FY 1980 Operating #2
Westgren

University of Illinois

BUDGET REQUEST FOR OPERATING AND CAPITAL FUNDS

FISCAL YEAR 1980

PREPARED FOR PRESENTATION TO THE
BOARD OF TRUSTEES
SEPTEMBER 20, 1978

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PREFACE

Beginning with its May, 1978 meeting, the Board of Trustees of the University of Illinois has been devoting its attention to the Fiscal Year 1980 budget request for operating and capital funds. The Board's process of considering trends and background information, the full range of University needs, the preliminary budget request, and ultimately this final budget request reflects similar processes which have already taken place at the departmental, college, and campus levels. At each stage of these processes, the scrutiny to which each request is subjected insures that funds will be sought only for the most pressing needs.

Following approval, the budget request and a variety of supporting documents will be sent to the executive and legislative branches of Illinois State government and to the Illinois Board of Higher Education. As the University's request is considered in the larger arena of total State needs, much of the discussion will center upon the task of balancing needs and available resources. It will be important for all concerned to recognize that the University's request has already been through a rigorous review process.

For the most part, the 1970's have represented a period of financial stringency for the University. More recently, however, there have been encouraging signs that these difficulties have been recognized, and that some effort is being made to ease them with increased State resources. This broad-based recognition that increased support for the University is a sound investment, in combination with our continuing efforts to provide effective management throughout the institution, will contribute tangibly to our goal of maintaining the University of Illinois as a strong State and national resource for the 1980's and beyond.

John E. Corbally

John E. Corbally
President

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PART ONE

INTRODUCTION TO THE FISCAL YEAR 1980 OPERATING AND CAPITAL BUDGET REQUESTS

Although financial trends in higher education do not follow a pattern geared to the calendar, preparation of the budget request for a year which begins a new decade offers an opportunity for taking stock of the recent past and invites speculation about the future. At the May, 1978, meeting of the Board of Trustees, a great deal of information was presented to describe some of the major trends at the University of Illinois during the 1960's and 1970's.

The 1960's capped a period of post-World War II growth in higher education unmatched by any other period in history. Expansion of existing institutions and the creation of new ones were the dominate modes for academic, financial, and facilities planning. The University of Illinois mirrored the national picture: more students, more faculty, more facilities, greater levels of funding from the State and other sources were the pattern of the 1960's.

It was inevitable that this rate of growth could not be sustained. Again, in the 1970's the trends apparent for the University of Illinois reflected the national experience as growth slowed in virtually every major area. Table 1 depicts a summary of these trends for both the 1960's and 1970's.

Even though a slowing of the 1960's rate of growth was to be expected, few anticipated how swiftly the decline would begin nor how far-ranging it would be. A number of factors combined at virtually the same time to produce a funding crisis for higher education in the 1970's. Among the most significant were these:

--a waning of the optimism of 1960's which placed education at the foundation of a variety of social advancement efforts;

--a general loss of the sense of national purpose and a corresponding loss of faith in all established institutions;

--a steep cut-back in Federal research and development efforts;

--a need for the states to focus their attention on social services programs other than education; and

--perhaps most damaging of all, a period of economic inflation from which recovery has not yet been made.

TABLE 1

SUMMARY OF TRENDS AT THE UNIVERSITY OF ILLINOIS

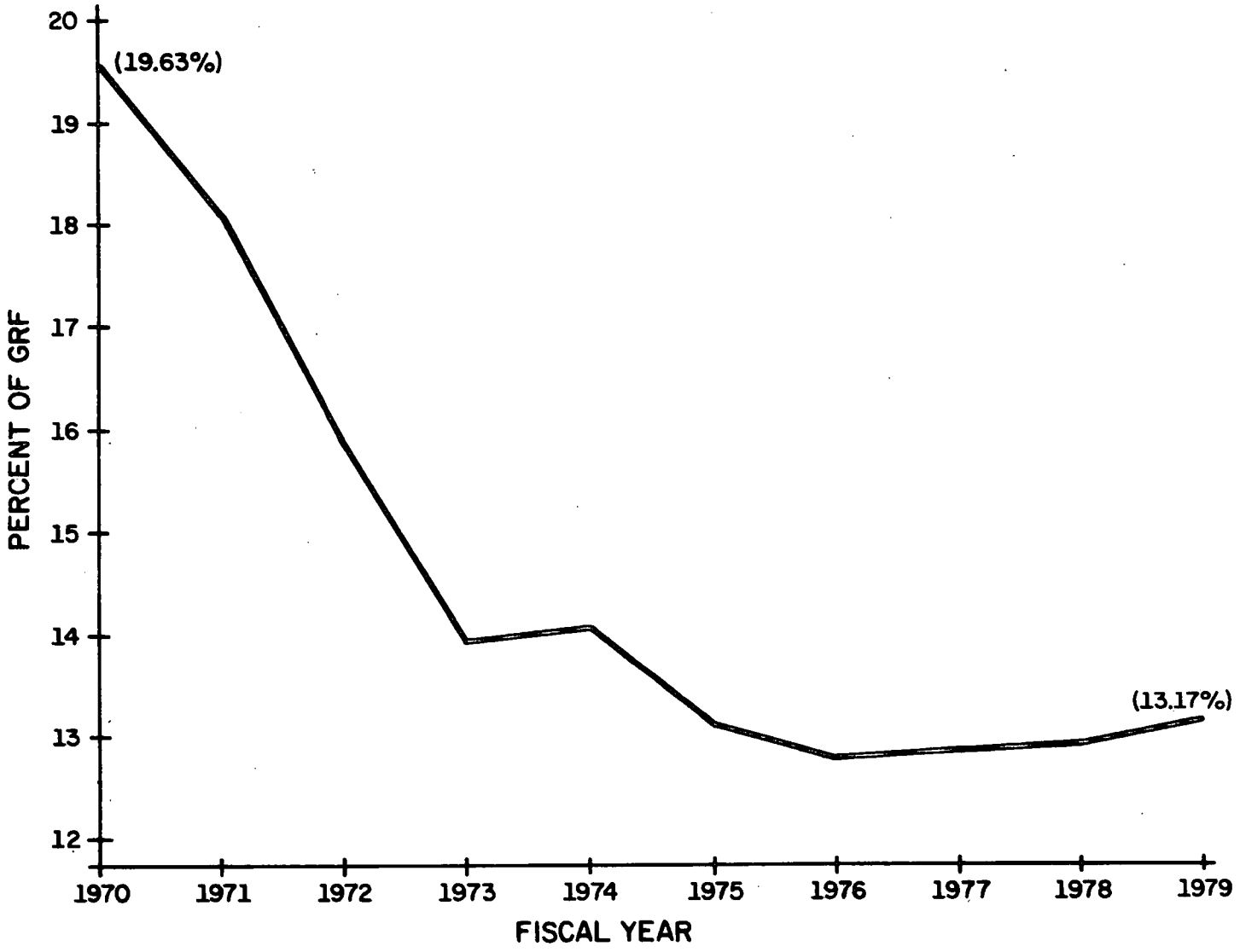
	FY1960-1969	FY1969-1977
STUDENTS		
HEADCOUNT	84% INCREASE	20% INCREASE
WEIGHTED FTE	71% INCREASE	28% INCREASE
STAFF		
ACADEMIC (STATE FUNDS)	68% INCREASE	21% INCREASE
NONACADEMIC (STATE FUNDS)	68% INCREASE	24% INCREASE
EXPENDITURES		
ALL FUNDS	75% INCREASE	17% INCREASE
STATE FUNDS	49% INCREASE	20% INCREASE
NONSTATE FUNDS	125% INCREASE	13% INCREASE
FACILITIES		
RESIDENTIAL	37% INCREASE	24% INCREASE
NONRESIDENTIAL	72% INCREASE	15% INCREASE

The impact of these and other factors in the University of Illinois in the 1970's has been severe and prolonged:

1. For the first seven years of the decade, the share of State General Revenue Funds provided to higher education fell annually, as depicted in Figure 1.
2. One result of this decline has been the need to devote the largest portion of incremental funds which have been available to those ongoing portions of the budget which are required simply to maintain the status quo. As described in Figure 2, with the exception of the health professions growth to which the State has been long committed, since FY 1972 there has been minimal growth in new programs.
3. Inflation has brought a further reduction in purchasing power, both for personal services and for commodities, goods and services as portrayed in Table 2 and Figures 3 and 4.
4. During the first half of the decade enrollments continued to grow as measured by both headcount and weighted FTE, as shown in Figure 5. More students in combination with greatly reduced growth in resources, has meant a steadily falling expenditure of funds per weighted FTE student, as seen in Figure 6.

FIGURE 1

PERCENT OF GENERAL REVENUE FUNDS ALLOCATED TO HIGHER EDUCATION



SOURCE: GOVERNOR'S BUDGET FOR EACH FISCAL YEAR

FIGURE 2

FY 1970-79 STATE INCREMENTAL FUNDS RECEIVED BY THE UNIVERSITY OF ILLINOIS

(GENERAL REVENUE, INCOME, AND AGRICULTURAL PREMIUM FUNDS
EXCLUDING RETIREMENT, IBA AND CAPITAL GRF)
(DOLLARS IN THOUSANDS)

COMPONENT	FY 1970	FY 1971	FY 1972	FY 1973	FY 1974	FY 1975	FY 1976	FY 1977	FY 1978	FY 1979
PREVIOUS YEAR'S BASE	$136,667.3	$159,011.5	$178,901.0	$179,061.1	$188,698.0	$198,381.5	$218,424.5	$235,375.1	$250,019.4	$265,925.8
NET INCREMENT	22,334.2	19,889.5	160.1	9,233.8	9,683.0	20,043.1	16,950.7	14,644.3	16,140.0	24,755.6
NET INCREMENT AS A PERCENT OF PREVIOUS YEAR'S BASE	16.3%	12.5%	0.1%	5.2%	5.1%	10.1%	7.8%	6.2%	6.5%	9.3%
CONTINUING COMPONENTS	11,307.7	10,818.0	160.1	6,859.8	6,191.3	12,680.0	14,230.7	14,488.0	12,347.1	21,422.9
PERCENT OF TOTAL INCREMENT	50.6%	54.4%	100.0%	74.3%	63.9%	63.3%	84.0%	98.9%	76.5%	86.5%
PROG. & SPEC. COMPONENTS	9,163.3	6,746.0		649.1	352.5	1,586.1	1,220.0	156.3	2001.4	1,859.7
PERCENT OF TOTAL INCREMENT	41.0%	33.9%		7.0%	3.6%	7.9%	7.2%	1.1%	12.4%	7.5%
HEALTH PROFESSIONS	1.863.2	2,325.5		1,724.9	3.139.2	5,777.0	1,500.0		1,791.5	1,473.0
PERCENT OF TOTAL INCREMENT	8.3%	11.7%		18.7%	32.4%	28.8%	8.8%		11.1%	6.0%

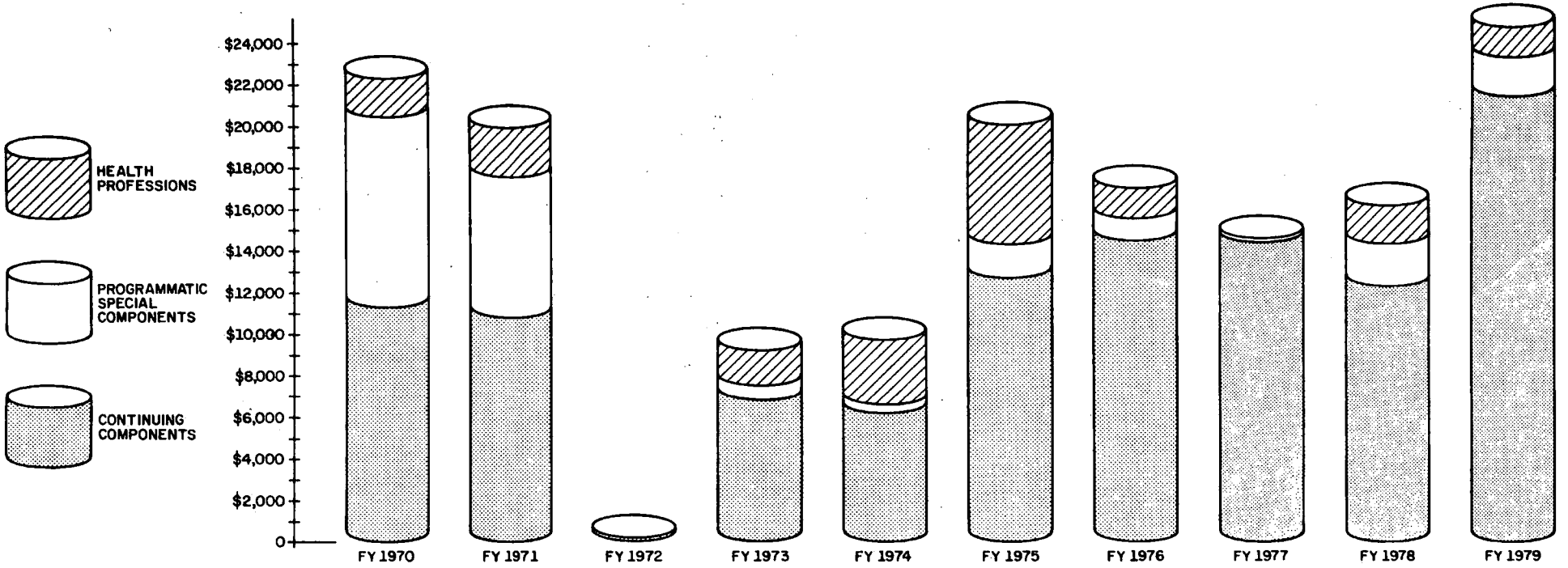


TABLE 2
IMPACT OF INFLATION
ON SALARIES AND GENERAL EXPENSE ITEMS

SALARIES

	% Change in CPI	vs.	U of I Average Salary Increase Policy
FY 1970	5.9%		8.1%
FY 1971	2.3		6.6
FY 1972	3.6		5.0
FY 1973	3.9		5.5
FY 1974	9.0		4.5
FY 1975	11.0		5.0
FY 1976	7.1		7.0
FY 1977	5.8		4.7
FY 1978	6.7		5.0/7.0
Compounded FY 1970-FY 1978	70.6%		64.7/67.9%

PRICE

	% Change in WPI & CPI on Price Increase Objects of Expenditure	vs.	U of I Price Increases (Includes Equipment, Utilities, Library)
FY 1970	3.9%		4.2%
FY 1971	1.4		4.7
FY 1972	3.6		0.0
FY 1973	5.3		0.0
FY 1974	12.4		1.6
FY 1975	18.3		9.1
FY 1976	6.3		10.0
FY 1977	6.4		8.4
FY 1978	6.6		5.8
Compounded FY 1970-FY 1978	84.3%		52.6%

FIGURE 3

IMPACT OF INFLATION
PERSONAL SERVICES

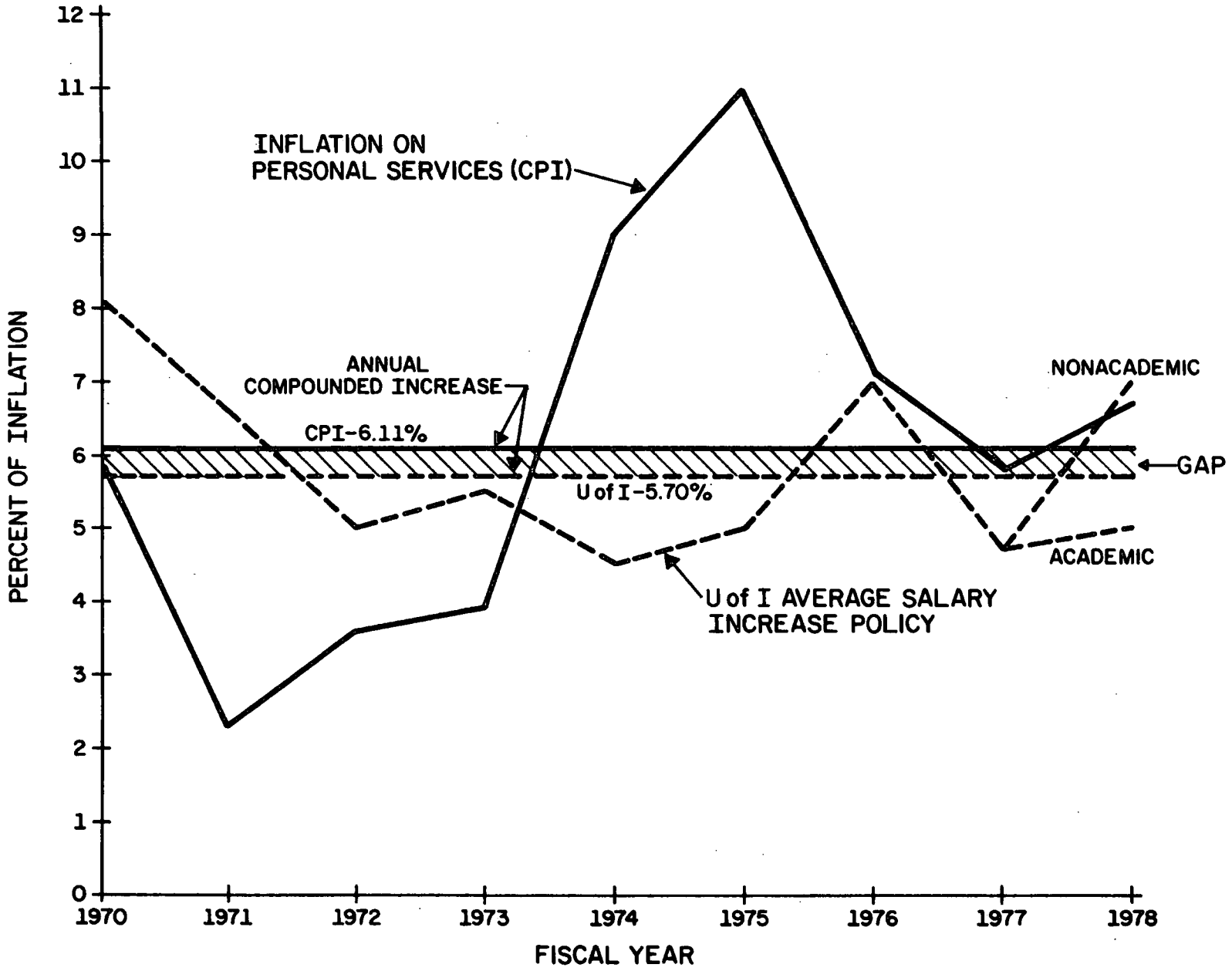


FIGURE 4

IMPACT OF INFLATION PRICE INCREASES

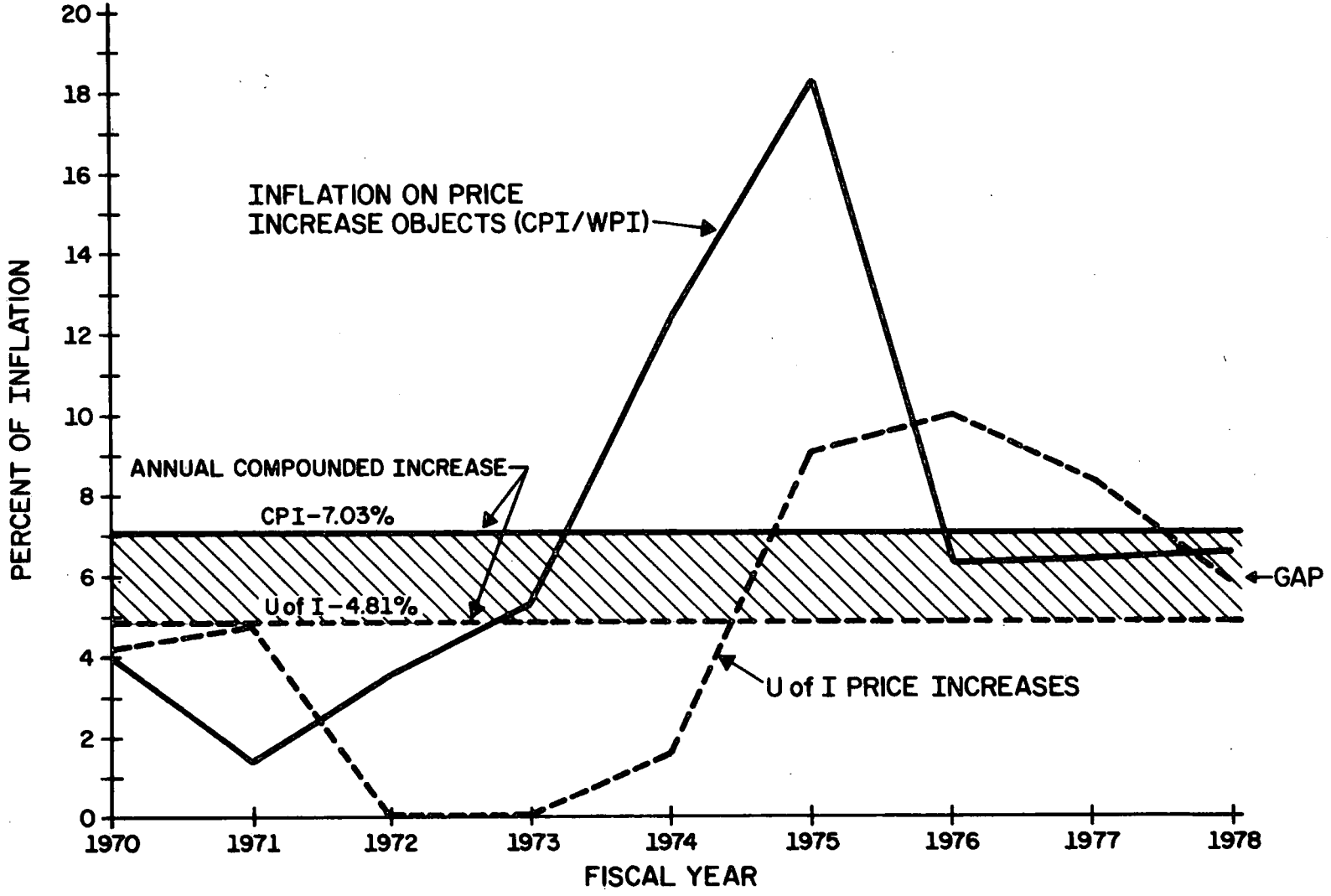
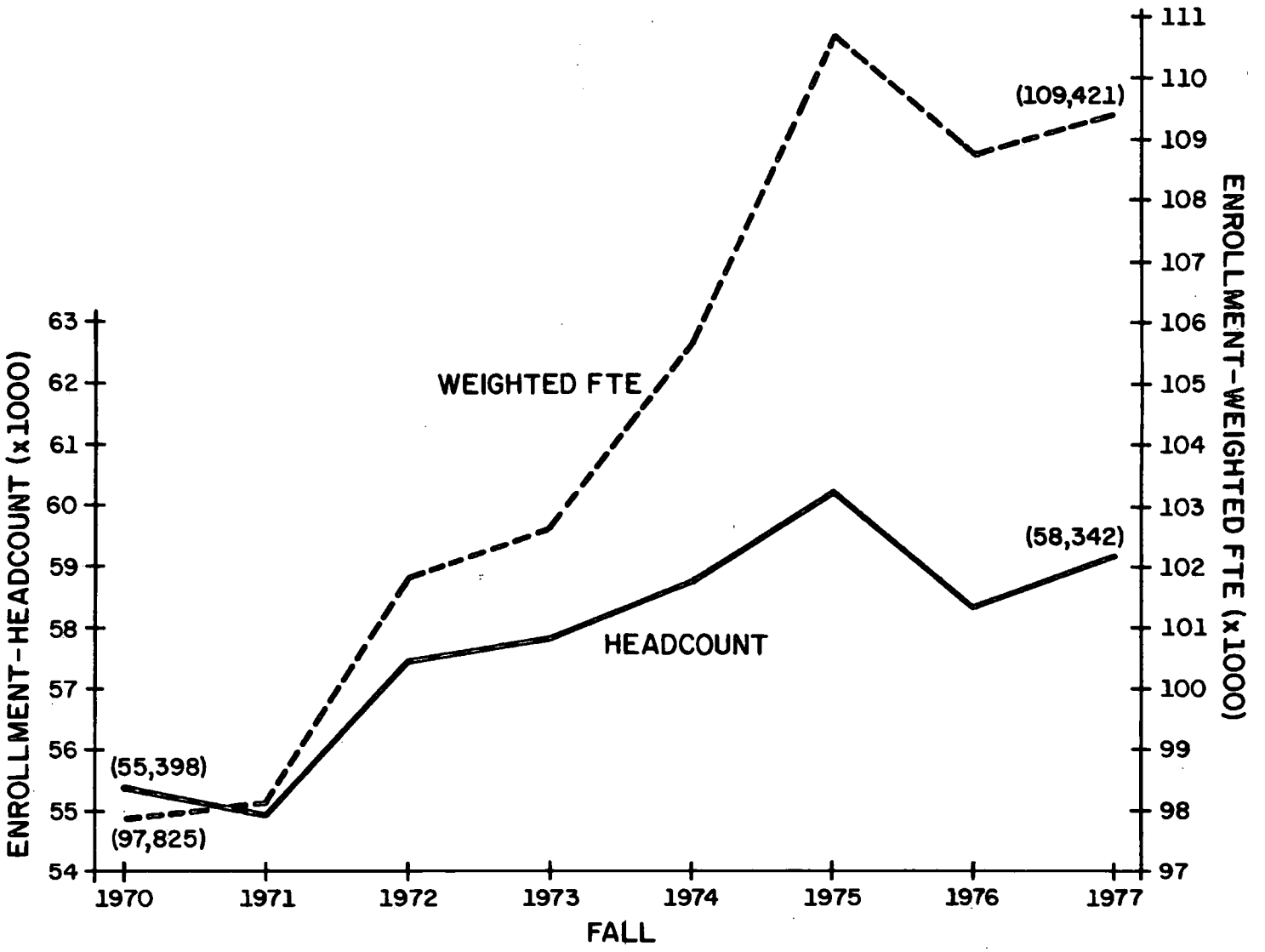


FIGURE 5

ENROLLMENT HEADCOUNT & WEIGHTED FTE

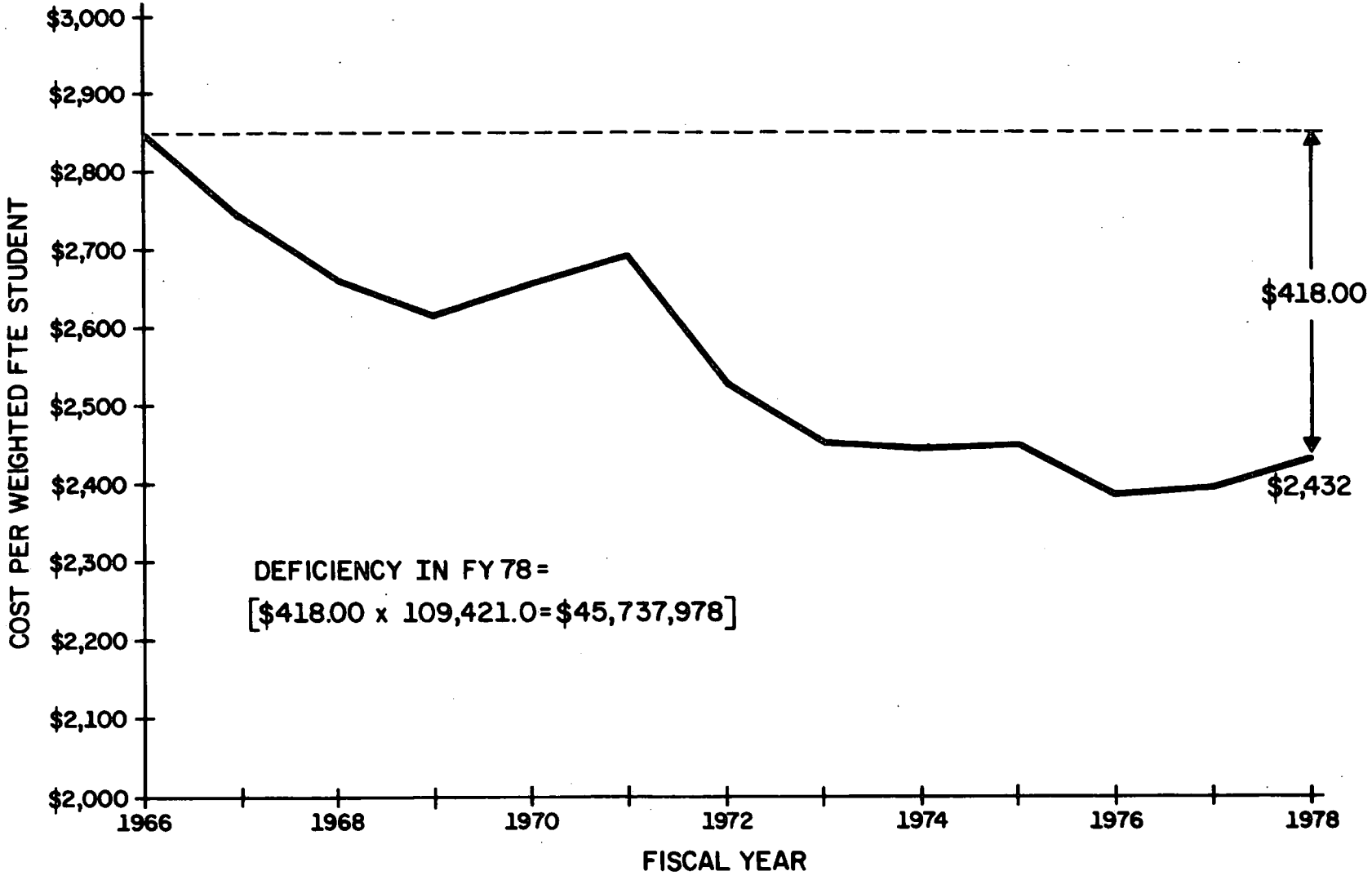


WEIGHTS ASSIGNED TO FTE ENROLLMENT FIGURES REFLECT THE DIFFERENCES IN INSTRUCTIONAL COSTS FOR VARIOUS STUDENT LEVELS. THE WEIGHTS USED ARE:

LOWER DIVISION (FRESHMEN AND SOPHMORE) - 1.0
UPPER DIVISION (JUNIOR, SENIOR, SPECIAL) - 1.6
GRADUATE I (MASTER'S DEGREE, LAW, VET. MED.) - 2.8
GRADUATE II (Ph.D) - 4.0
DENTISTRY (INCLUDES POST AND PROF.) - 5.5
MEDICINE (INCLUDES RES. AND INT. AS .5 FTE EACH) 11.6

FIGURE 6

EXPENDITURES PER WEIGHTED FTE STUDENT
1978=1.00



FY 1979 and a Preview of the 1980's

In several important respects, the University's FY 1979 appropriation of State funds represents an improvement over earlier appropriations in the 1970's. The $24,755,600 increment is 9.3% of the previous year's base--the largest increase since FY 1975 and second largest since FY 1971 (see Figure 2). Although recent signs of increased inflation have been noted, it appears that for FY 1979 most University employees will receive salary increases which exceed inflation. Further, the State has recognized the need to begin reducing deficiencies in library acquisitions and in equipment, and has continued to recognize the need to meet estimated utilities price increases. The State has also recognized the need to replace declining Federal capitation funds with State funds in the health professions and veterinary medicine. Finally, a shift from the net payout level to the gross payout level in the retirement appopriation gives evidence that the State has recognized the need to place retirement funding on a firmer base.

Despite the fact that FY 1979 may be viewed as a relatively good year in comparison with the years which preceeded it in the 1970's, several serious concerns remain as the FY 1980 budget is prepared.

1. Potential losses to inflation--further erosion of salaries and compensation for faculty and staff and further decline in purchasing power for commodities and services will not only mean no growth, but will necessitate a reduction of present capabilities and services and loss of key personnel.
2. Recovery from deficiencies in library and equipment acquisitions--efforts to begin these processes are welcome in FY 1979, but they must be viewed as modest beginnings, not as needs fully met.
3. Program growth and vitality--as described earlier (Figure 2) new funds for program growth have been greatly reduced in the 1970's. This reduction, combined with losses in purchasing power caused by inflation, has limited the potential for reallocation by severely reducing budgetary flexibility. Continuing efforts to reallocate funds internally have permitted some limited new program thrusts, but not nearly on the scale which must be achieved if the University is to maintain its stature as a first-class institution.

4. Renewal and repair of the physical plant--much of the impact of reduced purchasing power has been absorbed by reductions and deferrals in maintenance of the physical plant. The most immediate support for this area will be funding the University's Space Realignment, Renewal and Replacement program in the capital portion of the FY 1980 budget request. Unless new funds are made available early in the 1980's, the preservation of the tremendous capital investment at the University will be virtually impossible.

Enrollment Stability and Program Change

Much has been written--and more will come--about the impending slowing of enrollment growth and actual decline in the late 1980's. Great care must be taken not to apply these global predictions equally to all institutions of higher education. The enrollment projections identified in Table 3 indicate that enrollments at the three campuses are likely not to decline. The Urbana-Champaign campus has for years turned away literally thousands of qualified applicants because they could not be accommodated; the Medical Center campus has the capacity to continue its enrollment growth in line with earlier State planning, if sufficient funds are available; and the Chicago Circle campus has experienced early success in attracting new students through the Extended Day/Program PM effort.

Even within stable enrollment levels, dramatic changes among program enrollments can take place, as seen in Tables 4 and 5. These changes result from a variety of factors:

--advances in knowledge and technology across the broad spectrum of academic disciplines;
--changing human resource needs in both the public and private sectors;
--shifting student interests.

It is imperative that the University improve its capability to respond to these program changes. Indeed, the hallmark of a truly great university is that through its efforts, such changes are encouraged. Reallocation of resources within the base funding has been and will continue to be used to meet a portion

TABLE 3
FALL TERM ON-CAMPUS HEADCOUNT ENROLLMENT
UNIVERSITY OF ILLINOIS

Campus and Level	FY77	FY78	FY79	FY80	FY81	FY82	FY83	FY84
Chicago Circle								
Lower Division	10,011	10,073	10,138	10,155	10,171	10,187	10,203	10,219
Upper Division	8,050	7,925	7,924	7,975	8,027	8,079	8,131	8,183
Total Undergrad	18,061	17,998	18,062	18,130	18,198	18,266	18,334	18,402
GI	1,520	1,816	2,198	2,353	2,508	2,663	2,818	2,973
GII	671	849	998	1,050	1,102	1,155	1,207	1,259
Total Grad	2,191	2,665	3,196	3,403	3,610	3,818	4,025	4,232
Total - Chicago Circle	20,252	20,663	21,258	21,533	21,808	22,084	22,359	22,634
Δ	*411*	*595*	*275*	*275*	*276*	*275*	*275*	
Medical Center Excluding Residents and Interns								
Lower Division	422	442	428	402	396	390	385	380
Upper Division	1,285	1,255	1,337	1,328	1,329	1,321	1,316	1,319
Total Undergrad	1,707	1,697	1,765	1,730	1,725	1,711	1,701	1,699
Professional	1,923	1,960	2,007	2,011	2,070	2,099	2,122	2,149
GI	470	458	497	512	539	569	589	598
GII	174	204	207	212	216	220	224	226
Total Grad	644	662	704	724	755	789	813	824
Total - for External Enrollment Reports Excludes Residents and Interns	4,274	4,319	4,476	4,465	4,550	4,599	4,636	4,672
Δ	*45*	*157*	*(11)*	*85*	*49*	*37*	*36*	
Residents and Interns[1]	382	424	435	435	435	435	435	435
Total - Including Residents and Interns	4,656	4,743	4,911	4,900	4,985	5,034	5,071	5,107
Δ	*87*	*168*	*(11)*	*85*	*49*	*37*	*36*	
UC - Nursing[2]	(16)	(28)						
UC - BMS and Clinical[2]	(102)	(101)						
Total - UC[2]	(118)	(129)						
Total - for External Enrollment Reports	4,538	4,614	4,476	4,465	4,550	4,599	4,636	4,672
Δ	*76*	*(138)*	*(11)*	*85*	*49*	*37*	*36*	
Urbana-Champaign								
Lower Division	12,133	12,861	13,379	13,085	12,975	12,775	12,650	12,400
Upper Division	12,620	12,458	12,487	12,400	12,300	12,300	12,300	12,300
Total Undergrad	24,753	25,319	25,866	25,485	25,275	25,075	24,950	24,700
Law	644	646	630	630	630	680	730	770
Veterinary Medicine	333	334	339	344	372	390	403	416
Total Professional	977	980	969	974	1,002	1,070	1,133	1,186
GI	3,690	3,538	3,525	3,525	3,525	3,550	3,550	3,550
GII	4,014	3,980	3,875	3,875	3,875	3,850	3,850	3,850
Total Grad	7,704	7,518	7,400	7,400	7,400	7,400	7,400	7,400
Total - Excluding Medical Students	33,434	33,817	34,235	33,859	33,677	33,545	33,483	33,286
Δ	*383*	*418*	*(376)*	*(182)*	*(132)*	*(62)*	*(197)*	
Nursing[2]	16	28						
BMS and Clinical[2]	102	101						
Total - Medical[2]	118	129						
Total - for External Enrollment Reports	33,552	33,946	34,235	33,859	33,677	33,545	33,483	33,286
Δ	*394*	*289*	*(376)*	*(182)*	*(132)*	*(62)*	*(197)*	
GRAND TOTAL - UNIVERSITY OF ILLINOIS	58,342	59,223	59,969	59,857	60,035	60,228	60,478	60,592
Δ	*881*	*746*	*112*	*(178)*	*193*	*250*	*114*	

[1]Residents and Interns have been included in external enrollment reports for FY77 and FY78, but have been excluded for future projections at the request of the IBHE.

[2]Nursing and medical (BMS and Clinical) students at Urbana-Champaign have been included in the Urbana-Champaign figures in FY77 and FY78, but have been included with the Medical Center beginning in FY79 following the convention that students will be counted at the campus that awards their degrees.

TABLE 4

COMPARISON OF HEGIS DISCIPLINE CREDIT-HOUR MIX
FY 1970 AND FY 1977
CHICAGO CIRCLE CAMPUS

	FY 1970		FY 1977		CHANGE FY 1970-FY 1977
	CREDIT HOURS	%	CREDIT HOURS	%	%
ARCHITECTURE	8,853	1.8	10,500	1.9	+ 18.6
BIOLOGICAL SCIENCES	25,281	5.2	35,936	6.4	+ 42.1
BUSINESS	22,095	4.6	47,547	8.4	+115.2
EDUCATION	31,439	6.5	34,670	6.1	10.3
ENGINEERING	28,278	5.8	28,681	5.1	+ 1.4
FINE AND APPLIED ARTS	26,698	5.5	37,078	6.6	38.9
LETTERS AND LANGUAGES	125,269	25.8	99,543	17.7	- 20.5
MATHEMATICS	53,135	11.0	68,141	12.1	+ 28.2
PHYSICAL SCIENCES	38,648	8.0	53,645	9.5	38.8
SOCIAL SCIENCES	116,901	24.1	137,137	24.3	+ 17.3
OTHER	8,143	1.7	11,071	1.9	+ 36.0
TOTAL	484,740	100.0	563,949	100.0	+ 16.3

TABLE 5

COMPARISON OF HEGIS DISCIPLINE CREDIT-HOUR MIX

FY 1970 AND FY 1977

URBANA-CHAMPAIGN CAMPUS

	FY 1970		FY 1977		CHANGE FY 1970-FY 1977
	CREDIT HOURS	%	CREDIT HOURS	%	%
AGRICULTURE	27,704	2.7	37,045	3.6	+ 33.7
ARCHITECTURE	17,325	1.7	27,126	2.6	+ 56.6
BIOLOGICAL SCIENCES	55,350	5.4	62,727	6.1	+ 13.3
BUSINESS	51,798	5.1	73,616	7.1	+ 42.1
COMPUTER SCIENCE	14,093	1.4	19,311	1.9	+ 37.0
EDUCATION	91,881	9.0	84,480	8.7	- 8.1
ENGINEERING	74,526	7.3	99,984	9.7	+ 34.2
FINE AND APPLIED ARTS	55,533	5.5	57,822	5.6	+ 4.1
LETTERS AND LANGUAGES	192,674	18.9	152,626	14.7	- 20.8
HOME ECONOMICS	9,669	1.0	11,871	1.1	+ 22.8
LAW	18,945	1.9	20,492	2.0	+ 8.2
MATHEMATICS	76,432	7.5	75,126	7.3	- 1.7
PHYSICAL SCIENCES	86,587	8.5	90,406	8.7	+ 4.4
SOCIAL SCIENCES	193,340	19.0	159,297	15.4	- 17.6
VETERINARY MEDICINE	9,838	1.0	10,697	1.0	+ 8.7
OTHER	41,108	4.1	52,453	5.0	+ 27.6
TOTAL	1,016,803	100.0	1,035,079	100.0	+ 1.8

of these needs. Reallocation cannot provide the full amount, however, and additional funds will be necessary to insure program change even under the "stability" of steady overall enrollments.

The FY 1980 Budget Request

This background information and recognition of the immediate needs for the 1980's which were initially identified in Volume I of the "Background Information" document presented to the Board of Trustees at their meeting on June 21, 1978, have been used as the basis for the FY 1980 operating budget request. The most important of these needs identified in the FY 1980 budget request are:

1. At the minimum, provide sufficient funds to maintain present activities at their current levels of support. Said another way, the University must stop its continuing losses to inflation.
2. Continue the process of recovery from past or potential deficiencies in the University's base funding in the areas of:
   a. employee compensation
   b. library acquisitions
   c. equipment
   d. replacement of Federal capitation funds.
3. Provide additional support for new and expanded programs in the most pressing research areas.
4. Provide additional services to the State to meet enrollment demand pressures and to support special needs of the agriculture and business sectors.

The incremental budget request which results from consideration of these needs totals $37,473,300 as shown in Table 6. Its most salient features are these:

--improving employee compensation as well as salaries, through an adjustment in the employee/employer share in retirement contributions, without any reduction in the overall level of funding of the Retirement System;

--special price increase funding for goods and services which will match anticipated inflationary rises in library acquisitions, utilities, and the Division of Services for Crippled Children;

--continued replacement of Federal capitation funds;

TABLE 6
FY 1980 OPERATING BUDGET REQUEST
(Dollars in Thousands)

I.	CONTINUING COMPONENTS		
	A. Salary/Compensation Improvement		$20,432.3
	1. Annualization	($ 2,878.2)	
	2. Salary Increase/Compensation Improvement (9.5%)	(17,554.1)	
	B. Price Increases		4,993.2
	1. General (7.5%)	(2,111.1)	
	2. Utilities (11.5%)	(2,044.1)	
	3. Library Acquisitions (11.0%)	(407.6)	
	4. Division of Services for Crippled Children (9.0%)	(430.4)	
	C. O & M for New Areas		1,328.9
	1. Medical Center	(1,117.0)	
	2. Urbana-Champaign	(211.9)	
	D. Workmen's Compensation		150.0
	E. Replacement of Federal Capitation Funds		2,550.0
	1. Medical Center	(2,400.0)	
	2. Veterinary Medicine, Urbana-Champaign	(150.0)	
	F. Enrollment Progression, College of Dentistry		367.5
	Subtotal, Continuing Components		$29,821.9
	% of FY 1979 Base[1]		10.26%
II.	PROGRAMMATIC COMPONENTS[2]		
	A. New and Expanded Programs		5,765.8
	1. Chicago Circle	(1,747.0)	
	2. Medical Center	(1,027.3)	
	3. Urbana-Champaign	(2,991.5)	
	B. Equipment Base Deficiencies		600.0
	1. Chicago Circle	(200.0)	
	2. Urbana-Champaign	(400.0)	
	Subtotal, Programmatic Components		$ 6,365.8
	% of FY 1979 Base		2.19%
III.	SPECIAL SERVICES/FUNDING COMPONENTS		
	A. Division of Services for Crippled Children (MC)		400.0
	B. Agricultural Extension Advisors (UC)		40.0
	C. County Cooperative Extension Telenet Expansion (UC)		64.0
	D. Public Service/Statewide Programming Electronic Blackboards (GU)		50.5
	E. County Board Matching Funds		304.5
	F. Cooperative Extension Service Nonacademic Reclassification (UC)		34.4
	G. Cooperative Extension Service Employer's Share of State Health Insurance (UC)		177.2
	H. Library Computer System (UC)		215.0
	Subtotal, Special Services/Funding Components		$ 1,285.6
	% of FY 1979 Base		.44%
	Grand Total FY 1980 Request (I+II+III)[3]		$37,473.3
	% of FY 1979 Base		12.89%

[1] FY 1979 Base excluding Retirement = $290,681.4.

[2] Individual programs contained in this section are identified in Table 3, Part Two.

[3] Excludes Retirement, for which an increment of $24,579.0 is requested.

--program funds for carefully selected research and service efforts to improve the University's ability to respond to needs for new knowledge and expanded services.

This request for operating funds has been pared by one-third from the "needs" budget identified in the June presentation to the Board of Trustees. From an institutional perspective the resources necessary to provide support for each of those needs is fully justified. The University recognizes, however, that the State must support additional important services for its citizens, and a strong effort has been made to balance the most crucial of the University's needs with an appropriate amount of State resources. Given the necessity of balancing institutional needs with available State resources, it is clear that the challenge for the 1980's will be to continue the improved management of current resources while demonstrating the value of additonal support.

CAPITAL BUDGET REQUEST

In recent years the thrust of the University's capital budget requests has changed from one of providing additional facilities to accommodate growing enrollments to one of providing the resources necessary to adequately maintain and better utilize existing facilities. During the period 1960-1970, University of Illinois enrollments increased at a rate of about 9% per year, rapidly exceeding the capacity of the existing physical facilities. Considering this enrollment boom, the need to provide additional instructional space was critical; thus, available capital funds were channeled into highest priority new construction projects to accommodate the enrollment increase. Minor remodeling and major renovation projects, while important, were of necessity placed in a lower priority, and were deferred. Due to the sound condition of the existing facilities, the decision to defer a major renovation program did not have an immediate adverse effect.

Conditions have changed, however, in regard to enrollment trends, new facilities requirements, and the overall quality of the existing physical facilities. Stabilizing enrollments have significantly reduced the need to acquire additional general instruction space. Campuses are

now faced with the task of restoring their existing facilities to levels of acceptable quality and/or modifying them to meet new and changing program needs. The overall condition of the physical plants is still reasonably sound, but the University can no longer afford to defer its realignment, renewal and rehabilitation program.

The total capital budget request for FY 1980 is $33,123,995. This request contains projects designed to: (1) maintain the structural integrity of the existing facilities, (2) renovate facilities to accommodate new and changing academic programs, (3) upgrade building systems, and (4) provide special purpose facilities which cannot be obtained through building renovation.

The University's capital improvement program currently places major emphasis on completing remodeling and rehabilitation projects which are essential to the continued use of many existing facilities. These types of projects typically involve the complete gutting of buildings (or portions of buildings) for the purpose of upgrading or restoring the facilities to their original operating condition or reconfiguring space within them to accommodate changes in academic programs. Many of the University's buildings are old, but most are structurally sound and will continue to be serviceable, if funds can be obtained to upgrade obsolete systems and remodel the space. Table 7 presents a distribution of the University's nonresidential GSF by campus and by age. Note that over 37% of this space is 28 years of age or older. While this is not a precise indication of the University's renovation needs, it should invoke a general feeling for the problem. A rule of thumb which should prove helpful in interpreting these figures is that the components of these buildings (excluding the superstructure, exterior skin, and foundation) will undergo the equivalent of two complete changes within a 100 year period of use. Several major remodeling projects have been included in the FY 1980 capital budget request. The sum of the FY 1980 major remodeling requests totals $13,250,100, or 40% of the total capital budget request.

The Space Realignment, Renewal and Replacement (SR^3) program is another means by which the University is attempting to address its remodeling and replacement needs. This concept is based on the premise

TABLE 7
DISTRIBUTION OF NONRESIDENTIAL GSF BY CAMPUS AND AGE

Campus	Total GSF	GSF / 0-17 Years Old	% of Total GSF	GSF/18-27 Years Old	% of Total GSF	GSF/28-47 Years Old	% of Total GSF	GSF/Over 47 Years Old	% of Total GSF
Chicago Circle	3,141,336	3,141,336	100%						
Medical Center*	3,377,832	1,500,907	45	485,692	14%	620,083	18%	771,150	23%
Urbana-Champaign**	9,735,754	4,097,458	42	1,002,210	10	989,417	10	3,646,669	37
Total	16,254,922	8,739,701	54%	1,487,902	9%	1,609,500	10%	4,417,819	27%

*Includes Peoria and Rockford.
**Includes School of Basic Medical Sciences.
Source: 1977 Statewide Space Survey.

that the life of a building can be extended indefinitely, through proper maintenance, as long as the foundation, superstructure, and exterior skin are sound. The application of the SR^3 formula generates the funds required annually for renewal and replacement projects and for remodeling to accommodate academic program changes. The amount of funding generated by each campus is based on the total square footage maintained by the campus and the current replacement cost of its facilities. The sum of the FY 1980 SR^3 requests totals $8,828,095*, or approximately 27% of the total capital budget request. If funded annually at the requested levels, this program will help insure that the existing facilities can be effectively maintained and utilized.

The combination of the SR^3 projects and the major remodeling projects represents the University's attempts to provide adequate instructional space for new and existing academic programs and support units through the modification and adaptation of existing facilities. Consistent with the University's goal of preserving and maintaining its existing physical facilities, over 66% ($22,078,195) of the FY 1980 capital budget request is for major remodeling and SR^3 projects.

New facilities are requested when space needs cannot be met through realignment, renewal or remodeling of existing facilities. The FY 1980 capital budget contains three requests for new, special purpose facilities: a Library Sixth Stack Addition and Pilot Training Facility at Urbana-Champaign, and an Animal Quarters Building at the Peoria School of Medicine. In addition to the three new construction projects, there is also a request to purchase an existing facility which is currently being leased by the Medical Center. Although this is not a special purpose facility it is important to Medical Center programs and must be acquired to guarantee its availability for future use. The request for new facilities for FY 1980 totals $6,586,100, or approximately 20% of the total capital budget request.

Several requests are also included for planning funds to develop preliminary plans for future new facilities which cannot be obtained

*Includes SR^3 equipment requests.

through remodeling. The new construction planning projects include: a Library Addition at the Chicago Circle campus, and an Ambulatory Care Facility at the Peoria School of Medicine. The new construction planning projects requested for the Urbana-Champaign campus include: a Life Sciences Teaching Lab, Engineering Library, Law Building Addition, and a Nuclear Reactor Lab. Planning funds are also requested for the future replacement of the Auditorium Roof at the Urbana-Champaign campus. The request for these projects totals $2,192,700, approximately 6% of the total request.

The remainder of the FY 1980 capital budget request is comprised of various equipment, utility, land, and site improvement projects. The equipment, utility, land, and site improvement requests are related to existing facilities and/or proposed new ones. The combined request for these projects totals $2,267,000, or approximately 7% of the total request.

PART TWO

FISCAL YEAR 1980 OPERATING BUDGET REQUEST

INTRODUCTION

Table 1 presents a summary of the Board of Trustees operating budget requests from FY 1973 through FY 1979. As discussed in Part One, FY 1979 can be seen as a relatively good year. The actual increment received is the largest by far of any in the past seven years, and the 9.3% increase over the previous base represents the second highest increase in the period. It is of major importance to recognize, however, that the "good year" which the FY 1979 increment most certainly represents is in reality only the beginning step toward recovery from earlier years' deficiencies.

The FY 1980 operating budget request is presented in three major sections: Continuing Components, Programmatic Components, and Special Services/Funding Components. Table 2 presents the incremental requests for each of these catagories, while Table 3 identifies the specific New and Expanded Program requests for each campus. The request for retirement funding for the University of Illinois' share of the FY 1980 State Universities Retirement System appropriation is outlined in Appendix 8.

CONTINUING COMPONENTS

Items contained in this category are those which are essential to the maintenance of <u>current</u> efforts. Included are the following: 1) salary and compensation increases for continuing staff, 2) price increases for goods and services, 3) operation and maintenance funds for new areas, 4) workmen's compensation, and 5) funds to continue the replacement of reduced Federal capitation funds and to maintain the enrollment progression in the College of Dentistry.

TABLE 1
SUMMARY OF INCREMENTAL OPERATING BUDGET DECISIONS[1]
UNIVERSITY OF ILLINOIS
(Dollars in Thousands)

	BOT Original Request	% of Previous Base	Adjusted Request	% of Previous Base	Increment[6] Received	% of Previous Base	% of Adjusted Request
FY 1973	$32,016	17.88	$32,016	17.88	$ 9,234[7]	5.16	28.84
FY 1974	28,693	15.20	28,693	15.20	9,683	5.13	33.74
FY 1975	22,800	11.49	26,368[2]	13.29	20,043	10.10	76.01
FY 1976	32,344	14.81	35,149[3]	16.09	16,951	7.76	48.23
FY 1977	29,276	12.44	26,499[4]	11.26	14,644	6.22	55.26
FY 1978	31,036	12.64	31,036	12.41[5]	15,906[8]	6.36	51.25
FY 1979	34,107	12.83	34,107	12.83	24,756[9]	9.31	72.58
Simple Average			30,553	14.14	$15,888	7.15	52.27

[1]Excludes Retirement, IBA Rentals.

[2]Includes $3,568.0 requested as utility contingency; $1,500.0 received.

[3]Includes $2,655.0 requested for Chicago Public Health Hospital and Clinics and $150.0 for Willard Airport-Commercial Operations; $2,496.0 received for CPHH&C and $141.0 for Willard.

[4]Original request less $281.0 for the Veterinary Diagnostic Lab and $2,496.0 for the Public Health Hospital and Clinics, which was added on a recurring basis to the FY 1976 base by the IBHE.

[5]Due to the receiving of override funds, the FY 1977 base increased causing the FY 1978 request to be a smaller "Percentage of the Previous Base".

[6]Reflects new dollars received from appropriation to appropriation.

[7]Excludes $403.0 for County Board Matching which had not been part of the University's FY 1973 incremental request, but was transferred into the University's FY 1974 base by the State.

[8]Excludes $234.1 received from Senate Bill 880, which was not part of the University's FY 1978 incremental request, and is not recurring.

[9]Includes $187.5 in Audit Commission Income Fund Adjustments.

TABLE 2
FY 1980 Operating Budget Request
(Dollars in Thousands)

I.	CONTINUING COMPONENTS		
	A. Salary/Compensation Improvement		$20,432.3
	1. Annualization	($ 2,878.2)	
	2. Salary Increase/Compensation Improvement (9.5%)	(17,554.1)	
	B. Price Increases		4,993.2
	1. General (7.5%)	(2,111.1)	
	2. Utilities (11.5%)	(2,044.1)	
	3. Library Acquisitions (11.0%)	(407.6)	
	4. Division of Services for Crippled Children (9.0%)	(430.4)	
	C. O & M for New Areas		1,328.9
	1. Medical Center	(1,117.0)	
	2. Urbana-Champaign	(211.9)	
	D. Workmen's Compensation		150.0
	E. Replacement of Federal Capitation Funds		2,550.0
	1. Medical Center	(2,400.0)	
	2. Veterinary Medicine, Urbana-Champaign	(150.0)	
	F. Enrollment Progression, College of Dentistry		367.5
	Subtotal, Continuing Components		$29,821.9
	% of FY 1979 Base[1]		10.26%
II.	PROGRAMMATIC COMPONENTS[2]		
	A. New and Expanded Programs		5,765.8
	1. Chicago Circle	(1,747.0)	
	2. Medical Center	(1,027.3)	
	3. Urbana-Champaign	(2,991.5)	
	B. Equipment Base Deficiencies		600.0
	1. Chicago Circle	(200.0)	
	2. Urbana-Champaign	(400.0)	
	Subtotal, Programmatic Components		$ 6,365.8
	% of FY 1979 Base		2.19%
III.	SPECIAL SERVICES/FUNDING COMPONENTS		
	A. Division of Services for Crippled Children (MC)		400.0
	B. Agricultural Extension Advisors (UC)		40.0
	C. County Cooperative Extension Telenet Expansion (UC)		64.0
	D. Public Service/Statewide Programming Electronic Blackboards (GU)		50.5
	E. County Board Matching Funds		304.5
	F. Cooperative Extension Service Nonacademic Reclassification (UC)		34.4
	G. Cooperative Extension Service Employer's Share of State Health Insurance (UC)		177.2
	H. Library Computer System (UC)		215.0
	Subtotal, Special Services/Funding Components		$ 1,285.6
	% of FY 1979 Base		.44%
	Grand Total FY 1980 Request (I+II+III)[3]		$37,473.3
	% of FY 1979 Base		12.89%

[1] FY 1979 Base excluding Retirement = $290,681.4.

[2] Individual programs contained in this section are identified in Table 3.

[3] Excludes Retirement, for which an increment of $24,579.0 is requested.

TABLE 3
NEW AND EXPANDED PROGRAMS FY 1980
(Dollars In Thousands)

I.	CHICAGO CIRCLE		
	A. High Demand Instructional Development		$ 957.0
	1. Professional Programs		
	a. College of Business Administration	($250.0)	
	b. School of Architecture	(50.0)	
	c. Art Studies/Theraputic Techniques	(57.0)	
	2. Extended Day/Program PM	(600.0)	
	B. Professional Schools Research Centers		270.0
	1. Administrative Science Research Center	(75.0)	
	2. Jane Addams Center for the Study of Social Policy and the Conduct of Social Research	(75.0)	
	3. Human Performance Evaluation	(45.0)	
	4. Urban Transportation Center	(75.0)	
	C. Graduate Fellowships		120.0
	D. Library Development		200.0
	E. Assistance to Students		200.0
	Subtotal, Chicago Circle		$1,747.0
II.	MEDICAL CENTER		
	A. Urban Health Program		461.0
	B. Center for Humanistic Studies		52.5
	C. Graduate Medical Education		200.0
	D. Clinical Education, College of Pharmacy		113.8
	E. Ambulatory Care Rockford School of Medicine		200.0
	Subtotal, Medical Center		$1,027.3
III.	URBANA-CHAMPAIGN		
	A. Projects Supported by State Appropriations in Past Requests		556.6
	1. College of Veterinary Medicine	(400.0)	
	2. Interdisciplinary Work, College of Law	(90.0)	
	3. Visual Resources Laboratory, Phase III	(66.6)	
	B. New Programs		658.1
	1. New Outreach Services, Engineering Experiment Station	(200.0)	
	2. Regional Transportation Systems Planning	(100.0)	
	3. Architectural Preservation Program	(164.0)	
	4. Professional Program in Acting	(84.8)	
	5. Graduate Programs in Design, Behavior Studies	(109.3)	
	C. Expansion of Existing Programs		893.0
	1. Coal Conversion Studies	(118.0)	
	2. Fusion Plasma Laboratory	(144.8)	
	3. Nuclear Radiation Protection	(69.0)	
	4. Solar Energy	(271.0)	
	5. Principal's Scholars Program	(140.0)	
	6. Pest Management Clinic	(81.0)	
	7. Nuclear Physics Superconducting Accelerator Facility	(69.2)	
	D. Consolidation and Improvement of Interdisciplinary Efforts		533.8
	1. Ancient Technologies and Archeological Materials	(60.0)	
	2. Human Factors Engineering	(162.4)	
	3. Program on Mutagens and Carcinogens in the Environment	(105.0)	
	4. Regional Science	(108.5)	
	5. Population Studies	(97.9)	
	E. Student Realignment		350.0
	1. Response to Changing Student Demand	(250.0)	
	2. Growth in Chemical Engineering Program	(100.0)	
	Subtotal, Urbana-Champaign		$2,991.5
	Grand Total, New and Expanded Programs		$5,765.8

SALARY INCREASES/COMPENSATION IMPROVEMENT ($20,432,300)

As part of the analytical processes supporting the preparation of the operating budget request, the University has carefully monitored the position of its academic and non-academic employees relative to the salaries and total compensation (salary plus fringe benefits) of their peer groups. As shown in Tables 4 and 5, until FY 1978 the relative standing of academic employees deterioriated steadily with respect both to cash salaries and compensation; salary increases granted for FY 1978 produced only very slight improvements.

It has become apparent that University employees face deficiencies in total compensation which require more direct attention than can be achieved through a continuation of straight increases in cash salaries. A separate discussion of this issue has been prepared to identify the compensation problem and the University's proposal to improve a portion of the compensation package. The salary increase/compensation improvement increment should, however, be viewed as a combined request for an increase of 9.5% for FY 1980.

Salary Increases

Although comparative data are not yet available, it is likely that the salary increases granted in FY 1979 (an average of 8%) will permit University faculty and staff to make some improvement in their relative standing among others in the Big Ten (Table 4). Further, although recent signs of increased inflation have been observed, it appears that an average increase of eight percent will at least match or perhaps slightly exceed inflation.

Peer group salary studies are also conducted regularly for non-academic employees. In past years, these studies have revealed that many non-academic employees, especially those in lower salary grades, were so significantly behind the market outside the University that they required special assistance. In 1978 and again in FY 1979, special appropriations of salary increase funds for lower paid civil service employees were provided.

TABLE 4

UNIVERSITY OF ILLINOIS SALARY RANK IN BIG TEN[1]

Rank % FTE	Professor (36.9%)	Associate Professor (27.6%)	Assistant Professor (29.2%)	Instructor (6.3%)
FY 1972	4.0	4.0	5.5	5.0
FY 1973	3.0	4.0	5.0	6.5
FY 1974	3.0	4.0	5.5	6.0
FY 1975	3.0	4.0	5.5	8.0
FY 1976	4.0	6.0	8.0	9.0
FY 1977	4.5	8.0	8.0	9.0
FY 1978	4.5	7.0	8.0	7.0

[1]"Total Institution" data according to AAUP guidelines; i.e. salaries for faculty in the Health Professions are excluded. Data for FY 1972 through FY 1977 are from published AAUP reports. Data for FY 1978 are from the Big Ten Survey, reduced to AAUP format.

TABLE 5

UNIVERSITY OF ILLINOIS TOTAL COMPENSATION RANK IN BIG TEN[1]

Rank % FTE	Professor (36.9%)	Associate Professor (27.6%)	Assistant Professor (29.9%)	Instructor (6.3%)
FY 1972	4.5	5.5	8.0	7.0
FY 1973	5.0	7.5	7.5	7.0
FY 1974	5.0	8.5	9.0	7.5
FY 1975	4.0	9.0	9.0	8.0
FY 1976	7.0	10.0	10.0	9.0
FY 1977	6.5	10.0	10.0	9.0
FY 1978	7.0	9.5	9.5	8.0

[1]"Total Institution" data according to AAUP guidelines; i.e., salaries for faculty in the Health Professions are excluded. Data for FY 1972 through FY 1977 are from published AAUP reports. Data for FY 1978 are from the Big Ten Survey, reduced to AAUP format.

Figure 1 shows the most current estimate for FY 1979 University of Illinois non-academic salary range midpoints in comparison with market midpoints and with FY 1978 University midpoints. Table 6 provides data which identify the range midpoints displayed in Figure 1. It can readily be seen that adjustments made to assist lower-paid employees have been effective in improving the competitive position of University ranges with the market. It should be stressed, however, that this Figure compares range midpoints--not actual salaries of each employee within a given range. Because of the restructuring of the ranges at the lower salary levels, the majority of employees are clustered at or near range minimums.

As previously mentioned, a study of total compensation has been made and the discussion in the following section has been prepared to speak to the issue of compensation improvement. Given projected inflation estimates it appears that a salary increase/compensation improvement increment of 9.5% will be required for FY 1980. The amount requested for the salary increase increment includes funds to annualize the FY 1979 salary increase 8%/10% as described in Appendix 1.

FIGURE 1

OPEN RANGE MARKET SALARY COMPARISONS

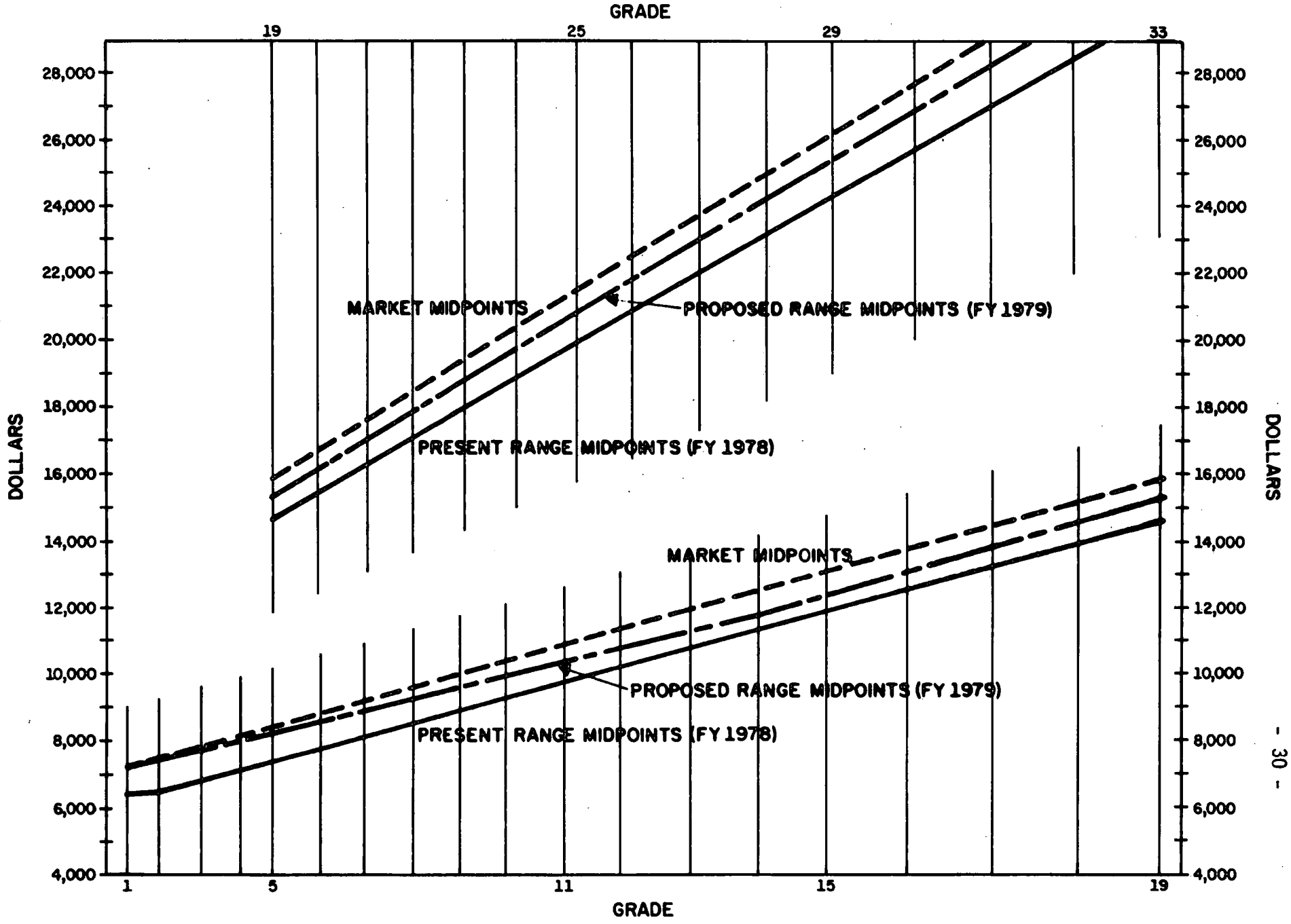


TABLE 6

COMPARISON OF MARKET COMPARABILITY POINTS
OF PRESENT RANGES, 9-78 MARKET, AND PROPOSED RANGES

Grade	Present Urbana Comparability Rate (8/77 Ranges) (see note 1)	Approximate 9/78 Market Average (see note 2)	Approximate Range Proposed for 8/78 (see note 3)	Percent Market Ahead of Ranges
1	6,346	7120	7200	slightly behind
2	6,456	7408	7449	slightly behind
3	6,746	7707	7715	slightly behind
4	7,054	8025	7984	0.5%
5	7,366	8347	8268	1.0%
6	7,708	8700	8571	1.5%
7	8,073	9077	8909	1.9%
8	8,428	9443	9223	2.4%
9	8,847	9876	9599	2.9%
10	9,253	10295	9970	3.3%
11	9,706	10762	10374	3.7%
12	10,268	11300	10812	4.5%
13	10,720	11809	11279	4.7%
14	11,296	12404	11784	5.3%
15	11,833	12958	12366	4.8%
16	12,451	13596	13011	4.5%
17	13,133	14300	13724	4.2%
18	13,849	15039	14472	3.9%
19	14,586	15800	15242	3.7%
20	15,371	16635	16062	3.6%
21	16,186	17502	16914	3.5%
22	17,021	18391	17785	3.4%
23	17,928	19356	18734	3.3%
24	18,884	20373	19732	3.2%
25	19,872	21424	20767	3.2%
26	20,917	22536	21860	3.1%
27	22,044	23735	23034	3.0%
28	23,215	24981	24258	3.0%
29	24,453	26299	25552	2.9%
30	25,770	27700	26928	2.9%
31	27,154	29173	28374	2.8%
32	28,622	30734	29909	2.8%
33	30,174	32386	31531	2.7%

NOTE:

(1) The Chicago ranges, based on the prevailing 37½ hour week which applies to the vast majority of open range employees, is virtually identical to Urbana's.
(2) The Urbana and Chicago grade structures differ, class by class, sufficient so that on a grade by grade basis the markets can be expressed as equivalent.
(3) Although the actual rates below grade 14 differ for the two campuses the values are close enough to fairly represent both campuses with single values for each grade.

Employee Compensation

The deterioration in the salary and compensation rankings of University of Illinois faculty memebers throughout the 1970's with respect to their counterparts at other Big Ten institutions has already been noted (Tables 4 and 5). Tables 7 through 10 provide salary and compensation comparisons for FY 1978 for each of the principal faculty ranks. Table 11 presents average cash salary and compensation data for each Big Ten institution for all ranks combined and weighted to the University of Illinois distribution of faculty. These data indicate that while the University of Illinois is at the median in weighted cash salaries, it ranks ninth in weighted compensation, due primarily to the fact the employer's contribution to fringe benefits is more than $1,000 below the mean of other Big Ten institutions.

It is an objective of the University of Illinois to provide cash salaries and compensation for all employees at a level competitive with other institutions of similar comprehensiveness and quality. These comparative studies indicate that along with continued progress in cash salary standing, increases in compensation (fringe benefits) must be made to maintain the University's competitive position among Big Ten institutions. Although comparative studies of employer-employee compensation contributions for nonacademic employees are not available at this time, the data in Table 6 which show the large majority of salary grades to be behind the market indicate a continuing need for the University to improve its competitive position vis-a-vis the market. Improvement in the compensation package is one direct way to enhance the University's competitive position with the market.

The study of employee compensation is quite complex, since some portions of the total compensation package at each institution are provided in lump sums, while others are based upon a percentage of the employee's salary. In order to provide a meaningful comparison among Big Ten institutions, percentage levels of employer and employee contributions were developed for an average cash salary of $20,000. Table 12 identifies the percentage levels of the employer and employee contributions to the two major categories of fringe benefits: 1) retirement; and 2) social security; and for employer contributions to other fringe benefits, (health insurance, life insurance, etc.) since employee participation in these programs is generally optional.

TABLE 7

DIFFERENCES IN AVERAGE CASH SALARIES VS. AVERAGE COMPENSATION
BIG 10 INSTITUTIONS FY 1978

PROFESSORS

Institution	Average Cash Salary	Rank	Employer Contribution	Rank	Average Compensation	Rank
Illinois	$28,000	4	$3,900	10	$31,900	7
Indiana	25,700	10	5,200	3	30,900	10
Iowa	28,000	4	4,600	8	32,600	4
Michigan	29,700	1	5,100	4	34,800	1
Michigan State	26,300	9	4,700	6	31,000	9
Minnesota	27,000	7	5,400	2	32,400	6
Ohio State	28,100	3	4,500	9	32,600	4
Purdue	27,700	6	5,600	1	33,300	3
Wisconsin	26,400	8	5,100	4	31,500	8
Northwestern	29,600	2	4,700	6	34,300	2
Mean, Less Illinois	27,611		4,989		32,600	

TABLE 8

DIFFERENCES IN AVERAGE CASH SALARIES VS. AVERAGE COMPENSATION
BIG 10 INSTITUTIONS FY 1978

ASSOCIATE PROFESSORS

Institution	Average Cash Salary	Rank	Employer Contribution	Rank	Average Compensation	Rank
Illinois	$19,900	7	$3,000	10	$22,900	9
Indiana	18,800	10	4,100	6	22,900	9
Iowa	21,000	3	4,400	1	25,400	2
Michigan	21,600	1	4,200	5	25,800	1
Michigan State	20,000	6	4,100	6	24,100	6
Minnesota	20,600	4	4,400	1	25,000	3
Ohio State	21,100	2	3,600	9	24,700	4
Purdue	19,700	8	4,400	1	24,100	6
Wisconsin	19,300	9	4,300	4	23,600	8
Northwestern	20,600	4	3,800	8	24,400	5
Mean, Less Illinois	20,300		4,144		24,444	

TABLE 9

DIFFERENCES IN AVERAGE CASH SALARIES VS. AVERAGE COMPENSATION
BIG 10 INSTITUTIONS FY 1978

ASSISTANT PROFESSORS

Institution	Average Cash Salary	Rank	Employer Contribution	Rank	Average Compensation	Rank
Illinois	$16,200	8	$2,500	10	$18,700	9
Indiana	15,300	10	3,400	6	18,700	9
Iowa	17,400	1	3,200	7	20,600	3
Michigan	17,300	2	3,600	2	20,900	1
Michigan State	16,300	7	3,500	5	19,800	6
Minnesota	17,000	4	3,800	1	20,800	2
Ohio State	17,300	2	3,100	9	20,400	4
Purdue	15,800	9	3,600	2	19,400	8
Wisconsin	16,400	6	3,600	2	20,000	5
Northwestern	16,500	5	3,200	7	19,700	7
Mean, Less Illinois	16,589		3,444		20,033	

TABLE 10

DIFFERENCES IN AVERAGE CASH SALARIES VS. AVERAGE COMPENSATION
BIG 10 INSTITUTIONS FY 1978

INSTRUCTORS

Institution	Average Cash Salary	Rank	Employer Contribution	Rank	Average Compensation	Rank
Illinois	$13,200	6	$2,100	10	$15,300	8
Indiana	11,900	9	2,700	5	14,600	9
Iowa	14,200	3	2,700	5	16,900	4
Michigan	15,000	1	3,100	3	18,100	1
Michigan State	13,200	6	3,100	3	16,300	6
Minnesota	14,000	4	3,300	1	17,300	2
Ohio State	14,600	2	2,700	5	17,300	2
Purdue	11,400	10	2,700	5	14,100	10
Wisconsin	13,200	6	3,200	2	16,400	5
Northwestern	13,300	5	2,600	9	15,900	7
Mean Less Illinois	13,422		2,900		16,322	

TABLE 11

ALL RANKS COMBINED AND WEIGHTED TO
UNIVERSITY OF ILLINOIS DISTRIBUTION[1]

	Weighted Average Cash Salary	Rank	Weighted Employer Contribution	Rank	Weighted Average Compensation	Rank
Illinois	$22,100	5	$3,200	10	$25,300	9
Indiana	20,500	10	4,300	5	24,800	10
Iowa	22,800	3	4,100	7	26,900	3
Michigan	23,600	1	4,400	3	28,000	1
Michigan State	21,400	8	4,200	6	25,600	8
Minnesota	22,100	5	4,600	1	26,700	4
Ohio State	22,800	3	3,800	9	26,600	5
Purdue	21,800	7	4,600	1	26,400	6
Wisconsin	21,300	9	4,400	3	25,700	7
Northwestern	23,000	2	4,000	8	27,000	2
Mean, Less Illinois	22,144		4,267		26,411	

[1] Weights Assigned: Professor = .41
Assoc. Professor = .30
Asst. Professor = .27
Instructor = .02

TABLE 12

COMPARISON OF FY 1978 EMPLOYEE AND EMPLOYER CONTRIBUTIONS
TO FRINGE BENEFITS

(Assumed Salary of $20,000)

	Retirement			Social Security[3]			Retirement & Social Security			Other
	Employee	Employer	Total	Employee	Employer	Total	Employee	Employer	Total	Employer Only
Illinois	8.00%	10.78%[1]	18.78%				8.00%	10.78%	18.78%	4.285%
Indiana	0.00	13.44	13.44	5.355%	5.355%	10.71%	5.355	18.795	24.15	2.81
Iowa	4.60	9.20	13.80	5.355	5.355	10.71	9.955	14.555	24.51	3.76
Michigan	5.00	10.00	15.00	5.355	5.355	10.71	10.355	15.355	25.71	6.16
Michigan State	5.00	10.00	15.00	5.355	5.355	10.71	10.355	15.355	25.71	5.31
Minnesota	2.50	10.375	12.875	5.355	5.355	10.71	7.855	15.73	23.585	6.76
Ohio State	8.00	13.50[2]	21.50	0.00	0.00	0.00	8.00	13.50	21.50	3.96
Purdue	0.00	13.20	13.20	5.355	5.355	10.71	5.355	18.555	23.91	4.245
Wisconsin	1.00	10.90	11.90	5.355	5.355	10.71	6.355	16.255	22.61	5.75
Northwestern	5.00	10.00	15.00	5.355	5.355	10.71	10.355	15.355	25.71	3.445
Mean, Less Illinois	3.455	11.18	14.635	4.76	4.76	9.52	8.215	15.94	24.155	4.69

(1) Includes Survivor's Benefits (1.90%) and Retirement System Administrative Expenses (.18%), in addition to Retirement (8.70%).

(2) Includes Survivor's Benefits and Retirement System Administrative Expenses. No estimate of percentages.

(3) The Social Security System contains Survivor's Benefits.

It should be noted that the figures in Table 12 represent costs to the employee and to the employer and not benefits. A study has been undertaken to assess benefits at all Big Ten institutions and to test whether the "value" of the benefits is directly related to the current cost of these programs. Prior to the completion of this study it is assumed that the present value of the benefits is approximated by the current costs (sum of employer and employee contributions) of the fringe benefit programs.

A review of Table 12 indicates that the 4.29% employer's contribution to "other" fringe benefits for the University of Illinios does not differ significantly from the 4.69% average contribution at the other Big Ten institutions. Therefore, it is assumed that it is in the area of Retirement and Social Security contributions where the major deficiencies in compensation exist.

Retirement and Social Security

The combined employee (8.00%) and employer (10.78%) contributions to Retirement and Social Security represent 18.78% of the gross annual salary of a $20,000 employee at the University of Illinois. Similar figures are employee (8.215%), employer (15.94%) total (24.155%) for the average of the other nine Big Ten institutions. By far the major source of the compensation difference is the employer contribution, 15.94% at the other Big Ten instituitons vs. 10.78% at the University of Illinois, rather than the employee contribution (8.215% vs. 8.00%). In other words, the employer contribution to Retirement and Social Security at the other institutions exceeds that at the University of Illinois by 5.16%, a difference of $1,032 based on a $20,000 per year salary.

Budget Proposal

Given a 5% to 6% deficiency in employer contributions to fringe benefits the issue becomes identifying the best method to reduce the deficiency. One alternative would be to opt into the Social Security system in addition to the present State Universities Retirement System. This option would require

additional contributions of 5.355%[1] from both employees and the employer. While it would bring the State's contribution to a level slightly above the mean for the Big Ten, it would raise employee contributions to 13.55, by far the highest contribution among the Big Ten and perhaps an intolerable level of deductions form take-home pay for University employees. In addition, the total contributions to retirement would rise to 29.49%--again by far the highest total among Big Ten institutions. At this time, there is no evidence to indicate that the present SURS benefits are below benefits at other institutions by such a large margin.

A variation of alternative one would be to reduce the employee's contribution to 2% or 3%, shift 5% to 6% to the employer, and then join Social Security. This would keep the employee's contribution at about 8%, but would add 10.85% to the State's current contribution, more than doubling the present amount (5.355% for Social Security plus 5.5% shifted from employee contributions).

Another alternative would be to retain the employee's contribution at 8% and to provide 5% to 6% in additional State-funded retirement benefits, either by increasing present SURS benefits, or by purchasing an annuity program through an external source. This would bring the State significantly closer to the mean for other Big Ten institutions. As indicated in alternative one, however, there is no current reason to believe that present SURS benefits are deficient.

A fourth alternative appears to be preferable to any of the others. It would shift a total of 5% to 6% of present employee contributions to the employer, eventually reducing the employee contribution to 2.5% and raising the State contribution to 16.28%, retaining the present 18.78% total. This alternative would thus reduce the amount deducted from the employee's pay, providing an increase in take-home pay. The employee would then have the option to provide for additional retirement income through an annuity of his/her own selection, or to select some other form of fringe benefit. Table 13 presents a recapitulation of these alternatives.

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[1]Based upon a $20,000 annual salary. Present Social Security contributions are calculated at 6.05 percent of annual salary up to a maximum of $17,700.

TABLE 13
COMPENSATION IMPROVEMENT ALTERNATIVES
(Based Upon $20,000 Annual Salary)

	Contributions to Retirement		
	Employee	Employer	Total
Big Ten Average, Less Illinois	8.215%	15.94 %	24.155%
Current Illinois Contributions	8.0	10.78	18.78
Alternative One: Add Social Security			
SURS	8.0	10.78	18.78
Social Security	5.355	5.355	10.71
Total	13.355%	16.135%	29.49 %
Alternative Two: Shift State Contribution, then Add Social Security			
SURS	2.5	16.28	18.78
Social Security	5.355	5.355	10.71
Total	7.855%	21.635%	29.49 %
Alternative Three: State Funds Expanded Benefits			
SURS	8.0	10.78	18.78
Additional Benefits[1]	0	5.50	5.50
Total	8.0 %	16.28 %	24.28 %
Alternative Four: Shift State Contribution, Permit Employee to Select Benefits			
SURS	2.50	16.28	18.78
Additional Discretionary Income	(5.5)	0	(24.28)

[1]Either expanded SURS benefits or added benefits from another source.

The proposal contained in the FY 1980 budget request follows the fourth alternative, recognizing that a gradual phasing to the 5% to 6% level over a period of three years might be preferable to a full shift in a single year. This proposal is not intended to weaken the Retirement System in any way. The University of Illinois is committed to support the Retirement System at least at the level obtained under the Gross Payout Method. Under no circumstances should the employee contribution proposal result in a decrease of the support to the Retirement System.

The question then arises as to what guarantees exist for future funding of the Retirement System. Although past history may create concerns over funding commitments, the steps taken in FY 1979 to move from Net to Gross payout is of extreme importance. Table 14 shows that the requirements to maintain funding at the Gross payout level in FY 1980 for all universities and the University of Illinois are not significantly different from the incremental funds that would have been required to maintain a Net level from FY 1979 and FY 1980. Therefore, maintenance of the Gross Payout Method is not expected to create an additional burden on the State.

The issue remains as to what level of future requirements are needed to support pension benefits for University employees. The analysis presented in Appendix 2 suggests that although increases in Retirement funding are expected, when reviewed relative to the anticipated growth of State Revenue Funds, no alarming trend is envisioned in terms of major changes in the proportion of State Revenue Funds needed to support the Retirement System(s). Also, it appears that the current ratio of assets to liabilities approximates 47% (through FY 1977) a rate which, although not ideal, has improved steadily since FY 1972.

TABLE 14
FY 1980 RETIREMENT FUNDING REQUIREMENTS
(Dollars in Thousands)

	FY 1978	FY 1979	FY 1980	Increment
Net 1978 to Gross 1979	$20,943.9	$25,891.8		$ 4,947.9
Gross 1979 to Gross 1980		25,891.8	$29,404.7	3,512.9
Net 1979 to Net 1980		21,458.6	24,369.9*	2,911.3
Gross 1979 to Statutory 1980		25,891.8	50,470.8	24,579.0

*Estimated, based on FY 1979 requirement

PRICE INCREASES
($4,993,200)

Incremental funds are required to support annual increases in costs for those objects of expenditure with which the University purchases utilities, commodities, equipment, contractual services, travel, telephones, and the operation of automobiles. In addition, two special objects relating to goods and services provided by the Division of Services for Crippled Children (Hospital Services and Artificial Appliances) are included.

As noted below, the State has made a strong effort since FY 1974 to provide utilities increments which approximate inflation-driven price increases. In recognition of growing deficiencies in library acquisitions and an inflation rate well above the norm, in FY 1979 the State also provided additional resources for library acquisitions through the price-increase mechanism. The University is again requesting special price increase funding for these two areas and in addition seeks similar consideration for the Hospital Services and Artificial Appliances objects. General price increase funding at a level which would offset the annual rise in the Consumer Price Index is requested for all other objects. Each of these major areas is discussed below.

Utilities ($2,044,100)

The University's purchases of commodities and contractual services includes those components needed for the provision of heat, light, air conditioning, laboratory gas, water, and power generated by Urbana-Champaign's Abbott Power Plant. In FY 1978, the University expended a total of $14,647,335 for the purchase of these materials excluding lapse period billings. Fuel oil, used both for heating and for the generation of electricity, accounted for 42.7% of direct utility expenditures; purchased electricity accounted for 38.3%; the purchase of steam, 11.1%; gas, 3.8%; and water, sewer, and other charges, 4.1%. The University's consumption of the major energy components is shown in Table 15.

While energy conservation measures continue to be in effect at all campuses, utility requirements are increasing due to campus needs and to the addition of new buildings. Energy conservation measures continue to mitigate only a portion of the effects of continuing cost increases in utility components.

TABLE 15
ENERGY CONSUMED BY THE UNIVERSITY OF ILLINOIS* FY 1973-FY 1978

	FUEL OIL			ELECTRICITY			STEAM**				
	Gallons	GAL/GSF	Rate of Change Since 1973	KWH	KWH/GSF	Rate of Change Since 1973	MLBS	MLBS/GSF	Rate of Change Since 1973	Area Maintained By Physical Plant (GSF)	Rate of Change Since 1973
FY 1973	21,262,458	1.58	100%	232,285,213	17.28	100%	342,241	.15	100%	13,442,253	100%
FY 1974	19,949,053	1.47	94%	225,045,050	16.68	97%	337,520	.13	99%	13,484,039	100%
FY 1975	17,560,316	1.28	83%	223,119,800	16.36	96%	339,291	.13	99%	13,638,880	101%
FY 1976	14,703,073	1.06	69%	242,733,078	17.56	104%	384,900	.14	112%	13,823,121	103%
FY 1977	16,869,952	1.19	79%	243,139,324	17.14	105%	397,729	.13	116%	14,184,984	106%
FY 1978	17,503,483	1.22	82%	245,998,952	17.19	106%	387,264	.13	113%	14,306,844	106%

*Does not include Rockford and Peoria Schools of Medicine.
**Medical Center only.

The University requests an increment of 11.5% on the current utility base. This percentage approximates the increase in utilities prices this past year as measured by the Wholesale Price Index for Fuel, Related Products and Power. It would result in an increment of $2,044,100 to the utilities base.

The University's recent direct utility expenditures are described in the table below.

	Chicago Circle	Medical Center	Urbana-Champaign	Total
FY 1977 Expenditures	$2,716.2	$3,644.9	$6,822.9	$13,184.0
FY 1978 Expenditures	2,927.5	3,975.0	7,744.7	14,647.3[1]
FY 1979 State Base Including New Buildings	3,427.5	5,097.6	8,893.9	17,774.5[2]

[1]Not including billings received during the lapse period, July 1 through September 30, 1978.

[2]Includes a utility contingency of 2% of the base - $355,500 - budgeted at the General University.

Total direct utility expenditures in FY 1978 were 11.1% greater than in FY 1977. Cost increases by type of utility varied widely among the campuses. Whereas fuel oil remained at a relatively constant price in Chicago, its cost increased by nearly 10% at Urbana-Champaign; and usage was up at both campuses. Electricity costs increased roughly 15% in Chicago, but the unit cost of purchased electricity increased by 35.6% at Urbana-Champaign, making it relatively more efficient for that campus to generate a much larger share of its electricity. Medical Center expenditures for steam increased 7.5% from FY 1977 to FY 1978.

Natural gas costs, while a small part of the total, increased by 14% to 18% in unit cost. Water unit costs, also a small share of the total, increased from 6% to 13%.

A similar variety of price increase expectations are budgeted for FY 1979 and projected for FY 1980.

Library Acquisitions ($407,600)

The library deficiency study reported in the FY 1979 budget request documented deficiencies in the current collections at the Chicago Circle and Urbana-Champaign libraries, as well as a rate of inflation for library acquisitions at all three campuses which far exceeded the rise in the Consumer Price Index. The State responded to this situation by providing a 10% price increase increment for library acquisitions, as against a general price increase increment of only 4.5%.

For FY 1980, an 11% price increase is requested for library acquisitions. This request would provide $407,600, and is based upon inflation data reported in the Bowker Annual and acquisition cost trends experienced by the University libraries.

Division of Services for Crippled Children ($430,400)

General price increase amounts provided in the recent past have failed by a wide margin to match inflation-driven increases in the Hospital Services and Artificial Appliance objects which serve the Division of Services for Crippled Children (DSCC). Additional increments received in programmatic portion of the Special Services components have also failed to keep pace with inflation. As a result, DSCC services have not increased nearly as rapidly as they should have. In an attempt to provide DSCC with a more adequate price increase increment, a 9% increase is requested for FY 1980. This request would provide $430,400 in an attempt to stop further losses to inflation. It is based upon a projected 9% inflation rate for FY 1980, using current Consumer Price Index data from the medical care services category. A companion request in the Special Services/Funding section addresses the issue of DSCC deficiencies caused by past failures to provide price increase increments matching inflation.

General Price Increases ($2,111,100)

As discussed earlier, the 1970's have seen periods of steep inflation which have seriously reduced the University's purchasing power for goods and services. As described in Figure 4 of Part One, the Consumer Price

Index has increased at an annual compounded rate of 7.03% since 1970, while corresponding University price increases have risen at only a 4.81% annual compounded rate. Further losses to inflation must be avoided, and a General Price Increase request of 7.5% is sought, based upon the projected rise in the Consumer Price Index for FY 1980.

OPERATION AND MAINTENANCE FOR NEW AREAS

($1,328,905)

Funds in this category are requested for a) recently constructed buildings, b) added space to be maintained by the Division of Operation and Maintenance, and c) meeting user fee agreements with the Champaign Sanitary District. Table 16 provides specific cost information for each component of this request.

For the first two components, the cost per gross square foot requested is determined by building up the annual costs for operating the facility in terms of personal services, expenses, and equipment.

A user fee of $162,100 is to be paid annually to the Champaign Sanitary District. This fee will support the district's repayment of bonds required for the current program of capital improvements.

TABLE 16
OPERATING COSTS FOR NEW AREAS IN FY 1980

Name of Building	A Gross Square Feet	B Total Unit Cost ($/GSF)	C Date of Occupancy	D No. of Months To Be Funded In FY 1980	E Annual Cost [1]	F Amount Requested In FY 1980 [2]
Replacement Hospital	621,815	$3.63[3]	01/01/79	6	$2,233,996	$1,117,000
Champaign Sanitary District Capital Improvements[4]	N/A	N/A	07/01/79	12	162,100	162,100
Skating Rink	54,964	$0.637	07/01/79	12	35,000	35,000
Vet Med Research No. 2	4,050	$2.925	07/01/79	12	6,604	6,604
Vet Med Research No. 3	3,600	$3.055	07/01/79	12	6,401	6,401
TV Annex	864	$2.083	07/01/79	12	1,800	1,800
Total						$1,328,905

[1] Annual Cost (E) = A x B

[2] Amount Requested (F) = E x D/12

[3] IBHE FY 1979 recommendation $3.30 per GSF times 1.10.

[4] User fee to be paid to the Urbana-Champaign Sanitary District.

WORKMEN'S COMPENSATION

($150,000)

Expenditures for Workmen's Compensation have grown steadily for the past four fiscal years, and show no indication of slowing. Significantly liberalized benefits introduced in FY 1977 have resulted in larger awards and lengthier periods for which compensation is provided. A growing number of cases are being referred to the Illinois Industrial Commission for settlement, creating a backlog of pending cases, many of which are eventually settled one or even two fiscal years following their initiation. In addition, auditing guidelines now require charging the Workmen's Compensation object for certain lost-time wage payments which previously have been charged to departmental accounts. The data below highlight the growth in Workmen's Compensation expenditures.

	Budget	Expenditures	% Change In Expenditures
FY 1975	$145,000	$145,000	-
FY 1976	180,000	214,700	48.0%
FY 1977	288,000	296,000	37.9%
FY 1978	360,000	490,000*(400,000)	65.5% (35.1%)
FY 1979	440,000	480,000**	2.0% (20.0%)
FY 1980	590,000		

*Includes settlement of $90,000 for a single case involving the death of a University staff member. Numbers in parentheses exclude this case.
**Estimated.

For past fiscal years, it has been the custom to project the budget request increment on the basis of past experience. Assuming that the single settlement for $90,000 in FY 1978 is an unusual occurrence, expenditures have increased an average of 35% each year since FY 1975. This would indicate a total appropriation of $590,000 for FY 1980, or an increment of $150,000.

Due to the volatility of Workmen's Compensation in the past two years especially, the University has recently made arrangements with the actuarial firm of Tillinghast, Nelson & Warren to provide a more comprehensive

review of Workmen's Compensation needs for FY 1980. The results of this review are expected to be available about October 1. Based upon these results, it is possible that a slight revision in the current increment will be requested.

REPLACEMENT OF FEDERAL CAPITATION FUNDS ($2,550,000)

Federal Capitation funds have been awarded to the University of Illinois since the late 1960's and have provided significant and necessary support for instruction and increased enrollments in Dentistry, Medicine, Nursing, Pharmacy, Public Health, and Veterinary Medicine.

Without the availability of Federal capitation funds, the enrollment growth experienced in the Health Professions would not have been achieved. Expenditures of these funds have averaged $3,820,000 over the last three fiscal years (FY 1978 dollars).

The University now faces the impact of reduced awards of Federal capitation funds and, therefore, requires State funds equivalent to the reductions to maintain current enrollment levels. For FY 1979, $757,600 was appropriated to the University by the State in recognition of this condition. $182,600 will be replaced for Veterinary Medicine, and $289,000 will be replaced at the Medical Center; an additional $286,000 will be allocated to support capitation-required enrollment increases (17 medical students) for three years, after which it will be used to replace capitation funds.

At this FY 1979 State replacement level, planned enrollments can be maintained, if capitation awards well above the Federal Administration's budget level are received, as anticipated.

Given the unpredictability of future capitation awards, a cautious approach has been taken leading to the projected replacement needs shown in Tables 17 and 18. For FY 1980, $2,400,000 is requested for the Medical Center and $150,000 for Veterinary Medicine.

TABLE 17
MEDICAL CENTER
PLAN FOR REPLACEMENT OF CAPITATION FUNDS
(Dollars in Millions)

	FY 1978	FY 1979	FY 1980	FY 1981	FY 1982	FY 1983
Beginning Balance	$ 1.76	$ 1.19	$ 0.40	$ 0.26	$ 0.15	$ 0
Awards	2.76	2.50*	1.00*	0.80*	0	0
Replacement of Capitation by State Funds						
Increment	0	0.29	2.40	0.30	0.46	0.16
Cumulative (from previous years)**	0	0	0.31	2.87	3.71***	4.42
Expenditures**	3.33	3.58	3.85	4.08	4.32	4.58
Ending Balance	$ 1.19	$ 0.40	$ 0.26	$ 0.15	$ 0	$ 0

*Estimated.
**Inflated by 7.5% from FY 1978 to FY 1979 and FY 1979 to FY 1980; by 6% for other years.
***Includes 0.29 (escalated to 0.35) provided in FY 1979 for an additional 17 students.

TABLE 18
VETERINARY MEDICINE
LONG RANGE PLAN FOR THE REPLACEMENT OF CAPITATION FUNDS
(Dollars in Thousands)

	FY 1978[1]	FY 1979[2]	FY 1980[3]	FY 1981[3]	FY 1982[3]
Beginning Balance	$ -0-	$ 100.0	$ 62.0	$ -0-	$ -0-
Estimated Awards	230.6	236.0	-0-	-0-	-0-
Replacement of Capitation Funds	250.0	451.3	635.1	807.9	929.4
Increment	(250.0)	(182.6)	(150.0)	(134.7)	(73.0)
Previous	(-0-)	(268.7)	(485.1)	(673.2)	(856.4)
Expenditures	380.6	664.0	631.2	738.0	855.3
Additional Capitation Students	-0-	61.3	65.9	69.9	74.1
Total Expenditures	380.6	725.3	697.1	807.9	929.4
Ending Balance	$ 100.0	$ 62.0	$ -0-	$ -0-	$ -0-

[1]Actual.

[2]Budget.

[3]Capitation expenditures are based on a three year expenditure figure (FY 1975, FY 1976, FY 1977, in FY 1978 dollars), inflated by 7.5% to FY 1979 and to FY 1980; and by 6% for the other years. The acceptance of capitation funds required the growth of the entering class by five students in FY 1979. These are funded at the average FY 1979 expenditure per student rate of $12,265; inflated in later years as above.

INCREASE IN CLASS SIZE
COLLEGE OF DENTISTRY
($367,500)

New State funds totaling $333,000 were received in FY 1979 to allow the College of Dentistry to expand its class size from 132 to 165 students. These funds support growth in the first-year class. Additional funds will be required in each of Fiscal Years 1980, 1981, 1982 to fund fully the added complement of students. In addition to meeting enrollment levels recommended several years ago by the Board of Higher Education, this expansion will allow the University to meet enrollment commitments made to the Federal government in the acceptance of the award of $1,250,000 in Federal funds for the equiping of the new facility of the College of Dentistry.

The additional funds required in FY 1980 to support an increase in the second-year class of 32 students total $367,500. This amount will fund an additional 8.6 FTE academic staff, 2.7 FTE support staff, and associated costs.

FY 1981 and FY 1982 estimated requirements for additional funds total $408,500 and $435,400, respectively. These figures include a compounded inflation rate of 8% per year above the FY 1980 costs.

PROGRAMMATIC COMPONENTS

Requests for new and expanded programs at each campus are included in this section, along with a request to continue funding for the equipment deficiency program which was begun in FY 1979. A general description of the processes by which the requests appearing in this document were compiled is provided, and summary tables are included for each campus.

System Review Process

The preparation of the FY 1980 Operating Budget request began with the identification of needs. After the internal campus review and selection processes described in the overview sections which follow, in May each campus transmitted documentary support for all new and expanded programs to be considered for the request to the Vice President for Academic Affairs and the Office for Planning. All of these programs were included in Volume II of the "Background Information for the Review of the FY 1980 Capital and Operating Budget Request" presented to the Board of Trustees on June 21, 1978. The programs described in Volume II were presented as transmitted by each campus and represented the identified and justifiable needs from which a specific set would ultimately be requested. The criteria used for the selection of programs were the following:

--academic suitability,
--stature and productivity of current faculty engaged in related activities,
--fit of these programs into University wide long-range perspectives,
--extent and quality of supporting facilities and services,
--impact of programs on camus directions.

The Office of the Vice President of Academic Affairs applied these criteria and arrived at general priorities and categorization of programs. The results of this process were shared with the Office of Planning, and the combined conclusions were first shared with each campus and then presented to the University Planning Council. Funding levels and priorities were arrived at in cooperation with campus academic offices; these decisions are reflected in the Operating Budget Request.

CHICAGO CIRCLE NEW AND EXPANDED PROGRAMS

Overview

The development of the FY 1980 budget request of Chicago Circle (UICC) reflects several important considerations. First, the campus is committed to fulfilling the mission of high quality instruction, research, and public service which has long characterized the University of Illinois. Funds are thus sought to meet student demand for further instructional development, to improve library services, and to initiate major new research thrusts in the professional colleges. Second, UICC has resolved to take major steps to insure that the diverse population of the Chicago metropolitan area has access in all respects to the high quality educational services the campus is prepared to offer. This concern manifests itself in requests for graduate fellowships and in a variety of programs designed to assist students in participating fully in the academic life of the campus. Finally, the request reflects a long-range developmental plan for the campus coupled with a concern for responsible and responsive management of resources.

The foci of this request are not randomly selected, nor are they part of a list of all UICC might wish to accomplish were there no limits to resources. Rather, careful consideration was given to how to utilize most effectively human and financial resources already available in areas most germane to UICC's responsibilities and to the needs of the community. From this perspective High Demand Instructional Development, Professional School Research Centers, Graduate Fellowships, Library Development and Student Assistance clearly emerged as those areas requiring most immediate attention and which can be supported realistically by additional resources.

The final selection of the individual projects presented for incremental funding in FY 1980 resulted from a process of consideration and review by several campus constituencies. Early in the fall, campus units were asked to prepare preliminary proposals for incremental funding following thorough internal review and discussion. Many units were already well along in the planning process by this time. By April, final drafts were prepared by the units and carefully scrutinized by the staff of the Office of Academic Affairs. These proposals were presented to the Academic Council for discussion and approval and then forwarded to the Academic Resources Board for information

and discussion. After this consultative process, which included discussion with the Chancellor, the Vice Chancellor for Administration, and the General University Officers, the Office of Academic Affairs prepared this statement in its final version.

Four new programs included among the projects have the full endorsement of the units from which they originated as well as of the Chancellor and the Office of Academic Affairs, but have not yet been presented to the Campus Senate, the Board of Trustees or the Board of Higher Education. Because each of these programs, the M.A. in Art Studies/Therapeutic Techniques, the Administrative Science Research Center, the Jane Addams Center, and the Urban Transportation Center, has direct bearing on the goals and mission of the campus and is in accord with directions already established, it is not anticipated that problems will arise in securing necessary campus, University and Board of Higher Education approvals. Because it is anticipated that the approval process will be completed before the beginning of FY 1980, the campus administration has chosen to present these new programs in this budget document to insure their implementation during FY 1980.

TABLE 19
CHICAGO CIRCLE NEW AND EXPANDED PROGRAMS
FY 1980 BUDGET REQUEST
(Dollars in Thousands)

A.	High Demand Instructional Development	
	1. Professional Programs	
	a. College of Business Administration	$ 250.0
	b. School of Architecture	50.0
	c. Art Studies/Therapeutic Techniques	57.0
	2. Extended Day/Program PM	600.0
	SUBTOTAL	(957.0)
B.	Professional Schools Research Centers	
	1. Administrative Science Research Center	75.0
	2. Jane Addams Center for the Study of Social Policy and the Conduct of Social Research	75.0
	3. Human Performance Evaluation	45.0
	4. Urban Transportation Center	75.0
	SUBTOTAL	(270.0)
C.	Graduate Fellowships	120.0
D.	Library Development	200.0
E.	Assistance to Students	200.0
	TOTAL FY 1980 New and Expanded Programs	$ 1,747.0

HIGH DEMAND INSTRUCTIONAL DEVELOPMENT ($957,000)

Increased access to the campus will come largely through the further development of Extended Day/Program PM and expansion of the instructional programs in the professional areas. Students are currently being denied admission to certain programs because the number of qualified applicants far exceeds the number of places available. In certain cases, accreditation standards for student-faculty ratios are in jeopardy of being exceeded. The units that are experiencing the most pressure to increase enrollment are Business Administration, Architecture, and Art and Design. Student demand follows what the marketplace requires as preparation for professional and career development in technical, social and humanistic fields. The availability of degree programs with flexible scheduling is as relevant for UICC students as is the number and variety of courses offered. Internal reallocation pushed to its furthest limits cannot meet the shifting demands without seriously undermining the programs basic to the total educational program offered by a comprehensive university. Additionally, UICC must meet its obligations to fulfill the long-term commitments to depth and breadth of offerings already made to current students and to the faculty.

College of Business Administration ($250,000)

Since the start of the current decade, the College of Business Administration has experienced a steadily increasing student demand for instruction in business. In the past five years, enrollment has increased 20% and the instructional load has increased 30%. These increases would have been much larger if the College had admitted all qualified students who sought admission. The increases have resulted largely from shifts in student demand from other disciplines to business with a large part of the demand coming from women and minorities. Overall, the growing demand can be attributed to the availability of jobs for men, women, and minorities with formal training in business and the reaction of students to this market demand.

In view of the current demand, the backlog that has built up due to restricted admissions, and the projected state of the economy, the College anticipates that the high demand for instruction in business will continue

at least through 1983-84, and probably until 1988. Although the rate of growth may slow at the undergraduate level, a high level of enrollment is expected to continue through the 1980's as demand shifts to graduate and continuing education areas.

Even though the current enrollment substantially understates demand, it is a level which places the College's average class size near the maximum acceptable to the accreditation association. Furthermore, the ratio of part-time faculty is above the maximum allowed by the accreditation standard. If the College, Campus, and University are to serve the high demand for instruction in business and to meet their responsibilities to provide the type, quantity and quality of education expected by the public, the College must be provided with considerably increased budget resources.

The analysis presented in Table 20 indicates that an increment of $300,000 in FY 1980 would provide the College with sufficient funds to establish instructional capacity (measured by FTE faculty) at a level that would maintain an average class size within accreditation standards and allow for an increase of 150 students beyond the present level. Of the $300,000, $50,000 will be provided by campus internal reallocation. The increase in number of students, while significant, would meet the needs of only a portion of the qualified students who want to study business and are now refused admission.

TABLE 20
COLLEGE OF BUSINESS ADMINISTRATION FY 1980 BUDGET PROPOSAL
HIGH DEMAND INSTRUCITON--DAY PROGRAM ONLY

I. Planned Fall 1979 Headcount Enrollment--With and Without Budget Increment--day programs only:

	Fall Quarter 1979		
	Without Budget Increment	With Budget Increment	Difference
A. Undergraduate			
1. Continuing students	1,580	1,580	0
2. New students	500	650	150
Subtotal	2,080	2,230	150
B. Graduate			
1. Continuing students	50	50	0
2. New students	60	60	0
Subtotal	110	110	0
C. Total	2,190	2,340	150

II. Requested FY 1980 Budget--day programs only:*

A. Instruction:		
1. Faculty	$1,870,000	
2. Teaching Assistants	55,000	$1,925,000
B. Administrative Support:		
1. Academic	272,000	
2. Nonacademic	220,000	
3. Wages	50,000	
4. Expense	151,000	693,000
C. Total		$2,618,000
D. Less FY 1979 Budget for Day Programs		
Instruction:		
1. Faculty	$1,595,000	
2. Teaching Assistants	46,000	$1,641,000
Administrative Support:		
1. Academic	272,000	
2. Nonacademic	210,000	
3. Wages	50,000	
4. Expense	145,000	677,000
Total FY 1979 Budget for Day Programs		$2,318,000
E. Required FY 1980 Increment for Day Programs		300,000
Increment Allocated by Campus		50,000
Net required FY 1980 Increment for Day Programs		$ 250,000

*FY 1980 figures are in FY 1979 dollars and do not include $156,000 for salary increases and $10,900 for price increases.

School of Architecture ($50,000)

The School of Architecture is currently turning away almost as many qualified applicants as it is able to accept. This enrollment pressure is most critical at the graduate level, but it extends to undergraduate programs as well. Because a basic core of senior faculty already exists, the proposed increase of $50,000 would make possible the addition of between 30 and 40 new graduate students. In addition to helping to alleviate growing enrollment pressures, expansion of the graduate program would provide the means to develop the research potential of the School and to expand urban service-related programs which have already established the School of Architecture as a major resource for planning and design in the Chicago metropolitan area.

The School of Architecture is highly regarded throughout the country for its effective professional program, its strong faculty, and its ability to utilize the resources of the area as an integral part of the educational program. Chicago occupies a position of world prominence in the field of architecture, and with the increasing demand for architectural education nationally, UICC is in a particularly favorable position to capitalize on this national trend and on its Chicago location.

The new graduate program, established in 1976, coupled with a reorganized undergraduate program, will take advantage of the opportunities and challenges of planning and design related to the rehabilitation of neighborhoods, the adaptive reuse of existing structures, and the development of accommodations for the handicapped and elderly, as well as permit an increase in the effectiveness of the more traditional professional programs in architecture. In addition, the School of Architecture will be able to expand professional continuing education programs for practitioners as well as environmental education programs for the general public.

The proposed budget increase would provide 2.0 new FTE faculty positions and support for graduate teaching and research assistants.

M.A. in Art Studies/Therapeutic Techniques ($57,000)

The purpose of this program is to meet the continuing demand by the metropolitan student public for graduate study in art with a specialization in therapeutic techniques. This high demand is evidenced by the more than 200 artists, teachers, and other professional men and women who are currently on the list for Fall openings in Art/Design and Therapeutic Techniques. Further evidence of this demand was the Extension lecture series on Art Therapy in 1976 and 1977 that drew several hundred applicants, some from as far as Milwaukee and Urbana.

There is strong evidence that artist/teachers and artist/designer/therapists are needed in the burgeoning new social service, educational, and health care settings, and that non-verbal modes of expression and therapeutics can augment clinical care and intervention in a substantial and often dramatic manner. No such program is currently available in Chicago, nor in the entire State. The College of Architecture, Art and Urban Sciences is prepared to develop such a pioneering program, unique in character and effective in delivery.

Major components of this program will be Art Therapy, Human Development and Design/Environment, and the program will satisfy the requirements of the American Art Therapy Association. Placement and field work will include many agencies such as Psychiatric Research and Training-Michael Reese Medical Center; Chicago-Read Mental Health Center; Cook County Prison; residences for the elderly, juvenile homes, as well as special facilities for the blind, handicapped, drug or alcohol abusers, "half-way" houses, etc.

Based on an inventory of the inquiries received to date, it is expected that 10-12 students would be enrolled in the first year with growth to 30-40 students in five years. The anticipated expenditure of $57,000 would cover the cost of 1.83 faculty and staff, plus supplies, equipment and other contractual services.

Extended Day/Program ($600,000)

Extended Day/Program PM was initiated in Fall, 1977, through an internal reallocation of $643,000 of University funds. The effort was begun in order to make the resources of UICC available to persons who, for a variety of reasons, needed to pursue academic programs at times other than the traditional hours of 8:00 a.m. to 5 p.m. As the data in Table 21 indicate, there was an immediate and significant response to this initiative. In Fall, 1977, a total of 1,803 students were classified as Extended Day Students (EDS) because they took 50% or more of their courses at 5:00 p.m. or later. They enrolled in courses in more than twenty departments, pursuing one undergraduate and seven masters degree programs. As shown in Table 22, these students produced a total of 12,960 credit hours of instruction during Fall, 1977--some 5.1% of all credit hours generated at UICC.

Of the 1,803 EDS group some 1,200 students were new to the UICC campus. That they were different in some respects from the non-EDS group is amply demonstrated by the data in Table 23. Of major importance are the age data, showing that fewer than 10% of the EDS group are under age 22, as against nearly 40% of the non-EDS students. The average age of the initial EDS group was 29; the corresponding figure for the non-EDS group was 24. In addition, Extended Day has drawn slightly more female and black students.

The second year of Extended Day/Program PM begins in Fall, 1978. The original second-year plan approved by the Board of Trustees requested $800,000 to expand instruction by an additional 572 FTE students. This request was recommended at the $400,000 level by the IBHE, and this amount was appropriated by the General Assembly and approved by the Governor. While the reduction in funding will require some reduction in scope for FY 1979, it is significant that the Extended Day effort received recognition from the State.

The FY 1979 program provides for expansion of the eight programs begun in Fall, 1977 and the addition of four new areas: an undergraduate pre-medical program, master's programs in Architecture and in Physical Education, and a doctoral program in Public Policy Analysis. In addition, expanded opportunities in Liberal Arts and Sciences courses will be available for undergraduate and graduate students.

TABLE 21
FALL, 1977
EXTENDED DAY ENROLLMENTS (HEADCOUNT)
(Students taking at least 50% of their courses at 5 p.m. or later)

Program Area	Under-grad	Grad	Total	%
Business Administration	254	129	383	21%
Education	25	406	431	24%
Engineering	84	84	168	9%
Social Work	-	106	106	6%
Social Sciences and other areas	471	244	715	40%
Totals	834	969	1,803	
% of Totals	46%	54%		

TABLE 22
FALL, 1977
EXTENDED DAY ENROLLMENT (CREDIT HOURS)
(All students participating in Extended Day)

	STUDENT LEVEL				
Program Area	LD	UD	GI	GII	TOTAL
Business Administration	384	1208	1132	116	2,840
Education	8	185	2189	32	2,414
Engineering	42	176	528	133	879
Social Work	-	10	438	295	743
Social Sciences and other areas	2025	2347	1433	279	6,083
Totals	2459	3926	5720	855	12,960*
FTE Students	164	261.7	476.7	71.3	973.7
% Distribution	16.8	26.9	49.0	7.3	

* Approximately 5.1% of all credit hours generated at UICC in Fall, 1977.

TABLE 23
FALL, 1977
DEMOGRAPHIC DATA FOR NEW EDS STUDENTS
COMPARED WITH CAMPUS TOTALS

	EDS		CAMPUS	
	N	%	N	%
Number of Students	1200	100	20663	100
Sex				
Male	665	55.4	11859	57.4
Female	535	44.6	8804	42.6
Race/Ethnic				
Asian	28	2.7	796	3.9
Black	244	20.3	3306	16.0
Caucasian	726	60.5	12509	50.5
Hispanic	51	4.3	1402	6.8
Native American	3	.3	80	.4
Unknown	148	12.3	2570	12.4
Age				
Under 22	111	9.3	8173	39.6
22-26	474	39.5	7846	38.0
27-32	337	28.1	3224	15.6
over 32	278	23.2	1420	6.9
average age	29		24	
Residence				
City of Chicago	792	66		
Suburban	376	31.3		
Other	32	2.7		
Employment	1023	85.3		

As shown in Table 24, in Fall, 1978, about 3,900 students or approximately 18% of the total anticipated UICC Fall enrollment of 21,258 students are expected to participate in the 255 courses scheduled to begin at 5 p.m. or later. Because many of these courses are also fully subscribed during the day--particularly the courses in Business Administration, Mathematics, Biological Sciences, English, Physics, Psychology, and Sociology--it is necessary to offer duplicate sections during the evening hours in order to meet the programmatic needs of evening students. As in Fall, 1977, instruction must be limited to four evenings per week, although the hours will be extended to 10 p.m. and the number of buildings in operation will be modestly increased, permitting limited access to some specialized instructional facilities. Within the limited funds available, supportive services must be held to a minimum, as was the case in FY 1978.

Planning for FY 1980 (Table 24) calls for continued expansion of the instructional programs to meet the needs of about 4,600 students (about 2,000 FTE) who are expected to request one or more courses after 5 p.m. Approximately 350 courses will be scheduled over five evenings to provide more than 7,500 spaces for these students.

The funds for FY 1980 (see Table 25 for the functional distribution) will provide for 25.0 FTE additional faculty, who will be able to staff about 60% of the increase of about 100 courses. Since about 1,900 of the students taking courses during evening hours will have shifted from day to evening courses, about 40% of the additional courses can be rescheduled from earlier hours. It must be anticipated, however, that in general those courses most currently subscribed during the day will continue to be those in greatest demand during the evening hours. Continued development in FY 1980 of the twelve programs offered in FY 1979 is expected to create additional demand for support courses in several areas sufficiently large to allow for additional degree programs in the Extended Day. Planning calls for the addition of about 40 courses in biological sciences, mathematics and the physical sciences. It should be noted that the College of Business Administration, which is experiencing particularly high demand for its degree programs during the day hours, will need to devote additional resources to both day and evening components of its undergraduate programs. Younger (18-22 year olds) students who are interested in full-time study toward the degree tend to request

TABLE 24
PROJECTED EXTENDED DAY PARTICIPATION
(FALL QUARTER ENROLLMENTS IN COURSES BEGINNING 5 P.M. OR LATER)

Headcount	(Actual) 1977	1978	1979	1980	1981	1982
New "EDS" Students	1,200	1,800	1,950	2,300	3,100	3,800
Cont "EDS" Students	603	600	650	800	1,000	1,200
Anticipated "Shift" Students	1,008	1,500	2,000	2,700	3,400	4,000
Total HC*	2,811	3,900	4,600	5,800	7,500	9,000
FTE	974	1,700	2,000	2,525	3,275	4,000

*Excludes concurrent registrants from Medical Center who will take courses during evening.

TABLE 25
EXTENDED DAY BUDGET REQUESTS
INCREMENTAL OPERATING RESOURCES
(Dollars in Thousands)

	FY 1978 (Actual)	FY 1979 (Proposed)	FY 1980 (Request)	FY 1981 (Projected)	FY 1982 (Projected)
Instructional Units	463.3	247.0	400.0	595.0	600.0
Admissions and Records	30.0	20.0	25.0	30.0	25.0
Computer Center	27.0	13.0	25.0	30.0	30.0
OIRD	-	-	-	25.0	25.0
Library	12.0	30.0	30.0	35.0	35.0
Student Affairs	11.0	0.0	15.0	30.0	30.0
Office of Business Affairs	24.0	12.0	15.0	20.0	20.0
Operations and Maintenance	76.1	71.0	90.0	110.0	110.0
Campus Administration	-	7.0	-	25.0	20.0
Totals	643.4	400.0	600.0	900.0	900.0

courses during the day hours. The Extended Day program in Business Administration provides the opportunity for older and employed students to continue or resume their studies on a part-time basis. This strong demand for business courses warrants expansion of these programs throughout the day and evening.

The FY 1980 proposal will permit expansion and new degree programs in the following areas:

a. College of Business Administration--expansion of undergraduate and master's programs.
b. College of Education--addition of an undergraduate degree program in policy studies and addition of the Education component of the doctoral program in Public Policy Analysis.
c. College of Health, Physical Education and Recreation--expansion of master's program.
d. College of Engineering--expansion of three master's programs.
e. Jane Addams College of Social Work--provide the field experience components of master's program and expand enrollment.
f. College of Liberal Arts and Sciences--additional service courses in social sciences and humanities.

Operation of Extended Day/Program PM in FY 1980 at its proposed level will require the use of additional facilities, as well as expansion from four to five evenings a week. With 4,600 students (21.5% of all students on campus) taking courses during these extended hours, support services will have to be expanded to meet their needs. Limited funds in FY 1978 and FY 1979, combined with the necessity to maximize course offerings, have severely constrained the expansion of adequate support services, particularly in the Library, Admissions and Records, Student Affairs and Auxiliary Services.

Preliminary long-range plans for Chicago Circle are based upon a clearly established trend toward part-time study and the likelihood that this trend will continue over the next five years. It is anticipated that by FY 1983 approximately one-third of all students will be pursuing studies on a part-time basis. Although this trend will be accelerated by the expansion

of the Extended Day program and the increasing proportion of graduate students, preference for part-time study is also apparent for undergraduates and day students. Thus, an increasing number of headcount students will be enrolled within a relatively stable FTE enrollment of about 19,000-19,500 over the next five years. It is estimated that by 1982 two of every five students will take at least one course during the late afternoon and evening hours, and the Extended Day courses will account for more than 20% of all credit instruction at Chicago Circle.

PROFESSIONAL SCHOOLS RESEARCH CENTERS ($270,000)

The development of research centers in the professional schools is essential if the UICC campus is to perform adequately its research responsibilities as a component of the University of Illinois and if it is to accomplish what has been called its urban mission.

Each of the proposed research centers would have a direct impact on the Chicago metropolitan area and the State by expanding knowledge in areas of key concern such as business and commerce, social welfare policy, transportation and human performance evaluation. These centers, moreover, would greatly augment the campus' capability for public service to the State of Illinois and would advance the direction already embarked upon through the Energy Resources Center, the Urban Systems Laboratory, the University Center for Gerontology, and the Institute for the Study of Developmental Disabilities (jointly sponsored with the State Department of Mental Health).

Beyond meeting the urban mission and enhancing public service, the research activities of these centers will augment the quality of the graduate and undergraduate instructional programs of the professional schools with which they will be associated. Support for research is among the most seriously undeveloped aspects of the UICC campus and requires immediate and sustained attention. This is a vital concern of the UICC faculty and administration because of the inextricable relationship between research, teaching, and public service. An additional concern is that the recent explosion of knowledge, while in no way lessening the need for research by individual faculty members, has emphasized the need for interdisciplinary work. The proposed research centers offer particularly appropriate settings for this kind of activity.

Administrative Science Research Center ($75,000)

The Administrative Science Research Center is proposed as a separate, ongoing entity within the College of Business Administration. An increase in sponsored research activity in the College has been identified as a high priority goal, and the Administrative Science Research Center is needed to facilitate such activity. It is worth noting, in view of the College's participation in the growing Master of Administrative Science Program,

that although research is an important adjunct to an undergraduate program, it is essential to a graduate program.

Several projects are proposed initially for the Administrative Science Research Center: (1) The Regional Forecasting Program will be designed to monitor the economy of Chicago and the factors within it which contribute to economic change and to examine the relationship of economic change within broader state, national, and international economies. (2) The Marketing and Public Policy Program will serve corporate managers, legislators and regulators who seek solutions to unresolved public policy issues arising as a result of corporate marketing activity. Additionally, the Program will monitor the effects of recent legislation and regulations. (3) The Quantitative Methods Faculty Consultation Program will provide methodological advice, computer software and data-based information, and support personnel for faculty and others needing assistance in statistical or operations research techniques.

Jane Addams Center for the Study of Social Policy and the Conduct of Social Research ($75,000)

The Jane Addams Center for Social Policy is designed to address critical social problems. Women, children, the aged, minorities, and other neglected, disadvantaged, and underserved populations have been identified as the groups with the most critical needs in the Chicago Metropolitan area. The proposed Research Center will provide the mechanism or structure by which the research capability of the College can be linked to several social service agencies in designing and implementing desired training, demonstration, and research projects.

Thus, the Center will help social welfare administrators utilize the resources and technical expertise of the UICC College of Social Work; and in turn the College will bring its capability to bear upon the social welfare problems of the urban area of which it is a significant part. The very existence of the proposed Jane Addams Center will provide both a focal point and an opportunity for the College to stimulate and conduct research. Such policy-oriented research will supplement the mission of the Jane Addams College of Social Work and enhance its position.

The resources requested for the Center are for the start-up period. It is anticipated that by the fifth year the Center will be fully self-supporting, with the exception of the salary of the Director and one secretary. The first-year support will provide the services of a full-time Director, part-time Assistant Director, one FTE Graduate Assistant, and a secretary.

Human Performance Evaluation Laboratory ($45,000)

The Department of Physical Education at UICC has embarked on a course of action that is untypical of most physical education departments. In its quest to develop the most outstanding exercise physiology program in the country, the Department has recruited three of the ten national young scholars who have the unusual combination of a physical education background and post-doctoral experience in medical schools.

The development of an excellent basic exercise physiology laboratory was made possible when one of the three scholars, Dr. Lawrence B. Oscai, was awarded a five-year NIH Career Development grant in 1975. The Human Performance Evaluation Laboratory became operational in September, 1977, funded at more than $47,000.

The purposes of the Laboratory are threefold: (1) to conduct research on the effects of exercise on human performance and in preventive and rehabilitative therapy; (2) to provide training in the techniques of dynamic diagnostic procedures and prescribing exercises; and (3) to provide a service of individual programs of fitness evaluation and fitness development.

As the laboratory has progressed, it has become apparent that more space will be needed to accommodate the growing number of students interested in exercise physiology. An even greater need in terms of current urgency, however, is for additional equipment and a laboratory technician to provide dependable, professional, and continuous service throughout the year. The proposed budget request would provide funds for the equipment expenses and the salary of the medical laboratory technician.

Urban Transportation Center ($75,000)

In recent years, there has been a growing awareness of the effects of urban transportation upon every aspect of the American economy and a concomitant increase in the Federal funding of urban transportation projects and research. But there has also been a growing consensus among transit operators, decision-makers, and the public that these expenditures have not always been allocated in the most efficient manner. While some of this criticism is justified, it overlooks the formidable barriers to achieving a greater responsiveness to society's transportation needs through policy planning and research. The sheer size of the transportation sector, which accounts for 20% of national expenditures, makes it difficult to transmit technological changes to those who would profit by them. Policy and planning development on a national level often must be adapted to the needs of local areas.

UICC is proposing a program for urban transportation which would use University resources to help adapt new operations practices, innovative technology, and planning developments to the needs of local transportation systems. An urban transportation center at a university would provide research, technical, educational, and management training services to its local area with the objective of providing a continuing mechanism for serving the specialized needs of local and regional agencies. It would also serve as the lead institution for other universities in the region, coordinating research programs and sharing staff members when necessary.

Requested funding will provide a director, an administrative assistant to the director, a secretary and basic supplies and equipment.

GRADUATE FELLOWSHIPS
($120,000)

For an institution such as UICC to fulfill its function and to meet its responsibility toward the population of the region which it serves, developing and offering quality instructional programs is not sufficient. Conditions must also be provided under which potential students can avail themselves of these educational opportunities. Chicago Circle, which serves predominately a metropolitan area with a large low-and middle-income population, must be and is particularly concerned about the ways and means by which its educational resources can become available to the largest number of qualified students without regard to their economic background. In particular, the Illinois State Scholarship Program and the Federal Basic Opportunity Grants Program assist UICC and other institutions in meeting this objective for undergraduate students.

Most universities of size and mission comparable to UICC have also developed strong fellowship programs in response to the financial needs of their graduate students. The University of Illinois as a whole has traditionally followed this pattern but has not been able to respond rapidly enough to the expansion of graduate programs and enrollment at UICC.

When UICC graduate programs were started in 1967, 13 fellowships were allocated to the campus to create an approximate parity between Chicago Circle and Urbana-Champaign. By 1974, the ratio of students to available fellowships was twice as high at the Circle as at Urbana; and in 1977, Chicago Circle had about three times as many students per fellowship as the Urbana campus. This increase occured despite adjustments in 1969 and 1970. UICC now requests the creation of 48 new University Fellowships at a level of support of $2,500 each to allow a return to the level of approximate enrollment parity. This increase would provide a total of 71 fellowships to be awarded among more than 2,500 graduate students.

LIBRARY DEVELOPMENT
($200,000)

UICC Library deficiencies have been recognized by many, including the Illinois Board of Higher Education. In a comparative analysis conducted recently by the staff of the IBHE, UICC was found to be 108,968 volumes below the mean number of volumes for its peer group and below the mean expenditure level for the peer group as well. In the IBHE study, only three other academic libraries in the State of Illinois fell below the mean for their peer group.

The Library has determined that an acquisitions budget of $1,300,000 is needed to support the present instructional, research and service programs of the campus. Approximately $900,000 will be available for Library acquisitions in FY 1979. This represents a $72,000 increment, which will help to cover the cost of inflation, and $108,000 gained from internal reallocation. Another $200,000 in addition to the normal price increases, although insufficient, will allow the Library to correct some of its deficiencies while building a library collection designed to serve campus programs.

It is not intended to meet all of the library resource needs of the UICC community with on-site collections. Given continuing inflation, increasing rates of publication, and declining capital funds, increased emphasis on library resource sharing porvides the most effective and efficient way to build up the resources of any library at an institution such as UICC. The UICC Library is attempting to reduce serious current deficiencies through a combined program of expanding essential on-site collections and further use of resource sharing programs, while making the holdings in its collections known and available to others.

ASSISTANCE TO STUDENTS
($200,000)

Access to quality educational programs for the population of the Chicago metropolitan area is a commitment of the highest priority for the Chicago Circle campus and the University of Illinois. The Extended Day program represents one major step in the attempt to meet this commitment. UICC has, however, already made a sustained effort to enroll and serve substantial numbers of students who have educationally deficient secondary school experiences, or who have been out of the college mainstream for several years. In order to fulfill the implied promises to these students, take cognizance of the shifting demographic picture of potential student populations, and comply with the recent Federal regulations regarding the handicapped, increased efforts must be made to provide additional assistance to students.

There can be no question that it is more difficult--and more costly--to serve properly the educational and social needs of these students, many of whom are women and members of minority groups. UICC's estimated expenditures for special programs and supplemental services in FY 1978 is in excess of one million dollars. This rate of expenditure has been achieved only through very difficult and sometimes controversial reallocation of funds from ongoing academic programs. In order for the campus to sustain the full range of quality undergraduate and graduate programs that students expect from the University of Illinois, and at the same time to provide needed services in a timely and effective fashion, an increment of $200,000 for FY 1980 is requested for the specific types of assistance as described in this section.

Office of Financial Aid ($18,000)

The total number of UICC students receiving financial aid has increased due to growth in both State and Federal assistance programs. In addition, the percentage of financial aid students who are self-supporting has increased from 33% to 50%.

The current capacity of the Office of Financial Aid staff is overtaxed by these increased numbers of students, the extension of eligibility requirements, and significant changes in program characteristics requiring new report formats and methodologies as well as additional student demographic data.

Effective and efficient program administration requires verification of each student's eligibility, coordination between and among programs, and the detection and elimination of program fraud and abuse.

The addition of one staff person to the Office will help assure that all eligible students will be served at the highest level of effectiveness.

Women's Re-entry Program ($50,000)

While the proportion of women enrolled in post-secondary institutions has been increasing in recent years, it is clear that the mature woman faces very different needs and concerns than does her sister who has only recently graduated from high school. Away from formal schooling for a decade or more, the mature woman often lacks current knowledge of educational options and career alternatives. She is ambitious, but also concerned and perhaps wary of the complexities of the paths she is considering. She needs personalized guidance, sophisticated counseling, and accurate information.

Continuation of the pilot Women's Re-entry Program, launched in the Spring of 1977, will assist mature women in the development of realistic life objectives, and it will help them become integrated into the full range of opportunities in the University. Based in part on the experience gained through the pilot project, the multi-faceted program will consist of community outreach, life span planning, counseling, development of academic skills, issue analysis, introduction to women's studies, professional skills improvement, and financial support. These services will be delivered through the use of a variety of techniques, including workshops, forums, discussion groups, and institutes.

Over 200 women, many of whom were blacks and Latinos, participated the one time the program was offered. A reasonable estimate of the potential participation level in the program during its first year of regular operation is approximately 500 women.

Writing Center ($36,000)

The decline in writing skills of the current student generation has been discussed widely. UICC began to cope with this problem several years ago with the establishment of the English Resource Center, which is now known as the Writing Center. Sponsored and operated by the English Department, the

Center provides tutorial services and individualized instruction for all students who need to improve or reinforce their composition skills. Students are referred by faculty and advisors, through special programs and personnel, or are self-identified. In addition, students in the freshman compositon program can receive tutorial assistance supplementing their classroom instruction. Hundreds of students who could and should benefit from the services of the Writing Center are turned away each year because of the limited number of staff, even though the campus commitment to this service is approximately $50,000 per year. Additional faculty and teaching assistants, as well as instructional materials, are requested to more fully satisfy the heavy demand for tutorial services in writing skills.

Diagnostic Prescriptive Instruction ($60,000)

In accordance with a recent UICC Senate resolution, a diagnostic prescriptive program will be undertaken for the purpose of counseling all incoming freshmen based on an evaluation of their reading, writing, and computation skills. Appropriate evaluative instruments may have to be designed. The preparatory program to serve those students whose skills are found to be deficient must be strengthened, and new components developed. The cost of administering such evaluative procedures and of the advising that must follow will involve a substantial budgetary commitment requiring incremental funding.

Office of Handicapped Students ($36,000)

Disabled students at UICC (primarily those with visual, auditory, or motor impairments, and/or learning disabilities) have been the recipients of special services for many years but to the limited extent possible without funding additional staff or activities. In a concerted effort to further meet the needs of these students and to comply with the Federal regulations requiring full program and employment accessibility for the handicapped, an increased level and variety of services must be provided. Reading and writing or typing (including test-taking assistance) for the blind and dyslexic, writing/typing for the upper-extremity limited, classroom notetaking and sign-language interpreting for the deaf, and limited physical assistance for the mobility impaired must be made available, as well as additional counseling and coordination with specialized agencies in the community that

provide equipment and services for the handicapped.

A full-time coordinator for services for the handicapped, interpreters for the deaf, others to perform the functions described above, and a half-time secretary are needed. In addition, supplies and equipment, such as a Brailler and talking calculator, are required to accommodate the needs of the increased numbers of handicapped students enrolling at Chicago Circle.

MEDICAL CENTER NEW AND EXPANDED PROGRAMS

Overview

With one exception, the Center for Humanistic Studies, the requests for new programmatic funds at the Medical Center for FY 1980 are for activities and programs which have already been approved and initiated. These requests have been derived from a campus review of the most critical budgetary requirements for ongoing activities. This budget request reflects the change in the planning assumption made in mid-1977 from continued general enrollment expansion at the Medical Center to the recognition that a more appropriate stance was to plan no general enrollment growth but to target new, available funds into selected, existing programmatic areas.

In the early 1970's, the Medical Center embarked upon an ambitious expansion of its medical education program. While the primary elements of that plan are now in place, there remain some particular components that require further funding. The FY 1980 request includes $200,000 for graduate medical education (the training of post-M.D. interns and residents) in conjunction with the Peoria School of Medicine. This request not only reflects the need to complete the medical education spectrum in Peoria, but also addresses planning directives emanating from both the State and Federal governments. The requested funds would provide additional faculty and support for the training of new residents.

The Medical Center is also requesting $200,000 for the Rockford School of Medicine. The clinical training of Rockford students takes place in one of four clinical locations: Rockton/Roscoe, Belvidere, Mount Morris, or Durand. In addition to providing an educational setting for students, these clinics provide health care services to approximately 20,000 people annually. The Rockford School is subsidizing, through its educational appropriation, the provision of health care services in these clinics. The FY 1980 request is for State funds to offset some of the necessary, but nonrecoverable, health care costs incurred by the School.

The Medical Center requests $113,800 for the further implementation of the clinical curriculum in Pharmacy. The College of Pharmacy must respond to accreditation pressures and the desires of the profession to train

pharmacists in the clinical aspects of the profession. The clinical training is concentrated in the last year of the baccalaureate curriculum and also is the educational emphasis of the recently approved doctorate of Pharmacy program (Pharm. D.).

The Urban Health Program, first funded in FY 1978, builds substantially upon the Medical Center's earlier efforts in developing, recruiting, and graduating students to meet the health care needs of Chicago. The request for FY 1980 of $461,000 will allow the Medical Center to take the next steps in the long-term plan for implementing the Urban Health Program.

A budget request for $52,500 is made for the Center for Humanistic Studies, a new program pending approval by the Board of Higher Education. Upon implementation in FY 1980, the Medical Center campus will have a focus for teaching and service in the biomedically-related humanities.

TABLE 26
MEDICAL CENTER NEW AND EXPANDED PROGRAMS
FY 1980 BUDGET REQUEST
(Dollars in Thousands)

A.	Urban Health Program	$ 461.0
B.	Center for Humanistic Studies	52.5
C.	Graduate Medical Education	200.0
D.	Clinical Education, College of Pharmacy	113.8
E.	Ambulatory Care, Rockford School of Medicine	200.0
	TOTAL FY 1980 New and Expanded Programs	$ 1,027.3

UNIVERSITY OF ILLINOIS URBAN HEALTH PROGRAM (UI-UHP)
($461,000)

The University of Illinois at the Medical Center has committed itself to increasing substantially the number of minority students who are graduated from its medical and other health professions curricula. The campus has accepted as part of its educational mission the responsibility for increasing the number of qualified students who are admitted from the predominant minority populations of the urban areas of metropolitan Chicago.

In January, 1978, the Medical Center campus developed and subsequently received wide-spread acceptance of a proposal, "Proposed Health Professions Education Program Goals for the South Side of Chicago." These goals, the essence of the "Urban Health Program", establish numerical targets for achieving growth in both the numbers and percentages of enrollments in the medical curriculum, in other campus health professions curricula, and in primary care residency programs to be established by the University with selected South Side Chicago community hospitals. The fiscal year 1978 has been devoted to planning, articulating, and securing acceptance of the proposed UHP as the campus response to the Illinois Board of Higher Education's "Feasibility Study of Health Professions for the South Side of Chicago".

Fiscal year 1979 will be an organizational development period for the Urban Health Program. Two primary tasks are identified for accomplishment in the period. First, the campus will recruit and employ qualified individuals who will assume key management positions relevant to each of six specific "result" areas identified in the UHP proposal. Second will be the development of specific plans for each of the six result areas.

The proposed activities for FY 1980 are summarized by result area as follows:

Result Area #1: Primary Care Residency Programs

The number of residencies to be developed is six (four in the first year and two in the second year of an accredited three-year program) in one new program site in a South Side hospital. A total of 2.0 FTE physicians will be identified in this and other primary care sites. Ultimately, a residency program network is intended to support sixty residents - e.g., twenty residents in each of the three years -in consortium with several

South side community hospitals. The additional resource requirement for this program element in FY 1980 is $100,000.

Result Area #2: Ambulatory Care Facilities

During FY 1980, a significant undertaking of the UHP will be the development and initial implementation of a program, or series of programs, intended to improve the operational efficiency and range of services available through selected ambulatory care centers in the South Side area. Two FTE positions will be devoted to developing, in cooperation with various schools and departments of the Medical Center campus, appropriate agencies and offices of the City of Chicago and County of Cook governments, and the Health and Hospitals Governing Commission, both an initial plan and a timetable and recommendations for implementing that plan. The new resources required are $55,000.

Result Area #3: Academic and Personal Counseling

Inherent in acceptance by the Medical Center of the Urban Health Program goals is the provision of the special services and meeting of the unique needs of minority students. Prior success of the campus in attracting and matriculating minority health professions students was at least partially attributable to the Medical Opportunity Program (MOP). Through the Urban Health Program, the campus has undertaken a substantial expansion of this student resource through the reorganization of: (1) specific systems and programs of counseling and advising within each school and college, and (2) corresponding expansion of personal counseling staff to better serve the needs of an expanding minority student population. In FY 1980, the campus program will be increased by 4.0 FTE counselors. Additional State resources of $65,000 are required for this purpose.

Result Area #4: Talent Search

The "talent search" is a critical element of the Urban Health Program. The long-range success of the program in achieving its enrollment goals hinges upon the ability of the campus to organize and implement programs which will attract early the interest of students who have the academic potential for the health professions. This element of the project will require the active initiative of the campus in working with counselors in Chicago public schools, individually and through planned health career days, and other orientation activities. Talent search efforts in FY 1980 will require an additional $65,000 to accommodate the addition of 3.0 FTE positions and the development of media and materials and special programs to be used in the project.

Result Area #5: Increasing Minority Applicants

A related element of the project will be a coordinated, inter-institutional effort to identify and recruit qualified minority applicants to Medical Center curricula. During FY 1979, major effort will be directed

to developing an inter-institutional "consortium" to provide special counseling and motivation to students who have an interest in, and the academic potential for, health professions. In FY 1980, a long-range plan will be put in place involving several schools and departments of the University of Illinois Chicago Circle campus, Chicago State University, and the City of Chicago Board of Education. The program which will be geared toward students from grade level 09 through college levels, will require an increase of $65,000 in FY 1980 for 4.0 FTE positions and supporting costs.

Key Result Area #6: Increasing Medical Student Enrollments

In FY 1980, the first new medical student positions will be filled. A total of six additional entering positions are planned for the medical education curriculum, increasing the total minority enrollment in the entering class to about 60. The additional resources required in FY 1980 are $111,000 for two faculty positions and related costs.

To continue the planning and implementation of the Urban Health Program as proposed, the Medical Center will require an additional $461,000 in State funds for FY 1980.

CENTER FOR HUMANISTIC STUDIES
($52,500)

The Medical Center is proposing to establish an academic unit, the Center for Humanistic Studies, to serve the schools and colleges in the Medical Center (including Peoria, Rockford, and Urbana/Champaign). The intent of the Center is to enrich the cultural, social, and intellectual environment of the Medical Center campus:

1. By extending the education of health professionals in humanistic studies to expand their basis for empathetic relationships with patients;
2. By the expansion of academic programs to make the educational climate of the Medical Center more humanistically oriented;
3. To equip the new health professionals with a better understanding of the values and ethical choices involved in health care delivery not only in their personal practice but also through social institutions;
4. To enrich the faculty and staff of the Medical Center through both direct and indirect spin offs of the activities undertaken.

The Center will develop course offerings, seminars, and workshops to provide health professions students educational opportunities in such areas as philosophy, ethics, history of science and medicine, human values in the clinical setting, and international and intercultural studies.

A cooperative arrangement with the College of Liberal Arts and Sciences at the Chicago Circle campus is in place. It is anticipated that the Center will rely upon the Circle resources in part. However, a successful integration of humanistic studies into the core program of each health professional school will depend upon wide-spread involvement by faculty members whose principal appointment is at the Medical Center.

The operating budget for the Center is proposed to be derived from several sources. Some State funds will be required for the core faculty and its support. It is anticipated that Federal and/or foundation funding will be obtained also. The request for new State funds for fiscal year 1980 is $52,500 for two additional faculty and associated support costs.

GRADUATE MEDICAL EDUCATION
PEORIA SCHOOL OF MEDICINE
($200,000)

Background

The term "graduate medical education" (GME) refers to those post-M.D. formal educational experiences called internships and residencies. The expression embodies terms such as house staff and house officers.

The education of a physician typically begins with a four-year baccalaureate degree in one of the sciences or social sciences followed by a three- or four-year curriculum in a medical school. Upon graduation from the medical school, the student receives an M.D. degree. However, both legally and educationally, the new physician is not prepared to practice medicine. In Illinois, as in most other states, one additional year of post-graduate education is required for licensure. Historically, that year has been called an internship. Today, most new M.D.'s engage in a post-graduate educational experience of three or more years, the length depending upon the type and degree of specialization which the physician chooses. It is during this graduate medical education experience that the physician acquires the necessary skills to practice medicine in a particular field. The primary care specialities, usually defined to include family practice, general internal medicine, and pediatrics, and sometimes including general obstetrics/gynecology, require at least three years of post-M.D. education for eligibility to be certified in these specialties. Subspecialties require even more training.

Historically, GME has been the responsibility of hospitals. Some of these hospitals were closely affiliated with a medical school; however, many of them were not and conducted GME independent of any educational institution. Today it is recognized that the education of a physician is a continuum running from medical school through graduate medical education into ongoing continuing education. The Liaison Committee on Medical Education[1] recommended that all GME programs in the future be conducted in hospitals which are major affiliates of medical schools; that is, medical schools should have the educational responsibility for GME as they have had historically for M.D. training. This posture represents not only

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[1] The Liaison Committee on Medical Education is the group recognized by the U.S. Office of Education for the purpose of accrediting medical education programs.

formal recognition of the educational importance of the GME experience, but also will rectify what in the past has often been an exploitative posture of many hospitals not affiliated with medical schools with regard to their training of interns and residents. In particular, many non-affiliated hospitals have recruited foreign medical graduates to their GME programs and provided only a modicum of educational experience, while using the services of the foreign medical graduates to provide basic patient care.

In short, the responsibility for graduate medical education has become that of the medical schools. Thus, the medical schools and their faculties must be involved directly in the provision of the residents' education.

Federal and State Policies

Both the Federal government and the State of Illinois have recognized explicitly the role of the Illinois medical schools in GME. Federal health legislation as enacted in the "Health Educational Assistance Act of 1976" provides programmatic support for some types of residency programs conducted under the auspices of medical schools. Emphasis in Federal government programs is on the primary care specialities, particularly family practice. The Federal programs speak to the concern of the Federal government to the need for a shift of emphasis to primary care from the other specialities.

The March, 1976 IBHE report, A Master Plan for Post-Secondary Education In Illinois, stresses the importance of GME programs noting:

> "Each medical school in Illinois should be responsible for a network of clinical affiliations to enable the development of residency programs with the following characteristics: a) by 1980 each medical school should have educational responsibility for at least as many first year residency positions as it will have graduating physicians. The number of post-first year positions should be adequate to permit sufficient opportunity for all first-year residents to complete their residency training; b) the medical school should assume responsibility for recruiting new physicians to its residency programs. Emphasis should be placed first on recruiting graduates of Illinois medical schools and then graduates of other American medical schools; c) at least one-half of all the first-year residency positions should be in the specialities of family practice, internal medicine, and pediatrics; d) at least one-half of all the first-year positions should be offered in institutions and facilities affiliated with the medical school, which provide pre-

> dominantly primary and secondary health care to their communities."
>
> "The two public medical schools should explore means of expanding the geographic distribution of their residency programs."

In short, it is public policy that the University of Illinois should assume a primary repsonsibility in the provision of GME. The premises upon which this policy is based include: provision of quality educational experience, retention of physicians for the State of Illinois, and better geographic and specialty distribution of practicing physicians within Illinois.

Financing

The financing of graduate medical education has two distinct but related components. First, the intern or resident is paid a stipend, typically ranging from $13,000 to $20,000 annually. Second, the necessary educational resources to train the resident must be provided. These resources include faculty, supporting staff, and expense items. Historically, the hospital conducting the GME program has borne all of the costs of training a resident. If the program was in a hospital which was a major affiliate of a medical school, the medical school faculty was the primary source of the educational resources for the training program. In those hospitals not affiliated with a medical school, there typically has been very little educational supervision of the intern or resident.

If medical schools are to assume the corporate responsibility for increased GME positions, they must be responsible for providing the faculty and supporting resources for the education of a resident. The governmental agencies establishing policies for GME have recognized the legitimacy of such costs. The new Federal health legislation provides a grant program for institutions conducting certain kinds of graduate medical education programs. The State of Illinois, both in the 1968 report and the recent Master Plan, specifically recognized the cost of GME programs.

Proposed Expansion of Graduate Medical Education

The University of Illinois College of Medicine has taken as one of its responsibilities the expansion of GME programs under its educational

auspices so as to meet the goals stated in the IBHE Master Plan. In particular, the College has had as one of its goals for several years the development of a number of first-year GME positions equal to the size of its graduating medical class. This expansion is to take place primarily in the affiliated hospitals in Chicago, Rockford, Peoria, and Urbana-Champaign. Some of these programs have already been initiated. The College falls short at this time, however, of providing sufficient numbers of GME programs to meet this goal.

The request for FY 1980 is for funds to expand the graduate medical education programs in the Peoria School of Medicine. One GME program, family practice in conjunction with Methodist Medical Center, is already the educational responsibility of the School. The requested funds will allow for the addition of faculty and necessary support to enlarge that program and to bring internal medicine and pediatrics programs under the educational responsibility of the School.

While the stipends for the residents in these programs will continue to be the responsibility of the hospital (offset perhaps in part from other State and Federal programs), the College of Medicine must generate the necessary educational resources for the training of these residents. An amount of $200,000 is requested for FY 1980. This amount will allow about an additional 20 residency positions to become the educational responsibility of the School.

CLINICAL EDUCATION IN THE COLLEGE OF PHARMACY ($113,800)

Traditionally the education and training of a pharmacist focused on the drug and its dosage form with emphasis on physical, chemical, and pharmacological properties. In the past decade, since the development of a scientific base of understanding how a dosage form can affect drug absorption and how drugs can interact adversely in the patient, the pharmacist has come to accept more responsibility for monitoring drug utilization. Clinical education has been introduced as part of the education base of the pharmacist so the necessary skills can be acquired. Federal initiatives, as evidenced by the eligibility requirement of clinical pharmacy as part of the curriculum for capitation funding, facilitated this educational development. Clinical pharmacy education has been recognized as so vital to proper preparation for professional practice that it is now a pharmacy school accreditation requirement.

Clinical pharmacy practice activities extend into several spheres. The pharmacist is expected currently to serve as a drug counselor for the patient. Among the activities directed to this end are the taking of medication histories, the maintenance of complete drug utilization profiles, and the education of the patient on proper drug administration and on the importance of compliance with the prescribed regimen. In order to monitor effectiveness of therapy, the pharmacist evalutes therapeutic outcomes, screens for drug interactions and adverse drug reactions, and advises the patient on proper use of medications available for open purchase, with special attention to compatibility with prescription medications. Much of the information the pharmacist gathers through these activities is fed back into the patient care system through communication with the prescriber and other health professionals. The pharmacist also provides the prescriber with drug information, advice on dosage form selection, and consultative service on selection of drug of choice. The pharmacist, in implementing clinical practice activities, also maintains responsibility for dosage form preparation in, for example, intravenous additive mixtures. Proper storage to assure stability, product selection to assure quality, and control of distribution to minimize medical errors and drug abuse are important functions in providing quality patient care.

Curriculum changes made to provide the proper educational background for this role include the addition of didactic instruction in disease states and drug therapy, addition of clinical education in contemporary practice settings, and clinical education in organized health care delivery settings where advanced clinical pharmacy practices have been established. Recognition that a limited number of pharmacists with advanced professional education is essential in the spectrum of health care providers available to the citizens of Illinois is shown by the recent approval of a Doctor of Pharmacy degree program by the Illinois Board of Higher Education.

Clinical education is more expensive than didactic forms of education. The student/faculty ratio must be small for effective instruction. It is also necessary to develop affiliations with practice sites in which the intended clinical role is exemplified and to provide the necessary supervisory staff for practitioner-educators.

A student/faculty ratio of 4:1 for clinical and graduate education (fourth year of baccalaureate program, Pharm.D. program, and M.S. and Ph.D. programs) should be achieved over the next four years to implement fully the clinical components of the curricula. The student/faculty ratio for the first three years of the baccalaureate curriculum is to remain at 9:1. As the next step in the implementation, an additional 3.3 FTE faculty positions are requested in FY 1980. At an average salary of $30,300 and other costs at an average of $4,600 per faculty member, a total of $113,800 is requested.

AMBULATORY CARE ROCKFORD SCHOOL OF MEDICINE ($200,000)

Medical students receive three years of the M.D. curriculum in the Rockford School of Medicine. Primary emphasis is upon clinical training, and the Rockford curriculum includes extensive experience, in all three years, in the provision of primary, ambulatory medicine in one of four community health center (CHC) settings: Belvidere, Durand, Mount Morris, or Rockton/Roscoe.

The CHC's were established to meet the educational needs of the Rockford School of Medicine. Their locations were chosen, in part, because of the needs for increased ambulatory health care services in those towns. The Rockford School of Medicine CHC program has proven to be an effective mechanism for teaching, as well as for providing needed services.

The CHC's are housed in rented or leased facilities. Virtually all of the costs of operation of the centers are borne by the health care funds. These costs include rental or lease fees, the operation and maintenance of the facilities, the commodities and equipment necessary for the operation of the clinics, and the salary costs of support staff. The Rockford School of Medicine does use State funds for approximately 85% of the salary of the physician-faculty based at the CHC's. Thus, with the exception of the salary dollars for the physicians, the costs of operating the CHC's have been derived from patient and third-party payers for health care services rendered. The CHC's have been unique in this regard. Operational costs in ambulatory service facilities operated by other public medical education programs in Illinois are subsidized, in part, by educational funds.

While the current method of financing the Rockford School of Medicine CHC's was viable in the early years of their operation, it is no longer so. The enrollments at the Rockford School of Medicine will have increased to 133 students in FY 1980 as compared to 89 students in FY 1976. This additional student load, plus the increased costs related to the provision of services, now necessitates obtaining additional dollars from sources other

than patient care for the CHC's. The operating of the educational program in the CHC's causes added costs beyond those for patient care alone. The University of Illinois is requesting $200,000 in State funds in FY 1980 for the operation of the centers. This amount represents a step toward the establishment of a more balanced and stable financing mechanism for the educational activity.

URBANA-CHAMPAIGN NEW AND EXPANDED PROGRAMS

Overview

The requests for support for new and expanded programs are made within the context of several factors, developments and plans at UIUC:

1. The 28 proposals being submitted by UIUC have been selected from among a total of approximately 75 that were forwarded by various units at UIUC. The Campus Council on Program Evaluation (COPE) examined all submissions and assigned priority ratings to each. The campus administration at UIUC has followed very closely the priorities recommended by COPE. Thus, the items being submitted are the product of close scrutiny by a faculty/student committee with wide experience and knowledge concerning programs on the UIUC Campus.
2. Internal adjustments and reallocations that have been required to offset in part the significant losses to inflation since FY 1971 have seriously reduced the ability of the campus to reallocate funds for programmatic purposes. The impact of these losses to inflation has been progressive and cumulative, and reallocations for programmatic purposes has become increasingly more difficult each year.
3. UIUC, being a mature, comprehensive, research-oriented Campus has most of its degree programs in place. Consequently, there are very few instances (none in the FY 1980 programmatic requests) in which the addition of new degree programs is anticipated. Instead, additional funds for programmatic support at UIUC are sought in order to respond to rapid changes in the content and orientation of many disciplines and to take advantage of current curricular, research, and outreach developments so that the excellence of existing faculty and other resources may be maintained and enhanced. It is recognized that such requests may not possess the surface glitter of some proposals that relate to entirely new audiences or that open up whole new curricular areas. However, the administration at UIUC strongly urges that the importance of maintaining excellence and of extending existing programs of quality be stressed and that a very high priority be given to such proposals.

4. Certain academic areas on campus (and off) are scheduled for modest enrollment growth in the future, in part at the expense of other areas. It is anticipated that various fields within Agriculture, Commerce and Business Administration, and perhaps Engineering will grow somewhat. It appears now that some of that growth will reflect changing interests on the part of students and prospective students with some declines continuing in certain Liberal Arts fields and in Education. Modest increases in enrollments in Law (if funds for an addition to the Law Building are approved) and Veterinary Medicine are planned, and substantial growth in participation in continuing professional education is anticipated. Much of this latter will, it is assumed, be noncredit and self-supporting.
5. As campus planning continues, it is with the assumption that the decline in the number of college-age youth in the '80's will have little or no impact on the Urbana-Champaign Campus. The present popularity of UIUC programs is not likely to decline, and the fact that the campus cannot now admit thousands of qualified applicants because of a shortage of space and resources suggests that the campus could actually increase its enrollment in the 1980's if it were deemed desirable to do so. In any event, there is no reason to believe that enrollment will decline, unless a planned reduction is made.
6. It will be noted that requests for equipment play a prominent role in many of the proposals. The lack of funds to maintain teaching and research equipment and to purchase new items is creating a very serious problem for UIUC. The importance of this aspect of these proposals cannot be overstated.

Another serious problem not reflected in these operating budget requests deserves to be emphasized, and that is space related to various library needs. The UIUC Library is a major source of pride and a major resource for scholarship. It has occupied a favored spot in previous operating budgets and has been the recipient of a significant amount of reallocated funds from other campus units. UIUC does not, however, have the resources to enlarge and to modernize library space. Repeated efforts to obtain such funds have failed, and the need is drastic for additional space and an upgrading of present

space (e.g., air conditioning in library storage areas to preserve the collection). Deterioration of the collection is already occurring, and given the long lead time for any major remodeling or for new construction, there is no time to waste.

SUMMARY
URBANA-CHAMPAIGN PROGRAMMATIC COMPONENTS
FY 1980 BUDGET REQUEST

A.	Projects Supported by State Appropriations in Past Requests	
1.	College of Veterinary Medicine	$ 400,000
2.	Interdisciplinary work in the College of Law	90,000
3.	Visual Resources Laboratory-Phase III	66,600
	SUBTOTAL	($ 556,600)
B.	New Programs	
1.	New Outreach Services by the Engineering Experiment Station	200,000
2.	Regional Transportation Systems Planning	100,000
3.	Architectural Preservation Program	164,000
4.	Professional Program in Acting	84,800
5.	Graduate Program in Design-Behavior Studies	109,300
	SUBTOTAL	($ 658,100)
C.	Expansion of Existing Programs	
1.	Program for Coal Conversion Studies	118,000
2.	Fusion Plasma Laboratory	144,800
3.	Nuclear Radiation Protection	69,000
4.	Solar Energy	271,000
5.	Principal's Scholars Program	140,000
6.	Pest Management Clinic	81,000
7.	Nuclear Physics: A Large Superconducting Accelerator Facility	69,200
	SUBTOTAL	($ 893,000)
D.	Consolidation and Improvement of Interdisciplinary Efforts	
1.	Ancient Technologies and Archaeological Materials	60,000
2.	Human Factors Engineering	162,400

3. Program in Mutagens and Carcinogens in the Environment	$	105,000
4. Regional Science		108,500
5. Population Studies		97,900
SUBTOTAL	($	533,800)
E. Student Realignment		
1. Response to Changing Student Demand		250,000
2. Funds to Accommodate Growth in the Chemical Engineering Program		100,000
SUBTOTAL	($	350,000)

TOTAL FY 1980 New and Expanded Programs - Urbana-Champaign $ 2,991,500

PROJECTS SUPPORTED BY STATE APPROPRIATIONS IN PAST REQUESTS ($556,600)

Often projects or programs are of such magnitude that they cannot, or logically should not, be funded or instituted in a single year. Therefore, they are phased over a period of several years. Changes in the academic market, inflation, only partial funding in the early years, and other factors sometimes force the campus administration to extend the period during which implementation funds are sought.

The projects in this category, plus a number of those appearing under Special Services (Agricultural Area Extension Advisers, County Board Matching Funds, and the Library Computer System), are all projects for which UIUC has received incremental funding in past years. The funds requested for these projects in FY 1980 will either allow units to finalize their plans or to accomplish the next major step in developing their programs.

College of Veterinary Medicine - $400,000

The $400,000 requested here plus the $150,000 mentioned under Replacement of Capitation Funds will serve to support the College's next step in meeting the following goals by FY 1985:

1. to complete the construction program outlined in Food for Century III, through the capital budgeting process,
2. to replace all capitation support with State funds,
3. to enroll 104 students in the freshman class by FY 1981,
4. to reach a level of State support of $16,500 per FTE student, (FY 1980 dollars), and
5. to improve the teaching, research, and public service programs of the College.

For the past decade UIUC has been working diligently to improve its College of Veterinary Medicine. Reallocated campus resources and incremental State appropriations have served to support numerous capital and operating improvements. However, these efforts to attain higher quality are constantly being blunted by the combined forces of inflation and the

loss of faculty to new and expanding colleges of veterinary medicine throughout the United States and Canada. It is fully expected that if the College of Veterinary Medicine is to attain the type of reputation that it deserves in a premier agricultural state, not only will it be necessary for the State of Illinois to provide the $400,000 requested here for FY 1980, but it will require an additional $2,818,700 (FY 1980 dollars) in operating funds during the period FY 1981 through FY 1985. A more detailed discussion of this request can be found in Appendix 3 at the end of Part Two.

Interdisciplinary Work in the College of Law - $90,000

In FY 1979 the College of Law received an incremental State appropriation of $50,000 to support the first phase of expanding its horizons to include establishing joint teaching and research programs that are developing rapidly on the periphery of the law. Already the College of Law has combined degree programs with the Institute of Labor and Industrial Relations, the Department of Business Administration, the Department of Accountancy, the Department of Political Science. Faculty members from the College of Law have participated in both teaching and research programs with the College of Engineering, the School of Social Work, the Institute for Environmental Studies, the Department of Sociology, the Department of Psychology, the Department of Landscape Architecture, and the Office of International Programs. In addition, the College has received requests from the College of Education, the School of Basic Medical Sciences, the English Department, etc., to provide input in even more programs. To provide the necessary personnel and expertise being sought by other campus units that wish to keep their courses and research current, the College of Law is requesting $90,000 in FY 1980 and $123,000 in FY 1981.

Visual Resources Laboratory-Phase III - $66,600

To date, the Department of Art and Design has completed two phases in the development of its Visual Resources Laboratory and has spent $162,000 on remodeling the laboratory and $154,000 in purchasing highly sophisticated

equipment. An additional $117,000 for remodeling and $75,000 for equipment is being requested as part of the FY 1980 capital budget request and $66,600 is being requested here to provide the faculty and staff to operate the Laboratory. Funding of the final phase of this project is essential if the Department of Art and Design is to provide students, especially its majors in graphic design, industrial design, medical art, photography, and cinematography, with up-to-date equipment and processes.

When the accreditation team from the National Association of the Schools of Art visited UIUC, it expressed a great need for such a laboratory in the Midwest, for at the present time the major centers of excellence in this area are in either New York or California. The team members agreed that if the third phase of the Visual Resources Laboratory were completed as planned, the Department of Art and Design would have one of the finest teaching facilities of this kind in the nation.

NEW PROGRAMS
($658,100)

It should be noted that none of the programs in this category involves the establishment of a new degree or organizational entity. Therefore, they do not fall within the "new programs" definition established by the Illinois Board of Higher Education and do not require IBHE approval before they can be initiated. Primarily the programs are listed in this category because the ideas for them were generated only recently, or the programs have been in existence for a very short period of time.

New Outreach Services by the Engineering Experiment Station - $200,000

The Engineering Experiment Station (EES) has a distinguished seventy-five year record of support service to major industries in the State, but it is unable to meet all of the requests for assistance that it is receiving at the present time from smaller businesses and industries, from county and municipal governments, and from the general public. During the next four years EES would like to mount a major campaign to reach a much broader and more diversified audience within the State. It would disseminate knowledge gained through its many applied research programs and would provide expertise in such areas as energy conservation; selection, design, and use of materials in product manufacture; all phases of manufacturing processing; road and highway maintenance; waste disposal; competition for land use; housing and construction development; and transportation planning. EES proposes providing this information and help by expanding its traditional modes of contact (University's state-wide regional offices, the county extension agents of the Cooperative Extension Service, and the Small Homes Council); through the mass media--radio, television, and widely distributed brochures; and by developing a unique cooperative program with the State system of community colleges to originate courses and supporting materials on various technical topics that would allow the community colleges to provide an outstanding educational service to their regional constituencies.

As mentioned above, this major effort would be initiated in four phases, each requiring an additional appropriation of incremental State funds:

FY 1980 - $200,000,
FY 1981 - $227,000,
FY 1982 - $225,000, and
FY 1983 - $225,000.

The funds required would be for faculty, staff, and related expenses and equipment. An extended discussion of this request appears in Appendix 4.

Regional Transportation Systems Planning - $100,000

Transportation will play a major role in many of the great problems of the future: resource depletion, food distribution, energy conservation, population density, management of regional growth, pricing of commodities and services, etc. The Departments of Civil Engineering, Economics, Geography, Urban and Regional Planning, and the Regional Science Program propose to initiate a Regional Transportation Systems Program that will involve the development of sophisticated computer models to provide new insights for transportation planning at the State, regional, and national levels. The funds requested would be used to provide 3.00 FTE new assistant professors, 2.00 FTE graduate assistants, and a secretary, and to meet expense and equipment costs.

Architectural Preservation Program - $164,000

All across the country public agencies, citizens' groups, individuals, architectural and engineering groups, etc., are beginning to realize the worth of their heritage in the old buildings in their midst. The energy crisis, skyrocketing construction costs, and the move of the federal government in favor of the retention of historically accredited buildings under the Tax Reform Act of 1976 have all been influential in the swing to recycle older buildings. Architects today must be capable of meeting the challenge of preserving many of the older irreplaceable buildings in existence as well as designing viable new ones.

At the present time the major architectural preservation programs in the country are found in four universities in the Eastern United States. These programs emphasize Colonial buildings and ignore the many treasures of the Midwest which are primarily Victorian. They also place little emphasis on the famous Chicago and Prairie schools which followed the Victorian period in the Midwest. Therefore, UIUC would like to build on its current faculty strengths in the Departments of Civil Engineering, Geography, Urban and Regional Planning, and Architecture by adding four new faculty members and several graduate assistants to establish a first-rate architectural preservation program. The Ricker Library, the best architectural collection for research and teaching in the Midwest, provides another strong reason for establishing such a program on this campus.

Professional Program in Acting - $84,800

No university program in the country, other than the one at UIUC, offers both musical theatre technique and acting for the camera. The reason for this is that none of the other teaching theatres have at the head of their curricula an artist like David Knight, who has played starring roles in first-class productions of musicals, films, and television. Unfortunately, the Department has been unable to identify a source of permanent support for these efforts. Funds are required to support two performance instructors, several graduate assistants, and a part-time technician.

In the past few years the fortunes of the Department of Theatre have been improving--better students are enrolling in the program, attendance at theatrical performances has increased by 20 percent, and sales of season subscriptions are rising. It is expected that if the Department could institute the musical theatre and acting for the camera components of its program on a permanent basis, it would make another surge forward into a leading position in the nation, and it would at the same time strengthen its interdisciplinary efforts with other departments in the performing arts. Such a program would draw external examiners and consultants from the ranks of leading figures in musical theatre, films, and television to observe the work of the program, giving it further authority.

Graduate Program in Design-Behavior Studies - $109,300

Design-behavior studies are concerned with how people perceive and use the environment and with the satisfactions that they seek to derive from the environment. For example, the failure of public housing programs, dramatized by the decision to dynamite the supposed landmark Pruitt-Igoe housing in St. Louis, has led to increasing Federal demands for studies of user needs in housing and for studies of user satisfaction through post-occupancy evaluation. Ideas about crime prevention through environmental design, emerging from design-behavior studies, have formed the basis for both Federal policy and actual design decision and implementation. Such programs offer graduates of a design-behavior program a variety of employment opportunities in professional offices, academic and research institutions, and governmental agencies.

Strong inter-departmental cooperation has resulted in the development of several existing courses in design-behavior in the Departments of Architecture, Landscape Architecture, and Urban and Regional Planning. Cooperation with the Housing Research and Development Program has provided research opportunities for the exploration of design-behavior issues. Within the University, the importance of such a graduate instructional program was recognized by the Executive Committee of the Graduate College, which in February, 1978, approved design-behavior studies as an area of concentration within the existing master's degree programs for Architecture and Landscape Architecture.

The success of this program will not require the development of a totally new curriculum. The quality educational resources available in other departments on the UIUC Campus provide a unique opportunity for establishing a program second to none in the United States. For example, the core courses of the program will be supplemented by a pool of courses offered in the Department of Psychology and the School of Social Sciences to cover topics such as statistics and existing theoretical frameworks.

If this new graduate program is to be implemented in its entirety, most funds (nearly 90 percent of the budget) must be provided to hire 3.50 FTE faculty members, 1.00 FTE graduate assistant, and a .50 FTE secretary. Funds will also be required for expenses and equipment.

EXPANSION OF EXISTING PROGRAMS
($893,000)

Changes are constantly being made in existing programs at UIUC. As students' requirements change and as faculty members' interests and expertise change, programs also change. Curricula are constantly being tested, evaluated, and altered. Hundreds of course changes are processed each year. Research and public service assume new directions to reflect current societal needs.

For the most part these changes are funded through the reallocation of resources within the departments where they occur. Sometimes departments receive help in these ventures from their school directors or deans of their colleges through reallocated funds. On occasion the campus administration steps in to help with the larger changes in program direction that are made.

In recent years when incremental State funds for new programs have been so scarce, significant resources have been reallocated each year at UIUC to implement necessary program changes. However, budget reductions and the effects of inflation have taken their toll; and it has become much more difficult to shift funds from one program to another as the flexibility has been wrenched from the system. Therefore, it is essential that some incremental funds be provided each year to initiate major improvements in existing programs. Without at least some money for this sort of effort, there is almost no incentive for one to plan for the future or to consider making any major improvements that will require resources beyond those available in the current budget.

The programs in this category include suggestions for expanding current programs that deal with immediate problems that deserve more attention. Without new funds, these efforts will never reach the proportions required to make them truly effective.

Program for Coal Conversion Studies - $118,000

UIUC is attempting to establish a Federally-funded Coal Research Laboratory which would become recognized as a center of excellence for the study of the gasification and liquefaction of coal and for codifying basic

data for related coal species and processes. A proposal, which has been strongly supported by the Departments of Mechanical and Industrial Engineering, Aeronautical and Astronautical Engineering, Chemical Engineering, Civil Engineering, Agricultural Engineering, the Institute for Environmental Studies, the State Geological Survey, and the State Water Survey, has already been prepared for submission under Title VIII, Public Law 95-87.

The immediate need that must be fulfilled to keep this project moving relates to the hiring of sufficient faculty (2.33 FTE assistant professors) and support staff (1.00 FTE secretary and 1.00 FTE laboratory technician), and the purchase of equipment (a nonrecurring expenditure of $33,000) required to make the present Standards and Instructions Laboratory in the Department of Mechanical and Industrial Engineering a viable teaching and research operation. Through reallocated funds the Department already has outfitted the Laboratory so that it can be used in evaluating the properties of coal (its mechanical thermal properties and heating value), in evaluating the gasifiability of coals, and in evaluating gasification processes. In addition, it has designed and installed a unique system for gasifying high-sulfur, caking, Illinois coal.

The funds requested will allow the Department of Mechanical and Industrial Engineering to begin to introduce its students to the problems and processes related to coal conversion. The demand for engineering personnel in this area is growing rapidly as other fuel sources diminish.

Fusion Plasma Laboratory - $144,800

One of the serious long-term alternatives to coal and nuclear fission for electrical power generation is nuclear fusion. The fuel, deuterium, found in normal water, is readily available and practically inexhaustible. Other advantages include no nuclear runaway, no chemical combustion products, less troublesome nuclear waste products than for fission reactors, etc.

Six faculty members at UIUC are active in fusion research (with three in experimental fusion), and they have attracted more than $300,000 in externally funded research in this area. However, only one modest fusion

research experiment exists in the program and two introductory student laboratory experiments were only recently developed. Thus, the student wishing to pursue experimental fusion as a career has very limited opportunity for experience in the program.

New staff and equipment are requested to establish a laboratory dedicated to fusion plasma experiments. This laboratory would serve two purposes:

1. It would allow introduction of two new student laboratory courses.
2. It would also provide basic facilities and equipment for graduate student research.

Nearly half of the budget request is related to a nonrecurring expenditure of $70,000 for a Tokamak device that is the key to an instructional program in nuclear fusion.

Nuclear Radiation Protection - $69,000

The objective of the program in Radiation Protection (sometimes called Health Physics) is to provide students seeking degrees in Nuclear Engineering the opportunity to learn about the hazards of working with nuclear radiation emitters and about the proper means to protect personnel against such hazards. The program will provide industry and government with qualified experts in the field, so as to better protect the public.

The Department of Nuclear Engineering has recognized a need to put additional teaching and research emphasis on radiation protection. Therefore, it is requesting $69,000 in FY 1980 and $55,500 in FY 1981 to add three new faculty members and several graduate assistants to this program. New equipment is being provided at the present time, through outside support and reallocated funds, to outfit a teaching laboratory for the radiation protection program.

Solar Energy - $271,000

The Department of Mechanical and Industrial Engineering, which is already providing a course on solar energy utilization and will get more than $100,000 in FY 1979 for solar energy research, would like to develop a full-scale solar energy program at UIUC that would be a natural extension of the current strengths of the department.

The emphasis for the proposed program would be placed on the utilization of solar energy for three major uses:

1. residential and commercial water and space heating,
2. industrial process heat and steam, and
3. space cooling.

In addition to this emphasis, vital questions common to all energy sources would also be considered in the solar energy program, namely, the development of advanced energy storage systems, engineering economics, and system modeling.

Besides four additional faculty members and three nonacademic support personnel that the Department has requested, it will also need $100,000 in nonrecurring funds to purchase the essential equipment to outfit a teaching and research laboratory. Note that this expenditure represents more than one-third of the total budget request.

Principal's Scholars Program - $140,000

The Principal's Scholars Program was initiated three years ago with the major objective of increasing the number of minority students eligible to enter pre-professional post-secondary education programs--not necessarily at UIUC, but at whatever institutions they might choose. Personnel from the Office of Admissions and Records and the College of Engineering have worked with the principals and faculties of a number of Chicago schools to insure that the best-qualified students are enrolling in the necessary college preparatory courses so that they will be able to go to college when they graduate from high school. At the present time 1,200 minority students are included in the program.

To encourage students to enter the Principal's Scholars Program, UIUC personnel provide monthly motivational programs for the students and parents, teacher and counselor enrichment workshops, and evaluation and course improvement assistance. They have also sponsored science fairs, award banquets, and similar special events to encourage students. Nearly all of the activities related to the program have been from funds donated by business and industry.

Personnel from the Colleges of Agriculture, Commerce and Business Administration, and Applied Life Studies have been meeting with representatives from the College of Engineering and the Office of Admissions and Records throughout the current year to discuss plans for broadening the Principal's Scholars Program to include additional high schools in the State. Localities that seem promising for such activity include East St. Louis-Alton, Rock Island-Moline, Peoria, Rockford, Chicago, Urbana-Champaign, Danville, Decatur, and Springfield. Although plans are in progress to seek additional funding for the Principal's Scholars Program from industry, business, various foundations, etc., the units involved could proceed with their plans much more rapidly if State support were provided for this joint effort. If the $140,000 requested were made available, it would be possible to support the Principal's Scholars Program in a minimum of 15 Chicago schools and 10 non-Chicago schools. Such an effort would involve 5,000 students directly and another 5,000 indirectly.

Pest Management Clinic - $81,000

In 1976 the Agricultural Experiment Station of the College of Agriculture initiated a Pest Management Clinic at UIUC. The personnel in the Clinic handled more than 3,000 plant and insect specimens in its first year of operation.

There is a growing demand from farmers who want information on crop diseases, pesticide usage, spraying methods, etc. Nursery owners/workers, homeowner/gardeners, and city arborists introduce another set of related questions and problems that must be met.

This proposal requests that another extension specialist in the area of plant pathology be added to the two that are presently on the staff and that a plant pathologist and a clinic coordinator be added to the Pest Management Clinic along with the necessary support personnel (2.00 FTE secretaries). These staff additions should make it possible for the College of Agriculture to stay abreast of its burgeoning effort in this area.

Nuclear Physics: A Large Superconducting Accelerator Facility - $69,200

A remarkable technical development, the application of superconducting microwave cavities to accelerate electrons, makes possible unique new studies of nuclear structure. Illinois physicists built a prototype machine (MUSL-1) which was used for research for five physics Ph.D.'s. The successor (MUSL-2) is operating, and within two years another half dozen Ph.D.'s will be graduated. Federal funds for a 288 McV accelerator (MUSL-3) now appear within reach (approximately $3.5 million is expected from NSF).

The Department of Physics would like to expand its efforts in nuclear physics in FY 1980 by adding 2.00 FTE senior professorships attached specifically to the graduate instructional and research program of the higher energy electron accelerator laboratory. These personnel, working with those nuclear physicists presently on the staff, should be able to make a major contribution in the field once the MUSL-3 has been funded and installed.

CONSOLIDATION AND IMPROVEMENT OF INTERDISCIPLINARY EFFORTS ($533,800)

Although a number of the programs mentioned earlier have various interdisciplinary aspects, the programs listed in this section are those selected by the Council on Program Evaluation because of the way in which the strengths from various campus units have been meshed to produce sound results and unique programs. The programs in this category represent a few of the best cooperative ventures at UIUC that seem worthy of additional support at this time.

Ancient Technologies and Archaeological Materials - $60,000

The Ancient Technologies and Archaeological Materials Program was established in July, 1977, under the jurisdiction of the Graduate College. It represents an interdisciplinary effort involving faculty from the Departments of Ceramic Engineering, Anthropology, Classics, Geology, History, Art and Design, and the Illinois Geological Survey, the Materials Research Laboratory, and the World Heritage Museum.

The objectives of the proposed program are:

1. to promote analytical research into ancient technologies, both primitive and complex, by humanists and physical and social scientists;
2. to initiate and to develop new research areas in the application of physical and analytical methods for the definition and characterization of archaeological remains and museum specimens;
3. to supplement existing departmental research facilities for faculty, graduate students, and advanced undergraduate students engaged in the study of the technological aspects of human societies;
4. to sponsor continuing faculty and graduate student research seminars into the relationships of technology and other aspects of human society;
5. to sponsor colloquia and symposia devoted to exploring and defining various problems of the impact of technological change on society.

The proposed budget will provide the core faculty and staff needed to activate fully the concept that has been generated as the program has developed. It is expected that by FY 1981 this program can achieve a good deal of visibility as numerous efforts that have been planned and discussed are initiated.

Human Factors Engineering - $162,400

The Departments of Psychology and Mechanical and Industrial Engineering have established programs in the human factors areas and together are now developing joint programs at the bachelors, masters, and Ph.D. levels to qualify students for employment in the expanding numbers of positions in industry and government. Human factors engineering is a growing area of research focused upon the interaction of persons and machines. Research with that focus often combines the special knowledge and skills of engineers and experimental psychologists in joint research efforts. This collaboration has produced much useful information on the general topic of controls and instrumentation, and this information has been useful in the design of a wide variety of devices, such as automobiles, jet transports, submarines, helicopters, agricultural spraying aircraft, and computers.

Both departments already have made substantial commitments to the development of a program in human factors engineering. Approximately $40,000 (nonrecurring) has been invested in the task of setting up and partially equipping the Engineering-Psychology Laboratory. In both departments a number of faculty devote at least part of their time to programs in human factors engineering, and all would be associated with the new interdisciplinary programs under development.

To develop the new program fully, special courses must be introduced so that the Engineering-Psychology Laboratory, a research laboratory, will serve also as a teaching laboratory. These courses, which are viewed as critical for the development of the program, will require new equipment (a nonrecurring expenditure of $50,000) and personnel (3.00 FTE faculty members and 2.00 FTE nonacademic employees).

Program on Mutagens and Carcinogens in the Environment - $105,000

The Institute for Environmental Studies proposes to expand its present research efforts into a broad, interdisciplinary program of environmental quality management focused on mutagenic and carcinogenic (cancer-causing) substances in the environment. The objectives of the program are to develop and to refine methods for detecting and identifying these hazardous substances, for examining their sources, transformations, fate, and effects in the environment, and for making public policy decisions regarding their use; and to provide educational opportunities for individuals who will be able to fill the large present and anticipated demand for professionals in this field. Because of its current, highly successful work in this emerging and vitally important field, the Institute for Environmental Studies, given the necessary additional resources, is in a unique position to attain national leadership.

The Institute for Environmental Studies has a solid foundation on which to build a major educational and research program on environmental mutagens and carcinogens. First, through its federally funded Environmental Toxicology Training Program and through its experience in developing mutagen screening tests, in characterizing chemical contaminants, in analyzing complex ecosystems, and in developing environmental management strategies, it has developed laboratory facilities, faculty expertise, and a reputation for competence in this field. Second, the Institute has a successful history of organizing and carrying out large scale interdisciplinary studies of environmental contaminants. For example, it recently completed a seven-year, $3.0 million landmark study of lead and other heavy metals for the National Science Foundation. The program management mechanisms developed for that study will contribute directly to the success of the program proposed here.

To implement fully the proposed program, the Institute's core faculty must be expanded (3.00 FTE faculty in FY 1980 and 3.00 FTE in FY 1981). The new faculty members will be involved in further developing, refining, and applying the mutagen screening tests for the detection of genetically active substances; in developing improved techniques for the chemical detection, separation, and identification of such substances; in applying the laboratory model ecosystem approach to tracing the environmental behavior of the chemicals and in developing mathematical models to predict their movement and accumulation

in the environment; in analyzing the risks and benefits of using the substances; in developing alternative management strategies for controlling and optimizing the use of these compounds; and in developing courses on these and related topics, and in working with individual students on specific projects. In addition, new laboratory equipment is needed to supplement that which is now available (nonrecurring expenditures of $18,000 in FY 1980 and $40,000 in FY 1981). The total amount being requested to implement the program is $228,000 ($105,000 in FY 1980 and $123,000 in FY 1981).

Regional Science - $108,500

Regional Science is one of the newest of the social sciences. It was developed as an interdisciplinary science in recognition of the need to strengthen the regional or spatial components of research in many existing disciplines. Regional Science is particularly well suited for the study of practically every major problem facing national, state, and local governments and other policy-makers. Examples of specific problems which fall most directly within this discipline are as follows:

1. spatial dimensions of economic health (unemployment, housing, health, education, etc.),
2. regional problems in energy resource allocation and conservation,
3. urban-rural interface development problems, and
4. intraurban problems (such as decline of the core, suburban expansion).

A strong foundation has been established on the UIUC Campus for a Regional Science Program involving primarily the Departments of Economics, Finance, Geography, Civil Engineering, and Urban and Regional Planning with the cooperation of several related departments--Landscape Architecture and Agricultural Economics. For three years, an interdisciplinary Regional Science group has been active in coordinating a teaching program in urban and regional analysis, culminating in the crosslisting of several new graduate-level courses and in greater coordination between courses in urban

and regional economics. There has also been a good deal of cooperation on research in urban and regional analysis. This research, supported by both state and federal agencies, has included the development and testing of substate population and employment projection systems, analysis of the macro-economic impacts of major proposed environmental legislation on the State of Illinois, development of an economic impact model, and development of non-survey methods of input-output analysis. The research has led to the development of an interdisciplinary research seminar that has been addressed by local faculty and students and several distinguished faculty from the United States and Western Europe.

To strengthen this interdisciplinary effort four new faculty members are being requested for the following participating departments:

Finance	-	in the field of urban and regional real estate market analysis.
Economics	-	in the field of macro-regional economics analysis and regional forecasting.
Geography	-	in the field of urban systems analysis, regional and urban policy evaluation.
Urban and Regional Planning	-	in the field of macro-regional planning and development.

Population Studies - $97,900

A growing nucleus of population scientists is now working at UIUC, but these researchers are hampered by the lack of core support and a facilitating organization. Most of the ingredients for demography already exist on campus--excellent computing resources, demographic materials in the library, curricular offerings, and interested faculty. What remains is for them to be consolidated into a productive working unit.

It is proposed that a Laboratory of Population Studies under the aegis of the School of Social Sciences be established to facilitate demographic research. The laboratory would house externally-funded research projects on population processes and their consequences. It would have an administrative

structure to aid faculty and students in research, and it would provide technical services in data storage and management, computing, and manuscript production. It would provide space for research activities and for a small demographic library. The laboratory would develop linkages with the Social Science Quantitative Laboratory, the ISEIRD (Illinois Social and Economic Indicators for Rural Development) project, the Institute for Environmental Studies, the Reproductive Physiology Group, and the Population Dynamics Groups.

The Population Studies Laboratory would produce various types of scientific outputs, "pure" and applied, and methodological tools for the science of demography. Examples from studies presently underway are social indicators and demographic accounts that show trends in educational and health levels, crime rates, and other aspects of population behavior such as school enrollments and labor force participation; marriage and divorce analyses that quantify the trends in those crucial aspects of American family life: fertility analyses relating to the new employment patterns for women and the higher levels of teenage pregnancy; and migration studies of the population redistribution from urban to suburban and rural areas.

It is believed that such an office could be established and operated for a total cost of $146,900 ($97,900 in FY 1980 and $49,000 in FY 1981). The information that would be generated by such a unit over a period of years should be well worth the initial expenditure by the State of Illinois.

STUDENT REALIGNMENT
($350,000)

The items included in this category are related to shifting student enrollments on the UIUC Campus. A more detailed discussion of each item can be found in Appendices 5 and 6 at the close of Part Two.

Response to Changing Demand - $250,000

Since FY 1970 three of the largest colleges at the Urbana-Champaign Campus have experienced significant increases in student instructional demand. This demand, reflecting changing student aspirations, has placed severe pressure on the Colleges of Agriculture, Engineering, and Commerce. In addition to raising entrance requirements to reduce enrollments, UIUC has, in the last three years, internally reallocated $825,000 to these colleges. Internal reallocation, although providing badly needed support, has not been sufficient to meet student demand for three major reasons:

1. Internal reallocation strategies have been restricted by the fact that the University's budget has not kept pace with inflationary pressures.
2. There is a limit to the amount of internal reallocation that can be accomplished without doing irreparable harm to existing programs. The UIUC Campus essentially has reached that level.
3. Although the UIUC Campus has not experienced large total enrollment increases, the pressures that are now occurring are, in large part, movements from relatively less costly disciplines to relatively more costly disciplines.

To insure that the UIUC Campus can provide an adequate opportunity for qualified students to receive instruction in the Colleges of Agriculture, Engineering, and Commerce, the funds and faculty and graduate assistant resources listed in Table 28 are being requested:

TABLE 28
INCREMENTAL FUNDS SUPPORTING SHIFTING ENROLLMENTS

COLLEGES	FY 1980 FTE	FY 1980 $	FY 1981 FTE	FY 1981 $	FY 1982 FTE	FY 1982 $	FY 1983 FTE	FY 1983 $
Agriculture	5.75	$ 75,000	7.00	$ 91,300	7.00	$ 91,300	7.00	$ 91,300
Engineering	7.25	100,000	9.67	133,380	9.67	133,380	9.67	133,380
Commerce	5.25	75,000	10.00	148,250				
TOTAL	18.25	$ 250,000	26.67	$ 372,930	16.67	$ 224,680	16.67	$ 224,680

These funds and related FTE staff will be matched dollar for dollar and FTE for FTE by UIUC through reallocation of existing campus resources. The allocations will eliminate the excessive teaching load pressure that exists in the Colleges of Agriculture, Engineering, and Commerce at the present time. Appendix 5 provides further information in support of this request.

Funds to Accommodate Growth in the Chemical Engineering Program - $100,000

The campus Council on Program Evaluation in its 1977 review recognized the Chemical Engineering Department to be an excellent unit with sound leadership, good faculty and student morale, and an exceptional record of research productivity--a department reflecting standards of scholarship among the highest on the UIUC Campus. The Council urged that the Department consider seeking additional funding in order to expand its programs to accommodate more students without sacrificing quality.

At about that same time a nation-wide interest in Chemical Engineering was reaching its zenith, primarily because of energy and pollution problems currently faced by industry. Since it provides the only curriculum in Chemical Engineering in a public institution in the State of Illinois, the Department feels that it has a definite obligation to admit more students.

The Dean of the College of Liberal Arts and Sciences has found it extremely difficult to reallocate funds to the School of Chemical Sciences and subsequently to the Department of Chemical Engineering since total enrollments in his College have been dropping in recent years and he has found large portions of his budget reallocated to other colleges where enrollments have been increasing. Although some funds have been reallocated both at the college and campus levels to the School of Chemical Sciences, it has been difficult to provide enough dollars to meet increasing enrollments in expensive chemistry courses by reallocating funds from less expensive courses. If the funds for an additional 2.00 FTE faculty members are provided ($39,000) the undergraduate enrollment in the Department can be maintained at approximately 475 students, an increase of approximately 175 percent since FY 1974. A major portion of the budget is devoted to the purchase of teaching equipment (a nonrecurring expenditure of $61,000). Appendix 6 provides additional information about this request.

EQUIPMENT DEFICIENCY

($600,000)

In the past three years the University of Illinois has accumulated a backlog of nearly $7 million worth of obsolete equipment requiring replacement. This deficiency in equipment replacement has resulted from two sources.

1. Large amounts of equipment purchased during the growth period of the early and mid-1960's have become obsolete. Especially in the last three years, equipment purchased at Chicago Circle has become obsolete.
2. With one minor exception, since FY 1973, State funds available annually for equipment purchase have been inadequate to replace obsolete equipment in the State funded portion of the University's equipment base.

Since FY 1972 the University has conducted an equipment deficiency study to determine the value of obsolete equipment requiring replacement. By assigning useful life values to items on the University's equipment inventory, it is possible to determine the total amount of equipment requiring replacement in a given year. To the extent that sufficient funds are not provided to replace one year's obsolete equipment, a deficiency exists. The table below shows the yearly results of the study.

Fiscal Year	Sufficient Funds (+) or Deficiency (-) (Dollars in Thousands)
1972	$ +597.6
1973	-457.4
1974	+89.2
1975	-639.8
1976	-2,264.8
1977	-1,634.3
1978	-2,760.8
Total	$-7,070.3

The University sought $750,000 in its FY 1979 budget request to begin reduction of the equipment deficiency. The Board of Higher Education supported this request in the amount of $250,000, and $200,000 was pro-

vided for this item in the University's FY 1979 appropriation. It is noteworthy that the Illinois Board of Higher Education supported the concept of funding a recovery from the current deficiency both in their initial recommendations and in their advice on the allocations of the Governor's budget for FY 1979. It is clear, however, that $200,000, will only begin the recovery process. Serious deficiencies remain in equipment necessary for direct instruction and for related laboratory research. To continue the process of reducing this deficiency, the University requests $600,000 for FY 1980. This amount will provide $200,000 for the Chicago Circle campus and $400,000 for Urbana-Champaign.

SPECIAL SERVICES/FUNDING COMPONENTS

Budget requests for essential services provided by the University to Illinois residents are included in this section. These services are outside the core University functions of instruction, research, and public service, and they require differential budgetary treatment in that their resource requirements should not compete with educational funds.

Included here are requests for the Division of Services for Crippled Children (MC), Library Computer System (UC), the Public Service/Statewide Programming section of the Associate Vice President for Public Service (GU), Agricultural Area Extension Advisers (UC), Cooperative Extension Telenet System (UC), County Board Matching (UC), Employer's Share of State Health Insurance (UC), and Nonacademic Reclassification and Salary Adjustments for the Cooperative Extension Service (UC).

TABLE 29
SUMMARY
SPECIAL SERVICES/FUNDING COMPONENTS FOR FY 1980
(Dollars in Thousands)

A.	Division of Services for Crippled Children (MC)	$ 400.0
B.	Library Computer System (UC)	215.0
C.	Public Service/Statewide Programming Electronic Blackboards (GU)	50.5
D.	Agricultural Area Extension Advisers (UC)	40.0
E.	Expansion of the Cooperative Extension Telenet System (UC)	64.0
F.	County Board Matching Funds (UC)	304.5
G.	Cooperative Extension Service Employer's Share of State Health Insurance (UC)	177.2
H.	Cooperative Extension Service Nonacademic Salary Adjustment and Reclassification (UC)	34.4
TOTAL FY 1980 Special Services/Funding Components		$ 1,285.6

DIVISION OF SERVICES FOR CRIPPLED CHILDREN

The Division of Services for Crippled Children (DSCC), administered by the University of Illinois, is a State-wide public service program authorized by Federal and State legislation to provide specialized medical care and related rehabilitative services to handicapped children. The operating budget for the Division comes both from Federal and State sources, with two of the Division's special services (Hospital and Medical Services and Artificial Appliances) identified separately in the University of Illinois budget.

Between FY 1976 and FY 1979, the Division has received approximately 15% (compounded) for price increases for the Hospital and Medical Services and Artificial Appliances budget items. Those percentages were not equal to the increased prices experienced in one of the years, much less three. As a consequence, the Division has suspended some services, delayed others, and reduced still others.

Another problem, familiar to those who have studied the Division's budget over the years, is that children in the City of Chicago still do not have available to them the services available to children in other parts of the State. Under consideration for FY 1979 is a reduction of services involving certain disabling conditions to children in downstate Illinois in order to preclude a cutback of services to children in Chicago.

A request for an increase of $400,000 in special services funding is made for FY 1980. This amount, coupled with a nine percent increase in the continuing components request, will allow the restoration of some services cut back during the last two years and will also permit a limited extension of the Division's services into Chicago.

LIBRARY COMPUTER SYSTEM
($215,000)

The University received budget increments of $250,000 in FY 1978 and $400,000 in FY 1979, a) to convert the library shelf lists of the three campuses to machine readable format (FY 1978), and b) to implement the Library Computer System (LCS) within the University of Illinois with a limited number of terminals at the State Librarian and a restricted number of additional institutions in the State. The main shelf list at UIUC should be converted by about September 1; UIMC should follow about October 15; and UICC about January 1, 1979. The basic LCS on-line programs are in final testing and modifications for multi-campus operation should be completed in October. Thus, the operation of LCS will begin at UIUC during the Fall, 1978 semester and be phased during FY 1979 to the other campuses upon completion of the conversion of their shelf lists, multi-campus programs, installation of terminals and training of staff.

For FY 1980, UIUC is submitting its last in a series of requests for funding the Library Computer System. The funds being requested will provide the capacity for an addition of 99 terminals to the Library Computer System and will cover the cost of installing a terminal at each of the 11 State-supported senior institutions in the State and at each of the 18 regional library systems. (It should be noted that almost all of Illinois' private colleges and universities and community colleges are affiliates of the regional library systems.) The installation of these 29 terminals would forge another link in a state-wide network.

The Illinois State Library is planning to establish a state-wide delivery system for transporting library materials back and forth among all of the institutions that will be tied together by the Library Computer System. Therefore, if this request is funded the State of Illinois should have the core of the state-wide system functioning by 1981.

The proposed budget is as follows:

Cost of 29 Terminals @ $1,200	$	31,900[1]
Modems and Multiplexors for the 29 Terminals		24,000[1]
Telephone Line Charges for the 29 Terminals @ $1.50/mile/month		16,500
Maintenance and Connection Costs for 29 Terminals @ $27.00/month/terminal		9,400
CPU and Communication Controller Costs for 29 Terminals		38,000
CPU and Communication Controller Costs for an Additional 70 Terminals (Completion of upgrade to capacity for 99 terminals)		95,200
TOTAL	$	215,000

[1]Nonrecurring amount

ELECTRONIC BLACKBOARD
($50,500)

Introduction

The Electronic Blackboard (EB) is a remote delivery system developed by Bell Laboratory in conjunction with Illinois Bell Telephone. It transmits both graphics and audio. To transmit handwriting and information such as graphs or drawings, the instructor writes on a pressurized surface with chalk as if writing on an ordinary chalkboard. These graphics are electronically converted and transmitted over the telephone line. At the receiving end, which can be across the country, the signals are reconverted and displayed on a television screen. The audio portion of a lecture is carried simultaneously over a second telephone line. The system also has the capability of recording both graphics and audio portions which can be used at a later time for reference purposes.

Historical Background

The University of Illinois has a long history in the development of remote instructional delivery systems. The Electronic Blackboard represents the latest of these developments. Working closely with Bell Laboratory over the last several years, the University has served as the only field test site for the new delivery system. Using this system, and earlier developed models, the Urbana-Champaign campus has offered credit classes each semester since 1967 to classrooms away from campus.

Purpose

The Electronic Blackboard has been designed as a system for relaying information to large or small groups of people and to one or more locations remote from campus simultaneously. The primary purpose for which the EB would be used by the University of Illinois is the delivery of continuing education and public service educational programs to the citizens of the State. More specifically, credit and non-credit programs would be offered over the EB delivery system to receiving sites initially located in the University Public Service Regional Offices. University Regional Office sites are chosen for this effort due, in large part, to the limited access

available to the general public at receiving sites currently located in private industry. By using University facilities, the range of continuing education and public service programs can be expanded so as to meet the educational needs of the citizens of the State. Funds requested for this project will permit two or three remote receiving sites to be established.

Current Status

Presently, the UIUC campus has remote receiving sites located in private industry in Peoria and Rockford. The UIUC campus has in recent years awarded two Master of Science Engineering degrees to adults who have taken engineering credit courses via the EB system. Courses taught in this curriculum were taken at remote sites concurrently with the offering of the class on campus.

Potential

This project has as its focus a minimum of twelve public delivery sites, most of which will be located in current University facilities. Experience to date indicates that this system has the potential to permit expansion of University of Illinois outreach programs into new areas through a multi-faceted approach--some travel for face-to-face instruction, some use of correspondence and some remote teaching. The capability to teach several disciplines at remote sites could be enhanced by this system. Further, expansion of teaching sites at the Medical Center and Chicago Circle campuses would, through this system, make continuing education programming available to a broad range of professionals throughout the State. In brief, when this system is fully implemented, a significant impact can be made upon the continuing education needs of professionals who serve the citizens of Illinois.

Budget

Establish 2 - 3 Electronic Blackboard remote receiving sites -	$46,900
Purchase of television monitors -	3,600
	$50,500

To complete this project, additional funding will be sought in succeeding years.

Agricultural Area Extension Advisers - $40,000

Agricultural Area Extension Advisers are employees of the Cooperative Extension Service (CES) who are housed off-campus, generally in Regional Directors' Offices, and who have special expertise in selected subject matter fields, allowing CES to concentrate on the specific problems of a particular geographical region. Currently there are 16 advisers serving on the CES staff, not including 27 Farm Business and Management Advisers.

Each year CES reviews the most critical needs throughout the State to determine if additional advisers are needed. This year it is apparent that funds are required to hire a specialist in communications to help the CES personnel in Northeastern Illinois meet the demand for information from homeowners in the area and a livestock specialist to supplement the four livestock specialists currently spread throughout the State.

Expansion of the Cooperative Extension Telenet System - $64,000

The Cooperative Extension Service Telenet System consists of amplified phones tied together 24 hours a day by leased dedicated telephone lines. The Telenet System was instituted in the Fall of 1971 with an initial installation at 17 county Extension Offices. The system currently is operational in 55 county and regional Extension Offices, leaving 57 offices unserved.

Telenet is used for a variety of educational programming activities. Technical updating is provided to field staff members on a weekly basis. Specialized training for specialized advisers is offered frequently. Direct teaching of clientele by campus-based faculty is delivered via Telenet when travel schedules and other considerations dictate its use. Short sessions with Regional Directors are held daily. These discussions deal with the many administrative matters that are essential to the management of Cooperative Extension Service (CES) staff that numbers in excess of 1,300 professional, nonacademic and paraprofessional people. During calendar year 1977 there were nearly 69,000 person-contact hours of programming conducted for all purposes via Telenet.

The funds being requested will allow CES to extend Telenet services to approximately half of the 57 Extension Offices not presently served. Additional funds will be requested in FY 1981.

County Board Matching Funds - $304,500

County Board Matching Funds are appropriated to the University of Illinois from the State Agricultural Premium Fund for distribution as matching money to the County Governing Boards. The current County Cooperative Extension legislation calls for county extension budgets to be made up of 25% State funds (distributed through the University) and 75% county contributions. Changes in legislation are now in progress to change the matching ratio to 30%/70% for FY 1980, 35%/65% for FY 1981, finalizing at 50%/50% in FY 1984. House Bill 3396 on this issue is expected to be approved this fall.

For FY 1980 County Boards project their counties' contributions to total $2,539,500. This amount would equal 70% of a total budget of $3,627,800. Thirty percent of this budget, the amount to be distributed by the University, would be $1,088,300. This represents a $304,500 increase over the University's FY 1979 appropriation of $783,800.

Employer's Share of State Health Insurance - $177,200

The concept of joint responsibility for CES is contained in the basic Federal legislation (the Smith-Lever Act of 1914) and in memoranda of agreement between local cooperating groups, the University, and the Federal government. The three partners are responsible to jointly plan and to conduct extension education programs in agriculture, home economics, and related subjects for the State of Illinois. The program is jointly financed from local, State and university, and Federal sources.

In the past the Department of Personnel for the State of Illinois paid for the employer's share of the costs of health insurance for CES employees

on salaries paid from non-state sources. However, in May of 1978 that agency informed the Cooperative Extension Service that beginning in FY 1980 it planned to cease that practice.

The concept of joint responsibility for CES activities suggests that there be equitable sharing of agreed-upon costs. Currently local sources provide support for office rent, equipment, supplies, and local travel. The State and Federal governments share in paying salary costs. The Federal government also provides funds for the employer's share of retirement costs, and it provides Federal Workmen's Compensation. Therefore, it appears equitable for the State to provide for the employer's share of health insurance, $177,200 in FY 1980. $162,200 will permit the continuation of State health insurance benefits for the staff of CES. An additional $15,000 is requested to provide State health insurance coverage to retirees, a benefit not currently available to CES professional staff members, but which is provided to all University of Illinois State retirees.

Nonacademic Salary and Classification Adjustments - $34,430

Staff members from the College of Agriculture and the UIUC Personnel Services Office have recently completed a personnel study related to the job classifications and salaries for the Civil Service employees that serve in the 122 Cooperative Extension Service offices throughout the State of Illinois. The results of the study indicate that an additional job classification (Secretary III) should be added to those that already exist (Secretary I and Secretary II) to reflect the more sophisticated type of work that is required in many of these offices. Also it was determined that in several geographic areas, the salaries of CES secretarial personnel were well behind the current market. To correct current salary deficiencies and to establish the new Secretary III classification and to promote a number of individuals (those whose current classifications do not reflect their actual duties) to that level will require $34,430. A more detailed description of this request appears in Appendix 7.

FY 1980 SALARY INCREASE/COMPENSATION IMPROVEMENT CALCULATIONS

The following information provides an outline of the steps used to calculate the amounts for the salary increase/compensation improvement increment.

A. Annualization

Since the University's fiscal year (July 1 to June 30) does not coincide with the contract year for employees (August 21 to August 20 at Urbana-Champaign; September 1 to August 31 at the Chicago campuses), the amounts necessary to fund salaries for the first two months of the fiscal year are based upon preceding year's requirements. This situation is described as "annualization" of the previous year's request. For FY 1980, the annualization of both the regular 8% salary increase and the additional 2% increase for lower paid civil service personnel is required. For each calculation an employee turnover value of 5% is assumed. The specific computations are as follow.

1. Regular: 8% for two months in FY 1980
   FY 1978 Personal Services Base x .08 x 2/12 x .95 =
   $214,027,400 x .0126666 = $2,711,000
2. Additional: 2% for two months in FY 1980
   FY 1979 Appropriation x 2/10 x .95* =
   $880,200 x .19 = 167,200

   Total Annualization (1 + 2) $2,878,200

*The entire FY 1979 appropriation for low income civil service employees will be spent over a 10 month period; hence, the use of 2/10 rather than 2/12 to calculate annualization requirements.

B. Regular Increase and Compensation Improvement (9.5%)

Based upon current estimates of inflation and the inclusion of the compensation improvement mechanism, an overall increase of 9.5% is requested. The amount necessary to fund this portion of the request will cover the last 10 months of FY 1980. Again, a 5% employee turnover rate is assumed. This results in the following calculation.

FY 1979 Personal Services Base x .095 x 10/12 x .95 =	
$233,406,700 x .0752083	$17,554,100
Total Salary/Compensation (A + B)	$20,432,300

RETIREMENT FUNDING

Background

In recent years, substantial debate has occurred over the extent to which the State of Illinois should commit current dollars in support of pension benefits to be paid to State employees in the future. Although Illinois law specifically requires that funds be provided in the year that benefits are earned by active employees, the State has never appropriated at this "full funding" level. The State has thereby acquired an unfunded liability for future pension payments for State employees. The growth of this liability has intensified the debate over the steps necessary to stem its growth and begin its reduction. As the largest member of the State Universities Retirement System (SURS), which is one of the five pension systems supported by the State, the University of Illinois has been both a keen observer and a participant in the debate over adequate retirement funding. A summary of the principal issues in this debate follows.

Those who argue for greater appropriations to the State's retirement systems suggest that:

a. pension liabilities are growing at an alarming rate and in FY 1977 exceeded assets by more than $3.5 billion;
b. the growth in State revenues over the next 15-20 years may be insufficient to meet the growth in payout requirements under the existing formula;
c. insufficient funding of pension benefits today pushes off onto future generations of taxpayers the burden of paying for services provided and benefits earned in prior years; and,
d. in future years, a relatively smaller percentage of our population will have to pay for the pension benefits of a relatively larger percentage of the population which is retired.

Those more optimistic about the current and future posture of the State's retirement system argue that:

a. while unfunded liabilities continue to grow, assets are growing at a faster rate (the ratio of assets to unfunded liabilities for the State's five retirement systems has climbed from 35.6%

in FY 1971 to 45.97% in FY 1977);

b. there is no reason to assume that the annual growth in State revenue will not continue to increase at a healthy economic pace (revenues have increased at an average annual rate of 10% for the period FY 1973-FY 1978);

c. substantial increases in appropriations to the retirement systems would seriously jeopardize the State's ability to meet high priority, current needs in the areas of education and the social services; and,

d. the magnitude of Illinois' debt burden is 25% below the average for all other states on a per capita basis (the combination of general obligation bond debt and unfunded pension liabilities in Illinois is roughly $409 per capita - the per capita debt burden in all other states is approximately $500).

In a sense, most of the retirement issues appear to center on the State's long-term ability to meet annual pension payout costs as they escalate over the next twenty years. If the State is able to meet these costs without sacrificing other necessary social service funding, arguments surrounding the continued growth in unfunded liabilities become moot. Unfunded liabilities are critical only if and when the State becomes bankrupt--most would agree that this is a very remote possibility.

Projected Payout Requirements

The most recent comprehensive forecast of future payout costs for the State of Illinois was provided by the A. S. Hansen, Inc. actuarial firm as part of a larger report of the Illinois Pension Laws Commission. The payout levels identified by Hansen were based on assumptions concerning annual salary and inflation increases (5%), turnover rates, the number of retirees projected into the future, and other major variables (i.e., mortality rates). An aggregate forecast was developed for the five state-supported systems in addition to the Chicago Teachers Retirement System.

The data presented below represent payout levels projected by Hansen beginning in FY 1979 with five-year interval figures shown through FY 1995. The original Hansen figures have been adjusted upward to account for the transition in FY 1979 from net payout to gross payout for the State Universities Retirement System (based on the FY 1979 budget recommendation of the

Governor). This adjustment reflects the historical ratio of net payout to gross payout (85%).

Projected Payout Levels
($ in Millions)

	Actual FY79	Projected FY79	Projected FY80	Projected FY85	Projected FY90	Projected FY95
Total - 5 State Systems[(a)]	325.3	335.0	364.8	560.6	812.2	1,142.4
SURS Only	52.0	66.8	73.7	120.8	186.8	299.8

(a) A. S. Hansen, Inc. forecasts for the following systems: State Employees, Downstate Teachers, Universities, Judges, General Assembly.

While it is difficult to measure the validity of the Hansen forecasts without updating each of the major factors used in the actuarial determination, it is possible to review the reliability of the projections since the completion of the study in FY 1974. Over the five-year period, FY 1974-1979, Hansen forecasts have exceeded actual payout requirements by 3-4%. Because of the nature of the forecasting model it could be assumed that this estimating error will be sustained through FY 1995.

While the original Hansen forecast appears to have inherent characteristics which tend to overstate future payout requirements slightly, the factor used in estimating future annual salary increases (4-5%) may well understate the salary growth patterns expected for SURS employees in the future. One could assume that the effects of the two deviations noted above will essentially cancel each other out over time, thereby making the Hansen figures at least a reasonable model against which future trends can be examined.

Payout Needs vs. State Revenues

As indicated earlier, one of the key issues in the review of future pension policies is the extent to which the growth in State revenues will keep pace with the expected growth and maturity of the State's retirement systems. Table A illustrates the changes necessary over time for the State to meet payout requirements. State revenues are assumed to increase at 7% per year - payout levels are those presented by A. S. Hansen, Inc. with an adjustment made for the SURS to correct for payout on a gross benefit level.

TABLE A
PROJECTED STATE PENSION PAYOUT REQUIREMENTS
VS.
PROJECTED STATE REVENUES
(Dollars in Millions)

	FY 1980	FY 1985	FY 1990	FY 1995
State GRF[1]	$7,330	$10,280	$14,420	$20,220
Rate of Change		1.40	1.97	2.76
Payout - All 5 Systems[2]	$ 365	$ 561	$ 812	$ 1,142
Rate of Change		1.54	2.22	3.13
% of GRF	4.98%	5.46%	5.63%	5.65%
Payout - All Minus SURS	$ 291	$ 440	$ 625	$ 842
Rate of Change		1.51	2.15	2.89
% of GRF	3.97%	4.28%	4.33%	4.16%
Payout - SURS Only[2]	$ 74	$ 121	$ 187	$ 300
Rate of Change		1.64	2.53	4.05
% of GRF	1.01%	1.18%	1.30%	1.48%

(1) Projected at 7% annual increase

(2) From A. S. Hansen, Inc. forecasts

In addition, data are shown to describe the growth of other State systems minus SURS. The data in Table A indicate that if State revenues grow at an annual rate of 7% and if the Hansen forecasts are reasonably valid, then the relative burden of pension costs on the State's General Revenue Fund over time will not substantially change (from 4.98% of total GRF in FY 1980 to 5.65% of total GRF in FY 1995). The share of State revenue necessary to support SURS payouts will increase by almost 50% over the same period, however, demonstrating the late maturity of SURS and the impact of the addition of a large community college sector in the 1960s.

Figures A and B show this situation graphically. Figure A demonstrates that SURS decidedly has the most rapid rate of growth over the next 20 years. When SURS is removed from the other State systems, they exhibit a much lower overall rate of change (4.05 for SURS vs. 2.89 for the other four systems together). Figure B provides another way of demonstrating that SURS will require an increasing share of the total State retirement systems funding by 1995 (26.3% in 1995 vs. 20.3% in 1980). Clearly, the SURS payout growth accounts for most of the total growth in payout requirements (on a percentage basis) likely to be experienced by all five State systems collectively through FY 1995. From these data, it seems equally clear that funding improvements for the overall State retirement systems should be targeted first for SURS.

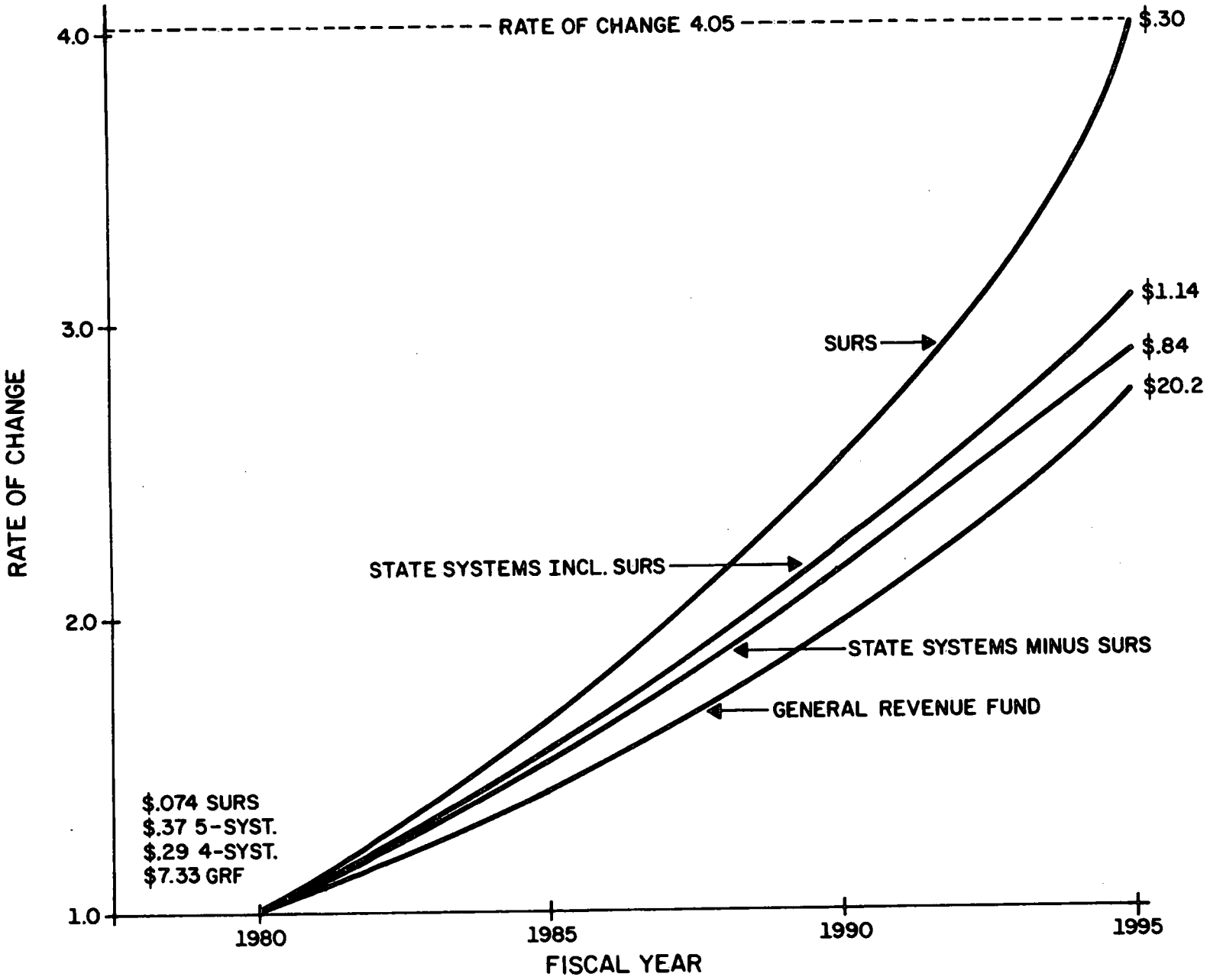
FY 1979 - Transition Year: Funding Improvement Begun

Assuming the general accuracy of the above projections, a second key issue in the retirement debate becomes providing a funding mechanism which will ease the burden of the need for an increased share of General Revenue Funds required to fund future payout costs. The following discussion will identify the various funding plans most frequently debated: net payout level, gross payout level, Pension Laws Commission level and statutory level.

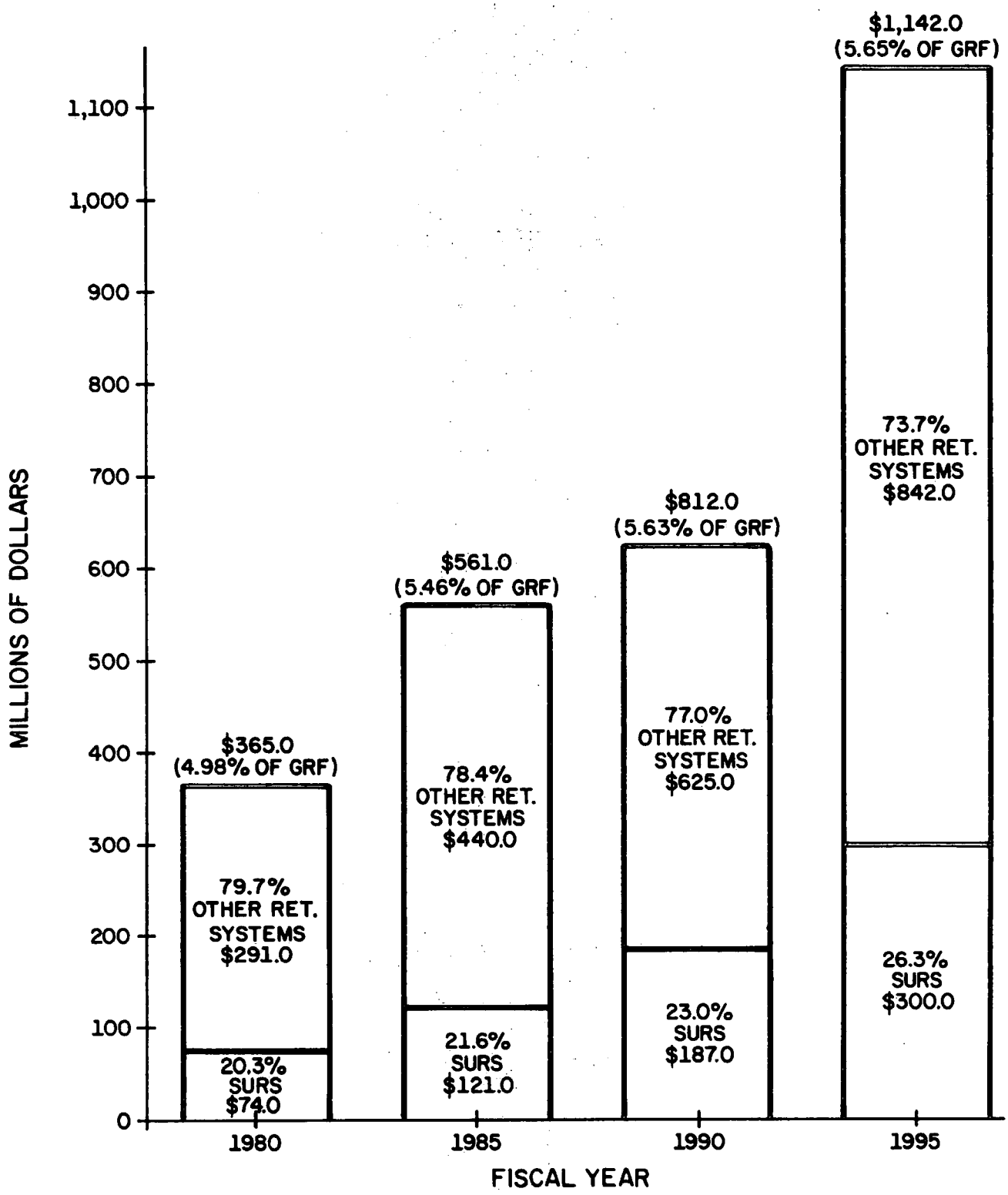
If the appropriation levels recommended by the Governor for higher education are enacted in FY 1979 the funding status of the SURS will have been improved over past years. While Illinois statutes require that appropriation levels reflect the "normal cost" (current cost) of future benefits earned by individuals presently employed, appropriations to SURS through FY 1978 have been targeted at meeting only the annual pension costs for individuals actually retired. In other words, no State funds have heretofore been "put aside" to insure that the cash needed to support the pension benefits earned

FIGURE A

RATES OF CHANGE PROJECTED IN STATE REVENUES AND PENSION PAYOUT REQUIREMENTS



PROJECTED GROWTH IN STATE PENSION PAYOUT REQUIREMENTS



by a person working today would in fact be available at some point in the future when that person retires.

The Governor's budget recommends that SURS funding levels reflect the "gross benefit payout level", consistent with the policies in use by the other four State pension systems. As this section will attempt to explain, appropriations at the gross benefit level will be used in substantial part (approximately 80% of the total amount) to continue the support of pension payments provided to retired individuals. Of major importance, however, is the fact that, for the first time, a portion (roughly 20% of the total amount) of the State funds made available to the SURS will be set aside (pooled) to meet part of the normal cost of future benefits earned by active employees.

The model presented below attempts to illustrate the significance of the proposed change. The $1,000 monthly pension level shown in the model reflects a retiree's entitlement based on length of service and average salary while employed. The $200 figure shown as the "employee's reserve" represents an actuarial calculation of the monthly amount which can be withdrawn from the retiree's own contributions (made during his/her working career) based on expected mortality rates or life-expectancy tables.

In Case "A", benefits are provided for a hypothetical retiree at $1,000/month, with $200 being paid from the contributions made by the retiree and $800 paid by the State. This model reflects state appropriations at the "net benefit level". The annual appropriation is sufficient only to cover costs of pensions for employees already retired. No funds are provided for the future pension costs of active employees.

Case "B" below shows the same total calculated benefit package for this particular retiree, but with State appropriations at a level equal to the total package itself, the "gross benefit level". Under the Case "B" illustration, the contributions made by the retiree continue to support the monthly entitlement, but the additional state amount ($200) is "pooled" or reserved for active employees.

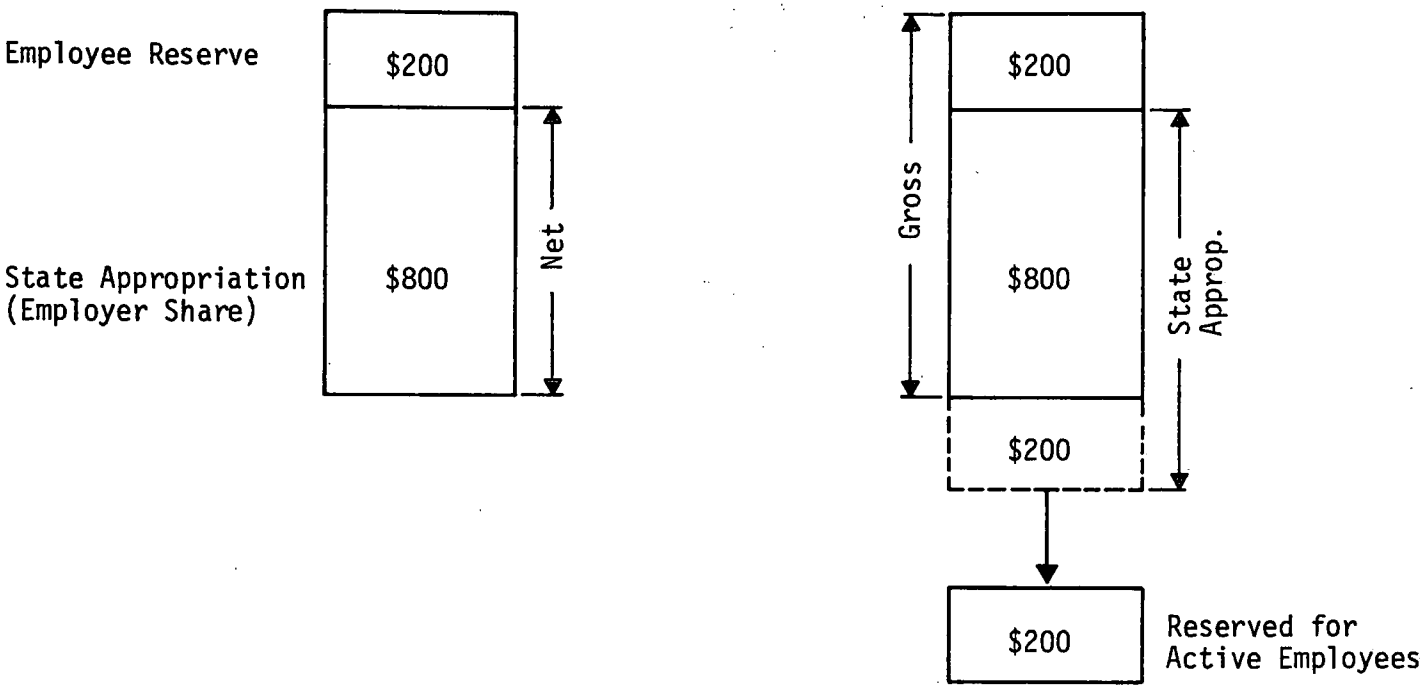
Net Payout vs. Gross Payout

A

Monthly Benefit Package = $1,000; State Approp. at the Net Benefit Payout Level

B

Monthly Benefit Package - $1,000 State Approp. at the Gross Benefit Payout Level



The $200 in Case "B" which is reserved for the future retirement benefits of active employees will, over time, help to reduce the projected dollar growth in gross payout levels. State funds which are set aside and invested today will obviously reduce the cash requirements needed in the future to meet gross payouts, thereby, in part, reducing the projected increase in the retirement system's share of GRF (now projected to grow from 1.01% in 1980 to 1.48% in 1995).

Statutory Requirement

The statutes of the State of Illinois require employer contributions to the several retirement systems on a "normal cost plus interest" basis. Expressed as a percent of total payroll, the normal cost factor is intended to cover future benefits of active employees (death and disability benefits,

retirement and survivors annuities, and post-retirement increases). For FY 1979, the Board of Trustees of the State Universities Retirement System adopted 11.88% of payroll as the "normal cost" of benefits. In addition, the statutes require that a percentage factor be added to the normal cost figure to cover interest on the unfunded accrued liabilities. A 6.41% factor was added in FY 1979 for the interest cost, thereby increasing the total minumum employer contribution to 18.29%.

For the University of Illinois, the statutory requirement in FY 1979 totaled $48.8 million (18.29% X $267,000,000 payroll). Because of the cost of this requirement, the Board of Higher Education recommended that a program endorsed by the Illinois Pension Laws Commission be adopted which would allow for a grade-in approach to achieve a higher "percent of payroll" factor over a period of several years. This method would provide a transition from the present system by calculating the percent of payroll achieved under the net benefit level and, then, adding two percent to that payroll factor each year (cumulatively) until a true normal cost factor is achieved. The FY 1979 cost of this approach for the University of Illinois was estimated at $26.8 million.

The final recommendation presented in the Governor's budget for the pension costs of the University was $25.9 million, which represents the estimated cost of the "gross benefit payout level". Net benefit payout was estimated at $21.5 million for FY 1979.

For the University of Illinois in FY 1980, SURS officials have estimated that full funding of the statutory requirement would require an appropriation of $50,470,000 - an increment of $24,579,000 over the anticipated FY 1979 appropriations. The SURS has also indicated that the total appropriations for funding at the gross payout level would require a total of $29,404,700, or an increment of $3,512,900.

Funding Status - SURS

Audited figures for FY 1977 show total liabilities of the State Universities Retirement System at $1.392 billion. The value of assets were shown at $657 million, leaving unfunded liabilities of $735 million. Although unfunded liabilities have increased by over 57% since 1973 (an increase in excess of $265 million), assets have increased by almost 72% over the same period (an increase of $275 million). The degree of funding ratio for the

SURS has improved from 44.97% in FY 1973 to 47.22% in FY 1977 (ratio of assets to total liabilities). The absolute dollar value of unfunded liabilities will continue to grow, however, until a normal cost funding approach is adopted.

It should be noted that figures used in reporting the level of unfunded liabilities are based on annual future salary increase assumptions. If the State of Illinois were in a bankruptcy position, that is, if all accrued liabilities had to be paid immediately, the dollar value representing that portion of unfunded liabilities based on future salary increases would necessarily be subtracted from the total unfunded amount. According to the actuary for the State Universities Retirement System, this factor would reduce accrued pension liabilities by approximately 20% or roughly $145 million. The actual accrued, but unfunded, liabilities of the SURS today could be identified as approximately $590 million ($735 million total unfunded less $145 million for future salary increases). Under this approach, the ratio of assets to liabilities would be 54.98%.

The following Tables B through E present a summary of the data used for these calculations.

TABLE B
TOTAL ACCRUED LIABILITIES
COMPARED TO
ASSETS AND UNFUNDED PORTION OF LIABILITIES
(Dollars In Millions)

	FY 1970	FY 1971	FY 1972	FY 1973	FY 1974	FY 1975	FY 1976
TOTAL ACCRUED LIABILITIES							
Downstate Teachers	$1,570.5	$2,483.4	$2,703.7	$2,926.9	$2,751.6	$2,964.1	$3,232.6
State Employees	551.6	717.4	811.6	912.9	1,019.0	1,173.8	1,296.5
State Universities	446.5	528.9	729.5	850.4	953.1	1,095.3	1,235.8
General Assembly	8.3	10.0	11.5	12.8	13.6	17.8	19.0
Judges	32.7	45.9	62.0	69.5	76.6	93.4	110.6
TOTAL	$2,609.6	$3,785.6	$4,318.3	$4,772.5	$4,813.9	$5,344.4	$5,894.5
ASSETS							
Downstate Teachers	620.1	722.8	828.6	954.9	1,078.1	1,250.4	1,426.7
State Employees	272.5	320.9	342.7	396.3	446.9	511.9	573.6
State Universities	228.6	281.0	328.0	382.5	443.3	507.4	577.0
General Assembly	5.8	6.6	7.1	7.9	8.4	9.1	9.8
Judges	12.8	16.0	18.7	21.7	25.1	29.3	33.7
TOTAL	$1,139.8	$1,347.3	$1,525.1	$1,763.3	$2,001.8	$2,308.1	$2,620.8
UNFUNDED LIABILITIES							
Downstate Teachers	950.4	1,760.6	1,875.1	1,972.0	1,673.5	1,713.7	1,805.9
State Employees	279.1	396.5	468.9	516.6	572.1	661.9	722.9
State Universities	217.9	247.9	401.5	467.9	509.8	587.9	658.8
General Assembly	2.5	3.4	4.4	4.9	5.2	8.7	9.2
Judges	19.9	29.9	43.3	47.8	51.5	64.1	76.9
TOTAL	$1,469.8	$2,438.3	$2,793.2	$3,009.2	$2,812.1	$3,036.3	$3,273.7

TABLE C
DEGREE OF FUNDING RATIO: PERCENTAGE OF ASSETS
TO TOTAL ACCRUED LIABILITIES

FY	Downstate Teachers	State Employees	State Universities	General Assembly	Judges	Composite Ratio
1970	39.5%	49.4%	51.2%	69.9%	39.1%	43.7%
1971	29.1	44.7	53.1	66.0	34.8	35.6
1972	30.6	42.2	45.0	61.7	30.2	35.3
1973	32.6	43.4	45.0	61.7	31.2	36.9
1974	39.2	43.8	46.5	61.8	32.8	41.6
1975	42.2	43.6	46.3	51.1	31.4	43.2
1976	44.1	44.2	46.7	51.6	30.5	44.5

TABLE D
PAYMENTS MADE TO PENSIONERS
(Dollars in Millions)

Retirement System	FY 1970	FY 1971	FY 1972	FY 1973	FY 1974	FY 1975	FY 1976
Downstate Teachers	$54.5	$ 62.9	$ 73.9	$ 90.4	$105.5	$124.8	$138.7
State Employees	22.0	25.6	30.3	36.0	44.2	51.0	57.4
State Universities	10.6	12.9	16.0	20.0	23.2	27.1	33.8
General Assembly	.3	.4	.4	.6	.8	.9	1.0
Judges	.9	1.0	1.3	1.6	2.0	2.3	2.9
TOTAL	$88.3	$102.8	$121.9	$148.6	$175.7	$206.1	$233.8

TABLE E
NUMBER OF PENSION RECIPIENTS

	FY 1970	FY 1971	FY 1972	FY 1973	FY 1974	FY 1975	FY 1976
Downstate Teachers	18,481	18,543	22,051	23,410	24,703	25,920	27,500
State Employees	11,374	12,285	13,634	14,989	16,475	18,024	19,516
State Universities	3,332	3,761	4,273	4,903	5,515	6,220	7,010
General Assembly	146	152	159	193	200	211	217
Judges	162	188	196	227	241	258	282
TOTAL	33,495	34,929	40,313	43,722	47,134	50,633	54,525

COLLEGE OF VETERINARY MEDICINE
($550,000)

The College of Veterinary Medicine has a number of goals that it would like to achieve by FY 1985:

1. complete the construction program outlined in Food for Century III through the capital budgeting process,
2. replace all capitation support with state funds,
3. enroll 104 students in the freshman class by FY 1981,
4. reach a level of state support of $16,500 per FTE student, (FY 1980 dollars), and
5. improve the teaching, research, and public service programs of the College.

Already the College, with financial help from the State and the University, has been able to make considerable progress in reaching these goals.

In FY 1978, planning funds were approved for the Veterinary Basic Sciences Building--the last major building to be completed in the Veterinary Medicine complex. If the construction funds ($21,017,800) for this building are approved in FY 1979, the College will have the necessary facilities to increase the entering freshman class to 104 in FY 1981. The required space for improving and expanding the research efforts of the College are scheduled for funding between FY 1979 and FY 1983:

FY 1980	Veterinary Medicine Research Buildings	$ 581,200
FY 1980	Veterinary Research Farm Complex Buildings	285,600
FY 1980-81	Isolation Research Laboratory	4,605,500
FY 1982-83	High Containment Isolation Research Laboratory (To be a multidisciplinary facility shared with the College of Agriculture, the College of Liberal Arts and Sciences, and the School of Basic Medical Sciences)	13,798,100

Requests for additional State operating funds for the College have totaled $3.0 million for the fiscal years 1971 through 1979. The College has received $893,000 from the State in the form of new program funds for that same period. The new program funds acquired prior to FY 1979 have fostered some very positive changes:

1. Reduced capitation support has been replaced with State funds, avoiding reductions in total funds available for operation.

2. Special salary increases have been provided to selected faculty on the basis of teaching and research productivity, greatly reducing the number of faculty leaving to take new positions at the numerous new colleges of veterinary medicine that are being developed throughout the country.
3. The mean professorial salaries of the College have shifted from very near the bottom of the ranking for the 24 established colleges of veterinary medicine in the U.S. and Canada to approximately mid-range among those institutions, improving the recruiting position for the College a great deal.
4. During the past 18 months, 27.50 FTE open faculty positions and four new positions have been filled with excellent new faculty members exhibiting strong teaching and research potential in a number of critical areas of specialization.
5. The number of students in the entering freshman class was increased from 76 in FY 1977 to 86 in FY 1978.
6. The ratio of budgeted State dollars to students increased from $9,482 in FY 1977 to $10,363 in FY 1978.
7. The case load in the hospital relating to equine and foods animals has increased, improving possibilities for teaching and research.
8. Faculty morale has improved appreciably with the anticipation of improved funding and the corresponding improvement of the teaching, research, and public service programs of the College.

The $400,000 of new program funds added to the College budget in FY 1979 will allow the College to expand the entering freshman class to 91 students, to hire six new assistant professors and five teaching associates, and to hire eight new nonacademic staff members. The academic personnel will add depth in essential teaching areas and will help to staff the new class sections required because of the additional students. The increased number of animals in the hospital requires that more animal caretakers be added to the staff, and the remaining nonacademic positions will provide required support for teaching and service activities in several departments.

For FY 1979 the College of Veterinary Medicine requested $740,800 in its efforts to reach a goal of State support of $15,000 per FTE student by FY 1985. It then projected a need of $437,000 for FY 1980. As one can see from the following table, that figure is now at $550,000 for FY 1980. There are several reasons for the increase in the figure:

1. The State provided $400,000 in new program funds for FY 1979 rather than the $740,800 requested.
2. The effects of inflation have been recognized. (Note that the amount of $15,000 per FTE student for FY 1985 has increased to $16,500 per FTE in order to keep pace with inflation and the increased competition created by the new and developing colleges of veterinary medicine in the United States.)
3. The College has now had time to assess carefully its specific needs on a department-by-department basis and would like to move more rapidly in eliminating current deficiencies and in improving its programs.

Specific information is available on how the College would spend the $550,000 in FY 1980, but only a general description will be provided here.

At the present time an administrative position of Associate Dean for Research is being created to provide greater administrative support in the development of research activities throughout the College. Funds for new academic positions in FY 1980 will ease the current high teaching loads in the clinical areas so that faculty members will have the time to develop their research programs. Selected areas will also be strengthened in pre-clinical programs to provide teaching expertise in several areas that are not currently developed.

Again, new nonacademic positions will be added throughout the College to provide support for faculty members and to free them from many time-consuming preparatory activities that will allow them to spend more time on research and public service. A word-processing center will be established to minimize the number of new secretarial positions required but at the same time maximizing the secretarial service provided in the College. The business accounting procedures are also being upgraded in an effort to reduce the number of accountants required while at the same time reducing the time department heads and principal investigators have to spend on routine business activities and increasing the efficiency of utilizing research support.

The College will continue to expand its audiovisual and learning resources services in collaboration with the University Office of Instructional Resources. These services were drastically reduced with the loss of capitation support and are still well below their previous level.

The Federal Government has indicated a strong desire to phase out capitation support. The President's budget has reduced capitation support for medicine and dentistry by one-third of the present amount in the FY 1979

federal budget with a three-year phase out. Capitation support for veterinary medicine, optometry, podiatry and pharmacy is being eliminated immediately in the White House budget. There is a high probability that capitation support for veterinary medicine will be phased out by FY 1981, and personnel currently paid from capitation support ($236,000) will have to be transferred to State funds.

The expansion of the existing veterinary colleges and the continued establishment of new colleges of veterinary medicine in the United States have created a critical shortage of future faculty members. Therefore, the College will also expand its clinical residency program and graduate programs in FY 1980 to increase the numbers of DVM's with postgraduate training who can then become faculty members and will have the expertise to increase the research potential in food animal medicine. The residents and graduate students will function as teaching associates in College programs, providing support for the professional teaching programs while they are training for future teaching positions. Their research activities will be supported by outside research funds, but their teaching efforts will need State support.

COLLEGE OF VETERINARY MEDICINE PROGRAM PROJECTIONS

ENROLLMENTS

	FY 78	FY 79	FY 80	FY 81	FY 82	FY 83	FY 84	FY 85
Headcount								
Professional								
VM-1	86	91	91	104	104	104	104	104
VM-2	76	86	91	91	104	104	104	104
VM-3	86	76	86	91	91	104	104	104
VM-4	86	86	76	86	91	91	104	104
Subtotal	(334)	(339)	(344)	(372)	(390)	(403)	(416)	(416)
Graduate	50	55	65	70	75	80	85	90
Interns	5	6	7	8	8	8	10	10
Residents	7	8	10	14	16	20	24	24
TOTAL	396	408	426	464	489	511	535	540
FTE								
Professional	334.0	339.0	344.0	372.0	390.0	403.0	416.0	416.0
Graduate	33.3	36.7	43.3	46.7	50.0	53.3	56.7	60.0
Post-Prof.	6.0	7.0	8.5	11.0	12.0	14.0	17.0	17.0
TOTAL	373.3	382.7	395.8	429.7	452.0	470.3	489.7	493.0

RESOURCES

	FY 78	FY 79[1]	FY 80[2]	FY 81[3]	FY 82[3]	FY 83[3]	FY 84[3]	FY 85[3]
State Approp. Funds	$ 3,626.2	$ 4,307.9	$ 5,168.8	$ 6,068.8	$ 6,768.8	$ 7,468.8	$ 7,918.8	$ 7,987.5
ICR	111.8	111.8	122.0	127.0	132.0	137.0	142.0	147.0
Capitation Funds (Expenditures)	130.6	274.0[a]	62.0	--	--	--	--	--
TOTAL FUNDS	$ 3,868.6	$ 4,693.7	$ 5,352.8	$ 6,195.8	$ 6,900.8	$ 7,605.8	$ 8,060.8	$ 8,134.5
Incremental State Funds	--	--	860.9	900.0	700.0	700.0	450.0	68.7
FTE Students	373.3	382.7	395.8	429.7	452.0	470.3	489.7	493.0
Dollars/FTE Students	$10,363	$12,265	$13,524	$14,419	$15,267	$16,172	$16,461	$16,500

[1]FY 1979 Budget
Increment: $281,700 for salary & expense increases; $400,000 - Program Improvement and Capitation Replacement

[2]FY 1980 Budget
Increment: $150,000 Capitation Replacement; $400,000 Program Improvement; $310,935 for salary and expense increases

[3]In FY 1980 dollars
Does not include salary and expense increases

[a]Estimated - grant allocation - October 1, 1978 - $236,000

APPENDIX 4

NEW OUTREACH SERVICES BY THE ENGINEERING EXPERIMENT STATION ($200,000)

The Engineering Experiment Station (EES) has a seventy-five year record of support service to the major industries of the State. In recent years, there has also been a heightened interest in the EES, reflected by many requests for assistance, from the smaller businesses and industries, from county and municipal governments, and from the general public. These requests are in addition to an intensification of the existing interactions with the State government and large industry of the State. The EES proposes a significant outreach program to provide technical assistance desired by these segments of its constituency.

While small business and industrial concerns represent an important component of the Illinois economy, they cannot afford the ongoing technical support facilities of larger concerns. Further, they are frequently not in a position to use consultants effectively. The following areas are typical of service which could be provided by an EES team of faculty, academic/professionals, and graduate students:

1. Energy-Related Programs. The team approach could be used to provide energy "audits" of small concerns and assistance on energy conservation programs related to heating and cooling of buildings or plant processes with a direct use of fossil fuels or electrical power.
2. Materials Reliability and Fracture Control. Small industries need special assistance in the proper selection, design, and use of materials in product manufacture. To address this need, an EES team would provide direct assistance to the individual company. Further, it could organize conferences to increase the ability of company personnel to identify problems, and either to solve them or knowledgeably to seek the advice of professional consultants.
3. Manufacturing Processing. Illinois is the center of a large number of companies in the metal-forming business (forging, casting, and machine tool industries). Specialized teams can provide assistance of materials selection, casting and forming, and machining processes, including computer control.

Historically, the EES has conducted many applied research programs sponsored by agencies of the State of Illinois. More recently, county and municipal agencies have also requested assistance. The following indicate ways they could benefit from an expanded outreach program:

1. Township Road Maintenance. Over 3600 township road supervisors are responsible for the building and maintenance of the State's secondary road system. The EES has initiated a program to "package" the results of previous and current studies of the EES in the areas of highway materials, highway drainage, road maintenance, and related topics in an innovative audiovisual format. In turn, the Illinois Department of Transportation has committed the services of its engineers to be trained as teachers of the township road supervisors. This combination of concise presentation of information based on EES research and the technique of "teaching the teachers" promises to be a highly effective mode of operation.
2. Solid Waste Disposal. In recent years, county and municipal officials have been plagued with a multitude of problems on the topic of solid waste disposal. Methods of disposal, size and location of disposal sites, environmental impacts, and cost impacts, and cost have all presented problems. Faculty with expertise in solid waste disposal are being asked to provide advisory services. However, the number and availability of professorial staff in this area are limited and need to be extended by the team approach of including academic/professionals and graduate students.

Finally, in these times of energy shortage, environmental concerns, competition for land use, and inflation, it is important that the people of the State of Illinois be informed and take advantage of technology as applied to their changing lifestyles. The areas of energy conservation, transportation planning, and housing and construction developments are but a few examples of the needs of the general public for sound technological concepts and understanding.

The EES proposes to meet these needs in a variety of ways. First, mass media, such as radio, television, or widely distributed brochures, have proven to be an effective means of transmitting rather technical information to the general public. Second, the EES would expand traditional modes of contacts such as the University's state-wide regional offices, the county extension agents of the Cooperative Extension Service, and the Small Homes Council. Third, the EES would develop a unique cooperative program with the state system of community colleges to develop courses and supporting materials on various technical topics which would allow the community colleges to provide a unique educational service to their regional constituencies.

The EES serves as an unmatched resource for the provision of all of these technical services. As the second largest engineering college research program in the U.S., the EES provides a substantial pool of research on modern topics which is usable, with the interpretive assistance of faculty and staff, for the identification and solution of technologically-based problems within the State. Providing the outreach services of the type most needed requires little additional effort and cost to be added to the substantial base of ongoing research.

The proposed budget for FY 1980 is as follows:

Academic Staff	
.50 FTE Program Administrator	$ 15,000
3.00 FTE Professorial Staff	73,000
1.50 FTE Academic/Professional Staff	30,000
Nonacademic Staff	
1.50 FTE Electronic and Instrument Maker Personnel	27,000
1.00 FTE Clerical Personnel	9,000
Graduate Assistants	
1.50 FTE Graduate Assistants	16,000
Expense	
Program Support	14,000
Equipment	16,000
TOTAL	$ 200,000

In the following three fiscal years, FY 1981 - FY 1983, the program should increase to its full maturity. The levels of total annual support indicated below will permit the realization of the full range of outreach services which can be effectively provided by EES to the State of Illinois.

	FY 1981		FY 1982		FY 1983	
	FTE	$	FTE	$	FTE	$
Academic Staff	4.50	$118,000	6.50	$163,000	8.00	$208,000
Professional Staff	5.50	110,000	8.75	175,000	12.00	240,000
Nonacademic Staff	6.00	79,000	9.50	121,000	12.00	164,000
Graduate Assistants	4.00	41,000	6.00	65,000	8.50	90,000
Expense		51,000		88,000		125,000
Equipment		28,000		40,000		50,000
TOTAL	20.00	$427,000	30.75	652,000	40.50	877,000

RESPONSE TO CHANGING STUDENT DEMAND ($250,000)

Since FY 1970, three of the largest colleges at the Urbana-Champaign Campus have experienced significant increases in student instructional demand. This demand, reflecting changing student aspirations, has placed severe pressure on the Colleges of Agriculture, Engineering, and Commerce.

The teaching load increases experienced by these colleges can be illustrated in a number of ways. Table 6 on page 16 of Background Information for the Review of the FY 1980 Capital and Operating Budget Request (Volume I) portrays increases ranging from 22.8% to 42.1% for the HEGIS disciplines of Agriculture, Business, Computer Science, Engineering, and Home Economics for the last eight years. These disciplines, with very small additions, comprise the Colleges of Agriculture, Engineering, and Commerce. The increasing numbers of undergraduate students with curriculum majors in these colleges also provide evidence of the demand placed upon these colleges.

Student Majors in Selected Colleges

	FY 1970	FY 1971	FY 1972	FY 1973	FY 1974	FY 1975	FY 1976	FY 1977	FY 1978
Agriculture	1,729	1,839	1,866	2,153	2,442	2,453	2,416	2,434	2,496
Engineering	3,502	3,598	3,163	3,145	3,241	3,390	3,829	4,254	4,644
Commerce	2,290	2,575	2,437	3,099	3,514	3,738	3,498	3,326	3,566

Perhaps the most significant result of the load pattern in these colleges is the growing inability of the Urbana-Champaign Campus to respond to student and societal needs. In the subject areas represented by these colleges, where jobs are generally most prevalent, student entrance has had to be severely restricted because of a lack of resources. Freshman class profile information for the Colleges of Engineering and Commerce illustrates the rising standards of admission. In the College of Engineering the mean high school rank of entering freshmen in 1972 was the 84.2 percentile, while in 1977 the figure rose to the 88.0 percentile; comparable figures for the College of Commerce show an even greater increase, from the 77.1 percentile to the 88.4 percentile.

All three colleges are experiencing earlier closing dates (for entering freshman admission); the Colleges of Commerce and Engineering both closed on November 15, 1977 (for FY 1979 students), the earliest possible closing date. In 1974 Commerce remained open until March 1, while Engineering did not close until June 18 (for FY 1975 freshmen). Agriculture's closing dates were January 20, 1978, for FY 1979 freshmen and April 22, 1974, for FY 1975 freshmen.

In addition to raising entrance requirements, a rather unsatisfactory response to a difficult situation, the Urbana-Champaign Campus has, in the last three years, internally reallocated $825,000 to the Colleges of Agriculture, Engineering, and Commerce. Internal reallocation, although providing badly needed support, has not been sufficient to meet student demand. This situation is evident in the increasing credit hour-tc-staff ratios in recent years.

	FY 1971	FY 1972	FY 1973	FY 1974	FY 1975	FY 1976	FY 1977	FY 1978
Agriculture	-1.59%	+3.81%	+16.51%	+8.94%	+7.20%	+4.71%	-8.14%	+5.51%
Engineering	+5.53%	-4.21%	+8.53%	-0-	-0-	+2.20%	+8.74%	+4.04%
Commerce	+9.78%	+4.37%	+5.29%	+3.43%	+2.28%	+14.11%	-7.03%	+2.34%

For three closely-related reasons the Urbana-Champaign Campus has been unable to solve the teaching load problems in the Colleges of Agricluture, Engineering, and Commerce through internal reallocation. First, internal reallocation strategies have been restricted by the fact that the University's budget has not kept pace with inflationary pressure. Secondly, there is a limit to the amount of internal reallocation that can be accomplished without doing irreparable harm to existing programs. The Urbana-Champaign Campus has essentially reached this level. Finally, although the Urbana Campus has not experienced large total enrollment increases, the pressures that are now occurring are, in large part, movements from relatively less costly disciplines to relatively more costly disciplines.

In order for the Urbana-Champaign Campus to provide adequate opportunity for qualified students to receive instruction in the Colleges of Agriculture, Engineering, and Commerce the following funds are requested:

(1) College of Agriculture - $75,000. These funds, in conjunction with $75,000 obtained through campus internal reallocation, are to be used to provide 6.50 FTE graduate assistants and 5.00 FTE assistant professors. This portion of the request is envisioned as the first step of a four-step program to reduce teaching load pressure in the College of Agriculture to its average level for the last nine years.

(2) College of Engineering - $100,000. These funds, in conjunction with $100,000 obtained through campus internal reallocation, are to be used to provide 7.50 FTE graduate assistants and 7.00 FTE assistant professors. This portion of the request is envisioned as the first step of a four-step program to reduce teaching load pressure in the College of Engineering to its average level for the last nine years.

(3) College of Commerce - $75,000. These funds, in conjunction with $75,000 obtained through campus internal reallocation, are to be used to provide 5.50 FTE graduate assistants and 5.00 FTE assistant professors. The addition of these new staff members constitutes the first step in a two-step program that will place the College of Commerce at its average teaching level for the last nine years.

With the accomplishment of Step 1 outlined above, the Urbana-Champaign Campus will have made a major stride towards stabilizing teaching load pressure in three of its most important colleges. Steps 2 through 4, to be requested in future years, will consist of requests for an additional 50.00 FTE spread over the next three years for the Colleges of Agriculture and Engineering (a total of 100.00 FTE) and an additional 10.00 FTE for the College of Commerce

The completion of the four-year program outlined above will stabilize teaching loads in the Colleges of Agriculture, Engineering, and Commerce at their average levels over the last nine years.

FUNDS TO ACCOMMODATE GROWTH IN THE CHEMICAL ENGINEERING PROGRAM ($100,000)[1]

A nation-wide growth in the interest in Chemical Engineering has occurred, primarily because of energy and pollution problems faced by industry. At UIUC this has resulted in a dramatic increase in the size of the freshman class in Chemical Engineering. In order to handle the increased enrollment, a larger operating budget is needed.

It should be noted that there are several factors that make it desirable for the Department of Chemical Engineering at UIUC to expand to meet this challenge rather than to turn students away. First of all, this institution is the only State-supported university in Illinois with a curriculum in Chemical Engineering. The Department of Chemical Engineering undoubtedly has an obligation to educate students in this field to meet the serious increase in environmental and energy problems facing the State and nation. At present, all of the Chemical Engineering graduates are in great demand and none have trouble finding jobs.

Another important factor that should be considered is that the department of Chemical Engineering at UIUC is one of very high quality. It is this type of department that should be encouraged to meet this type of challenge.

The campus Council on Program Evaluation in its 1977 review recognized the Chemical Engineering Department to be an excellent unit with sound leadership, good faculty and student morale, and an exceptional record of research productivity--a department reflecting standards of scholarship among the highest on the UIUC Campus. The Council urged that the Department consider seeking additional funding in order to expand its programs to accommodate more students without sacrificing quality.

The enrollments in the College of Liberal Arts and Sciences have been dropping in recent years and the College has lost funds to other colleges where enrollments have been increasing; therefore, the Dean of the College

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[1] Of this amount, $44,300 is nonrecurring.

of Liberal Arts and Sciences has found it extremely difficult to reallocate funds to the School of Chemical Sciences to meet increasing enrollments there. Although some funds have been reallocated both at the college and campus levels to the School of Chemical Sciences, it has been difficult to provide enough dollars to meet increasing enrollments in expensive chemistry courses by reallocating funds from cheaper courses in the humanities. If the funds requested in the following budget are provided, current budget deficiencies will be met, and the undergraduate enrollment in the Department can be maintained at approximately 475 students--an increase of approximately 175 percent since 1974.

The budget being requested is outlined below:

Academic Staff	
1.00 FTE Assistant Professor	$ 18,500
1.00 FTE Teaching Assistant	10,000
Nonacademic Staff	
1.00 FTE Clerk Typies III	8,700
Expense	
Operating Support	18,500
Equipment	
6 PLATO Terminals	36,000[2]
Evaporator for Senior Instructional Lab	8,300[2]
TOTAL	$ 100,000

[2] Nonrecurring amounts.

NONACADEMIC SALARY AND CLASSIFICATION ADJUSTMENTS ($34,430)

The Cooperative Extension Service of the College of Agriculture, University of Illinois at Urbana-Champaign operates offices at 122 locations throghout the State. Approximately 236.65 FTE staff provide clerical services to a field staff of 372 professionals and 362 paraprofessionals. The non-academic staff are Civil Service employees of the University and are paid according to a compensation plan approved by the Merit Board.

Compensation Areas

The Office of Personnel Services has established four "Compensation Areas" in the State which are designed to reflect salary differences in the job market. It is the intent of the University to pay competitive salaries, but not to set or lead the market in any locality. To avoid having one hundred or more different salary scales, a small number of geographic compensation areas are identified. It is assumed that within a compensation area, market conditions for clerical staff are the same.

During 1977-1978 market surveys conducted by the Office of Personnel Services indicated a need to adjust the boundaries of some of the geographical compensation areas in order to reflect more accurately current market conditions. The cost of making the required salary adjustments for nonacademic staff as a result of the boundary changes for the geographical compensation areas is estimated to be $3,600.

Personnel Reclassification

Currently all clerical staff of the Cooperative Extension Service housed in field offices are assigned to one of two classifications (Secretary I and Secretary II). The Office of Personnel Services has, in conjunction with CES administrative staff, created a third classification--that of Secretary III. The Secretary I and II positions are essentially equivalent to Clerk-Steno II and II as used at the Urbana-Champaign campus. The Secretary III position is designed to be equivalent to the Secretary position in use at the Urbana-Champaign campus.

The upgrading of selected positions in the field office clerical staff is required since the work required of the persons in these positions has been judged to be of a level that warrants the change. Funds in the amount of $24,250 are required to reclassify 39 Secretary I positions to Secretary II and $6,580 is required to reclassify 10 Secretary II positions to Secretary III.

If the requested funds are not provided, nonacademic personnel services in the various CES field offices throughout the State of Illinois are going to fall further behind the current market salaries for personnel doing similar work in those geographical areas. As a result it will become more difficult to hire qualified personnel to fill vacant positions in those offices and to retain current employees. The establishment and funding of a number of Secretary III positions will further serve to reqard deserving employees and to insure that personnel being hired have the essential qualifications for performing the tasks that will be required of them.

FY 1980 RETIREMENT INCREMENT ($24,579,000)

As noted earlier, funding for the State Universities Retirement System (SURS) was significantly improved in FY 1979 when the State moved from an appropriation at the net payout level to one at the gross payout level. As discussed in Appendix 2, this action will allow for reserves in an amount roughly equal to the employee's contribution to be set aside and invested to help fund future pension costs for active employees. The establishment of such reserves, even though they remain below the statutory level, will help to bring SURS to a sounder level of funding, and will help to reduce the impact of the growth in pension costs which will occur in the next twenty years (see Appendix 2).

While the move from net to gross payout levels may be seen as positive, it still leaves SURS funding below the statutory requirement. Consistent with the policy of the Board of Trustees of the University of Illinois, the FY 1980 recommended increment is $24,579,000. This is the amount necessary to meet the statutory level of funding for FY 1980, as determined by the SURS staff. An increment of this smount would raise the FY 1979 appropriation of $25,981,800 to an FY 1980 total of $50,470,800. The statutory increment will be the FY 1980 University request in all documents forwarded to executive and legislative agencies and the Illinois Board of Higher Education.

PART THREE

FISCAL YEAR 1980 CAPITAL BUDGET REQUEST

CHAPTER ONE
INTRODUCTION

In keeping with the theme of historical financial trends discussed in the operating budget introduction, a brief overview of recent capital budget trends is presented in this chapter. This overview briefly highlights the capital expenditure patterns of the 1960's through the 1970's and includes predictions for the 1980's. Following the historical overview is a summary of the status of on-going capital programs and the presentation of the FY 1980 capital budget request.

HISTORICAL TRENDS

The rapid enrollment growth of the 1960's generated critical needs for resources to accommodate the massive infusion of new students. The University of Illinois found itself in the same position as most other major public universities. Enrollments were increasing at a rate of about 9% per year, physical facilities were constantly overcrowded, and there was no immediate end to enrollment growth in sight. The University responded to this problem by emphasizing, through its capital budget requests, the need to construct or otherwise acquire additional space. Many of these requests for additional space were supported by the Board of Higher Education, the General Assembly, and the Governor; consequently, 3.6 million gross square feet of nonresidential space was added to the University inventory during the 1960-1970 period (71% increase in total GSF). These additions were often made at the expense of the existing facilities as remodeling and renovation projects were deferred so that higher priority new construction projects could be added.

In the early 1970's enrollments continued to grow but at less dramatic rates than those of the preceding decade. Many professionals in the field of higher education predicted a gradual but continued slowdown in enrollment growth. At the national level it was predicted that enrollments would stabilize during the late 1970's or early 1980's and possibly even decline during the mid-1980's. Across the country, funds

for new construction began to dwindle. In addition to the declining capital funding levels, inflation (averaging about 9% per year 1973-1976)* began to erode the purchasing power of the funds appropriated for capital improvements.

With the stabilizing enrollment growth imminent, and the lengthy deferral of remodeling projects, the capital budget needs of the University shifted from providing new facilities to effectively remodeling and utilizing the existing ones. As the need to expand the physical plants diminished, due to the prevailing enrollment trend, the need for capital funds to finance remodeling and rehabilitation, equipment, and utilities projects became the highest priority.

The philosophy adopted by the University during the 1970's, in regard to its capital budget requests, stressed the importance of meeting physical facilities needs, where possible, primarily through the alteration and improvement of existing facilities. The emphasis on remodeling and utilizing existing facilities should not be interpreted as meaning that new buildings will not be requested. The nature of the University is to encourage change, and often changes in academic programs or the development of new programs necessitate the construction of special purpose facilities. In addition, this philosophy does not imply that existing buildings will never become structurally unsound or functionally obsolete and thus candidates for replacement. What it does suggest is a plan to make maximal use of existing physical facilities for as long a period as reasonably possible.

The capital improvement needs of the 1980's will likely parallel those of the mid to late 1970's. Due to academic program changes and the deterioration of building components in older buildings, there will be a continuing need for major remodeling and space realignment, renewal and replacement (SR^3) funds. In addition some new construction will ultimately be needed to provide special purpose space which does not currently exist or which cannot be obtained through renovation. There will also be

*Source: Higher Education Prices and Price Indexes, Construction and Equipment Index, 1976.

requests for projects which are typically associated with the remodeling and new construction projects, i.e., equipment, land acquisitions, site improvements.

STATUS OF ONGOING CAPITAL PROGRAMS

Table 1 provides a summary of the actions on capital budget requests from FY 1975 to FY 1979. Excluding special projects, such as the Replacement Hospital and Food for Century III, the University has received an average of $7.3 million per year in capital support. While this has been substantial, it has not been sufficient to satisfy a growing list of critical needs.

In FY 1978 a total of $63,859,397* was authorized in new and reappropriated funds (Table 2) of which $59,791,275 has been released for construction. Table 3 summarizes the status of all building projects authorized in FY 1978, and Table 4 provides the same information for major remodeling projects.

The final status of the FY 1979 capital program of the University of Illinois is somewhat unclear at this time. Senate Bill 1601, which has been approved by the General Assembly, and signed by the Governor, contains the projects listed in Table 5. Although the appropriation bill has been signed by the Governor, the legislature has not passed legislation raising bond authorization levels to permit all of these funds to be used. It is expected that the authorization level will be raised during the November legislative session, permitting the appropriations to be used.

OVERVIEW OF THE FY 1980 CAPITAL BUDGET REQUEST

The University's FY 1980 capital budget request of $33,123,995 contains projects to meet several critical needs: maintain the

*Includes $1,231,000 for SUDMP, appropriated to Public Works but not released.

TABLE 1
HISTORY OF RECENT CAPITAL BUDGET REQUESTS

	FY 1975	FY 1976	FY 1977	FY 1978	FY 1979
Campus Requests*					
Chicago Circle	$13,890,100	$ 8,447,100	$10,939,113	$12,775,128	$ 7,788,520
Medical Center	9,488,500	8,146,300	7,227,319	10,731,019	12,409,965
Urbana-Champaign	20,427,600	23,152,700	16,001,929	26,609,843	16,937,056
Total	($43,806,200)	($39,746,100)	($34,168,361)	($50,115,990)	($37,135,541)
IBHE Recommendations*					
Chicago Circle	$ 2,796,600	$ 1,109,320	$ 9,699,428	$ 3,203,420	$ 3,311,200
Medical Center	3,966,000	5,640,000	4,228,342	4,878,227	5,111,500
Urbana-Champaign	9,881,700	9,951,100	5,203,520	11,887,700	13,524,100
Total	($16,644,300)	($16,700,420)	($19,131,290)	($19,969,347)	($21,946,800)
Appropriation*					
Chicago Circle	$ 1,627,100	$ 1,504,920	$ 177,500	$ -0-	*$ 1,715,000***
Medical Center	3,967,000	4,907,200	148,400	296,800	*2,430,900***
Urbana-Champaign***	2,958,600	10,982,900	234,130	1,273,600	*4,440,500***
Total	($ 8,552,700)	($17,395,020)	($ 560,030)	($ 1,570,400)	*($ 8,586,400)***
Appropriations for Special Projects					
Replacement Hospital	$ 1,750,000	$51,250,000	$ -0-	$ 6,000,000	*$ -0- **
Food Production Research	-0-	-0-	-0-	2,450,000	*28,715,700***
Total	($ 1,750,000)	($51,250,000)	($ -0-)	($ 8,450,000)	*($28,715,700)***
Total University of Illinois Appropriation	$10,302,700	$68,645,020	$ 560,030	$10,020,400	*$37,302,100***

*Excludes Replacement Hospital and Food Production Research
***Based on SB1601 as signed by Governor Thompson*
***The FY 1979 figure includes $110,000 for a capital project appearing in SB1524

TABLE 2

REPORT AS OF 08/23/78 STATUS OF FY 1978 CAPITAL BUDGET AS AUTHORIZED IN SENATE BILL 435 , 496 & 495 & 85

	SB 496,495 & 85 CAPITAL DEVELOPMENT FUND		SB 435 GENERAL REVENUE		RELEASED TO DATE	
	NEW FUNDS	REAPPROP	NEW FUNDS	REAPPROP	CDB	GEN REV
BLDG	$ 1183425	$ 46545167	$ 0	$ 0	$ 47415167	$ 0
COOP	$ 64000	$ 0	$ 0	$ 0	$ 0	$ 0
EQUP	$ 7120300	$ 1871165	$ 22500	$ 9425	$ 6931768	$ 31925
FUND	$ 0	$ 0	$ 265100	$ 47067	$ 0	$ 312167
LAND	$ 438500	$ 0	$ 0	$ 0	$ 38500	$ 0
PLAN	$ 1240000	$ 622777	$ 0	$ 0	$ 1862777	$ 0
REMD	$ 1231000	$ 2807569	$ 0	$ 0	$ 2807569	$ 0
SITE	$ 0	$ 189764	$ 0	$ 0	$ 189764	$ 0
UTIL	$ 0	$ 201638	$ 0	$ 0	$ 201638	$ 0
UNIVERSITY TOTALS	$ 11277225	$ 52238080	$ 287600	$ 56492	$ 59447183	$ 344092
TOTAL AUTHORIZATION		$ 63859397			$ 59791275	

RELEASED TO DATE	$ 7268800.	$ 52178383.	$ 287600.	$ 56492.
% OF TOTAL	64%	100%	100 %	100%
REQUESTS PENDING RELEASE	$ 1608413.	$ 0.	$ 0.	$ 0.
% OF TOTAL	14%	0%	0 %	0%
BALANCE TO BE REQUESTED	$ 2400012.	$ 59697.	$ 0.	$ 0.
% OF TOTAL	21%	0%	0 %	0%

TABLE 3
STATUS OF BUILDING PROJECTS FUNDED BY STATE APPROPRIATIONS FY 1978
(July 1, 1978)

Project	Year Authorized	Estimated Cost	Estimated Completion	Status
Medical Center				
Replacement Hospital	1976	$53,000,000	1/79	64% Complete
Urbana-Champaign				
Turner Hall Addition	1976	8,019,200	6/78	Completed
Veterinary Medicine Research Building	1978	360,000	6/79	Schematic Design
Dairy Research Facility	1978	450,000	6/79	Bids Due 8/78
Veterinary Medicine Basic Sciences Building	1978	900,000[1]	--	Schematic Design to be Completed 7/78
Agriculture Engineering Sciences Building	1978	340,000[1]	--	Schematic Design to be Completed 7/78
Crash Resuce Facility	1978	60,000[2]	11/78	5% Complete

[1]Planning Only.

[2]University's Share.

TABLE 4
STATUS OF MAJOR REMODELING PROJECTS, FY 1978
(Projects over $200,000)
(As of July 1, 1978)

	Amount Authorized	Status	Estimated Completion
Chicago Circle			
None	$		
Medical Center			
College of Medicine	442,435*	Completed	--
SUDMP Phase I	926,576*	Completed	--
School of Public Health	954,935**	Completed	--
Urbana-Champaign			
Veterinary Medicine SAC	419,967*	Completed	--
Meats Laboratory	556,712*	20% complete	12/78

*Reappropriated
**Reappropriated to GSA/funded in part by Federal Grant

TABLE 5
FY 1979 PROJECTS IN SB 1601
AS SIGNED BY THE GOVERNOR

1.	Buildings, Additions, and/or Structures	$ -0-
2.	Land	-0-
3.	Equipment	
	Medical Center - SUDMP	227,000
	Urbana-Champaign - Animal Room Improvements	70,200
	Urbana-Champaign - English Building Renovation	35,000
3a.	SR^3 Equipment	
	Urbana-Champaign	93,000
4.	Utilities	
	Urbana-Champaign - Central Supervisory Control	710,000
5.	Remodeling and Rehabilitation	
	Chicago Circle - Building Equipment Automation	1,010,000
	Medical Center - SUDMP	1,339,500
	Urbana-Champaign - Animal Room Improvements	520,000
	Urbana-Champaign - English Building Renovation	1,500,000
5a.	SR^3 Remodeling	
	Chicago Circle	650,000
	Medical Center	864,400
	Urbana-Champaign	1,402,300
6.	Site	
	Chicago Circle - Pedestrian Safety	55,000
7.	Planning	-0-
8.	Cooperative Improvements	-0-
	TOTAL	$8,476,400*

*An additional $110,000 was appropriated for a capital improvement project appearing in SB 1524.

structural integrity of existing facilities; renovate outdated facilities to accommodate new and changing academic programs; upgrade building systems for energy conservation and safety; and provide special purpose facilities which cannot be obtained through building renovation. Table 6 presents a summary of the University's FY 1980 capital budget request by project and by campus. Table 7 contains the University priority list for FY 1980.

Space Realignment, Renewal and Replacement Projects

The Space Realignment, Renewal and Replacement (SR^3) program is one means by which the University is attempting to address its remodeling and maintenance needs. This concept is based on the premise that the life of a building can be extended indefinitely, through proper maintenance, as long as the foundation, superstructure, and exterior skin are sound. Note that a key assumption of this concept is that proper maintenance be performed on a regular basis.

To promote the practice of regular building renewal and remodeling the FY 1980 project priority list includes SR^3 projects funded at the formula level of $8,049,388 (Table 8). These projects entail work related to energy conservation, compliance with State and Federal safety requirements, and the immediate needs for minor building alterations for academic programs (Table 9). The total request for SR^3 projects (includes needs exceeding the formula generated amount) is $8,828,095, or 27% of the total capital budget request.

Major Remodeling Projects

Several major remodeling projects are requested for FY 1980. These projects involve major alterations of buildings (or portions of buildings) for the purpose of upgrading or restoring the facilities to their original operating condition. Requests for funding of these projects were generated by changing program needs and building component deterioration. The sum of the FY 1980 major remodeling requests totals $13,250,100, or 40% of the total capital budget request. It should be noted that, consistent with the University's capital budget philosophy, over 66% of the total capital budget request is dedicated to major remodeling and SR^3 projects.

TABLE 6
SUMMARY OF THE FY 1980 CAPITAL BUDGET REQUEST
By Campus and Category

Category	Chicago Circle	Medical Center	Urbana-Champaign	Total
1. Buildings, Additions, and/or Structures	$ -0-	$ 719,000	$ 5,867,100	$ 6,586,100
2. Land	-0-	-0-	136,000	136,000
3. Equipment	585,000	-0-	75,000	660,000
4. SR^3 Equipment	64,500	-0-	296,000	360,500
5. Utilities	-0-	-0-	719,000	719,000
6. Remodeling	1,072,700	9,707,400	2,470,000	13,250,100
6a. Space Realignment, Renewal and Replacement	1,727,895	2,193,900	4,545,800	8,467,595
Generated Amount	(1,448,670)	(2,193,883)	(4,406,835)	
Additional Projects	(279,225)	(-0-)	(138,965)	
7. Site Improvements	291,500	-0-	460,500	752,000
8. Planning	697,500	269,000	1,226,200	2,192,700
9. Cooperative Improvements	-0-	-0-	-0-	-0-
TOTAL	$4,439,095	$12,889,300	$15,795,600	$33,123,995

TABLE 7
PROPOSED UNIVERSITY PRIORITIES - FY 1980 CAPITAL BUDGET REQUEST

University Priority	Campus Priority	Project	Category	Project Cost	Cumulative Total
1	CC- 1	SR^3 - Chicago Circle	REMD	$1,448,670	$ 1,448,670
2	CC- 2	SR^3 - Chicago Circle	EQUP	64,500	1,513,170
3	MC- 1	SR^3 - Medical Center	REMD	1,094,600	2,607,770
4	UC- 3	SR^3 - Urbana-Champaign	REMD	2,105,100	4,712,870
5	UC- 4	SR^3 - Urbana-Champaign	EQUP	124,000	4,836,870
6	MC- 2	Convent Building	BLDG	242,000	5,078,870
7	CC- 4	Building and Site Accessibility	SITE	152,500	5,231,370
8	MC- 3	Maj Bldg Renov Seg 1 - Pharmacy Building	REMD	1,000,000	6,231,370
9	MC- 3	Maj Bldg Renov Seg 1 - Vacated Hospital	REMD	300,000	6,531,370
10	MC- 3	Maj Bldg Renov Seg 1 - 1919 W Taylor	REMD	205,000	6,736,370
11	MC- 3	Maj Bldg Renov Seg 1 - FUDMP & R/L Unit	REMD	218,300	6,954,670
12	UC- 1	Library Sixth Stack Addition	BLDG	5,669,500	12,624,170
13	UC- 2	Library Sixth Stack Addition	UTIL	107,000	12,731,170
14	MC- 4	Maj Bldg Renov Seg 2 - Pharmacy Building	REMD	280,900	13,012,070
15	MC- 4	Maj Bldg Renov Seg 2 - Vacated Hospital	REMD	624,300	13,636,370
16	MC- 4	Maj Bldg Renov Seg 2 - 1919 W Taylor	REMD	428,000	14,064,370
17	MC- 4	Maj Bldg Renov Seg 2 - FUDMP & R/L Unit	REMD	417,000	14,481,370
18	CC- 3	Pedestrian Safety - Phase II	SITE	100,000	14,581,370
19	UC- 5	Pilot Training Facility	BLDG	197,600	14,778,970
20	UC- 6	Life Sciences Teaching Lab	PLAN	418,000	15,196,970
21	UC- 7	Life Sciences Teaching Lab	LAND	136,000	15,332,970
22	CC- 5	Library Addition	PLAN	697,500	16,030,470
23	CC- 6	SEL - Phase II	REMD	652,700	16,683,170
24	CC- 7	SEL - Phase II	EQUP	483,000	17,166,170
25	MC- 5	Maj Bldg Renov Seg 3 - SUDMP	REMD	1,119,600	18,285,770
26	MC- 5	Maj Bldg Renov Seg 3 - Pharmacy Building	REMD	329,100	18,614,870
27	MC- 5	Maj Bldg Renov Seg 3 - Vacated Hospital	REMD	388,700	19,003,570
28	MC- 5	Maj Bldg Renov Seg 3 - A.O.B. Annex	REMD	248,800	19,252,370
29	UC- 8	Auditorium Roof Replacement	PLAN	72,000	19,324,370
30	UC- 9	Davenport Hall	REMD	1,000,000	20,324,370
31	UC-10	Central Supervisory Control	UTIL	390,000	20,714,370
32	UC-11	Pennsylvania Ave Street Improvements	SITE	363,000	21,077,370
33	MC- 6	SR^3 - Medical Center	REMD	1,099,300	22,176,670
34	UC-16&22	SR^3 - Urbana-Champaign	REMD	2,301,735	24,478,405
35	UC-17&23	SR^3 - Urbana-Champaign	EQUP	172,000	24,650,405
36	UC-12	Engineering Library	PLAN	275,900	24,926,305
37	UC-13	College of Engineering	REMD	1,200,000	26,126,305
38	UC-14	College of Engineering	EQUP	75,000	26,201,305
39	MC- 7	Maj Bldg Renov Seg 4 - Pharmacy Building	REMD	833,200	27,034,505
40	MC- 7	Maj Bldg Renov Seg 4 - Vacated Hospital	REMD	501,000	27,535,505
41	MC- 7	Maj Bldg Renov Seg 4 - 1919 W Taylor	REMD	335,000	27,870,505
42	MC- 7	Maj Bldg Renov Seg 4 - A.O.B. Annex	REMD	138,600	28,009,105
43	MC- 7	Maj Bldg Renov Seg 4 - FUDMP & R/L Unit	REMD	312,800	28,321,905
44	CC- 8	Roosevelt Road Building - Phase II	REMD	420,000	28,741,905
45	CC- 9	Roosevelt Road Building - Phase II	EQUP	102,000	28,843,905
46	UC-15	Law Building Addition	PLAN	315,300	29,159,205
47	UC-18	Condensate Return System	UTIL	188,000	29,347,205
48	UC-19	Nuclear Reactor Lab	PLAN	145,000	29,492,205
49	MC- 8	Maj Bldg Renov Seg 5 - SUDMP	EQUP	175,000	29,667,205
50	MC- 8	Maj Bldg Renov Seg 5 - Vacated Hospital	REMD	751,400	30,418,605
51	MC- 8	Maj Bldg Renov Seg 5 - 1919 W Taylor	REMD	137,000	30,555,605
52	MC- 8	Maj Bldg Renov Seg 5 - A.O.B. Annex	REMD	435,100	30,990,705
53	MC- 8	Maj Bldg Renov Seg 5 - FUDMP & R/L Unit	REMD	528,600	31,519,305
54	UC-20	Main Library Remodeling	REMD	270,000	31,789,305
55	UC-21	Campus Landscape Improvements	SITE	50,000	31,839,305
56	MC-10	PSM Ambulatory Care	PLAN	269,000	32,108,305
57	MC- 9	RSM Animal Quarters Bldg	BLDG	477,000	32,585,305
58	CC-10	Bus Stop Shelters	SITE	39,000	32,624,305
59	UC-24	Water Main Extension	UTIL	34,000	32,658,305
60	UC-25	Intramural Athletic Fields	SITE	47,500	32,705,805
61	CC-11	SR^3 - Chicago Circle	REMD	279,225	32,985,030
62	UC-22	SR^3 - Urbana-Champaign	REMD	138,965	33,123,995

TABLE 8

GENERATION OF SR³ FUNDS FOR EACH CAMPUS–ESTIMATE OF SPACE REALIGNMENT, RENEWAL AND REPLACEMENT FUNDS TO BE REQUESTED IN FY 1980

	CHICAGO CIRCLE	MEDICAL CENTER	URBANA-CHAMPAIGN
1. ESTIMATED REPLACEMENT COST OF FACILITIES, JANUARY 1980	$211,253,932	$312,833,606	$922,272,649
2. GROSS AREA (IN SQUARE FEET)	3,072,594	4,229,602	13,698,945
3. AVERAGE COST PER GROSS SQUARE FOOT	$68.7542	$73.9628	$67.3243
4. ANNUAL SPACE REALIGNMENT, RENEWAL AND REPLACEMENT GENERATION $/GSF x .667(2/3 TO BE REMODELED) x .01 (1 TIME/100 YEARS)	.4585	.4933	.4490
5. AREA OF CAMPUS MAINTAINED BY PHYSICAL PLANT WITH STATE FUNDS, FALL 1980 (IN SQUARE FEET)	2,759,464	3,884,157	8,571,857
6. FUNDS TO BE GENERATED AT EACH CAMPUS	$1,265,214	$1,916,055	$3,848,764
7. TOTAL FUNDS INCLUDING ARCHITECTURE/ ENGINEERING FEE AND CONTINGENCY (STEP 6 x 1.145)	$1,448,670	$2,193,883	$4,406,835
		$8,049,388	

TABLE 9
SR^3 PROJECT PRIORITIES BY CAMPUS

CHICAGO CIRCLE*

Project	Amount
Remodeling	
Exterior Masonry Repair (PEB,ECB)	$ 231,000
Roof, Gutter, Drain Repair at Lecture Center - Phase II	336,070
Stairway & Upper Walkway Repair - Phase I	139,100
Computer Center 2052 & 2054 SEL	42,800
Art Rooms 1300 & 1530 A & A	77,900
Mechanical Equipment Upgrade	172,000
Modify Air Handling Systems	225,000
Modify Control Systems	53,500
Physical Education, Room 217 PEB	75,300
Business Administration	70,600
Biological Sciences - SEL - Group 1A	25,400
University Theater - Lighting & Ticket Booth	279,225
	$1,727,895
Equipment	
Art Rooms	1,200
Physical Education	3,900
Business Administration	5,700
Biological Sciences - SEL - Group 1A	53,700
	$ 64,500

*Amount generated by formula = $1,448,670.

MEDICAL CENTER*

Project	Amount
Remodeling	
Remodel 1st Floor Ortho, Relocation of OB/Gyn Clinic	$ 175,000
Relocate Hospital Billing, Basement H.A.	224,000
Remodel Anatomy Laboratories, 7th Floor, FUDMP	196,000
Laundry Building Remodeling for Physical Plant, Phase I	200,000
Building Equipment Automation Nursing Building	90,000
Roof Repairs and Exterior Masonry, General Hospital	66,600
OSHA and Code Corrections	100,000
Provisions for the Handicapped	43,000
Remodel Locker Room for Offices, Nursing Building	125,000
Building Equipment Automation Dentistry Building	118,000
Remodel Transplant Research Lab, Room 525 H.A.	90,000
Remodel Research Laboratories Room 234 & 236, FUDMP Physiology	56,000
Remodel Radioisotope Research Area, Room 424, FUDMP, Pathology	40,000
Building Equipment Automation, Eye and Ear Infirmary	104,000
Air Condition 8th Floor, South Wing, NPI, Psychiatry	42,000
Fire Alarm Upgrade, Campus and MSA	100,000
Air Condition 2nd Floor South Wing, NPI, Psychiatry	35,000
Building Equipment Automation Phase I, RSM	85,000
Remodel Dean's Suite, College of Pharmacy	62,000
Electrical Upgrade, Hospital Residence, Phase I	100,000
Remodel Rooms 420, 420B4, 438, FUDMP, Pathology	30,000
Remodel Room 409, 409B, FUDMP, Pharmacology	36,000
OSHA and Code Corrections	76,300
*Amount generated by formula = $2,193,883.	$2,193,900

URBANA-CHAMPAIGN*

Remodeling			
Animal Room Improvements	$ 225,000	Visual Arts Laboratory	$ 117,000
Elevator Installations	650,400	Armory Security Improvements	108,500
Paraplegic Ramp Improvements	80,000	Energy Cons. Multi-Unit A/C	71,600
Elevator Replacements	95,000	Energy Cons. Fans & Vent System	89,400
Energy Cons. Vent Turndown	107,400	Roof Replacement	411,200
Noyes Lab Remodeling	75,000	Mechanical Engineering Lab	40,000
Temp. Control Remd & Replacement	80,100	Remodel Cooling Towers	108,000
Environmental Research Lab	96,600	Energy Cons. H.V.A.C. Retrofit	95,500
Morrill Hall Remodeling	197,400	Fire Alarm Signal Replacement	61,400
Foreign Languages - Improvements	170,000	Remodel Steam Absorbtion Mach.	85,900
Krannert Performing Art Center	328,200	Col of Vet Med - Comp. Bsmt. S.A.C.	222,800
Heating System Remodeling	206,800	Steam Distribution, Remd & Repl	32,400
Sprinkler Systems	165,000	Magnetic Door Holders	41,300
David Kinley Hall - Room 114	179,000	Loomis Lab Remodeling	53,700
Energy Cons. An. Rm. Vent Improvement	107,400	Energy Cons. Remd. Windows	56,000
Stair Enclosures	152,800	Roger Adams Lab Remd	35,000
			$4,545,800
Equipment			
An. Rm. Improvements, Burrill Hall	49,000	Morrill Hall Remodeling	50,000
Krannert Performing Arts Center	25,000	David Kinley Hall, Room 114	6,000
Visual Arts Laboratory	75,000	Col of Vet Med, Compl. of Bsmt. S.A.C.	91,000
			$ 296,000

*Amount generated by formula = $4,406,835

New Construction Projects

Three new construction projects are included in this budget request: Library Sixth Stack Addition and Pilot Training Facility at Urbana-Champaign and Animal Quarters Building at the Peoria School of Medicine. The Pilot Training Facility and the Animal Quarters Building are designed to meet spcialized academic program needs which cannot currently be met with existing facilities. The Library Sixth Stack Addition, which will serve the needs of all academic programs, represents a need for specialized space not currently available on the Urbana-Champaign campus. There is also a request to purchase a building which is currently being leased by the Medical Center. Although this is not a special purpose facility, it is important to Medical Center programs and must be acquired to insure its availability for future use. The estimated cost of these construction and acquisition projects totals $6,586,100 and represents about 20% of the total request.

Planning Projects

Several requests are also included for planning funds to develop preliminary plans for future new construction or major remodeling projects. The new construction planning projects include: a Library Addition at the Chicago Circle campus; an Ambulatory Care Facility at the Peoria School of Medicine; and a life Sciences Teaching Lab, Engineering Library, Law Building Addition, and a Nuclear Reactor Lab at the Urbana-Champaign campus. Planning funds are also requested for the future replacement of the Auditorium Roof at the Urbana-Champaign campus. The request for these projects totals $2,192,700, or approximately 6% of the total request.

Equipment, Utility, Land, Site Improvement Projects

The remainder of the FY 1980 capital budget request is comprised of various equipment, utility, land, and site improvement projects. These project requests are related to existing facilities and/or proposed new ones. The combined request for these projects totals $2,267,000, or 7% of the total request.

Implications for Future Capital Budget Requests

Several of the FY 1980 capital project requests have implications for future budget requests. Planning fund projects usually precede new construction project requests by about one year. Thus, the $2.2 million dollar request for planning funds in FY 1980 will, if funded, generate new construction and major remodeling requests totalling approximately $36.1 million*(Table 10) in FY 1981. Additional funds would also be requested for these projects in FY 1982 and beyond to cover the cost of equipment acquisition and utility connections. The same circumstances apply to new construction and major remodeling projects requested in FY 1980. Additional funds will be required for some of these projects in FY 1981 and beyond to cover equipment and utility costs.

*This figure includes only new construction and major remodeling projects for which planning funds are requested in FY 1980. The total figure ($50,095,500) includes new construction, major remodeling, equipment, and utilities requests associated with projects requested for FY 1980.

TABLE 10
PROGRAMMING OF FUTURE CAPITAL REQUESTS FOR PROJECTS REQUESTED IN FY 1980

Campus	Project	Authorized Prior to FY 1980	Requested FY 1980	Projected Costs FY 1981	Projected Costs FY 1982	Projected Costs FY 1983	Projected Costs FY 1984	Total Project Cost
MC	Convent Building Purchase	$	$ 242,000	$	$	$	$	$ 242,000
MC	RSM Animal Quarters Building Addition		477,000					477,000
UC	Library Sixth Stack Addition		5,776,500	85,200				5,861,700
UC	Pilot Training Facility		197,600					197,600
UC	Central Supervisory Control	1,094,000	390,000	390,000	390,000			2,264,000
UC	Condensate Return System		188,000					188,000
UC	Water Main Extension		34,000	243,000				277,000
CC	Space Realignment, Renewal & Replacement[1]		1,792,395					1,792,395
MC	Space Realignment, Renewal & Replacement[1]		2,193,900					2,193,900
UC	Space Realignment, Renewal & Replacement[1]		4,841,800					4,841,800
CC	SEL Remd, Col of Engr - Phase II	412,020	1,135,700	590,000	535,000			2,672,720
CC	RRB, Phase III - Duplicating Service	1,212,800	522,000					1,734,800
MC	Major Building Rehabilitation, Segment 1	7,087,739	1,723,300	8,611,000[2]	7,559,000[2]	8,408,000[2]	7,692,000[2]	41,081,039
MC	Major Building Rehabilitation, Segment 2		1,750,200					1,750,200
MC	Major Building Rehabilitation, Segment 3		2,086,200					2,086,200
MC	Major Building Rehabilitation, Segment 4		2,120,600					2,120,600
MC	Major Building Rehabilitation, Segment 5		2,027,100					2,027,100
UC	Davenport Hall		1,000,000	650,000	690,000	550,000	550,000	3,440,000
UC	College of Engineering	290,000	1,275,000	2,170,000	760,000	380,000		4,875,000
UC	Main Library Remodeling		270,000	540,000	540,000	820,000	1,200,000	3,370,000
CC	Building and Site Accessibility		152,500					152,500
CC	Pedestrian Safety - Phase II	55,000	100,000					155,000
UC	Pennsylvania Ave Street Improvements	220,000	363,000	647,000				1,230,000
UC	Campus Site Improvements		50,000	50,000	75,000	50,000	75,000	300,000
UC	Intramural Athletic Fields		47,500					47,500
CC	Bus Stop Shelters		39,000					39,000
CC	Library Addition		697,500	12,522,500				13,220,000
MC	PSM Ambulatory Care		269,000	4,337,000		418,000		5,024,000
UC	Life Sciences Teaching Lab		554,000	7,639,900	275,000	325,000		8,793,900
UC	Auditorium Roof Replacement		72,000	720,000		18,000	280,000	1,090,000
UC	Engineering Library		275,900	2,539,700	200,000	75,000		3,090,600
UC	Law Building Addition		315,300	6,037,200	300,000	365,000		7,017,500
UC	Nuclear Reactor Lab - Phase II		145,000	2,323,000	240,000	244,000		2,952,000
Total		$10,371,559	$33,123,995	$50,095,500	$11,564,000	$11,653,000	$ 9,797,000	$126,605,054

[1]Funding for SR[3] will be requested annually, and on an ongoing basis. Since the amount of each request is based on current year replacement costs, these funding requirements were not projected.

[2]These figures represent the sum of the estimated segment costs for each future year.

CHAPTER TWO

DETAIL OF THE FY 1980 REQUEST

This chapter presents the FY 1980 capital projects by campus and provides brief descriptions of each project. Information regarding the cost per square foot (net and/or gross as appropriate) has also been provided for new building and major remodeling projects.

The projects are classified according to the budget categories specified by the Board of Higher Education.

CHICAGO CIRCLE CAMPUS

The capital projects requested for Chicago Circle respond to several fundamental and immediate needs associated with the academic programs and support units serving more than 21,000 students and 1,200 faculty and staff. These needs must be addressed in five categories of major concern:

1. The UICC Library facility is seriously deficient in several respects. First, the present building was designed to support only an undergraduate student population. Second, it represents only 67% of the space programmed in the original construction plan. Failure to complete the Library has resulted in serious deficiences in stack space, reader space, and appropriate processing and service space. If the UICC library is to provide basic levels of support for expanding graduate enrollment, research programs, and the undergraduate students, additional space must be constructed.
2. Expanding graduate enrollment and research programs are generating increased need for facilities and related equipment which cannot be met within the existing space alignment. Since 1972, when the last major building (the Education and Communication Building) was completed, graduate enrollment at Chicago Circle has increased 100% (1,574 in 1972; about 3,100 anticipated in Fall, 1978). The effects of this increase are most apparent in the expanding needs for graduate and research laboratories.

3. Not only has overall graduate enrollment increased significantly over the past six years, but a wide range of new and/or expanded master's level programs have also been introduced during this period. These include programs in Administrative Science, Architecture, Art, Education, Engineering, Physical Education, Urban Policy, and Social Work. Enrollment projections indicate that the graduate population will continue to expand to approximately 4,000 by Fall, 1982. The growth in graduate study accompanies an increased emphasis on research programs at UICC. Development of new academic and research programs requires specialized facilities, many of which do not exist at Chicago Circle or are functionally inadequate for the scope and quality of activities which they house.
4. Although UICC is usually thought of as a "new campus," inadequate funds for renewal, replacement and preventative maintenance over the years has resulted in substantial capital requirements to preserve and protect the State's investment in existing physical facilities. Continued deferral of basic work, particularly in such areas as elevated walkways, roofs, gutters, drains, masonry walls, and mechanical and electrical systems will seriously diminish the life and efficiency of existing physical facilities. In addition to structural improvements, mechanical and electrical systems are also in need of modification.
5. Capital expenditures are required to respond to the needs of the handicapped and to correct defects which create safety hazards for the campus community. The need to eliminate physical barriers and to provide for safe movement of pedestrian traffic accross the campus generates capital projects for site work and modifications to the approaches and entrances to all campus buildings.

A complete list of the capital projects requested for FY 1980 is presented in Table 11. Table 12 contains cost per square foot data (where applicable) for buildings and major renovation projects. Following Table 12 is a detailed description of each project being requested in FY 1980.

TABLE 11
CHICAGO CIRCLE CAMPUS
LIST OF FY 1980 PROJECTS BY CATEGORY

Projects	Estimated Cost
1. Buildings, Additions, and/or Structures	$ -0-
2. Land	-0-
3. Equipment	
SEL - Remd Col of Engineering - Phase II	483,000
RRB - Phase III, Dupl Service	102,000
Subtotal	($ 585,000)
3a. Equipment Related to Space Realignment, Renewal and Replacement Projects	64,500
Subtotal	($ 64,500)
4. Utilities	-0-
5. Remodeling and Rehabilitation	
SEL - Remd Col of Engineering - Phase II	652,700
RRB - Phase III, Dupl Service	420,000
Subtotal	($1,072,700)
5a. Space Realignment, Renewal and Replacement	
Generated Amount	1,448,670
Additional Projects	279,225
Subtotal	($1,727,895)
6. Site Improvements	
Pedestrian Safety - Phase II	100,000
Bldg & Site Accessibility	152,500
Bus Stop Shelters	39,000
Subtotal	($ 291,500)
7. Planning	
Library Addition	697,500
Subtotal	($ 697,500)
8. Cooperative Improvements	-0-
Total FY 1980 Capital Budget Request - Chicago Circle	$4,439,095

TABLE 12
COST PER SQUARE FOOT OF NEW BUILDING AND MAJOR REMODELING PROJECTS
Chicago Circle Campus

Category/Project	Project Cost	Gross Square Feet	Assignable Square Feet	Efficiency ASF/GSF	$/GSF	$/ASF
New Buildings*						
Library Addition	$14,025,000	132,000	94,285	.71	$106.25	$148.75
Major Remodeling (FY 1980 Request)						
SEL	652,700	29,402	18,088	.62	22.20	36.08
Roosevelt Road Building	420,000	15,099	10,000	.66	27.82	42.00

*Includes FY 1981 projects for which planning funds are requested in FY 1980.

Remodeling and Rehabilitation

Science and Engineering Laboratory Remodeling - College of Engineering - Phase II ($652,700)

The first phase of a multiphased remodeling of the College of Engineering's laboratories in the SEL Building funded in FY 1976 has been completed and occupied. The second phase of this project was requested in FY 1977, FY 1978, and FY 1979 Capital Budgets and now again in FY 1980. The scope of this year's request is a portion of the total program documented in FY 1976 and is a logical progression in the completion of this phased redevelopment of underutilized undergraduate laboratories to meet the needs of the growing graduate programs.

The amount of space to be remodeled in this phase has been carefully chosen from the total remaining area to meet the pressing needs of graduate level teaching and research and to minimize the disruptive effect of remodeling activities taking place in the midst of on-going academic enterprise.

The specific areas designated for FY 1980 funding are listed on the next page.

FY 1980 - SEL REMODELING - COL. OF ENGR. - PHASE II

DEPARTMENT	RM. NO.	NASF
Energy Engr.	3294 SEL	2,684
	1295 SEL	2,774
		(5,458)
Materials Engr.	1100D SEL	507
	1100E SEL	163
	1100F SEL	163
	1100G SEL	152
	1070 SEL	1,799
		(2,784)
Systems Engr.	4209 SEL	1,014
	4211 SEL	1,902
	4029A SEL	1,102
	4029B SEL	520
		(4,538)
Bio Engr.	4264 SEL	(2,028)
Information Engr.	3257-1 SEL	318
	3257A-1 SEL	264
	3263-1 SEL	450
	3263-2 SEL	450
	3263-3 SEL	450
	3267 SEL	1,248
		(3,280)
TOTAL REMODELING - PHASE III		18,088 NASF

SUMMARY BY ROOM USE

CLASS LAB	7,222
CLASS - LAB SERVICE	1,799
NON-CLASS LAB	8,915
NON-CLASS LAB SERVICE	152
	18,088 NASF

Roosevelt Road Building Remodeling - Phase III - Duplicating Service ($420,000)

This FY 1980 project will complete the phased remodeling begun with FY 1975 funds. At that time, the building was determined to be a permanent campus structure and its restoration and modification to serve the University was programmed. Intervening fiscal periods have provided resources to accomplish that program except for those now requested.

This final phase will provide facilities for the Campus Duplicating Service Department. The space to be modified is the basement and first floor of Building #2 providing storage and curing of paper stock in the basement and the production and processing on the first floor in what is now a storage garage.

Also included in this project is the installation of an existing boiler and centrifugal chiller salvaged from the Racine Avenue Building to provide sufficient heating and cooling capacity for the remodeled areas.

DUPLICATING SERVICE

SUMMARY OF SPACE NEEDS

DESCRIPTION	NASF
PLATEMAKING	
Dark Room	460
Plate Room	250
Stripping Room	250
PRODUCTION AREA	
Press Room	2650
Bindery	1325
OFFICE & FILING	
Superintendent's Office	230
Assistant Superintendent's Office	175
Clerk's Office	150
Plate/Negative Area	250
Conference Room	200
Employee Rest Area	120
STORAGE AREAS	
Paper	3480
Materials	460
TOTAL	10000

SUMMARY BY ROOM USE

CATEGORY	NASF
OFFICE	555
OFFICE SERVICE	120
CONFERENCE ROOM	200
SUB-TOTAL 300's	(875)
SHOP	4935
SHOP SERVICE	4190
SUB-TOTAL 720's	(9125)
TOTAL NASF	10000

Space Realignment, Renewal, and Replacement - ($1,727,895)

Exterior Masonry Repairs ($231,000)

Extensive water damage to the interior walls is visible in the Education and Communications Building and the Physical Education Building. Maintenance of the interior areas of these buildings has become extremely difficult and costly due to constant moisture accumulation. This problem will be corrected only by major repairs to the masonry on the exterior walls of the Education and Communications Building. Additional drains must be installed on the Physical Education Building. Preparatory work of grinding out mortar joints on exterior brick work, removal of weathered caulking, and removal of some brick work and stone work where necessary will be accomplished as part of this project. Replacement of exterior masonry is also included.

Roof, Gutter and Drain Repairs - Phase II ($336,070)

Due to movement of the Lecture Center structure, the flashing and counterflashing for the roof has been ruptured, causing leakage of water into the interior areas. Replacement and/or repair of the roofs is required to prevent additional damage to the buildings. The roof over Unit A is scheduled for repair with funds provided in the FY 1979 capital appropriation for SR3. The request for FY 1980 constitutes Phase II of this project and will provide for repairs/ replacement of Units C, D and F. Funding for repairs of Units B and E will be requested in a third and final phase to be completed in FY 1981.

The work contemplated for FY 1980 includes removal and replacement of present roofing, coping, and flashing and the rehabilitation of cant strips. The work also includes removal of structures and slabs above the Lecture Center buildings, removal of the stone protective layer, stripping roof membranes, repairing drains and gutters, and replacing structures and slabs.

Stair and Upper Walkway Repair - Phase I - ($139,100)

This project is the first phase of repairs and upgrading of the elevated walkway system, stairs and ramps. The rehabilitation of the walkway above the Lecture Center will be coordinated with the Lecture Center roof repairs project in order to eliminate the duplication of similar construction operations. The work consists of caulking sections of the walkway, resetting some existing granite pieces, replacing some damaged stairs, and stairtreads and other work necessary to restore this facility to an acceptable state of repair. This project is the first phase of upgrading and renovating work now required.

The total project is planned to be completed in two phases at an estimated total cost of $183,100. Movement of the structures over a 13 year period has made this repair necessary. These upper walkways, stairs and ramps are an integral component of the pedestrian traffic systems of the campus and, as such, must be maintained to meet standards for safety.

Computer Center - Rooms 2052 and 2054 SEL - ($42,800)

The Computer Center provides the main computer support for instructional and research programs for 21,000 students and more than 1,500 faculty and staff. Reliability of this service is important to most of these programs.

This project creates a self-sufficient environmental system for the Computer Center, (area: 2,516 NASF) with both temperature and humidity systems that are totally independent of the campus system. Temperature and humidity control are a necessity if reliable service is to be provided for the present IBM 370/158 system. There are three separate T & HC systems servicing the Computer Rooms 2052 and 2054 SEL. If any one is inoperative, the room temperature is not maintained.

Art Department Photography Area - Rooms 1300 and 1530 A&A - ($77,900)

This project will improve instructional facilities affecting more than 750 students and faculty. The work contemplated by this project covers an area of 3,072 NASF and is designed to reroute traffic flow to a new exterior door. This traffic, which must now pass through the photographic laboratory area, presently interferes with the effective use of the laboratory as a teaching facility.

The work consists of the following: construction of concrete block walls with appropriate doors in Room 1300 to create a classroom and a separate elevator lobby; creation of a new outside entry (wheelchair access) to Room 1530; removal of baffle wals in darkroom #1320 and extension of space to make new storage and equipment check-out room with window and secure access doors; re-railing and providing a safe stairway in photo-pit #1390; removal and relocation of entry phone and returning existing door to original fire-exit panic bar status.

Mechanical Equipment Upgrade - ($172,000)

This request consists of four items related to mechanical equipment at various points throughout the campus. These projects are intended to aid the campus in complying with OSHA regulations and to provide a higher level of safety for employees. One of these projects will enable the campus to meet new OSHA regulations which require special venting of all pressure vessels. The second project will provide flow valve repairs and the third will provide for insulation replacement. The final project consists of the installation of an air shaft for the utility tunnel at the Lecture Center area. The air shaft will permit heat release from this tunnel.

Modify Air Handling Systems - ($225,000)

This project consists of the modification of air handling systems in six campus buildings providing an amount of supply air to the areas as required by the season of the year. Included are: University Hall, Lecture Center, Library, Science & Engineering-South, Art and Architecture, and the Science and Engineering Offices Building. This project will install 50 two-speed motors in the air supply systems to control the amount of conditioned air being supplied to the areas. The new control system will reduce electrical energy consumption in the modified building systems and has an estimated pay back time period of 3 to 5 years.

Modify Temperature Control Systems - ($53,500)

This project consists of the modification and upgrading of existing temperature control systems in the following buildings:

University Hall	Behavioral Sciences
Science & Engineering Lab	Science & Engineering-South
Library	Science & Engineering Offices

Such items of equipment as fans, pumps, converters, hot water heaters and compressors are currently being operated by temperature controls which are outdated and worn. Replacement with solid state controls will conserve energy both in operation and efficiency. This project has an estimated payback time period of 1 to 3 years.

College of H.P.E. & R. - Room 217 PEB ($75,300)

This project is designed to support valuable research performed in the Human Performance Laboratory. A related request for support of this research program appears in the FY 1980 operating budget request for improved and expanded programs.

The capital project will create a new Room 217 PEB. This will be done by modifying existing Room 117 PEB which has a high 26 foot ceiling. Room 117 PEB will become a Human Performance Laboratory and Room 217 PEB will be a replacement classroom which is the function now performed in Room 117 PEB. The primary objective of the Human Performance Laboratory is to evaluate an individual's level of cardiovascular endurance. (1,750 NASF)

College of Business Administration - Case Study Classrooms - ($70,600)

The College of Business Administration presently enrolls about 2,800 undergraduates and 275 graduate students, all of whom will benefit from the improved instructional program being offered in these facilities.

This project will create 3 square rooms of 500-600 square feet each for use in the case study method of teaching business courses in management. Rooms will require construction of two tiers of fixed tables arranged in a semi-circular or U-shape.

Biological Sciences - SEL Remodeling - ($25,400)

This project for the Department of Biological Sciences has three components which are intended to meet increasing demands for facilities designed and equipped to support graduate instruction and faculty research related to the academic program of this department.

One project involves the subdivision of Room 4265 SEL to provide a separate office for a new cell biologist and another room to accommodate a walk-in cold room. The west end of Room 4265 SEL is to have a concrete block wall constructed in a north-south direction and then this new room in turn will be subdivided into two rooms, one to be a new office and the other to accommodate a walk-in cold room. ($14,100) Funds ($19,000) being requested in the capital project number 80-2A (SR^3 Equipment) are associated with this component.

The second project converts an undergraduate teaching laboratory into a graduate student and faculty research laboratory in Room 3052 SEL. A cold room is also being transferred from Room 3052 to 3068 SEL. Room 3068 SEL is to be remodeled by adding additional counters and base and wall cabinets. An area of this lab is to accommodate a walk-in cold room from Room 3052 SEL. ($5,100) Funds ($34,700) in capital project number 30-2A (SR^3 Equipment) are associated with this component.

The third project creates a new faculty office and provides access to a darkroom from both 4297 and 4299 SEL. A new concrete block wall with a door is to be constructed in an east-west direction, creating a new office. Another door is to be constructed in the existing wall separating rooms 4297 SEL and 4299 SEL providing access to the darkroom in 4297A SEL ($6,200).

Communications and Theater - Remodeling for University Theater - ($279,225)

This project will replace the existing theater lighting system and relocate the box office from the basement to the first floor.

It has been obvious for several years that the whole lighting system would have to be replaced. The University purchased for the theater an experimental system made by a lesser theatrical lighting company. Only four other theaters in the country have (or, perhaps, still have) this lighting system. The system is out of production, which hardly helps maintenance.

Among the variety of problems, one has been constant. Each light has a 1500-watt choke. However, about that much power is going through the circuit, so overheating occurs and the encapsulation melts over the firing switch and renders the light inoperable. Then electricians from Physical Plant have to come in and scrape away the melted material.

In FY 1976 120 of 169 dimmers had to be repaired. Nevertheless, in FY 1977 only 88 of 169 were operative. Not only are maintenance costs for the present system reaching an intolerable level, the students in this program are being trained on a lighting system, the principles of which they will never meet again.

This project also will relocate the box office for the University Theater from the basement location to the first floor for easier access by the Theater patrons. The work includes the construction of a new box office, new display case, fabrication of new signs and installation of public seating in Lobby L280A ECB.

Planning

Library Addition ($697,500)

Estimated Total Project Cost	$14,025,000
Estimated Bond-Eligible Funds Required in FY 1980	697,500
Gross Square Feet	132,000
Net Assignable Square Feet	94,285
Building Efficiency	71%

Library resources at Chicago Circle have been cited repeatedly as the area most critically in need of significant improvement for this campus to fulfill its mission. Groups both internal and external have pointed to the deficiencies of the collections and services which are required to support the expanding academic programs. This is not to say that the Library is without strength; the documents, manuscripts and archives collections and the collections of science materials are of excellent quality. These and other collections have the potential for continued improvement should space and acquisition funds permit.

The building of educational capital necessary to directly serve the current and potential student populations of this campus for the decades of the 1980's and 1990's must be one of the very high priority goals of the University. The FY 1980 request for an addition to the Library Building has been developed in the context of several considerations and restates the scope of the project to reflect the changes in operational philosophy occasioned by these considerations.

The University Librarian, appointed in January, 1977, has established a clearly defined program to meet the needs of all users of the UICC Library in terms of three levels of service: everyday needs, current awareness needs, and access to exhaustive resources which need not be on-site. This approach recognizes that college and university libraries cannot continue to expand as in the past and that the UICC Library will not meet all of the research needs of faculty and students with on-site materials. It will emphasize its service components, particularly those which build upon interlibrary cooperation and the sharing of research collections and resources.

This program assumes that within certain limits the best library service is that which permits the greatest freedom of access to the collections, both for students and faculty. Further, it assumes that the majority of UICC undergraduates are not prepared to use effectively a large library's collections.

This program recognizes that today's average freshman enrolls in the University with an estimated 15,000 hours of use and interaction with films, film strips, television, audio and video cassettes and that the library should use and make available these information media.

This program recognizes that UICC will likely continue to be largely a commuter campus and that the commuter campus demands of the student that he carry all of his research materials with him every time he comes to campus unless he has a safe place on campus to leave these materials.

These considerations lead to a shift in philosophy which requires a change in the building concept. This philosophy identifies the practical realities of the necessity of selective growth in collections and an accelerated growth in services, particularly in instructional support and access to off-site resources. To achieve this service goal, it is necessary to have adequate bibliographical information and a rapid and reliable interorganizational loan and delivery system. The space concept which best supports this approach to the management and development of library resources is a modular, open-shelf environment.

The building addition requested in this budget will add to the west of the existing structure two (2) bay columns the entire length of the building. The addition will provide a basement and four floors which will complete the structure as conceived in the original master plan.

Equipment

SR^3 Academic Departments Equipment ($64,500)

Departments and remodeling projects under the SR^3 line item requiring equipment are as follows:

1. Art Rooms - 1300 & 1530 A&A - Reroute traffic flow and provide efficient photo lab . . . $1,200.
2. College of Health, Physical Education & Recreation - Room 217 PEB to provide a Human Performance Lab & Classroom facility . . . $3,900.
3. College of Business Administration - Case Study Classrooms (3 rooms), third floor Burnham Hall . . . $5,700.
4. Biological Sciences - Room 4265 SEL - Subdivision to provide office and cold room facilities.
   Biological Sciences - Room 3052 and 3068 SEL - Graduate and Faculty Research Lab . . . $53,700.

Science Engineering Laboratories Remodeling (College of Engineering) - Phase II ($483,000)

Remodeling of the Science and Engineering Laboratories is required to continue the development of doctoral and/or master programs for departments in the College of Engineering.

These equipment funds will provide for the necessary and appropriate movable equipment to fit out the remodeled space to establish the graduate educational program for the units (Bio-engineering, Energy Engineering, Information Engineering, Materials Engineering, Systems Engineering).

In FY 1976, $200,055 was appropriated for the first phase of remodeling in SEL. In FY 1980 another $483,000 is required for this second phase of remodeling.

RRB Remodeling - Phase III - Duplicating Service ($102,000)

New presses are required to maintain and improve the capacity of the Duplicating Service to meet the needs of the campus. Funds for this equipment were lapsed in FY 1978 as the remodeling for the area was not approved. Purchase and installation of the equipment will be feasible and cost-effective with the relocation of the Duplicating Service from Burnham Hall to the Roosevelt Road Building.

Site Improvements

A total of $252,500 in State funds will be required for site improvements in FY 1980. The projects included are requested to enhance access to the campus facilities and to improve the safety and comfort of students, faculty and staff, and the public. A list of fiscal programming for these requests is indicated on the included Table 8.7. Short narrative descriptions of each project follow.

Pedestrian Safety - Phase II ($100,000)

This project continues the work begun in Phase I that was funded in FY 1979. Limited access service drives for University Hall and the Behavioral Sciences Building are provided. The remainder of the abandoned right-of-way contains pedestrian walks and grass areas.

Building and Site Accessibility ($152,500)

This project provides gradually elevated or pitched walkways that eliminate exterior stairs and give an unobstructed entry into the campus buildings and terraces. It also concerns the substitution of ramped sides for existing curbed driveway approaches. Grades will be modified to eliminate tripping hazards at building entrances and thresholds.

Bus Stop Shelters ($39,000)

The use of public transportation tends to alleviate the lack of parking for automobiles. One of the most prevalent complaints on the use of public transportation is lack of shelter from the elements at the loading points. It is planned to install three shelters at public transportation loading points around the campus. The shelters will be approximately 12 feet by 10 feet in size. The three shelters will be constructed of tinted lexan anodized aluminum to increase their resistance to vandalism and provide added security for the users. This project also includes the installation of a special security alarm system which will provide the users with a means of directly contacting the campus police.

MEDICAL CENTER CAMPUS

With the construction of separate, new buildings for Dentistry, Nursing, Pharmacy, Library, Administration, and the Replacement Hospital in the last decade, more than 300,000 square feet of building space has, or will, accrue to new users in the older buildings on the "main block" of the Medical Center campus. Most of this space has been earmarked for the needs of the College of Medicine, in lieu of new construction. Over the past decades, little attention has been given to preparing and maintaining these older buildings for new users. In addition, the acquisition of the 1919 W. Taylor Street Unit came with the full knowledge that major building deficiencies needed attention; the Pharmacy Building, constructed almost 25 years ago with air conditioning deferred, still has not realized this basic building system; and the moratorium on new building construction requires that the campus reuse the Old Illini Union Building as the Administrative Office Building Annex. As a result, the Medical Center campus has accumulated a large backlog of remodeling and renovation needs in buildings ranging from 24 to 53 years old.

Most of these buildings, still structurally sound, require installation or major renovation of their systems, and rearrangement, renovation, and reequipping of their interiors to accommodate new uses. Table 13 lists the buildings requiring extensive rehabilitation and remodeling.

The total replacement cost of these buildings is about $118,000,000. Most are structurally sound and should have a useful life of several more decades if rehabilitated. A key element in the plans of the Medical Center is the reuse of these buildings, wherever possible, rather than constructing new facilities to meet its space needs. Major rehabilitation and upgrading of building systems is required if the potential of these buildings is to be realized.

TABLE 13

BUILDINGS REQUIRING MAJOR REHABILITATION

Building	Date of Initial[1] Occupancy	GSF	NSF
Research and Library Unit, DMP	1925	49,600	27,127
First Unit, DMP	1931	179,600	95,250
Second Unit, DMP	1936	186,190	96,777
Pharmacy Building	1954/55/58/68[2]	270,738	168,423
Administrative Office Building Annex	1927	44,600	30,167
1919 W. Taylor Street Unit	1952	183,148	107,510
Vacated by Hospital-			
Hospital Addition	1953	240,000	127,309
General Hospital	1925	193,428	99,034
Illinois Surgical Institute	1927	56,566	31,171
Neuropsychiatric Institute	1942	127,000	66,225
Old Aeromedical Laboratory	1949	11,400	8,543
Hospital Residence	1926	25,900	14,147
Betatron	1948	1,299	1,079
TOTAL		1,569,469	872,762

[1]Denotes date of occupancy by tenant, not date of initial occupancy by University of Illinois.

[2]Denotes dates of occupancy for multiple phases of building.

The cost of rehabilitation and remodeling of these buildings is estimated to be approximately:

Building Systems and Components	$24 million
Space Remodeling	17 million
Subtotal	($41 million)
Equipment	6 million
Planning, Fees, and Other	5 million
TOTAL	$52 million

Building systems and utility services such as chilled water, electrical power, distilled water, steam distribution, domestic water, waste, ventilation, elevators, stairwells, etc., may be campus-wide, multiple-building, building-wide, or partial-building systems. The installation and distribution of such services and systems must be part of and integrated with space remodeling plans. Special considerations such as code requirements, provisions for the handicapped, energy conservation and operating efficiency also must be integrated with major rehabilitation plans.

The financing of the $52 million total rehabilitation project is anticipated to be derived from several sources. First, the building system and components must be upgraded early in the project. Funds for this component, estimated to be almost half of the total project cost, would be appropriated from State Capital Development Bond funds. Major interior remodeling and equipment projects would be funded similarly. The remaining remodeling and equipment projects would be funded in part from SR^3 funds and in part from institutional funds.

The first priority of the Medical Center campus is therefore the initiation and implementation of a major building rehabilitation plan, which, in its totality and out of necessity, must encompass several buildings and be phased over 5 to 10 years or longer.

A complete list of the capital projects requested in FY 1980 is presented in Table 14. Table 15 contains cost per square foot data (where applicable) for buildings and major renovation projects.

TABLE 14
MEDICAL CENTER CAMPUS
LIST OF FY 1980 PROJECTS BY CATEGORY

Projects	Estimated Cost
1. Buildings, Additions and/or Structures	
Convent Building Purchase	$ 242,000
RSM Animal Quarters Building Addition	477,000
Subtotal	($ 719,000)
2. Land	-0-
3. Equipment	-0-
4. Utilities	-0-
5. Remodeling and Rehabilitation	
5a. Major Building Rehabilitation	
Segment 1	1,723,300
Segment 2	1,750,200
Segment 3	2,086,200
Segment 4	2,120,600
Segment 5	2,027,100
Subtotal	($ 9,707,400)
5b. Space Realignment, Renewal and Replacement	
Part 1	1,094,600
Part 2	1,099,300
Subtotal	($ 2,193,900)
6. Site Improvements	-0-
7. Planning	
PSM Ambulatory Care/Teaching Center	269,000
Subtotal	($ 269,000)
8. Cooperative Improvements	-0-
Total FY 1980 Capital Budget Request - Medical Center	$12,889,300

TABLE 15
COST PER SQUARE FOOT OF NEW BUILDING AND MAJOR REMODELING PROJECTS
Medical Center Campus

Category/Project	Project Cost	Gross Square Feet	Assignable Square Feet	Efficiency ASF/GSF	$/GSF	$/ASF
New Buildings*						
PSM Ambulatory Care/Teaching Center	$ 5,024,800	50,000	30,000	.60	$100.50	$167.49
RSM Animal Quarters Building Addition	477,000	5,600	3,360	.60	85.18	141.96
Major Remodeling (Through FY 1983-FY 1984)						
SUDMP	10,106,650	-	98,140**	-	-	102.98
Pharmacy Building	4,693,200	-	168,000**	-	-	27.94
Vacated Hospital Space	16,209,400	-	330,962**	-	-	48.98
1919 W. Taylor Street	2,263,000	-	103,000**	-	-	21.97
Administration Office Building Annex	1,336,500	-	29,990**	-	-	44.56
FUDMP & R/L	9,411,700	-	123,500**	-	-	76.21

*Includes FY 1981 projects for which planning funds are requested in FY 1980.
**Represents total ASF in building.

Major Building Rehabilitation Plan

Phase I of the Major Building Rehabilitation plan, requested in FY 1980, totals $9,707,400 (Table 23). The scope of remodeling incorporated in this first phase provides the following amounts for specific buildings:

Research & Library Unit, DMP	$ 413,100
First Unit DMP	1,063,600
Second Unit DMP	1,294,600
Pharmacy Building	2,443,200
Vacated by Hospital -	
Hospital Addition	1,187,000
General Hospital	1,378,400
1919 W. Taylor Street Unit	1,105,000
Administrative Ofc Building Annex	822,500
TOTAL	$9,707,400

Of the $9.7 million total, about $7.4 million would be used for building systems and components, including architectural and engineering fees.

Table 16 lists all components of the major building rehabilitation project requested for funding in FY 1980 and presents them in priority "Project Funding Segments", Segment 1 being of highest priority. This presentation is provided to facilitate priority considerations among the many components comprising the $9.7 million request and to demonstrate the multiple-building considerations necessary with various levels of funding.

TABLE 16
MEDICAL CENTER CAMPUS FY 1980 CAPITAL BUDGET REQUEST
Major Building Rehabilitation - Project Funding Segments

	Item	Segment 1	Segment 2	Segment 3	Segment 4	Segment 5
SECOND UNIT DMP						
Elevator Renovation - 2 Passenger	$ 371,000	$	$	$ 371,000	$	$
1 Service	74,000			74,000		
Remodel 5th Floor & Part'l 4th	528,000			528,000		
A/E Fees & Contingency	146,600			146,600		
Equipment	175,000					175,000
Total - SUDMP	$1,294,600	$ -0-	$ -0-	$1,119,600	$ -0-	$ 175,000
PHARMACY BUILDING						
Air Conditioning & Ventilation	1,901,900	1,000,000		68,700	833,200	
Remodel Room 200	280,900		280,900			
Remodel Room 346	260,400			260,400		
Total - Pharmacy Building	$2,443,200	$1,000,000	$ 280,900	$ 329,100	$ 833,200	$ -0-
SPACE VACATED BY REPLACEMENT HOSPITAL						
Hospital Addition						
Convert to Hot Water	348,000				348,000	
Bldg Equipment Automation	139,000					139,000
Remodel 3rd Floor H.A. Radiology	50,000	50,000				
Remodel 2nd Floor H.A. Pathology	250,000	250,000				
Remodel 4th Floor H.A. Surgery	100,000		100,000			
Remodel Academic Areas	300,000			300,000		
Total - Hospital Addition	$1,187,000	$ 300,000	$ 100,000	$ 300,000	$ 348,000	$ 139,000
General Hospital						
Convert to Hot Water	153,000				153,000	
Chilled Water System	88,700			88,700		
Bldg Equipment Automation	111,400					111,400
Elevator Renovation	524,300		524,300			
Variable Air Volume System	501,000					501,000
Total - General Hospital	$1,378,400	$ -0-	$ 524,300	$ 88,700	$ 153,000	$ 612,400
Total - Space Vacated by Replacement Hospital	$2,565,400	$ 300,000	$ 624,300	$ 388,700	$ 501,000	$ 751,400
1919 WEST TAYLOR STREET						
Upgrade Electrical System	205,000	205,000				
Install Air Conditioning	428,000		428,000			
Window Replacement	287,000				150,000	137,000
Air Condition 3rd & 4th Floor	185,000				185,000	
Total - 1919 West Taylor Street	$1,105,000	$ 205,000	$ 428,000	$ -0-	$ 335,000	$ 137,000

TABLE 16 (Continued)

Item	Segment 1	Segment 2	Segment 3	Segment 4	Segment 5
REMODEL A.O.B. ANNEX					
Convert to Hot Water	$ 138,600	$	$	$	$ 138,600	$
Bldg Equipment Automation	44,500					44,500
Elevator Installation etc.	248,800			248,800		
Remodel 2nd & 3rd Floors	390,600					390,600
Total - A.O.B. Annex	$ 822,500	$ -0-	$ -0-	$ 248,800	$ 138,600	$ 435,100
REMODEL FUDMP & R/L UNIT						
R/L Unit						
Convert to Hot Water	104,000				104,000	
Upgrade Electrical System	138,600		138,600			
Chilled Water System	73,400	73,400				
Install Water Treatment System	7,000	7,000				
Building Equipment Automation	90,100					90,100
Total - R/L Unit	$ 413,100	$ 80,400	$ 138,600	$ -0-	$ 104,000	$ 90,100
FUDMP						
Convert to Hot Water	208,800				208,800	
Upgrade Electrical System	278,400		278,400			
Chilled Water System	130,900	130,900				
Install Water Treatment System	7,000	7,000				
Building Equipment Automation	69,600					69,600
Window Replacement	368,900					368,900
Total - FUDMP	$1,063,600	$ 137,900	$ 278,400	$ -0-	$ 208,800	$ 438,500
Total - Remodel FUDMP & R/L Unit	$1,476,700	$ 218,300	$ 417,000	$ -0-	$ 312,800	$ 528,600
GRAND TOTAL - MAJOR BUILDING REHABILITATION	$9,707,400	$1,723,300	$1,750,200	$2,086,200	$2,120,600	$2,027,100

Remodeling and Rehabilitation

Rehabilitation of older structures and remodeling of vacated space is presented in five priority funding segments, each segment containing a combination of building systems upgrading and space remodeling projects illustrating campus priorities at varying funding levels.

Major Building Rehabilitation, Segment 1 ($1,723,300)

Segment 1 of the Major Rehabilitation plan will provide for initiating installation of air conditioning and ventilation in the Pharmacy Building; space remodeling in the Hospital Addition; continuation of the electrical upgrade at 1919 W. Taylor and extension of the chilled water system in the DMP Buildings.

Pharmacy Building Air Conditioning and Ventilation, $1,000,000 - These funds will be allocated to initiating this long deferred building need. This amount will provide for the purchase of an 800-ton chiller unit and A&E services to plan chilled water distribution and air handling systems in the Pharmacy Building. Subsequent funding will finance the installation of chilled water distribution and ventilation systems.

Remodel 3rd Floor H.A., Radiology, $50,000 and 2nd Floor H.A., Pathology, $250,000 - Funding is allocated to remodeling of space for these two patient service areas which must continue, but modify their services as the new hospital becomes operational. Radiology in this location will serve outpatients only but must also maintain here the central X-ray files. Rearrangement of space and restoring areas whose function is relocated to the new hospital is required. The clinical laboratories function of the Department of Pathology was deleted from the new hospital program, due to funding limitations, and now requires expansion in existing buildings. The area allocated for this expansion is on the second floor of the Hospital Addition, adjacent to the existing clinical laboratory activities, and presently housing the kitchen and dining areas which are to be vacated.

1919 W. Taylor, Upgrade Electrical System, $205,000 - These funds are allocated to the installation of switchgear, risers, distribution panels and related distribution work. Electrical work will begin in this building in FY 1979 with the conversion of a 4,000 volt system to a 12,000 volt system. The additional electrical work contained in this request will provide capacity to serve the building users and will prepare the building to receive the air conditioning equipment to be installed in the future.

Chilled Water System and Water Treatment System, R/L Unit and FUDMP, $218,300 - This project involves the extension of the chilled water loop on the main block of the campus and installation of chilled water risers in the DMP complex. The project will provide an available source of chilled water for space remodeling.

Major Building Rehabilitation, Segment 2 ($1,750,200)

Segment 2 of the Major Rehabilitation plan will provide funds for the space remodeling in the Pharmacy Building and the Hospital Addition; elevator renovation in the General Hospital; installation of air conditioning at 1919 W. Taylor; and upgrading of the electrical systems in the DMP Buildings.

Pharmacy Building, Remodel Room 200, $280,900 - Funds will provide for remodeling of this large student laboratory and improve utilization to the extent that 2,320 net square feet will be converted to badly needed graduate student laboratories. This teaching laboratory, with a capacity of 225 student stations, is no longer required in this large configuration since classes are now taught in smaller section sizes.

Remodel 4th Floor H.A., Surgery, $100,000 - There is a need for an outpatient surgical capability at the Medical Center. Such a facility provides a less costly alternative to inpatient surgery for some types of surgical procedures. The requested funds will allow remodeling of some of the inpatient surgical suites, being vacated upon opening of the Replacement Hospital, to use as outpatient units.

Elevator Renovation, G.H., $524,300 - These funds will provide for replacement of the two antiquated elevators serving the west and south wings of the General Hospital Building. New cabs, elevator machinery, and penthouse are required. The elevators will serve the long term needs of future building occupants.

1919 W. Taylor, Install Air Conditioning, $428,000 - Funds are allocated for the purchase of a chiller and installation of chilled water risers to serve the entire building.

Upgrade Electrical Systems, R/L Unit and FUDMP, $417,000 - Provision for replacement and expansion of electrical service in these buildings is possible with this fund allocation. Replacement of existing transformers and feeders, increased switchboard capacity, new risers, and revisions to switchgear are required. The new electrical service will provide capacity for new needs generated by building occupants, space remodeling, and operation of planned new building equipment.

Major Building Rehabilitation, Segment 3 ($2,086,200)

Segment 3 of the Major Rehabilitation plan will provide funds for continuing the remodeling of the SUDMP Building; additional space remodeling and air conditioning work in the Pharmacy Building; space remodeling for academic units in the Hospital Addition; chilled water extension work in the General Hospital, and elevator installation and ramps for the Administrative Office Building Annex.

Remodel SUDMP, $1,119,600 - Continuation of this project will provide funding for elevator renovation and remodeling of the 5th floor and remainder of the 4th floor. This work would complete the high priority remodeling needs in this building with the exception of energy conservation items such as window replacement and building equipment automation.

Pharmacy Building, Air Conditioning and Ventilation, $68,700 - The purchase and installation of an 800-ton chiller referenced earlier will provide capacity to extend the chilled water loop linking the new hospital, the Pharmacy Building, the Administrative Office Building, the Library, and the A.O.B. Annex. These funds will provide for the chilled water tie to the Administrative Office Building.

Pharmacy Building, Remodel Room 346, $260,400 - Room 346 is another large teaching laboratory which is inefficiently utilized because its size is not adaptable to conduct small teaching lab sections. The room (5680 NASF) is to be remodeled to provide a lecture/demonstration room, a multi-use laboratory and about 2,000 NASF of office and research laboratory space badly needed by the Pharmacology Department.

Remodel Academic Areas H.A., $300,000 - Most of the space in the Hospital Addition to be vacated by the hospital will accrue to the clinical departments of the College of Medicine. The demand to remodel vacant areas will be pressing. This funding will provide for remodeling two floors of the tower for offices and laboratories.

Chilled Water System, General Hospital, $88,700 - These funds will provide for chilled water risers in the General Hospital and installation of a water treatment system.

Elevator Installation A.O.B. Annex, $248,800 - To utilize the A.O.B. Annex effectively and to make it accessible to the handicapped, a passenger elevator must be installed together with handicapped access ramps and new door openings. A single elevator serving the basement through 4th floor is planned.

Major Building Rehabilitiation, Segment 4 ($2,120,600)

Segment 4 of the Major Rehabilitation plan will provide for completion of the air conditioning and ventilation work in the Pharmacy Building; window replacement and air conditioning on the 3rd and 4th floors of the 1919 W. Taylor Street Unit; and conversion to hot water heating in the Hospital Addition, General Hospital, A.O.B. Annex, R/L Unit, and the FUDMP Building.

Pharmacy Building Air Conditioning and Ventilation, $833,200 - This funding will provide for completion of this project including chilled water distribution, upgrading of fan systems, and rehabilitation of existing fans and compressor equipment.

1919 W. Taylor, Window Replacement and Air Condition 3rd & 4th Floors, $335,000 - Chilled water distribution and installation of fan coil units will provide air conditioning to the 3rd & 4th floors. Replacement of the deteriorated windows on these floors will complete their environmental needs.

Convert to Hot Water, H.A., G.H., A.O.B. Annex, R/L Unit, and FUDMP Building, $952,400 - As a major energy conservation measure, this funding will initiate the conversion of campus buildings from steam heat to hot water heat. The savings in fuel costs are expected to equal the investment over a period of less than 5 years. Over 700,000 gross square feet of building space will be converted in this first phase.

Major Building Rehabilitation, Segment 5 ($2,027,100)

Segment 5 of the Major Rehabilitation plan will provide for space remodeling of the 2nd and 3rd floors of the A.O.B. Annex; window replacement in the FUDMP Building and 1919 W. Taylor; equipment for remodeled areas in the SUDMP Building; installation of building equipment automation in the Hospital Addition, General Hospital, A.O.B. Annex, R/L Unit, and the FUDMP Building; and installation of a variable air volume system in the General Hospital.

Remodel 2nd and 3rd Floors, A.O.B. Annex, $390,600 - Designation of the building at 715-21 South Wood Street to serve campus administration in lieu of new construction requires that major rehabilitation of building systems, upgrading of interiors and rearrangement of building space be undertaken to serve these new needs. These funds will provide for remodeling of 17,400 gross square feet on these two floors. The remodeled areas will accommodate the administration of the Urban Health Program, the Center for the Study of Patient Care and Community Health, the Humanistic Studies Program and portions of other units.

Window Replacement, FUDMP Building and 1919 W. Taylor, $505,900 - These funds will provide the continuation of window replacement at 1919 W. Taylor and the initiation of a program in the DMP Building complex. Deterioration, the high cost of maintenance, and the need to conserve energy require repair and replacement of windows in these older buildings.

Equipment SUDMP Building, $175,000 - Remodeling of the tower floors, 10 through 14, will be accomplished with funds allocated in FY 1979. The funds requested for FY 1980 will provide for the purchase of movable equipment for these floors.

Building Equipment Automation, H.A., G.H., A.O.B. Annex, R/L Unit and FUDMP Building, $454,600 - The energy conservation program provides for automating building equipment by providing controls which can be regulated remotely by computer. Automatic control of fan motors, pumps, dampers, and other operating equipment limit the use of equipment to needed use only and will thereby avoid energy waste.

Variable Air Volume System, G.H., $501,000 - Heating, cooling, and ventilation in the General Hospital is to be converted as part of the Building Rehabilitation plan. The most efficient and energy-saving system applicable to proposed functional uses is one which circulates conditioned air in a closed duct system and delivers air as demand varies. The system is planned in conjunction with the conversion to hot water.

Summary

This scope of work is based on funding of the magnitude presented herein. Funding for major building rehabilitation of a lesser amount will require alteration to this scope of work which must consider a variety of priority concerns, i.e., programs, buildings, and systems.

Space Realignment, Renewal, and Replacement ($1,727,895)

Remodel 1st Floor Ortho - Relocation of OB/Gyn Clinic ($175,000)

The conditions under which obstetric and gynecologic patients are attended in the outpatient setting require immediate and comprehensive improvement. The most expeditious and least disruptive solution is remodeling of the 1st floor inpatient area of the Illinois Surgical Institute, commonly referred to as 1st Floor Orthopedics. A total of 4,402 net assignable square feet and approximately 6,000 gross square feet is involved in the relocation which can occur uninterrupted when the new hospital is occupied.

Relocate Hospital Billing - Basement - Hospital Addition ($224,000)

Patient accounts activities of the Hospital, currently housed in the Eye and Ear Infirmary, must be relocated in proximity to Medical Records and be accessible to patients requiring services. The area to be remodeled is to be vacated by the emergency service and the autopsy suite upon occupancy of the new hospital. The combined area consists of about 4,000 net assignable square feet and approximately 5,000 gross square feet. Remodeling can occur uninterrupted when the area is vacated.

Remodel Anatomy Laboratories - 7th Floor - First Unit DMP Building ($196,000)

The gross anatomy teaching laboratories have experienced extensive deterioration of lab sinks and benches; walls, floors and ceilings; and mechanical systems. The demands on these laboratories increase each year and the deterioration grows more pronounced. The area consists of about 7,000 NASF and about 9,000 gross square feet. Work will include replacement of sinks and benches; new lighting, ventilation and air conditioning; and washing and painting of ceiling and walls.

Laundry Building Remodeling for Physical Plant - Phase I ($200,000)

The campus laundry service will be discontinued in FY 1979. The Laundry Building will be reused to consolidate many of the dispersed physical plant functions. The first phase of a planned reuse of the Laundry Building provides for relocation of the police and communication divisions of the Physical Plant department. Subsequent phases will accommodate other Physical Plant divisions. This phase involves approximately 8,600 gross square feet comprising the west section of the 1st floor, which is an open laundry area. The work involves dismantling of existing equipment and partitions; construction of new partitions, lighting, suspended ceilings, heating, ventilation and air conditioning.

Building Equipment Automation - Nursing Building ($90,000)

The Medical Center campus program for conservation of energy includes provisions for automated control of building systems to reduce energy consumption. The installation of automatic controls will result in operating efficiencies which are expected to recover the capital cost within a 5-year period.

Roof Repairs and Exterior Masonry - General Hospital ($66,600)

Water seepage caused by roof damage threatens to extend the deterioration of exterior masonry and building interiors. Repair of roof damage and masonry is required to arrest existing problems.

OSHA and Code Corrections ($176,300)

Architectural, mechanical, and electrical violations of building codes, OSHA standards and JCAH code requirements in hospital buildings are in need of correction. The Eye and Ear Infirmary, Hospital Residence, the Neuropsychiatric Institute and 1919 W. Taylor are included in this continuing program. Work includes elimination of dead bolt locks, installation of panic hardware, stairwells, automatic sprinklers, smoke doors and other building modifications.

Provisions for the Handicapped ($43,000)

Initial requirements for removal of architectural barriers to the handicapped call for construction of ramp and exterior door access to buildings not now accessible. Provided for herein is accessibility to the DMP Building complex, the Hospital Residence and the Convent Building. This is the first phase of a multiple year program of provisions for the handicapped.

Remodel Locker Room for Group Conference - Nursing Building Basement ($125,000)

One of the large locker areas in the basement of the Nursing Building has never been equipped or utilized for the purpose. It has instead served as temporary storage space. In the evaluation of College of Nursing space it has been determined that remodeling of this area can best serve the needs for graduate student offices, conferences and seminars. The area, consisting of about 4,800 square feet, will be divided to retain an area of about 1,200 square feet for storage with the remainder designed as office/study and conference/seminar space. The work includes some demolitions; lighting, power, ventilation, and air conditioning; new ceiling, carpeting and movable partitions.

Building Equipment Automation - Dentistry Building ($118,000)

This project will automate the controls of building systems to conserve energy.

Remodel Transplant Research Lab - Room 525 - Hospital Addition ($90,000)

Development of a research laboratory for the transplantation division of the Department of Surgery is made possible by the reassignment of Room 525 H.A. within the department. To facilitate the program, the existing laboratory (745 NASF) must be remodeled and equipped. Included in the work is the removal of existing lab furniture and fume hoods; installation of new lab furniture and fume hoods; extension of air conditioning ducts; patching and painting; and movable equipment. Two small offices will also be created within the room.

Remodel Physiology Research Laboratories - Rooms 234 & 236 - FUDMP ($56,000)

This existing office/laboratory (492 NASF) is part of the general upgrading needs of this 47 year old facility. This remodeling is required to make the area functionally useful. The work required includes removal of existing equipment; installation of air conditioning, fume hood and exhaust, lab furniture and utilities.

Remodel Radioisotope Research Area - Room 424 - FUDMP - Pathology ($40,000)

A radioisotope research area is required in pathology. Remodeling of this room (306 NASF) will provide a safe, confined space wherein residents, graduate students and staff may work and experiment with these substances under supervision of a licensed staff member. Work includes replacement of lab furniture, new isotope fume hoods, new flooring, and patching and painting.

Building Equipment Automation - Eye and Ear Infirmary ($104,000)

This project will automate the controls of building systems to conserve energy.

Air Condition 8th Floor, South Wing - Neuropsychiatric Institute - Psychiatry ($42,000)

The 8th floor, south wing, NPI Building (2,800 NASF) houses the Child Psychiatry Division. The area houses multi-purpose functions including staff offices, diagnostic and treatment programs for children, group therapy programs for parents and training for medical students, medical social workers, residents, and graduate students. The air conditioning will be accomplished by extending chilled water lines and installing fan coil units in 13 rooms.

Fire Alarm Upgrade - Campus and Medical Sciences Addition ($100,000)

This project will provide for furnishing and installation of a tie from a municipal fire alarm box to thirteen hospital and academic buildings as required by the Chicago Bureau of Fire Prevention. This tie will terminate at an auxiliary control panel adjacent to the existing control panel. Finally, repair and installation of alarms (i.e. heat detectors, evacuation alarms, and presignal alarms) will be initiated in the Medical Science Addition. This is the first phase of a multiple-phased project.

Air Condition 2nd Floor, South Wing - Neuropsychiatric Institute - Psychiatry ($35,000)

The 2nd Floor, South Wing of the NPI Building (3,100 NASF) houses the medical student training program in Psychiatry. Space provides for multipurpose functions including faculty offices, student/patient interviews, small group teaching and group therapy. The air conditioning will be accomplished by extending chilled water lines and installing fan coil units in 14 rooms.

Building Equipment Automation - Rockford School of Medicine, Phase II ($85,000)

The FY 1979 capital budget request provided $146,934 for the first phase of the RSM Building Equipment Automation. Phase I provides the control console and ties in operating equipment from the North, South and Maintenance Buildings. Phase II ties in operating equipment located in the East Building and will complete this project.

Remodel Dean's Suite - College of Pharmacy ($62,000)

Administrative responsibilities associated with enrollment growth, curriculum changes and special programs mandate a more efficient design of space to accommodate support functions and personnel. The area has not been modified since the original construction and occupancy by campus administration. The area involves 1,245 NASF and work includes partitioning of space, and attendant upgrading of ventilation, lighting, air conditioning, ceilings, floor covering, decorating and equipment.

Electrical Upgrade - Hospital Residence, Phase I ($100,000)

The Hospital Residence is no longer a residential building. It currently houses and will continue to house faculty and staff offices, health service clinic, and radiology shop functions. The change in use results in electrical requirements which exceed the building system. To provide adequate and safe electrical service, a multiple-phased electrical upgrade plan is required. This Phase I work provides for replacement of existing feeders and transformer, and revision of existing switchgear.

Remodel Rooms 420, 420 B4, and 438 FUDMP - Pathology ($30,000)

These areas have not been altered since the original construction some 47 years ago. The Room 420 complex (350 NASF) is an office complex, which when remodeled will accommodate three senior staff. Work requires minor demolition, movable partition, lighting, painting and patching, and floor covering. Room 438 (480 NASF) is to be remodeled to accommodate a self-instruction microscope room to implement a new teaching program in pathology. Work includes minor demolition, lighting, electrical service, removal of lab benches and utilities, painting, patching and floor covering.

Remodel Rooms 409 & 409B FUDMP - Pharmacology ($36,000)

The clinical pharmacology program requires additional research laboratory facilities. One such facility will be provided by consolidating repair shop functions currently housed in rooms 409 and 409B (643 NASF), in room 409B (350 NASF) and remodeling room 409 (293 NASF) to create a new wet laboratory. The work requires relocation of shop machinery, removal of existing benches, installation of new work bench and storage cabinet and installation of lab bench and utilities.

Buildings, Additions and/or Structures

Purchase Convent Building ($242,000)

The Convent Building located at 2035 W. Taylor Street, is owned by the Sisters of Charity of the Blessed Virgin Mary of Dubuque, Iowa. The building has been leased by the University for the School of Public Health since 1972. The purchase and retention of this building for use by the School was an integral part of space planning for the School's new facilities at 2121 W. Taylor Street. The building contains 21,000 gross square feet and about 13,500 net assignable square feet and houses several School programs which do not require wet laboratory facilities.

Purchase of property within the Medical Center District of Chicago is the responsibility of the Medical Center Commission, an agency of the State of Illinois. Appropriations to the Commission for the purchase of the property in past fiscal years has not produced the funds needed. The University is requesting funding for this project in FY 1980 with this understanding that it will be deleted from the University's request if the Commission is successful in obtaining a comparable appropriation.

RSM Animal Quarters Building Addition ($477,000)

Laboratory animal care facilities at the Rockford School of Medicine include adequate provisions for surgical procedures, necropsy examinations, recovery rooms, cage cleaning, and preparation space. However, animal holding facilities are limited to approximately 700 square feet in 3 rooms. Required standards of animal care mandate separation of species, isolation of infected colonies, quarantine of new animals and, in addition, exercise areas for larger animals such as dogs, cats, monkeys, goats, etc. Such considerations greatly increase space requirements for even a modest investigational program. Also, the School has been urged to formulate immediate plans for the development of Pharmacology which, by the beginning of 1979, means that two additional scientists must be accommodated. Pharmacologists, by the nature of their work, use large numbers of animals. By the end of 1979, it is planned that four such members of the faculty will be in residence and engaging in investigative activities. The development of Pharmacology at the Medical School has not only been strongly urged by the College of Medicine, but was strongly emphasized by the members of the accreditation site visit team, which was in Rockford on May 16 and 17, 1977.

It has been emphasized repeatedly that one of the great challenges available to the Rockford School of Medicine is the development of clinical research participation by members of the part-time faculty. Admittedly, this primarily involves human subjects, but it is reasonable to anticipate that ancillary studies involving animals will also be required.

Finally, it has not yet been possible to develop any animal usage programs in support of medical student education. The single exception is a small, improvised area for animal surgery in one of the community hospitals which is of seriously limited usability and probably does not meet standards of proper animal care.

The additional animal holding quarters can be added by new construction, contiguous to the existing basic animal care facility, and can be efficiently served by its core services such as cage washing, feed storage, etc. Its design will reflect the need to utilize several species of animals and to safely conduct experiments with infectious or other noxious materials.

The program for this project calls for the construction of 4,200 GSF of additional space and for remodeling of approximately 1,400 GSF of existing space.

The addition will provide additional holding rooms, quarantine rooms, storage rooms, receiving room, and a new enlarged cage washing room that will provide a dirty to clean circulation pattern.

The remodeling portion of the project will enlarge the surgery area, provide shower and locker rooms and improve the circulation in the animal quarters.

Planning

PSM Primary/Ambulatory Care Facility ($269,000)

Increasing emphasis on training in the primary/ambulatory mode for health professionals is recognized as a national need and has been of increasing concern to the Peoria School of Medicine and the regional components of the College of Nursing, School of Associated Medical Sciences and the College of Pharmacy. The original Peoria facility has capacity to train 225 undergraduate medical students. The new facility will serve as a base for conducting ambulatory/primary care service and to conduct interdisciplinary educational programs. These funds will provide planning services through construction documents for a facility containing 32,500 NASF and 50,000 GSF.

URBANA-CHAMPAIGN CAMPUS

The included FY 1980 capital budget request and projected budget needs through the target year of FY 1984 for the Urbana-Champaign campus are the end result of progressive efforts of numerous Campus and University level committees and personnel. Needs for added or improved space were initially identified and screened by department and college level building committees. Worthy requests were then forwarded to and given additional reviews by appropriate Campus and University committees and administrative staff. Since each review step would sift out weak or premature projects, the requests contained in this document represent only the most legitimate and immediate needs of the Urbana-Champaign campus.

The requests included in this document are coordinated with the general long range academic plan defined in the Scope and Mission Report of the University. Although only a very minimal growth in the total enrollment of the Urbana-Champaign campus is projected to occur through the target year of FY 1984, a few building requests are specifically geared to allow expanded programs in certain specialized fields such as law and nuclear engineering over the next decade. The bulk of the requests contained herewith, however, are oriented towards beginning an extended and much needed plan of physical facility replacement and renovation. Several projects represent straightforward replacement of outmoded existing facilities, while others are intended to release inefficient temporary and/or leased space through a series of space reassignments. In each case, the ultimate plan is to accomplish maximum space utilization in efficient modern facilities in such a way that the existing premier graduate and undergraduate academic programs of the Urbana-Champaign campus may continue to function and expand in quality with minimal facility overhead.

Several library-oriented and academic service facilities are also programmed within the multi-year budget period. Although one of the finest libraries in the country is housed at Urbana-Champaign, such a facility cannot become static. The acquisition rate of a major library must remain active if it is to retain its academic stature and value. Such a resource

provides an invaluable service to the entire State and must be maintained at a continuing level of excellence. As a result, such library and other academic support facilities cannot be directly earmarked toward an expanded enrollment, but rather toward a proper continuing support program of the existing academic program.

In summary, the included multi-year capital budget requests suggest a stabilizing approach toward the overall size of the Urbana-Champaign campus and place special emphasis upon initiating a major facility replacement and renovation program. Although almost all of the requests contained in this multi-year document represent an immediate need, they have been programmed through the target year of FY 1984 in a sincere attempt to produce a series of capital requests of sensible size for each of the involved fiscal years. Because most of these requests are long overdue, it is imperative that the State move forward and begin to satisfy these needs in a systematic fashion. The delays already applied have been costly and further delays will only add to those costs.

A complete list of the capital improvement projects requested for FY 1980 is presented in Table 17. The cost per square foot breakdown for buildings and major remodeling projects (where applicable) is provided in Table 18.

TABLE 17
URBANA-CHAMPAIGN CAMPUS
LIST OF FY 1980 PROJECTS BY CATEGORY

Projects	Estimated Cost
1. Buildings, Additions, and/or Structures	
Library Sixth Stack Addition	$ 5,669,500
Pilot Training Facility	197,600
Subtotal	($ 5,867,100)
2. Land	
Life Sciences Teaching Lab	136,000
Subtotal	($ 136,000)
3. Equipment	
College of Engineering - Remd	75,000
Subtotal	($ 75,000)
3a. Equipment Related to Space Realignment, Renewal and Replacement Projects	296,000
Subtotal	($ 296,000)
4. Utilities	
Library Sixth Stack Addition	107,000
Central Supervisory Control	390,000
Condensate Return System	188,000
Water Main Extension (SE)	34,000
Subtotal	($ 719,000)
5. Remodeling and Rehabilitation	
Davenport Hall Remodeling	1,000,000
College of Engineering Remd	1,200,000
Main Library Remodeling	270,000
Subtotal	($ 2,470,000)
5a. Space Realignment, Renewal and Replacement	
Generated Amount	4,406,835
Additional Projects	138,965
Subtotal	($ 4,545,800)

TABLE 17 (Continued)

Projects	Estimated Cost
6. Site Improvements	
Pennsylvania Avenue Street Improvements	$ 363,000
Campus Site Improvements	50,000
Intramural Athletic Fields	47,500
Subtotal	($ 460,500)
7. Planning	
Life Sciences Teaching Lab	418,000
Auditorium Roof Replacement	72,000
Engineering Library Stack Addition	275,900
Law Building Addition	315,300
Nuclear Reactor Laboratory, Phase II	145,000
Subtotal	($ 1,226,200)
8. Cooperative Improvements	-0-
Total FY 1980 Capital Budget Request - Urbana-Champaign	$15,795,600

TABLE 18
COST PER SQUARE FOOT OF NEW BUILDING AND MAJOR REMODELING PROJECTS
Urbana-Champaign Campus

Category/Project	Project Cost	Gross Square Feet	Assignable Square Feet	Efficiency ASF/GSF	$/GSF	$/ASF
New Buildings*						
Library Sixth Stack Addition	$5,861,700	76,750	63,000	.82	$ 76.37	$ 93.04
Pilot Training Facility	197,600	4,500	4,400	.98	43.91	44.91
Life Sciences Teaching Laboratory	7,650,900	80,143	50,000	.62	95.47	153.02
Engineering Library Stack Addition	2,789,300	82,691	54,615	.66	33.73	51.07
Law Building Addition	5,569,500	68,828	46,710	.68	80.92	119.24
Nuclear Reactor Laboratory - Phase II	2,330,000	20,348	12,160	.60	114.51	191.61
Major Remodeling (All Phases)						
Davenport Hall	3,440,000	--	57,000	--	--	60.35
College of Engineering	4,800,000	--	70,291	--	--	68.29

*Includes FY 1981 projects for which planning funds are requested in FY 1980.

Remodeling and Rehabilitation

College of Engineering Remodeling - $1,200,000

This request represents the second phase of an extended remodeling program involving the physical facilities of the College of Engineering. This phase, in conjunction with the first phase work approved in FY 1976, will allow certain space consolidations to be made by moving the Department of Aeronautical and Astronautical Engineering and General Engineering into the Mechanical Engineering Building and Talbot Laboratory. In order to accomplish this consolidation, the Department of Mechanical Engineering will better utilize space in the Mechanical Engineering Laboratory. This sequence of relocations will allow the Transportation Building to be vacated in order for it to be remodeled into an Engineering Library as an FY 1981 project. Related to this remodeling project is an Engineering Library Stack Addition, to be requested in FY 1981, which is needed to complement the above moves since the Transportation Building does not have the floor loading capacity or actual size to accommodate the Engineering Library needs.

This second phase project, in conjunction with the first phase work approved in FY 1976, will complete the remodeling in the Mechanical Engineering Laboratory in order to make it more usable by the Department of Mechanical Engineering. Another part of this second phase work involves remodeling in the Mechanical Engineering Building for General Engineering and Mechanical Engineering. This second phase work also involves remodeling in Talbot Laboratory for Aeronautical and Astronautical Engineering and for an expanded materials engineering curriculum in order to better utilize the building's space. In summary, the major thrust of the first two phases of this program will involve the renovation and modernization of approximately 40,000 NASF of old and antiquated office and laboratory space to upgrade outmoded existing space and to vacate a major existing building for use as an Engineering Library. The actual work involved in this undertaking will include improved lighting, relocation of large pieces of equipment, electrical renovations, new partitioning, heating, ventilation and air conditioning, and plumbing. Also, there is a $75,000 equipment request related to this project.

The importance of this project cannot be overemphasized. Because fewer fiscal resources are available to meet its capital needs, the Urbana-Champaign campus is attempting to solve some of its space problems through major remodeling of existing facilities. The ultimate goal of this undertaking, which is estimated to cost approximately $4,800,000 and extend over a five-year period, is intended to create space for a much needed Engineering Library and to modernize Engineering space for more efficient utilization of older buildings, including the provision of a central facility for materials engineering which will serve several engineering departments. Additionally, certain small old laboratory facilities that are costly to maintain and impractical to renovate will be razed. The Aeronautical Laboratory (10,984 NASF) and the Brakeshoe Laboratory (1,344 NASF) will be vacated and razed as a result of this total remodeling program.

Davenport Hall Remodeling - $1,000,000

This multi-phased project will involve the renovation of older portions of Davenport Hall following the completion of the Turner Hall Addition. Most of the building is over 75 years old and the area involved has had no major remodeling completed in all those years. This remodeling along with remodeling requested for Lincoln Hall, will allow for considerable realignment and relocation of academic units within the College of Liberal Arts and Sciences in an effort to provide more efficient and effective use of space. The proposed remodeling/realignment program will allow two former apartment buildings to be vacated and razed to clear the site for construction of the Life Sciences Teaching Laboratory to be requested in FY 1981.

The campus intends to initiate some preliminary planning (schematic and definitive design plus beginning of working drawing development) in FY 1979 in order to expedite this project. The purpose of this preliminary planning is to design the remodeling to the extent necessary to assure that all of the building system and safety items are improved along with the remodeling for the academic programs. The planning should include a study of how the project might be phased. The general intent of this multi-phased project is to develop the outmoded wet laboratory areas into dry laboratory, office, and classroom space and to establish well-defined traffic patterns. This project will involve partition changes, lighting, air conditioning, an elevator, safety improvements (such as stair enclosure and sprinkler system) and mechanical system improvements.

The specific work to be completed in the requested $1,000,000 first phase will be determined by the preliminary planning described above. One segment of the initial phase should involve remodeling the east wing. This portion of the remodeling provides space at an excellent location to remodel since it is vacant and can provide surge space when other portions of the building are remodeled. The total project is expected to be remodeled over a period of five years and the total cost is estimated to be $3,440,000.

Main Library Remodeling - $270,000

This project involves the installation of a fire detection system in the bookstack area of the Main Library. The bookstacks comprise some five acres of floor space distributed over ten levels. The value of the over eight million catalogued and uncatalogued items housed in the stacks, their vulnerability to the hazards of fire, and the tragic academic consequences to the University which would result from the loss of any significant portion of the books is reason enough for requesting this project. However, the added factor of potential loss of life from smoke or fire in the bookstack area is just as significant a reason for undertaking the improvement and should not be disregarded.

This project will provide additional space for the reference area of the Library and will connect the northwest wing of the building with the east portion by installing a basement corridor. Construction will include new walls, doors, additional counter space in the reference area, and revisions to heating and air conditioning in the new corridor.

A third segment of this project involves planning for the major remodeling of the Main Library to gain additional usable space and to improve the traffic pattern and accessibility to certain areas. Many of the areas now have unusually high ceilings and it is thought that a considerable amount of additional space could be gained by constructing additional floor levels to help alleviate the existing crowded conditions in the processing areas.

Space Realignment, Renewal, and Replacement - ($4,545,800)

Animal Room Improvements - Burrill Hall ($225,000)

This project involves upgrading the animal holding facilities in Burrill Hall to a level necessary to meet Federal regulations. Federal granting agencies have threatened to withhold research funds unless the facilities are improved. This is the second of a four-phased program to bring our existing facilities into compliance with the U.S. Department of Health, Education, and Welfare standards and regulations governing the humane handling, care, and treatment of laboratory animals.

The work to be done in Burrill Hall involves remodeling 1,236 NASF on the second floor and 1,942 NASF on the fifth floor. The remodeling will involve increasing the ventilation rate, installing heat recovery equipment, lighting connected to a timer, dropping the ceilings, installing sinks, installing an animal watering system, installing a standby ventilation system and partition changes.

Elevator Installation - ($650,400)

Flagg Hall project involves the construction of an exterior tower and an elevator at the west end of the building and the construction of a paraplegic ramp at the east side of the building. Flagg Hall is a five-floored building with instructional laboratories for the Department of Art in the basement; instructional laboratories for the Department of Architecture on floors one, two, and three; and offices for the Department of Architecture on the fourth floor. The elevator is needed for paraplegics and other handicapped users of the building and is required by Federal and State laws.

Coble Hall project involves the contruction of an interior elevator to provide access from the basement to three floors above grade. Paraplegics now have access to the basement only by means of an outside ramp. With the installation of an elevator, paraplegics and handicapped personnel and students would be able to reach the offices of the Chancellor, Vice Chancellors, Business Affairs offices, and offices assigned to personnel of the Mathematics Department.

Freer Gym project involves the installation of an elevator to provide access for paraplegics, handicapped students and staff as well as research subjects. Biomechanics, Motor Learning and Development, Youth Sport Research and within the next year the Physical Fitness Laboratory will all be located in Freer Gym. The basement as well as three floors above grade would be serviced by one elevator. The installation of an elevator would enhance grant opportunities in various research programs including stroke rehabilitation, activities for the elderly, physical education for the handicapped elementary and high school students and methods of teaching those students.

Paraplegic Ramp Improvements ($80,000)

In accordance with the regulations contained in the Rehabilitation Act of 1973, the following three buildings have been selected for improvements to ramps.

Mumford Hall paraplegic ramp now enters the building at the southwest corner of the building at the first floor level. The existing ramp does not conform to the "American National Standard Specifications for Making Buildings and Facilities Accessible to, and Usable by, the Physically Handicapped," as published by the American National Standards Institute, Inc. In order to meet the ANSI regulations, the old ramp should be removed and a new one constructed entering into the basement. This could be done in several places: one, an old hoistway elevator located on the exterior of the north end of the building could be removed, and the access way used with the construction of a ramp; two, a ramp and an entrance into the basement could be provided on the west side of the building.

David Kinley Hall paraplegic ramp now enters the building at the east center stairs to the first floor. The ramp at David Kinley Hall was constructed very similar to the one at Mumford Hall. The ramps in both buildings start at ground level, rise too rapidly, enter through a modified exterior door, and then rise at an unacceptable level again to reach the first floor. The old ramp should be removed and an acceptable ramp be installed to the basement, possibly through an outside hoistway at the north end of the building.

Huff Gym has no paraplegic access to the building. At times a temporary metal ramp has been set up for special events. This ramp is awkward and must be borrowed from the Rehabilitation Center when it is not in use at other locations. A ramp to the first floor in this building would provide access to the Dean of the College of Applied Life Studies and some of the academic staff.

Elevator Replacements ($95,000)

Talbot Laboratory elevator was originally installed in 1928 for freight service, with a capacity of 2,500 pounds. The basement traction machine operates at 75 feet per minute with manual, vertical, bi-parting hoistway doors and no car gate. Replacement should be with a unit suitable for passenger and freight service with a capacity of 4,000 pounds operating at 150 feet per minute with sliding doors. The existing elevator is 50 years old, slow and unreliable. The new elevator is required to provide paraplegic access above ground level to the first, second and third floors.

Energy Conservation-Ventilation Turndown ($107,400)

This project provides for the reduction of fan speeds in the Psychology Laboratory and Library Phase II to meet only the actual demands of each building. Air and hot water systems affected will have to be rebalanced. Savings will result from using less fan and pump energy, and less steam and chilled water.

Noyes Lab Remodeling ($75,000)

This project involves the upgrading of four undergraduate chemistry teaching laboratories in Noyes Laboratory. The hood system in Room 218 is outmoded and in need of extensive repairs. The ductwork leaks badly and the air flow into the hoods is barely minimal. Results indicate a collection of odors and harmful vapors in the laboratory as well as surrounding areas. The stone tops on laboratory benches in Room 467 need to be replaced since many cracks have developed allowing chemicals to drip through and damage wooden cabinets below. This lab is used by over 500 students per week. There are 40 stone sinks in Rooms 218, 219, 250 and 467 Noyes Lab that should be replaced due to cracks and temporary patching. These sinks are located in instructional laboratory areas that were constructed in 1901 and 1915.

Temperature Control - Remodeling and Replacement ($80,100)

This project will replace the existing dampers and controls in the Band Building, Gregory Hall, and Illini Hall. The controls were installed in 1957, 1939, 1907 respectively and through deterioration over the years have become inefficient and obsolete. New sensors, transducers and signaling type controls will be installed.

Environmental Research Laboratory ($96,600)

This project involves the completion of the remodeling of 4,580 NASF in the Environmental Research Laboratory (formerly named Sanitary Engineering Building) to provide modern office and laboratory space for the Institute for Environmental Studies. Additional space is desperately needed for expanding staff and proposed interdisciplinary research programs of the Institute.

The proposed remodeling would provide both men's and women's rest room facilities as well as an office complex and several laboratories on the first floor. A new enclosed stairwell will be provided between the first and second floors, and the old, open, wooden stair area will be developed into laboratory space. New built-in laboratory benches and cabinets will also be installed as new walls are constructed to enclose the stairs. The remodeling will also involve work on the third floor, including installation of a T-Bar suspended ceiling with fluorescent

lights, drywall to replace the asbestos sheeting, painting, replacement of old castiron radiators with fin-tube radiation and the addition of several window air conditioners for summer cooling.

Morrill Hall Remodeling ($197,400)

This project involves the remodeling of Rooms 43, 43A, B, C, D, E, F, G, H, I, J, K, and 45 Morrill Hall into a P-3 Basic Cancer Research Facility. These rooms are ideal for this type of remodeling because they are currently on the same ventilation system and easily isolated.

The remodeling would include isolation and controlled access, ventilation and exhaust air improvements, removal of all existing equipment and associated piping including conduit, install a new lowered ceiling, paint walls and ceiling with epoxy paint. Providing back-up systems and the sealing of all areas will be a major cost involving installation of new equipment that does not penetrate exterior walls or ceilings. This facility is needed to retain research staff who would otherwise leave the University of Illinois to use facilities being planned by other institutions.

Foreign Languages Laboratory - Improvements ($170,000)

The heating, ventilation and air conditioning capacities in the Foreign Languages Building were marginally designed and do not maintain the building environment during periods of extreme weather conditions, even though Federal guideline temperatures are the goal. This project involves changes to the existing HVAC system and thermal characteristics of the building to make the existing system function more effectively. The changes to the HVAC system involves modifications to supply fans to reduce duct resistance, modification of intake air louvers, add fans to pick up air from the center court to supply corridor ventilation, and modifications to return ducts in vertical risers to eliminate short circuiting. The improvements to the thermal characteristics of the building involve improving the thermal properties of glassed areas and insulation of the sixteen vertical air shafts located outside of the building. These improvements will make existing systems perform adequately without increasing equipment capacities and energy use.

Krannert Center for the Performing Arts ($328,200)

This project will provide additional needed space for the Departments of Dance and Theatre. Included are the construction of walls in the underground parking structure and the installation of lights, acoustical ceilings, wooden floor in the dance studios, floor tile in others, heat, ventilation, and air conditioning. Improvements will also be made to the acoustical and seating problems in existing drama and dance rehearsal areas. Hand rails will be installed on certain stairs in compliance with OSHA regulations.

Heating System Remodeling ($206,800)

The heating system in the Natural History Building was installed in 1890. Most of the original radiation and piping exists and is manually controlled. There are no replacement parts for the radiation. The steam supply main is located above the ceiling of the fourth floor and is not accessible. The fittings in the piping system have eroded and sections of the system are subject to failure at any time. This project includes the installation of a new steam main below the ceiling of the fourth floor, control valves, radiation, and traps to provide greater system reliability, conserve energy, and reduce maintenance costs.

Sprinkler Systems ($165,000)

This project consists of the planning and installation of an overhead sprinkler system for the south portion (55,000 NASF) of the Natural History Building. This building, which basically consists of Type II construction, exceeds the maximum area limitations for multi-story buildings according to the Chicago Building Code. To comply with this Code, to be consistent with the type of fire protection in this building, and to adequately protect the lives of its occupants, a sprinkler system throughout is required. The north portion (36,000 NASF) of the Natural History Building is already supplied with sprinkler equipment. Therefore, this project will be an extension of the existing north section. The installation will involve plumbing work and minor construction and repair work to install the required piping into each room.

David Kinley Hall - Room 114 ($179,000)

This project consists of the complete renovation of a 2,537 NASF lecture room in David Kinley Hall, a building that was constructed in 1926. During the fall semester of 1977-78, this 329 seat lecture room was used an average of 22 hours per week. Because of inadequate ventilation, temperatures in this room often reach the 90-95^{0} range during early fall and late spring. The room has been in constant use for over 52 years and is in need of major renovation and modernization. Improvements planned include central ventilation and air conditioning, suspended acoustical ceiling with recessed fluorescent fixtures, new flooring, new seating and audio-visual capabilities. Upon completion of the above improvements, this room should again become a very suitable teaching lecture room for year-round use for the indefinite future.

Energy Conservation - Animal Room Ventilation Improvements ($107,400)

The use of 100 percent outside air for ventilating the Small Animal Clinic Building requires large energy expenditures to maintain indoor conditions. This project will provide for the installation of thermal energy recovery devices which can reclaim up to 70 percent of the energy required for each fan system.

Stair Enclosures ($152,800)

Gregory Hall presently has two dead end corridors with no fire-rated exits. With 33 classrooms, plus heavily used instructional laboratories and offices, this building is one of the most highly populated facilities on the campus. As a result, safe exits in the event of a fire are desperately needed.

This project involves the construction of vertical and horizontal compartmentation of the existing stairways with related door closing improvements. As a result of this safety improvement, any fire which might develop would be confined to its area of origin and safe exits at all floor levels would be available. Funds in the amount of $2,450 were provided from the 1967-69 biennial request under the Protection of Life and Property category to complete planning for this improvement. As a result, project plans and firm cost estimates are complete, and the requested funds are only for actual construction of the safety improvements.

Visual Arts Laboratory ($117,000)

This project will complete Phase II of the remodeling for the Visual Arts Laboratory. It will provide cinematography facilities, a studio for photography/cinematography, and facilities to introduce photography to freshmen art students. Included in the project are construction of new walls, installation of additional power requirements, additional shelving, and revisions to heating and air conditioning. The first phase of this program involving a cost of $162,200 was funded as a part of the FY 1976 Capital Budget Request and included needed expansion for photographic laboratories. This second phase is to fund the required remodeling for a cinematography Shooting Studio and several small dark rooms for freshmen and faculty. Major heating and ventilation changes need to be completed for optimum use of space created by remodeling Phases I and II. A separate equipment request in the amount of $75,000 is also included in this budget request for equipping the Cinematography Studios and dark rooms.

Armory - Security Improvements and Bleacher Installation ($108,500)

This project will provide security for the building when the main portion of it is open but the offices are not, so that the ever-increasing incidence of vandalism will be reduced. A turnstile will be installed, locks and hinges will be upgraded and panic hardware will be replaced as a part of this project. In addition, permanent bleachers of the fold-away variety will be installed, leaving the existing bleachers, which are costly to set up, to be used for back-up when major events call for more spectator seating. The installation of fold-away bleachers will allow more flexibility on the Armory floor as they can be extended or pushed back depending on the activity.

Energy Conservation - Multi-Unit Air Conditioning ($71,600)

This project involves the planning costs for creating in essence an air conditioning center from existing isolated plants which cool the Civil Engineering Building and Digital Computer Laboratory. By looping the two buildings partial air conditioning load efficiency can be improved, the system can be made more reliable and winter operating costs reduced. Total project cost for these two buildings including planning has been estimated at $804,800.

Energy Conservation - Fans and Ventilation Systems ($89,400)

This project includes the installation of time clocks on fan systems in various buildings. Through automation, start-stop of HVAC equipment will provide increased "stop" time and thus energy savings by reducing operating time.

The project includes planning for the installation of equipment to recover heat in the exhaust air system to temper outside make-up air as it is brought into Roger Adams Laboratory.

The project also includes planning funds to design a system for "free" cooling from outside air to be used for winter air conditioning in the Digital Computer Laboratory and Civil Engineering Building complex.

Roof Replacement ($411,200)

This project will provide for the replacement of all or a part of the roofs on the following five buildings:

Bevier Hall was constructed in 1956 with large areas of four-ply pitch and gravel roofing over 2-inch rigid insulation on a metal deck. Due to leaks the insulation has become saturated. The gravel, felts and insulation should be removed and replaced. As a part of this project, the above items will be removed and replaced with 2 inches of insulation, a vapor barrier and a five-ply built-up roof on the main portion of the building.

Civil Engineering Building Phase I was constructed in 1965. The roofing has deteriorated prematurely with insulation being saturated in areas which will require complete replacement. This project will replace approximately 152 squares of 1½ inch fiberglass insulation base and 3-15 pound pitch felts with 2-6inch tapered insulation, vapor barrier and five-ply built-up roofing. Also new curb flashings, and new leads at drains would be included.

Horticulture Field Lab was constructed in 1924 with multiple level combination pitch and gravel flat roofs and slate sloped roofs. The flat roofs were resurfaced in 1954 and the felts are now dried out and absorbing water with sheathing beginning to rot. This project will include the installation of new plywood over the existing sheathing and the installation of new roofing materials.

The Psychology Building was constructed in 1969-70. The existing 11,540 square foot four-ply steeped asphalt built-up roof is capped with a white granulated mineral felt. Fish mouthing and blistering have been evident for five years despite past contractor repairs. The fiberglass insulation is again soaked in many areas and water is beginning to leak into rooms below. Complete removal and replacement of roofing is included as a part of this project.

Kenney Gym was constructed in 1903. The existing cement asbestos shingles are brittle and deteriorating. The asbestos shingles will be replaced with asphalt shingles. The metal vallies, gables, and apron will also be replaced.

Mechanical Engineering Laboratory ($40,000)

This project involves connecting the drains in the Mechanical Engineering Laboratory to the sanitary sewage system. Currently many of the sinks, floor drains and sump pumps drain directly into the Boneyard Creek just south of the building. Although care is taken by the users, it is possible that a pollutant could be accidently drained into the Boneyard Creek. A second problem which occurs several times a year involves the Creek rising above the Mechanical Engineering Laboratory drains during a rain storm and flooding parts of the building. The occupants of the building attempt to plug these drains during periods of high water, but the plugs have blown out due to the hydrostatic pressure upon occasions causing flooding even with the best efforts on the part of the users. This project will eliminate the irritating flooding problem and possible problems from the EPA by accidently polluting the Boneyard Creek.

Remodeling Cooling Towers ($108,000)

This project includes the complete replacement of the discharge stacks on the upper deck on two of the three sets of cooling towers at Abbott Power Plant. New fan mounts must also be installed on one tower. Continued deterioration could affect our ability to generate electricity which in turn would cause our electrical power rates to increase rapidly, as we could no longer meet our contract commitments with Illinois Power Company.

Energy Conservation - H.V.A.C. Retrofit ($95,500)

This project provides for the replacement of the dual duct heating ventilation air conditioning (HVAC) system in the Loomis Laboratory of the Physics Building with a variable air volume (VAV) system. The results mean less energy required to produce the room temperature desired because the system is not heating and cooling the air at the same time.

Fire Alarm and Signal System Replacement ($61,400)

The fire detection equipment for the Library, except the stacks, requires excessive maintenance, has poor annunciation, and is subject to excessive false alarms. This project includes new annunciation, wiring, and replacement of approximately 100 remote batteries with one common battery.

The present central fire alarm connection to the Children's Research Center is over a high resistance telephone cable which periodically causes false alarms, erroneous ground indications at the fire station and prevents extension of this particular circuit to other buildings in the southwest campus area. The project will include the installation of low resistance fire alarm cable to the Children's Research Center and provide for the possibility of future expansion to other buildings in the area.

The auxiliary fire alarm boxes in the Kenney Gym Annex and David Kinley Hall are over 40 years old and obsolete. As such, replacement parts are in short supply and repair unreliable. Thus this part of the project will provide new auxiliary fire alarm boxes in the Gym Annex and Kinley Hall.

Auxiliary Fire Alarm boxes in Altgeld Hall are not properly located and there are many isolated areas in the building which would permit a fire to go undetected for some time. Installation of smoke detectors and a partial sprinkler system are included in this segment of the project.

There is neither water supply nor fire hose connections available for use in the event of a fire in the Main Library Stacks. Presently, water could only be obtained by elevation of the snorkel for the upper floors. This project is needed to provide funds for installation of a pipe from ground level to the top level with hose connection at each level.

Remodel Steam Absorption Machines ($85,900)

This project will rebuild the steam absorption machines in Morrill Hall and the Fine and Applied Arts Building. New pumps, control valves, steam tubes and purge units will be installed.

College of Veterinary Medicine Complete Basement Small Animal Clinic ($222,800)

This project will provide 3,500 NASF of research animal space for the College of Veterinary Medicine. The research program of the College is not up to par with its quality instructional program; one principal reason for this is simply a lack of sufficient research space. This project will create animal room space at the east end of the unfinished basement of the Small Animal Clinic. Together with the FY 1976 capital budget project, which developed the west end of the same wing, this remodeling will complete the transformation of the area into a useful research facility. The work necessary includes upgrading the ventilation system, plumbing, installing partitions, and lighting.

Steam Distribution Remodeling and Replacement ($32,400)

This project includes the replacement of some steam tunnel dewatering pumps which have been in use for thirty years. Parts can no longer be purchased and are very costly to manufacture. Work would include ventilation improvements in the tunnel to allow workmen to occupy the tunnel space for longer periods of time when repairs are necessary.

Approximately 1,200 feet of 8-inch steam line has deteriorated to the point where it must be replaced at this time. Major replacement of additional lines is planned for 1983.

Magnetic Door Holders ($41,300)

This project is needed to provide a means of closing fire doors in case of fire. Presently, doors in the corridors of Bevier Hall and Animal Science Laboratory are manually blocked open because of the large traffic volume. The magnetic door holders to be installed will be connected to a smoke detection system and will release the doors in the event of a fire or smoke build-up.

Loomis Laboratory of Physics Remodeling ($53,700)

This project is needed to provide some privacy for 80 teaching assistants now housed in nine rooms totaling 4,951 net assignable square feet. Undergraduate students who want to confer with their instructors are allowed no privacy from the activities of other teaching assistants and students in the room. Part-height walls are to be constructed.

Energy Conservation - Remodel Windows (Storm) ($56,000)

This project provides for the installation of self-storing aluminum frame storm windows in Mumford Hall and Commerce West. The existing windows in both buildings are the double-hung type. The addition of storm windows will reduce heating and cooling loads due to transmission losses and infiltration.

Roger Adams Laboratory Remodeling ($35,000)

The Chemical Engineering Department has doubled its enrollment since 1971 and is presently housed in a portion of Roger Adams Laboratory (RAL) constructed in 1950. The department was relocated from Noyes Lab into the old portion of RAL in 1967 when the new addition to RAL was completed. Very little remodeling was done for them in anticipation of the construction of another addition. The chance of another addition being constructed in the near future is very unlikely since overall enrollment of the University has stabilized in the last few years. The remodeling requested will provide air conditioning in the 112 complex and fluorescent lighting to replace incandescent fixtures in many rooms on the first, second and third floors. Future remodeling in RAL includes the replacement of its 26 year old central utility systems, (air filtering, vacuum, compressed air, and deionized water system) inadequate temperature and humidity controls.

Buildings, Additions, and/or Structures

LIBRARY SIXTH STACK ADDITION

Estimated Total Project Cost	$5,861,700
Estimated Bond-Eligible Funds Required in FY 1980	5,776,500
Total Non-State Funding for Which the Project is Eligible	-0-
Estimated Non-State Funding	-0-
Gross Square Feet	76,750
Net Assignable Square Feet	63,000
Building Efficiency	82%

This project would provide additional shelf storage for the constantly growing University General Library book collection. The University Library adds approximately 120,000 to 150,000 volumes a year to its collections in order to meet the instructional and research needs of students and faculty. Approximately twenty percent of these volumes are absorbed in working collections in departmental library units, and the balance, amounting to over 100,000 volumes a year, is absorbed by the General Library bookstacks, which house many of the principal research collections as well as less frequently used material transferred from departmental library collections. The University Library also serves as the main book repository for the State library system.

The latest stack addition, completed in July 1970, was intended to relieve a severely overcrowded situation, but because of the yearly acquisitions, that space is already beyond standard working capacity. The UIUC Library currently anticipates a crisis involving the availability of stack space. A recent in-depth library analysis of the main library bookstacks revealed that, no later than July 1979, this storage facility will be 100% full. The full capacity of this storage facility would be reached much sooner except that an extensive program of weeding duplicate and little used materials, compacting the storage facilities, and fore-edging books is currently underway. Each of these procedures is time consuming and inconvenient to staff and users. Fore-edging, that is shelving the books on the front edge, is especially wasteful because bindings are appreciably weakened by the process; and since the books' spines are not visible, locating and servicing the collection becomes several times more exhaustive to staff. The proposed Library Sixth Stack Addition would alleviate the present crowded conditions and improve the operating efficiency of the entire library. The project's planned 63,000 NASF would accommodate about 1,050,000 volumes and provide approximately 150 closed reading carrels.

The Library Sixth Stack Addition has been a high priority campus request in each of the last three years' capital budget requests and has been supported by the State Board of Higher Education but has been deferred by the General Assembly and the Governor for lack of funds. The square footage of the Library Sixth Stack Addition request has been increased by 50% from last year's FY 1979 request to emphasize the seriousness of the library book storage situation. The Library stacks are now so crowded that the campus administration has been asked to find leased space to alleviate the situation until a more permanent solution (new stack addition) can be obtained.

The Library Sixth Stack Addition is programmed to contain the following types and amounts of space:

Room Type and USOE Code	NASF in Proposed Addition
Office (310)	500
Reading/Study Rooms (410)	3,300
Stack (420)	59,200
TOTAL	63,000

This project is planned for completion by the fall of 1981. The total estimated project cost is $5,861,700 of which $5,776,500 will be required for authorization in FY 1980 and the remainder in FY 1981. The estimated total project cost (by budget category) and the amount requested for FY 1980 are as follows:

	Estimated Total Project Cost	Required for Authorization in FY 1980	Required for Authorization in FY 1981 and Beyond
Basic Building Cost (Including Fixed Equipment and Professional Fees)	$5,669,500	$5,669,500	-0-
Funds to Complete Bond-Eligible Buildings	-0-	-0-	-0-
Equipment	85,200	-0-	$85,200
Utilities	107,000	107,000	-0-
Planning (Included in Basic Building Cost Above)	(257,800)	(257,800)	-0-
TOTAL	$5,861,700	$5,776,500	$85,200

There will be no release of space upon completion of this project.

PILOT TRAINING FACILITY

Estimated Total Project Cost	$197,600
Estimated Bond-Eligible Funds Required in FY 1980	197,600
Total Non-State Funding for which the Project is Eligible	-0-
Estimated Non-State Funding	-0-
Gross Square Feet	4,500
Net Assignable Square Feet	4,400
Building Efficiency	98%

This project has been given a high priority by the campus administration because of the badly deteriorated condition of the existing Pilot Training Facility which this project will replace. The building area now occupied by Pilot Training for its academic program in Aviation was constructed in 1945. The area is the lean-to building attached to Hangar #1. This hangar was originally erected in Grady, Arkansas during World War II. It was dismantled and shipped to the University of Illinois-Willard Airport and re-erected. The building is essentially a metal lean-to on a concrete slab. The building has been upgraded (on a temporary basis and remodeled to furnish minimum facilities. The facilities are rapidly deteriorating and need replacement. The walls are poorly insulated, the roof leaks, the heating is poor, and the air conditioning is minimal.

Deterioration due to aging and weather damage has occurred to the point where current educational functions are seriously jeopardized. Instructor personnel are not being protected from leaking structures, and expensive electronic flight simulators ($300,000) are being damaged from moisture and furnace residues. Instructors' and students' lives are endangered by the potential for severe electrical shock which could occur from the operation of electrical equipment in an area having water collecting on the floor from the leaking roof. The present space is also extremely energy wasteful and must be corrected in consideration of energy conservation.

This small request is intended as a stop-gap measure to meet the Pilot Training Program's most critical space needs. Two additional phases of this project are anticipated for funding in later years.

This first phase project will be of low-cost construction (concrete block with a flat roof) and will provide the following types and amounts of space:

Room Type and USOE Code	NASF in Proposed Project
Instructional Lab. (210)	1,100
Office (310)	3,300
TOTAL	4,400

This project is planned for completion by the Fall of 1980. The total estimated project cost is $197,600 and the full sum will be required for authorization in FY 1980. The estimated total project cost (by budget category) is as follows:

	Estimated Total Project Cost	Required for Authorization in FY 1980	Required for Authorization in FY 1981 and Beyond
Basic Building Cost (Including Fixed Equipment and Professional Fees)	$197,600	$197,600	-0-
Funds to Complete Bond-Eligible Buildings	-0-	-0-	-0-
Equipment	-0-	-0-	-0-
Utilities	-0-	-0-	-0-
Planning (Included in Basic Building Cost Above)	(13,400)	(13,400)	
TOTAL	$197,600	$197,600	$ -0-

Planning

Life Sciences Teaching Laboratory - $418,000

This project will provide space needed to teach the basic undergraduate courses of the School of Life Sciences at one location. The facility is intended to be a unified teaching laboratory building designed to encompass laboratory instruction in all areas of the Life Sciences. In addition to providing much needed laboratory space, the facility is programmed for maximum interaction among the laboratory activities of the several Life Sciences Departments and will provide the opportunity for space consolidation, program coordination and educational experimentation.

The concept of physical interaction among the Life Science disciplines at the undergraduate laboratory level represents a new and exciting approach to large-scale education of students. It is presently planned to conduct the laboratory instruction portion of approximately 55 separate Life Sciences courses in the new facility. Fruition of this facility would provide the University of Illinois with a unique opportunity for leadership in modern laboratory teaching and would also alleviate the expensive problem of continually remodeling archaic and unsuitable space into wet laboratories for the teaching of Life Sciences.

This project has gained an even greater urgency during the past few years as a result of the tremendous increase in the number of students in the area of Life Sciences, primarily pre-professional students (pre-med., pre-dental, pre-vet., etc.). These students are exerting extraordinary pressure in course enrollments and use of facilities, and from all appearances, this "bulge" will not decrease over the coming years. While Life Sciences enrollment may reach a steady state in the near future, that steady state far exceeds the current potential to provide proper instructional laboratory space for the teaching of Life Sciences to the current majors in this area.

This project is programmed to contain the following types and amounts of space:

Room Type and USOE Code	NASF in Proposed Addition	
	Wet	Dry
Classroom (110)	--	3,710
Instructional Laboratory (210,215)	34,890	--
Office (310, 315, 350)	--	6,680
Animal Quarters (570)	--	720
Greenhouse (580, 585)	--	4,000
TOTAL	34,890	15,110

This project will satisfy the most pressing space needs of the School of Life Sciences by providing space for conducting the consolidated instructional program described in the preceding narrative. Based on current enrollment projections for 1980, a future building request (perhaps a second phase to this project) of approximately 30,000 NASF will eventually be needed to fully meet the space requirements of the School of Life Sciences.

It is anticipated that the School of Life Sciences will have the following projected enrollments when this project is completed and fully occupied:

	FTE					Headcount		
	F-S	J-S	Beg Grad	Adv Grad	Total	Beg Grad	Adv Grad	Total
Botany	120	69	14	18	221	17	22	39
Entomology	38	30	15	23	106	19	26	45
Life Sciences	395	244	24	38	701	60	44	104
Microbiology	65	216	34	50	365	18	39	57
Physiology	134	181	34	45	394	38	52	90
Zoology	118	178	20	37	353	27	53	80
	870	918	141	211	2140	179	236	415

Upon completion of this project, Harker Hall (16,720 NASF) will be vacated by Life Sciences, and this 100-year-old building will be razed. Additionally, 1204 W. Oregon (2,628 NASF) will be reassigned after space is remodeled and reassigned in the Natural History Building following the completion of the Life Sciences Teaching Laboratory.

The total planning cost, including the initial steps in construction document development, is estimated to be $418,000. It is anticipated that funds for constructing this building will be included in the FY 1981 capital budget request.

Engineering Library Stack Addition - $275,900

This Stack Addition, together with the remodeled Transportation Building, will provide library space for all students in the College of Engineering, except for those in the Department of Physics, as well as provide an interdisciplinary research center for information storage and retrieval. This project will be done in conjunction with the College of Engineering remodeling to be requested in FY 1981 to provide the total facilities for the Engineering Library. The College of Engineering remodeling requested in FY 1980 is intended to clear the Transportation Building for the anticipated FY 1981 remodeling and construction.

The new construction for which planning funds are being requested will be a stack addition to the Transportation Building. This "addition to an existing facility" approach will allow improved utilization of existing College of Engineering space and yet will overcome the problem of older buildings not having the floor loading capability to support a book stack facility. The requested funds are for planning both the stack addition and the remodeling of the existing building.

The College of Engineering at Urbana-Champaign is one of the country's largest and most distinguished centers of engineering education and research. With a total enrollment of over 4,000 including 1,200 graduates, the College's library space is grossly inadequate. The present facility offers seating space for only 99 students and book storage for approximately 80,000 volumes, while required adequate seating space currently approximates over 1,000 stations and the book collection is expected to reach over 200,000 volumes by 1980. A substantial portion of the engineering collection has already been transferred to the book stacks in other buildings where they are relatively inaccessible to the engineering students and faculty. Based upon current needs, there is a total space deficiency of 41,621 NASF in the Engineering Library.

In addition to providing the much needed Library facilities, this building is programmed to house a research center on information storage and retrieval that will be jointly operated by the Coordinated Science Laboratory, Graduate School of Library Science, the Department of Computer Science, and the Department of Electrical Engineering. It is the intent of this center to develop sophisticated electronic equipment and methods for storing and retrieving informational materials so that newer methods of information management may be explored and applied to modernize this and other library operations. The proposed facility, including remodeling, is programmed to contain the following types and amounts of space:

Room Type and USOE Code	NASF in Proposed Addition
Stack (420)	22,615
TOTAL NASF New Construction Only	(22,615)
Reading (410)	23,000
Service and Office (310, 315, 350, 440)	3,500
Office (Information Retrieval) (310, 315, 350)	3,600
Classroom (110)	1,000
Lounge (650)	900
TOTAL NASF Remodeling	(32,000)
TOTAL	54,615

Upon completion of this project, 4,432 NASF being used for stack collection in Altgeld Hall will be used to relieve the congestion in the Mathematics Library and 12,174 NASF In Engineering Hall will be reassigned to non-library units.

The total planning cost of both the proposed addition and the remodeled existing building, including the initial efforts in construction document development, is estimated to be $275,900. It is anticipated that funds for constructing this addition and for remodeling the existing building will be included in the FY 1981 capital budget request.

Law Building Addition - $315,300

The Law Building Addition has had a long history of requests dating back to the University's 1967-69 biennial request, but has either been deferred for lack of funds or funds have been approved but not released. Most recently, in reviewing the University's FY 1976 capital budget request, the Illinois Board of Higher Education indicated that expansion of legal education on this campus should be deferred until the then forthcoming Master Plan IV was completed. Because the project's scope is directly dependent upon how the educational program was defined in the Master Plan IV recommendations and how the definition relates to the Urbana-Champaign campus, only planning funds were requested in FY 1977. This request was approved for FY 1977 by the 79th General Assembly but was vetoed by the Governor. The project had been planned through the working drawing stage, but it was concluded that the project as represented in the working drawings was no longer completely viable. Therefore, the current request reflects law education expansion as the Urbana-Champaign campus believes it should be relative to Master Plan IV and the University of Illinois. Also, there would be a modest increase of 120 to 150 professional law students at the Urbana-Champaign campus. Accommodating the program as envisioned will include expansion of the Law Library and additional office space to meet existing deficiencies and new staff requirements for the expanded program.

The proposed Law Building Addition is programmed to contain the following types and amounts of space:

Room Type and USOE Code	NASF in Proposed Addition
Classroom (110)	5,890
Office (310, 315, 350)	11,195
Library (410, 420, 440)	27,055
Lounge (650)	1,800
Lockers (690)	770
TOTAL	46,710

No space will be vacated by the College of Law upon completion of this Addition.

The Law Building Addition with the existing Law Building was programmed to meet the space needs of the projected student enrollment in the College of Law, assuming a maximum student enrollment mix as follows:

FTE						Headcount			
F-S	J-S	Prof	Beg Grad	Adv Grad	Total	Prof	Beg Grad	Adv Grad	Total
--	--	750	16	3	769	750	15	5	770

The total planning cost, including initial efforts in construction document development, is estimated to be $315,300. It is anticipated that funds for constructing this proposed addition will be included in the FY 1981 capital budget request.

Nuclear Reactor Laboratory, Phase II - $145,000

The Nuclear Reactor Laboratory is an interdisciplinary facility, administered by an interdepartmental committee, primarily for the training of students majoring in Nuclear Engineering. The Laboratory is also used by the Departments of Chemistry and Chemical Engineering, Physiology and Biophysics, Physics, and various other engineering departments for specialized research and instructional activities.

The Illinois TRIGA reactor was upgraded in power level by a factor of 10 in 1968-69 (funded by the National Science Foundation, the Atomic Energy Commission, and the University) and its use is growing rapidly in volume and sophistication. Even prior to the upgrading, the Nuclear Engineering Program and the demand for reactor use by other departments and programs increased steadily. This has now resulted in extreme congestion of equipment in the present Nuclear Reactor Laboratory.

The State of Illinois is vitally involved in the study and use of nuclear energy. This is demonstrated by the presence of the Argonne National Laboratory, the National Accelerator Laboratory at Weston, seven Nuclear Power Plants, and a sizable nuclear industry. The Nuclear Engineering Program at the Urbana-Champaign campus was developed to assist and nourish the new field of Nuclear Engineering. In the sixteen years since the establishment of the Nuclear Engineering Program, it has grown equal in prestige to the programs at the Massachusetts Institute of Technology, the University of Michigan, and the University of California (Berkeley). If this program is to maintain a high standard of excellence, it must have adequate research and supporting space. The need for further research in the field of nuclear power has never been greater with the energy shortage that is being experienced. The long range energy potential involving nuclear power is tremendous, but it will take considerable research to realize the full potential of nuclear power. We have already delayed too long in moving forward in this critical area of energy research.

The requested facility, the first of a two-phase addition, was originally included in the University's 1967-69 biennium capital budget request. Schematic drawings were completed and a proposal was submitted to the National Science Foundation for a matching grant of $635,000. After review of the proposal, the National Science Foundation indicated its ability to fund the grant for construction. Because the project was not approved by the Board of Higher Education for the 1967-69 biennium, however, the grant application was reluctantly withdrawn by the University in February 1968.

This project was requested in the University's 1969-71 biennial capital budget request and again in the FY 1976, FY 1977, FY 1978, and FY 1979 capital budget requests, only to be denied all five times by the Board of Higher Education. This first phase project is not planned to meet the total needs of the Nuclear Engineering Program. Only the most critically needed research and support areas are being requested at this time with the less demanding space to be requested in FY 1985. The project is programmed to provide the following types and amounts of space:

Room Type and USOE Code	NASF in Proposed Addition	
	Wet	Dry
Classroom (110)	--	300
Non-Class Laboratories (250, 255)	--	8,798
Office (310, 315)	--	3,062
TOTAL		12,160

The Nuclear Reactor Laboratory Phase II with the existing Nuclear Reactor Laboratory is programmed to accommodate the following projected enrollments of the Nuclear Engineering Program:

FTE Enrollment					Headcount		
F-S	J-S	G1	G11	Total	Grad 1	Grad 11	Total
-0-	5	37	45	87	34	47	81

The total planning cost, including the initial efforts in construction document development, is estimated to be $145,000. It is anticipated that funds for this proposed Phase II construction will be included in the FY 1981 capital budget request.

Auditorium Roof Replacement - $72,000

This project involves the complete replacement of the domed roof of the Auditorium. The building was originally constructed in 1908, prior to the existence of comprehensive building codes. As a result, the facility is in substantial violation of current codes, and flammable materials are common in the structure. In addition, the metal roof dome has deteriorated to the extent that further repairs cannot be made. The gutter sections of this building have also deteriorated to the point that further soldering of joints is useless and only temporary repairs can be made. As a result, water is leaking into the building, causing interior damage to the plastered ceiling and walls. The construction will include the complete replacement of all wooden structural members with fireproofed metal framing and non-combustible roof and ceiling material, plus related mechanical and electrical changes.

The funds requested in FY 1980 are for planning of the project with construction funds to be requested in FY 1981. Planning funds are being requested in order to design the new roof system and related mechanical and electrical changes required. Approximately $720,000 will be needed to complete the project.

Equipment

These funds will allow the departments to equip the newly remodeled space resulting from the remodeling projects. Although considerable existing equipment will also be utilized at each of these locations, the below-listed funds are needed to complete the equipping of the remodeled space involved. A more detailed explanation of the remodeling involved is given in the Remodeling-Rehabilitation section.

Remodeling Project	Department Involved	Funds Requested
College of Engr. Remod	General & Mech. Engr.	$75,000
Space Realignment, Renewal & Replacement (SR^3)		(296,000)
Animal Room Improve.- Burrill Hall	Life Sciences	49,000
Morrill Hall Remodel.	Life Sciences	50,000
Krannert Perf. Arts Center	Dance & Theater	25,000
David Kinley Hall- Room 114	Classroom	6,000
Visual Arts Laboratory	Art & Design	75,000
Col. of Vet. Med.- S.A.C.	Vet. Med.	91,000

Utilities

Central Supervisory Control Center - $390,000

This request for $390,000 is to provide funds to connect the master control of the Central Supervisory Control Center to an additional 12 to 15 campus buildings. A feasibility engineering study of supervisory control centers had indicated that the University should install a central control system capable of providing the control needs for all the buildings on the campus and accommodating their occupants to give the most efficient, economical, and reliable environmental conditions available.

A computerized control center can collect and monitor any type of data. Scientific laboratory experiments can even be connected to a central panel and efficiently controlled with a maximum of safety and security. Any abnormal condition would be immediately detected and appropriate action taken where necessary.

The FY 1975 budget provided engineering funds for the project, and the FY 1976 budget provided $300,000 for installation of the master control console for the entire campus and cable into eight campus buildings. The funds approved for FY 1979 will provide the funds to connect the master control to an additional 24 to 30 buildings. When the buildings are added to the system, the University will realize a 14% to 25% reduction in utility cost in each building connected. This saving will "pay back" the cost of the improvements in five years. Benefits will be measured in terms of increased utility efficiency, decreased man-hours expended in operation and maintenance, and increased savings in terms of reduced power, steam and labor costs. The University has already experienced savings of approximately 10% in buildings that are controlled by installations made possible with FY 1976 funds. The installation of additional control points in the original eight buildings will bring the energy savings up to the 14% to 25% initially estimated. The funds approved in FY 1976 were expended where they would provide the most immediate savings rather than completely controlling a smaller number of buildings. This approach will be followed until all buildings that can feasibly be controlled by the Central Supervisory Center are connected. Then additional controls will be installed in each building to attain the full potential of the system. Additional phases (2,264,000) will be requested in future years until all of the major buildings are part of this system.

Library Sixth Stack Addition - $107,000

This request represents the cost for the planning and construction of the utility improvements related to the Library Sixth Stack Addition. The project involves additions and/or connections to the electrical, steam, potable water, air conditioning, and storm and sanitary sewers. The electrical service is the most extensive utility need as it involves 4,160 volt delta service which requires approximately 500 lineal feet of duct run,

three manholes and 700 lineal feet of high voltage cable. The other utilities require only minor extensions from the existing Library. The total cost of the project has been estimated at $107,000 with all the funds required in FY 1980.

Condensate Return System - $188,000

Steam is produced at the Abbott Power Plant for heating, air conditioning and process needs on the campus. This steam is transported through many miles of tunnel and building piping, heat elements, heat exchanges and process devices. Since economical operation of the power plant depends upon the ability to recycle the condensate to the boiler as feedwater, it is desirable to improve the system which returns the condensate. The existing condensate system has a restriction in the middle which reduces the ability to return the treated water to the power plant. This restriction can be overcome by either increasing the line capacity or increasing the pressure in the existing return system. The most economical solution consists of replacing approximately 4,300 feet of an existing 4-inch return line with a new 6-inch line, which will increase that line capacity approximately 40 percent. The total cost of improving the return system is $188,000. Since it would not be possible to phase this program the total amount, $188,000 will be required in FY 1980.

Water Main Extension (SE) - $34,000

This project involves the installation of approximately 3,500 feet of 12-inch water main for improved water service to the Orchard Downs Housing area and to the southeast campus area. It is proposed that a new connection be made to the Northern Illinois Water Corporation main near the corner of Race Street and Windsor Road. This new connection has been previously recommended by the University consulting engineers to improve the general campus fire protection and water quality.

Because of anticipated design problems, only engineering funds are requested by FY 1980 with the actual construction of the project to be requested in FY 1981. The total project cost is estimated at $277,000.

Site Improvements

Pennsylvania Avenue Street Improvement - $363,000

This project was initially listed as Phase III of the original Peabody and Pennsylvania Street improvements project. However, following the completion of the Intramural-Physical Education Building, the volume of traffic on Pennsylvania Avenue between Goodwin and Sixth Streets has been much higher than anticipated in the original project. Therefore, the original Phases II and III have been interchanged, so that this portion of the total project is now Phase II. Phase I has been completed with funds from the FY 1975 capital budget.

This project involves paving and lighting Pennsylvania Avenue from Sixth Street to Goodwin Avenue. This portion of Pennsylvania Avenue is presently an oiled dirt road and the maintenance costs are very high. Since the University owns all of the land on the north side of the street and the south side is owned by a cemetery, the University will have to provide all of the project funds.

Intramural Athletic Redevelopment of the Fields - $47,500

This request will complete the area formerly known as Stadium Terrace. In past years, approximately two-thirds of the Stadium Terrace area has been improved for use as athletic fields. This request is to provide for the regrading, seeding, and drainage improvements of the north one-third of the total area. This work will complete the intramural complex for football, soccer, and softball fields to meet the current demands of the intramural program.

Campus Site Improvements - $50,000

This project proposes the redevelopment of several areas to reduce maintenance and improve the appearance of the location. The funds requested this year will be used for two years. The first is the Gregory Grave Memorial site, located between Altgeld Hall and the Administration Building. This will be corrected by developing walks and paved areas. The second area is the service drive between Lincoln Hall and Gregory Hall. This project will improve the parking layout and allow for additional hard surface improvements.

Land

Life Sciences Teaching Laboratory Land - $136,000

This request is for funds to acquire the balance of land needed as a site for the proposed Life Sciences Teaching Laboratory. The site for this building is adjacent to the recently completed Medical Sciences Building. The University has been acquiring land in past years to have a site for this building. These funds would complete the property acquisition for this site. This request is for two small parcels of land on Goodwin Avenue. Although the two properties involve only 2,515 square feet of land area, the estimated cost is high because of the present commercial use of the properties.