, Animal Res. Unit)	12,912
Cold and warm rooms	424
Faculty and student office space	2,414
Administrative office space	593
Central dishwashing, general instrument, and electron microscope facilities	1,783
Library - Conference Room	227
Teaching Facilities	8,743
	<u>27,596</u>

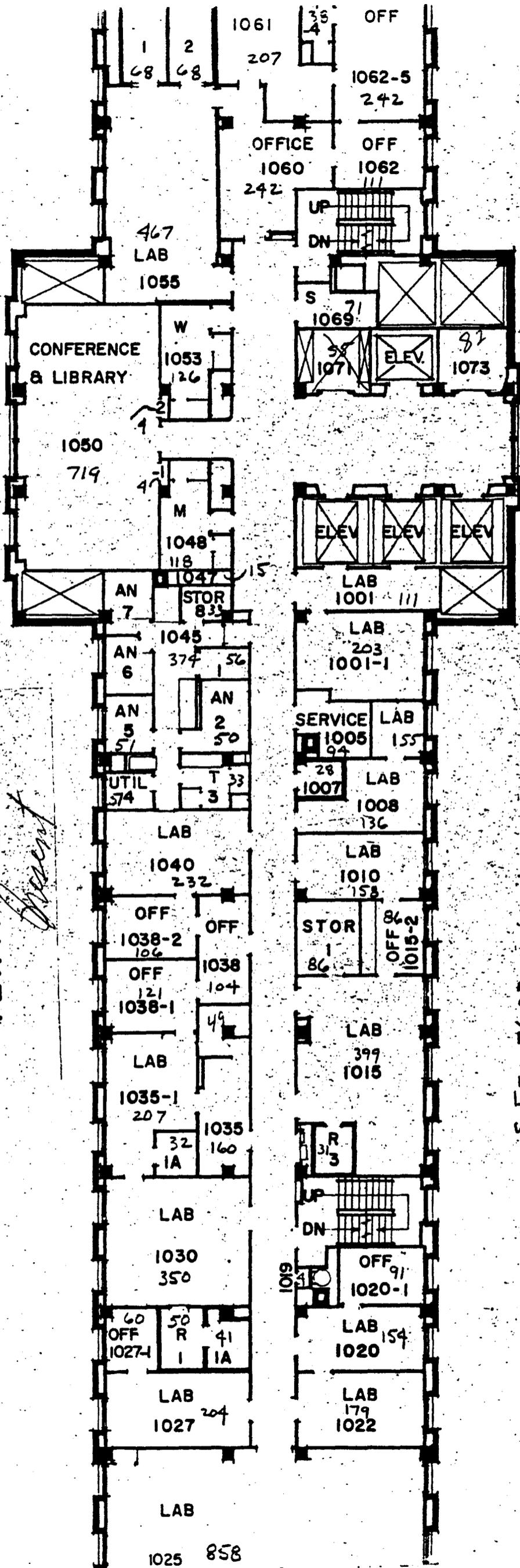


Basement

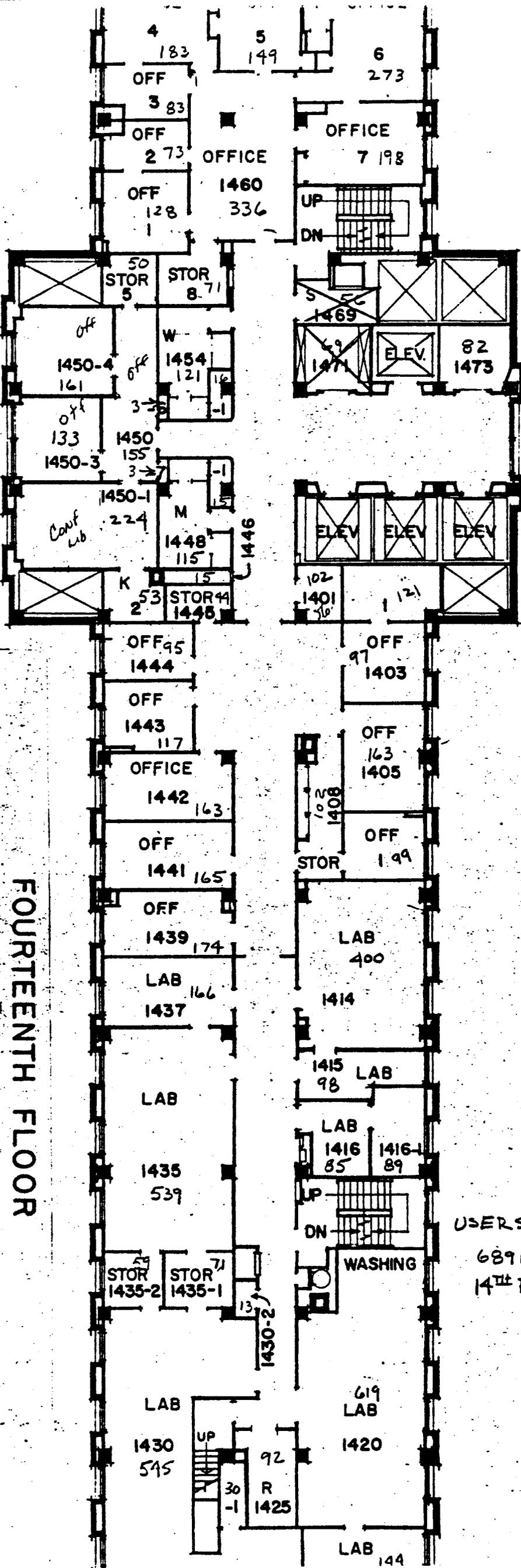
NINTH FLOOR

S.F. 7174 SQ FT

TENTH FLOOR



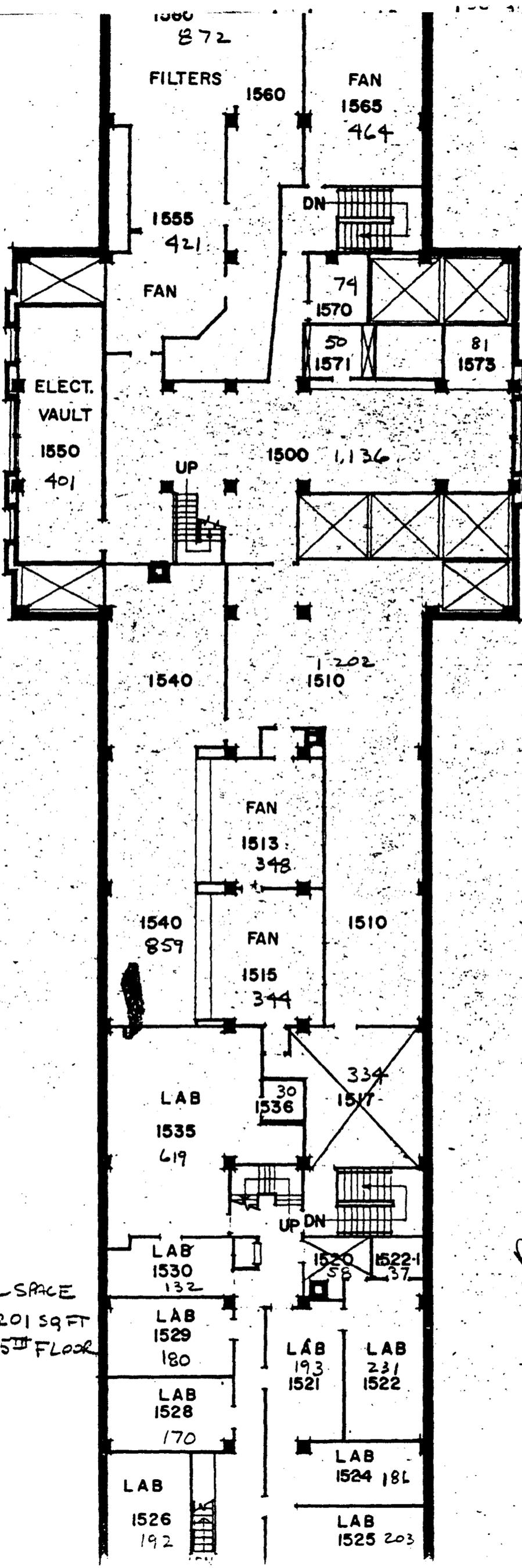
S.F. = 7607 sqft



FOURTEENTH FLOOR

Drawn

RED #5 ARE
 USER SPACE
 6891 SQ FT
 14TH FLOOR



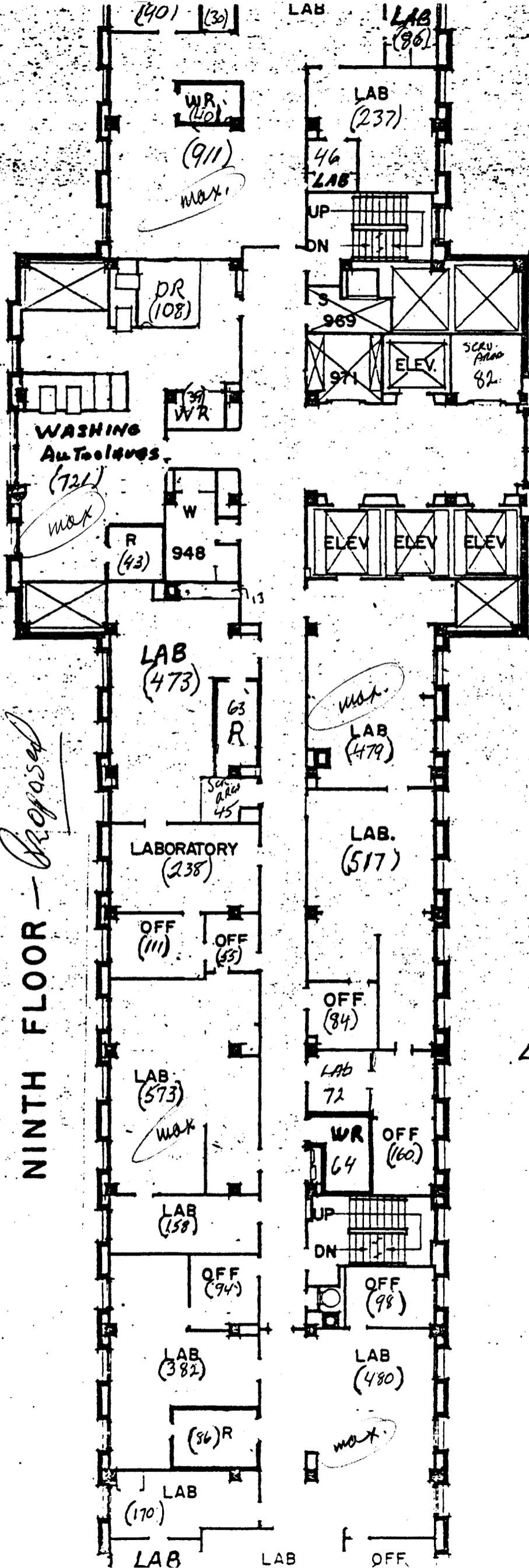
FIFTEENTH FLOOR

Boonart

E SQFT.

USER SPACE
2201 SQFT
15TH FLOOR

NINTH FLOOR - Proposed

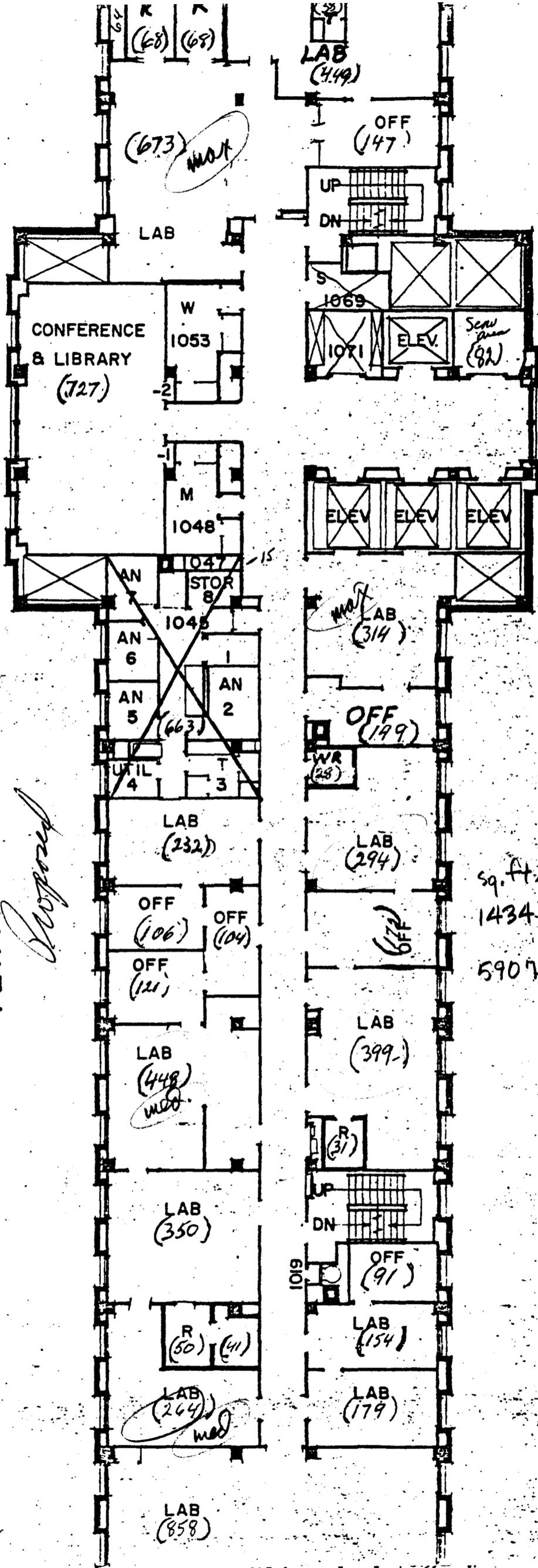


sq. ft.
 3164 - maximum renovation
 4137 - minimum

12/29/81

TENTH FLOOR

Proposed



sq. ft.
 1434 - medium
 5907 - minimum

(68) (69)

LAB (449)

OFF (147)

(673) *med*

LAB

CONFERENCE & LIBRARY (727)

W 1053

M 1048

1047
STOR 8

1045

AN 6

AN 5

AN 2

UTIL 4

T 3

LAB (232)

OFF (106)

OFF (104)

OFF (121)

LAB (448) *med*

LAB (350)

R (50) (41)

LAB (264) *med*

LAB (858)

UP
DN

1069

1071

ELEV.

Sewer (82)

ELEV

ELEV

ELEV

LAB (314) *med*

OFF (199)

WR (25)

LAB (294)

(672)

LAB (399)

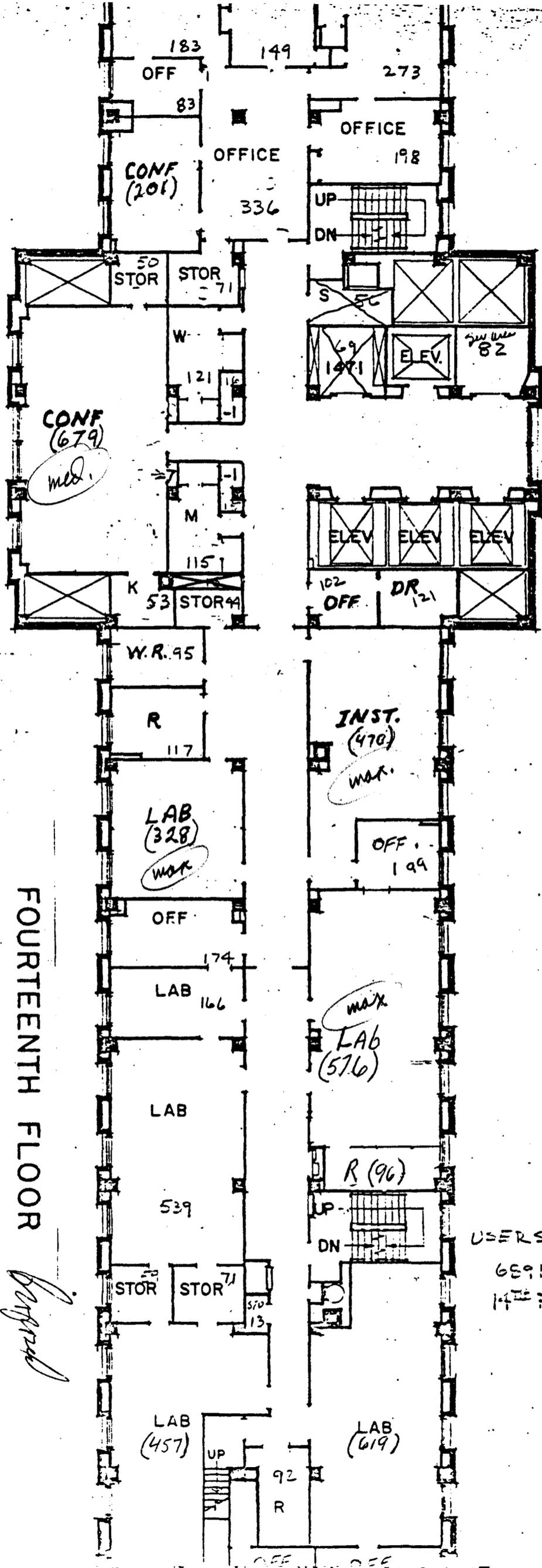
R (31)

UP
DN

OFF (91)

LAB (154)

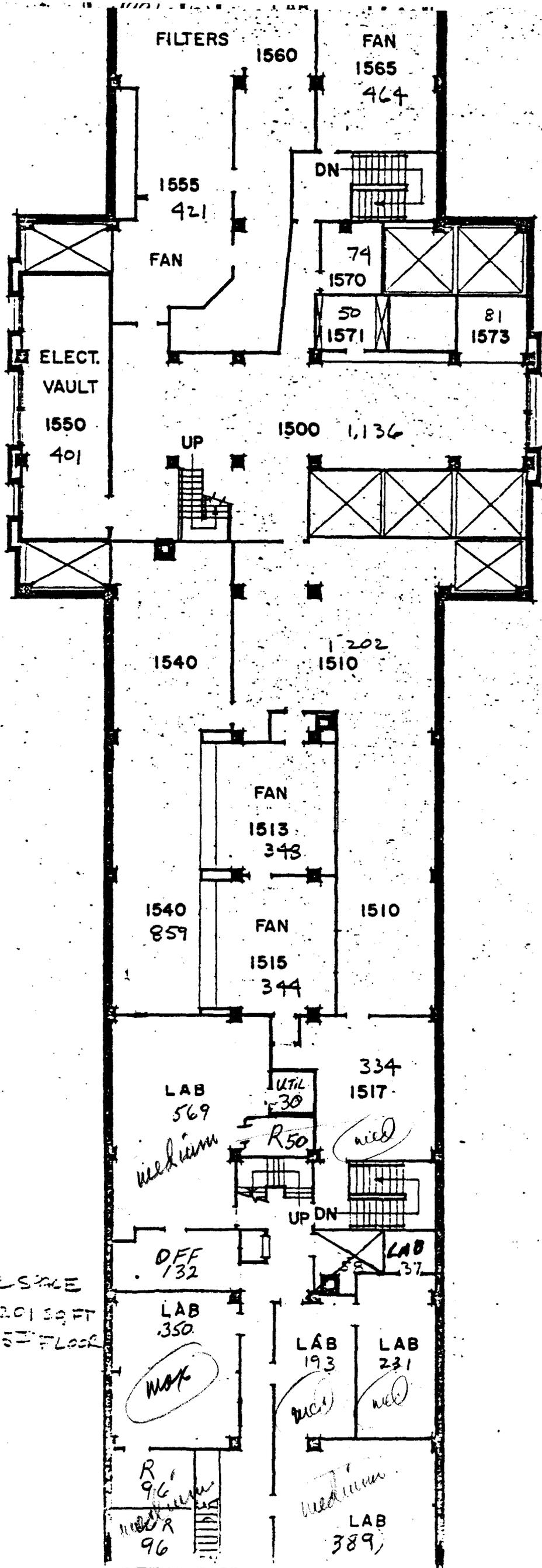
LAB (179)



FOURTEENTH FLOOR

Barford

REDS ARE
 USERSPACE
 6891 SQ FT
 14th FLOOR



Approved

FIFTEENTH FLOOR

sq. ft.

USEFUL SPACE
2201 sq. ft.
15th FLOOR

max

need

need

medium

LAB 389



UNIVERSITY OF MINNESOTA
TWIN CITIES

Health Sciences Planning Office
Physical Planning
4103 Powell Hall, Box 75
500 Essex Street S.E.
Minneapolis, Minnesota 55455
(612) 373-8981

May 28, 1980

TO: Microbiology Department
Expansion to Floors 14 & 15
Mayo Hospital Tower

FROM: Robert M. Swanson *RS*
Asst. Health Sciences Planning Coordinator

SUBJECT: Proposed Schedule
Request by Cheri Perlmutter
(May 27, 1980)

For the purpose of obtaining grant funding for the future Microbiology Department expansion to the Mayo Hospital floors 14 and 15, the following proposed schedule was transmitted to Ms. Perlmutter by Paul Maupin.

- Architects begin Schematic design (1 month) July 1, 1981
- Architects begin Design Development (3 months) August 1, 1981
- Architects begin contract documents (6 months) November 1, 1981
- University Reviews for final contract documents (1 month) May 1, 1982
- Bid Period (1 month) June 1, 1982
- Receive bids and review (1 month) July 1, 1982
- Award the Contract (2 weeks) August 1, 1982
- Construction Begins (12 months) August 15, 1982
- Substantial Completion (2 weeks) August 15, 1983



UNIVERSITY OF MINNESOTA
TWIN CITIES

Office of the Assistant Vice President

APR 19 1982

*J. P. ...
D. W. Waterman*

Physical Planning
340 Morrill Hall
100 Church Street S.E.
Minneapolis, Minnesota 55455

April 15, 1982

Dean N.L. Gault
Medical School
1360 Mayo
Minneapolis Campus

RE: 1983-85 Legislative Request for Capital Improvements

Dear Dean Gault:

The Budget Executive has identified a preliminary list of 1983-85 Capital Request items. It includes the Microbiology Remodeling Project. Before making their final recommendations to the Central Officers, the Budget Executive will require more specific documentation of program content and project costs.

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If you have any questions or wish to discuss the procedure in more detail, please call me.

Sincerely,

Clinton N. Hewitt

Clinton N. Hewitt
Assistant Vice President
Physical Planning

CNH/hd
cc: Budget Executive



Tom



UNIVERSITY OF MINNESOTA
TWIN CITIES

Health Sciences Planning Office
Physical Planning
Health Sciences Complex
Box 726 Mayo Memorial Building
Minneapolis, Minnesota 55455
(612) 373-8981

May 27, 1982

Dean N. L. Gault
Medical School
1360 Mayo
Minneapolis Campus

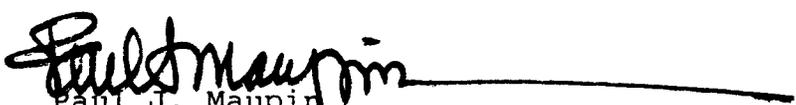
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Paul J. Maupin
Health Sciences Planning Coordinator

PJM:mka

cc: Tom Kyle
File
Cherie Perlmutter



UNIVERSITY OF MINNESOTA
TWIN CITIES

Office of the Assistant Vice President

APR 19 1982

J. P. L.
D. W. Watson

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CNH

Clinton N. Hewitt
Assistant Vice President
Physical Planning

CNH/hd
cc: Budget Executive



Pre-Programming Information Department of Microbiology

University of Minnesota

May 10, 1982

I. Introduction

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in Unit A (8,743 sq. ft.). The teaching facilities and animal research areas are modern, well designed and adequate. The space on the 9th and 10th floors of Mayo, on the other hand, which represents the main research and training facility of the department and also house the administrative offices and library are extremely deficient for the conduct of modern microbiological research and are inadequate considering the responsibilities of the department.

A total of 98 faculty, staff and students conduct research on the 9th and 10th floors which have available only about 9300 sq. ft. directly usable for research.

Not only is there insufficient bench space, there is also inadequate space for equipment. As research becomes more sophisticated and complex, so does the requirement for equipment such as centrifuges, gamma counters, spectrophotometers, incubators, etc. Presently some necessary equipment can not be purchased because of the lack of space. Additionally, as far as equipment is concerned, there is insufficient electrical service to the area and cooling requirements demand improvement.

There is also insufficient office space for faculty and the student increase resulting from the Health Sciences Expansion Project. There are no conference rooms available in the Mayo Building for the department's need to hold research group meetings, seminars, journal clubs, or staff meetings.

The laboratories in the department are presently used as radioisotope labs are outmoded and depreciating rapidly. Only a few of the laboratories are equipped with safety hoods which are essential for most microbiological research. There is no space to install additional hoods without remodeling involving walls and casework changes. There is a pressing need for darkrooms for photographic work. Most of the rooms are continuously overheated because of overcrowding people and instruments and the existing window air conditioning units are not up to the task. All controlled environment rooms (incubation and refrigeration rooms) are old, inefficient and in need of repair as temperatures fluctuate more than 1-3°C. The deionized water system to the 9th and 10th floors is usually not working properly and a new system or partial system is required.

II. Academic Brief

The goal of the Department of Microbiology is (1) to educate and train professional microbiologists and (2) to provide the microbiology component of medical and paramedical education. We achieve this goal through the specific objectives outlined in graduate and undergraduate courses, research and graduate training.

Undergraduate Program

The Department offers two baccalaureate degrees in microbiology: The B.S. through the College of Biological Sciences and the B.A. through the College of Liberal Arts. An average of 60 undergraduate students annually declare microbiology as their major.

In addition, the Department serves the whole University in the discipline of microbiology. Following is an analysis of the departmental affiliation of non-health science students other than CBS or CLA enrolled in microbiology courses: College of Education, Institute of Agriculture, School of Public Health, College of Veterinary Medicine, Institute of Technology.

Professional Programs

The Department has the responsibility of teaching microbiology to medical students and dental students. In addition, the following paramedical students are serviced: Medical Technology, Dental Hygiene, School of Nursing.

Graduate Programs

The Department offers two graduate programs in microbiology:

1. The M.S. Degree in Medical Microbiology. This is a Plan B two-year program and requires course work, a research paper, and preceptorships at collaborating hospitals. Ten students are currently enrolled. All core faculty members are involved. These students are teaching assistants for the Microbiology Course for Medical Students.
2. The Ph.D. Degree in Microbiology. This is a Plan A program and requires course work, laboratory research, and a doctoral dissertation, and requires approximately five years to complete. It involves the core faculty housed in the microbiology department in addition to 30 faculty holding joint appointments in Microbiology but housed in other areas. This program also includes students from the University of Minnesota, Duluth and Mayo Clinic, who take their course work on the Minneapolis campus. Seventy-two students are currently enrolled. These students are the laboratory instructors for all microbiology courses in the department, other than the medical student course.

TABLE OF ORGANIZATION

Regents' Professor and Head: Dennis W. Watson

<u>Committee on Graduate Studies (Ph.D. Program)</u>	<u>Committee on Graduate Studies (M.S. Med. MicB)</u>	<u>Committee on Undergraduate Studies</u>	<u>Coordinators/ Instructors MicB Courses</u>	<u>Research and Graduate/Undergraduate Training</u>
P. P. Cleary, Chairman	J. T. Prince, Chairman	P. Rogers, Chairman	Medical School: K. G. Brand	K. G. Brand
J. F. Zissler	G. M. Ederer	B. H. Gray	Dental School: D. Anderson	M. Dworkin
R. C. Johnson	C. Wells	R. Crawford	Paramedical: J. T. Prince	A. J. Faras
E. L. Schmidt	B. H. Gray	Elected Student	R. C. Johnson	R. C. Johnson
P. G. Plagemann	R. Bey		P. P. Cleary	P. G. Plagemann
R. L. Mitchell (Student)	P. Schnitzer (Student)		P. M. Schlievert	P. Rogers
			B. H. Gray	E. L. Schmidt
			Basic Science: M. Dworkin	P. P. Cleary
			P. Chapman	B. H. Gray
			C. Woodward	P. M. Schlievert
			P. Plagemann	M. Collett
			P. Rogers	H. C. Tsien
			E. Schmidt	R. M. Wohlhueter
			J. Zissler	D. W. Watson
			R. Wohlhueter	
			A. Faras	

III. Facility Requirements

This proposal is for the expansion of the Department of Microbiology to the 14th and 15th floors of the Mayo Building and the proposed remodeling and renovation of all space in the department. Attached is a tabulation of the square footages in the department.

The planning criteria must include the following:

1. Enlargement of existing laboratories by removing all wall partitions.
2. Renovation of laboratories to current research standards.
3. Replacement of benchtops and installation of new casework where necessary.
4. Updating and improving electric power supply as necessary on all floors involved.
5. Central airconditioning of all spaces in department in Mayo.
6. New deionized water system.
7. Renovation of existing environmental rooms and chemical fume hoods.
8. Installation of additional environmental rooms, chemical fume hoods and radioisotope hoods.
9. Creation of darkroom areas.
10. Improved general washing and sterilizing facilities.
11. Creation of conference rooms.
12. Improved general office and faculty/staff office areas.

Attached here is a tabulation of the proposed functional activities (spaces) and a listing of the number of people occupying space.

The site selection was defined in the Master Plan, as stated in the introduction, as existing space on floors 9 and 10 in Mayo Building and the addition of floors 14 and 15 of the Mayo Building as Microbiology's space increase under the Health Sciences Expansion Project. The proposal is for 12,200 sq. ft., of expansion space.

	Lab	Office	Warm Room	Refrig.	Washing Autoclave	Darkroom	Instrument	Storage	Utility	Service Area	Conference Library	Kitchen	Total Sq. Ft.
<u>9th Floor</u>													
Present	4599	1092	143	222	439	94	456			256			7301
Proposed	5154	813	143	222	721	108				140			7301
<u>10th Floor</u>													
Present	4697	1376	28	258						255	727		7341
Proposed	5277	890	28	258						161	727		7341
<u>14th Floor</u>													
Present	2715	3072		92				458		97	224	53	6711
Proposed	2683	1829	95	305		121	470	308		82	880	53	6826
<u>15th Floor</u>													
Present	2143								30				2173
Proposed	1769	132	96	146					30				2173
<u>Total</u>													
Present	14,154	5540	171	572	439	94	456	458	30	608	951	53	23,526
Proposed	14,883	3664	362	931	721	229	470	308	30	383	1607	53	23,641

MICROBIOLOGY FACULTY AND SPACE

Diehl Hall, Animal Research Unit,
Mayo Floors 9 and 10

		Sq. Ft.	Ass't Prof.	Post- doctorals	Graduate Students	Tech- nicians	Part-time Students	Senior Projects	Total
Grand, K. G.	1	1480	1			4	5		11
Cleary, P. P.	1	1052		1	5	2	1	1	12
Dworkin, M.	1	799 ^{2,4}		1	3	1	1	2	9
Faras, A. J.	1	1607 ^{1,2}		3	5	3	2		14
Collett, M.	1	873				1	1		3
Gray, Beulah	1	980			2	2		4	9
Johnson, R. C.	1	1218 ²			3	2	2	2	10
Plagemann, P.	1	1332 ^{1,2}	1	3	5	2	6		18
Rogers, Palmer	1	575			1		1		3
Schlievert, P.	1	974			2	1	1		5
Schmidt, E.	1	194 ^{1,3}	1		2				4
Watson, D.W.	1	621		1		2	3		7
Zissler, J.	1	876 ⁴			1				2
Main Office	5	593					2		7
Teaching Facilities		8743		1		8			9

¹ Share space in Diehl Hall

² Share space in Graduate Student Laboratory

³ Also has space on the St. Paul campus

⁴ Currently sharing space

SUMMARY

<u>Total Space</u>	<u>Sq. Ft.</u>
Research Laboratories (including Diehl Hall, Animal Res. Unit)	12,912
Cold and warm rooms	424
Faculty and student office space	2,414
Administrative office space	593
Central dishwashing, general instrument, and electron microscope facilities	1,783
Library - Conference Room	227
Teaching Facilities	8,743
	<u>27,596</u>



UNIVERSITY OF MINNESOTA
TWIN CITIES

Physical Planning
503 Morrill Hall
100 Church Street S.E.
Minneapolis, Minnesota 55455
(612) 373-5765

DATE	JUN 18 1982
CH	
FILE	

June 18, 1982

TO: Clint Hewitt
FROM: Larry Anderson *LA*
RE: Microbiology Pre-Program

I called Tom Kyle in Paul Maupin's office to ask if he was working on the cost estimate. He was not. The request that came to Maupin's office was as he understood it to put together the program justification and define scope and quality of project as parameters for a cost estimate. He interpreted this from the letter you sent to Dean Gault.

The project cost in the last legislative requests was simply updated from past requests. This has been going on for some time and he does not believe any original cost estimate exists.

The 1981-83 request listed 12,200 net square feet and 2 floors of remodeling in describing this project. The current program encompasses 4 floors and 23,600[±] square feet.

The program calls for air conditioning of all floors (9,10,14, and 15). A substantial portion is in lab upgrading and technical spaces. According to Tom the chilled water has to be brought all the way from the Mayo Auditorium and electrical service is totally inadequate. The lab benches, tops, and floors surfaces are badly corroded and need to be replaced. New dionized water service is required. A fair amount of casework needs to be replaced. Fume hoods need to be remodeled or replaced.

Using the East Bank Building Recycling cost study for Mines and Metallurgy as a comparison (actual microbiology has almost doubled the lab area). The remodeling would run \$3,200,000 at a January 1985 mid-construction date. This is approximately 50% higher than escalating the 1981 request construction cost at 10% per year. If more of the existing labs can be salvaged perhaps \$500,000 could be eliminated. If some 3,000 square feet can remain as-is with modest improvement another \$200,000 might be saved. This reduces construction to \$2,500,000 or still 30% more than escalating the previous request cost.

I suggest that Paul Maupin be asked to prepare an updated cost estimate in 1982 dollars and then project his cost to mid-point of construction unless the Health Sciences would prefer to stick with the old cost numbers and just escalate them.

LA/jp

cc: Laszlo Fulop



UNIVERSITY OF MINNESOTA
TWIN CITIES

Office of the Assistant Vice President

Physical Planning
340 Morrill Hall
100 Church Street S.E.
Minneapolis, Minnesota 55455



June 23, 1982

To: Paul Maupin

From: Clint Hewitt

Larry Anderson, per the attached memo, has related to me that your perception of the request for assistance in pre-programming the above did not include a cost estimate. It is unfortunate that this was not clarified but it is clear that with the apparent changes between what was the scope of project represented in the 81-83 request and what is proposed in the most recent programming an updated cost estimate is needed.

Since conceptual level plans are not available from which to extract a very detailed cost estimate it would seem appropriate considering the shortage of time that recent history of comparable levels of remodeling be used to obtain costs for the various components of this program. These comparables can then be projected to a recommended development schedule mid-construction point. Attached is a draft pre-program that will illustrate the level of documentation desired.

I would like to have this cost estimate by July 1st, if possible.

CNH/kh
Attachments

cc: Larry Anderson
Jeff Meyer