University of Illinois

BUDGET REQUEST FOR OPERATING AND CAPITAL FUNDS

FISCAL YEAR 1982

PREPARED FOR PRESENTATION TO THE
BOARD OF TRUSTEES
SEPTEMBER 18, 1980

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PREFACE

Earlier budget discussions with the Board of Trustees have focused on priorities, various background issues, the broad range of program needs, and on alternative funding levels from the State.

The present obligation is to build a budget request which identifies the most pressing needs of the University, moves the academic programs forward, and honors the need for prudent stewardship of scarce State resources.

From the outset of the budget discussions, we have stressed that improved compensation for faculty and staff members must be the number one priority. We reaffirm that priority in FY 1982. Given the University's weak competitive position in faculty and staff compensation, we cannot be content to maintain the status quo; the challenge is to improve our competitive position and to achieve parity with the best.

The specific goal, articulated for the past several years, is to achieve at least third place in total compensation among Big Ten universities.

While compensation is the top priority, it is <u>not</u> our sole priority. We must provide for essential price increases, energy costs, and library requirements. Recovery of budget deficiencies, including funds for the operation and maintenance of the physical plant and for modernization of instructional and research equipment, is essential.

You will note that proposed new program monies are sharply limited. Achievement of these recommended budget levels would enable us to respond to only a few of the more urgent program needs and priorities. I refer here, for example, to the ability to respond to changing student demand in engineering and business; urgent funding needs in veterinary medicine and law; the Extended Day program in Chicago; improved support levels for graduate fellows; completion of the fourth year in the expanded dental class size; and the very major and crucial item, replacement of federal capitation funds in medicine.

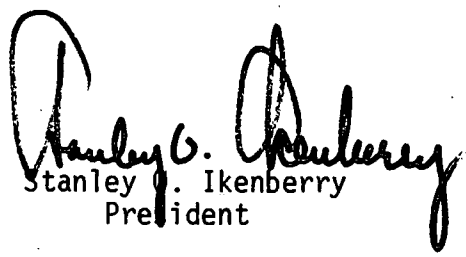
Prudent reflection of these basic needs results in a total budget request some 13.5 percent above the support level available for FY 1981.

The added emphasis on compensation results in a slight increase (six-tenths of one percent) above the comparable figures for the prior two years.

The capital budget request presented for approval by the Board reflects the priorities and funding levels identified in the July Preliminary Budget Request, with minor technical adjustments. The regular capital budget request has been sharply reduced from past years' requests, in response to the need to develop a more realistic plan for capital development within the State. As in FY 1981, a special capital request for energy conservation and fuel conversion projects and a separate request for continued funding of the Food for Century III program will again supplement the basic request for building and remodeling projects.

In sum, the budget discussions of earlier months bring us to the point at which we place before you our best recommendations and request your considered judgment and action. Although this step represents the apparent culmination of the long, internal budget-building process, it signals the beginning of the new process of review and analysis of the needs of the University by the Board of Higher Education, the General Assembly, and the Governor. We welcome this new beginning and intensive review, for it presents a unique opportunity to interpret the importance of the University of Illinois to the people of our State and nation.

I recommend your approval of the budget request with the confidence that the operating programs and capital projects it contains reflect the most urgent needs of the University, and, if granted, will contribute to a substantial strengthening of the University of Illinois.



Stanley O. Ikenberry
President

TABLE OF CONTENTS

PART I

INTRODUCTION TO THE OPERATING AND CAPITAL BUDGET REQUESTS

FISCAL YEAR 1982

FY 1982 OPERATING BUDGET REQUEST

FY 1981 in Perspective

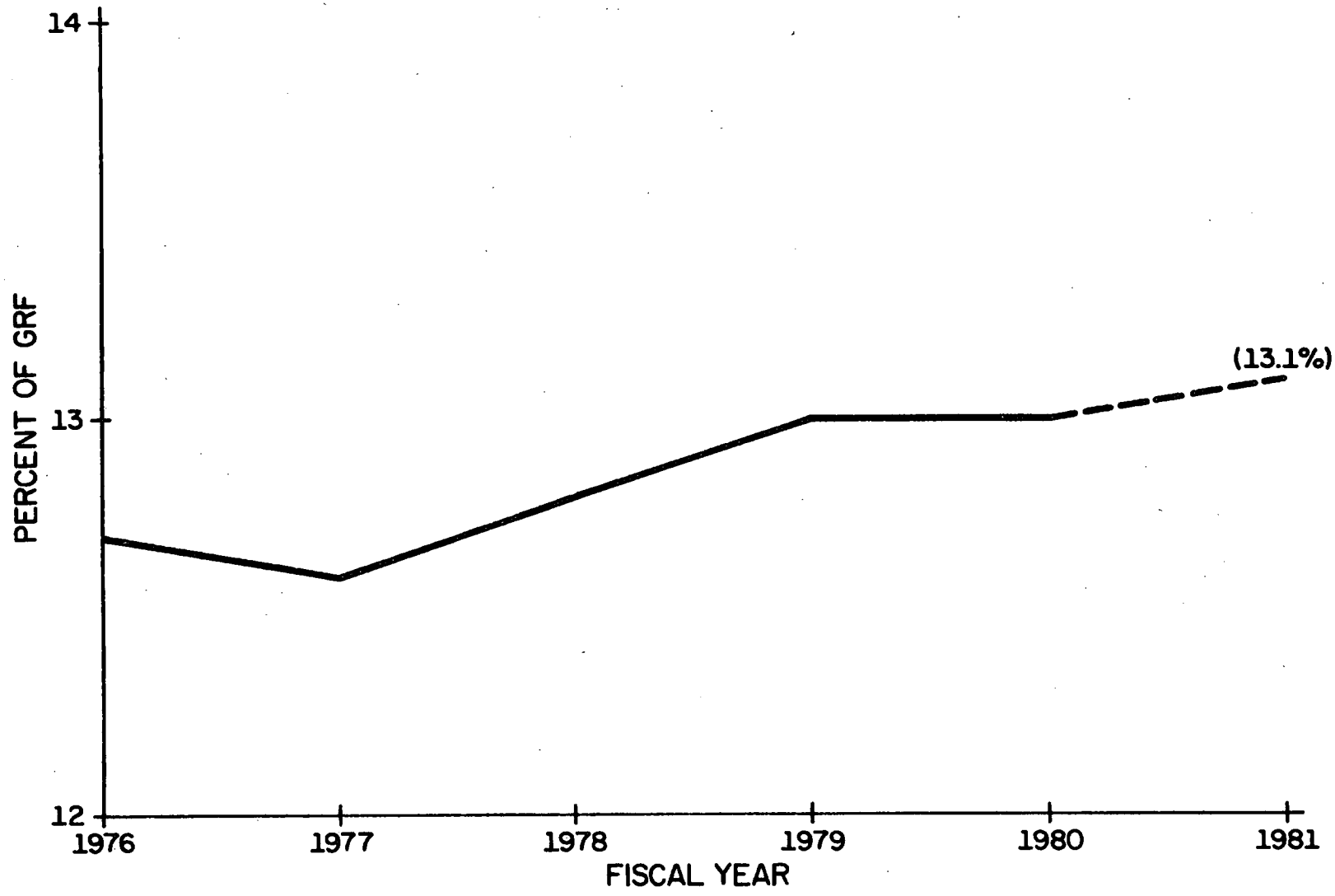
The first priority in allocating resources during the decade of the 1970's has been to maintain competitive faculty and staff salaries. As a result, funds available for non-personnel expenses tended to receive a lower priority, creating deficiencies in the operation and maintenance of the physical plant, in instructional and research equipment, and in library acquisitions. Even with this focus on faculty and staff compensation, the University's competitive position within the Big Ten fell from sixth in FY 1972 to ninth in FY 1978. Although most independent assessments of the University's academic programs place them among the very best in the nation and consistently among the top three in the Big Ten, the inability to move compensation levels to a comparable position threatens to weaken the academic quality of the University, especially in areas in which the competition is the strongest.

Fortunately, the latter part of the 1970's and the beginning of the 1980's have produced some encouraging evidence that the serious effects of financial stringency of the 1970's have been recognized by public policy makers. It is possible that steps will be taken to overcome deficiencies from the prior decade. For example, after falling to the lowest point in the decade in 1977, the percentage of State General Revenue funds allocated to higher education has risen gradually from 12.6% in 1977 to 13.1% in 1980, as displayed in Figure 1.

Incremental funds received by the University of Illinois for each of the past three years reflect a comparable pattern as demonstrated in Figure 2. For the period FY 1972 through 1978, the University's annual increase in incremental funds averaged 5.9 percent of the preceding year's base. For the past three fiscal years, that increase has averaged 10.1 percent. The University received funds to grant the highest average salary increases in the Big Ten in FY 1979, the second highest in FY 1980 and, we hope, to equal the average Big Ten increase in FY 1981. In recognition of the deficiencies which had accumulated in the 1970's, funds were provided to begin the recovery process in the areas of equipment deficiencies and operations and maintenance, and in FY 1979 and FY 1980, special price increase funds were made available for library acquisitions. And finally, between

FIGURE 1

PERCENT OF GENERAL REVENUE FUNDS ALLOCATED TO HIGHER EDUCATION



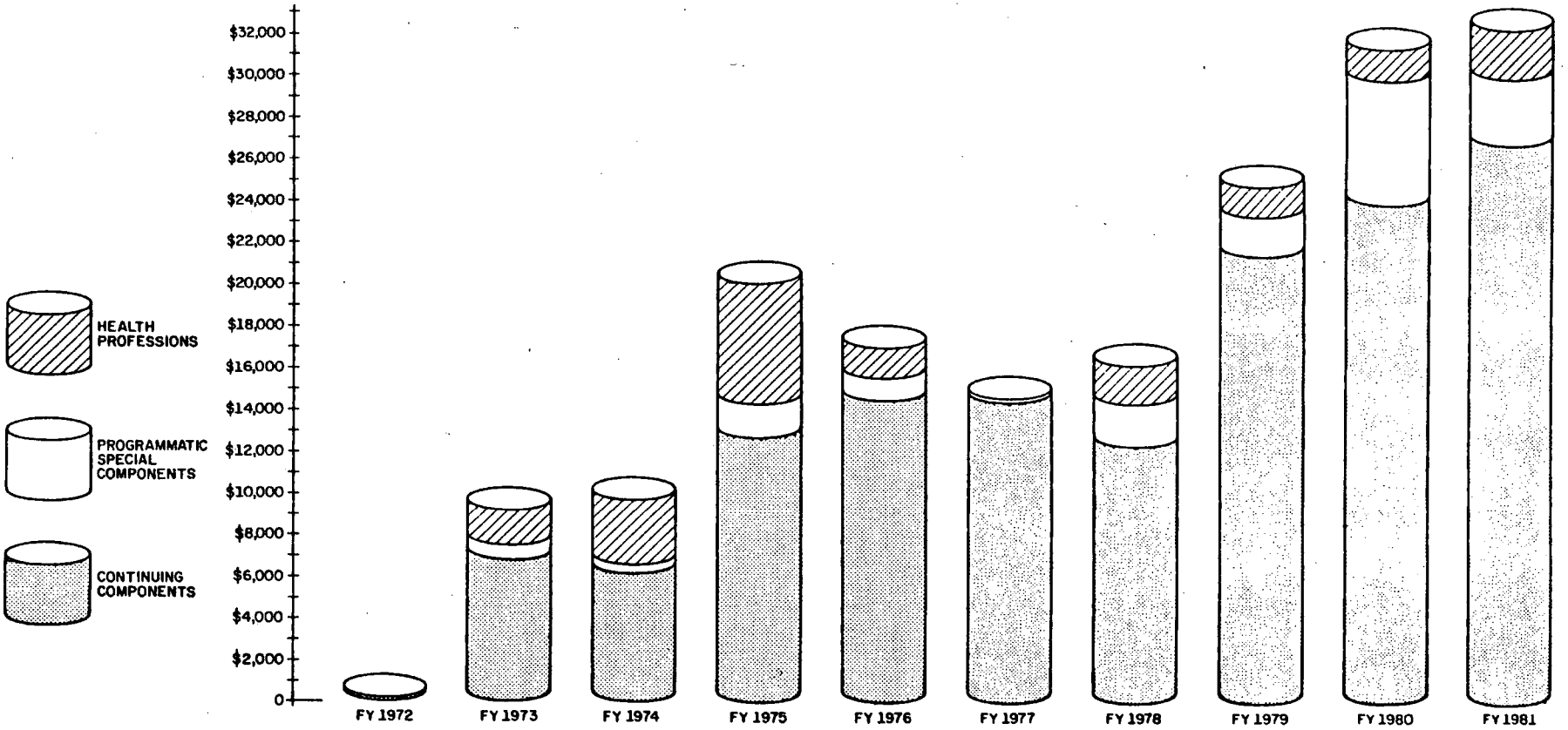
SOURCE: GOVERNOR'S BUDGET FOR EACH FISCAL YEAR
FY 1980 ESTIMATED DATA
FY 1981 GOVERNOR'S BUDGET

FIGURE 2

FY 1972-81 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 1972	FY 1973	FY 1974	FY 1975	FY 1976	FY 1977	FY 1978	FY 1979	FY 1980	FY 1981[1]
PREVIOUS YEAR'S BASE	$178,901.0	$179,061.1	$188,698.0	$198,381.5	$218,424.5	$235,375.1	$250,019.4	$265,925.8	$290,681.4	$321,158.3
NET INCREMENT	160.1	9,233.8	9,683.0	20,043.1	16,950.7	14,644.3	16,140.0	24,755.6	31,279.3	32,391.9
NET INCREMENT AS A PERCENT OF PREVIOUS YEAR'S BASE	0.1%	5.2%	5.1%	10.1%	7.8%	6.2%	6.5%	9.3%	10.8%	10.1%
CONTINUING COMPONENTS	160.1	6,859.8	6,191.3	12,680.0	14,230.7	14,488.0	12,347.1	21,422.9	23,803.4	26,840.1
PERCENT OF TOTAL INCREMENT	100.0%	74.3%	63.9%	63.3%	84.0%	98.9%	76.5%	86.5%	76.1%	82.9%
PROG. & SPEC. COMPONENTS		649.1	352.5	1,586.1	1,220.0	156.3	2001.4	1,859.7	6,008.4	3,242.0
PERCENT OF TOTAL INCREMENT		7.0%	3.6%	7.9%	7.2%	1.1%	12.4%	7.5%	19.2%	10.0%
HEALTH PROFESSIONS		1,724.9	3,139.2	5,777.0	1,500.0		1,791.5	1,473.0	1,467.5	2,309.8
PERCENT OF TOTAL INCREMENT		18.7%	32.4%	28.8%	8.8%		11.1%	6.0%	4.7%	7.1%



[1]BASED ON THE ALLOCATION OF THE GOVERNOR'S BUDGET

FY 1978 and 1981 some modest additional funds were made available for the most urgent academic program efforts.

These reversals of earlier trends suggest recognition on the part of Illinois policy makers that quality programs must be sustained. Although progress toward recovery has been steady, much remains to be done if we are to offer compensation levels commensurate with the University's quality and thereby attract and retain the best faculty and staff members at the University of Illinois.

As the 1980's began, the optimism created by the positive steps just noted had to be tempered by the awareness that many of the effects of earlier financial difficulties remained, and that much more had to be accomplished before the effects of that stringency could be removed and compensation levels made fully competitive.

The outcome of the FY 1981 operating budget cycle, completed when the Governor signed the University's appropriations legislation in mid July, can be viewed as continuing some of the progress which began at the close of the 1970's, while at the same time leaving uncorrected some of the erosion from earlier years. On the positive side are these accomplishments for FY 1981:

1. For higher education in total, the share of General Revenue Funds available has grown slightly from the FY 1980 level to 13.1 percent (see Figure 1).

2. For the University of Illinois, the total incremental funds provided in FY 1981 represent 10.1 percent of the preceding year's base--the second highest increase in the past decade (see Figure 2). The FY 1980 increase of 10.8 percent included a special increment of $2.6 million specifically earmarked for the Division of Services for Crippled Children (DSCC). Without this special increment, the FY 1980 increase would have been 9.9 percent.

3. Significant amounts were provided for continuing the progress toward elimination of deficiencies in operation and maintenance in the physical plant and instructional and research equipment deficiencies. A total of $1.4 million was made available for the O & M deficiency, and $650,000 for the equipment deficiency in FY 1981.

4. In addition, $3.2 million was provided for expanded and improved programs in FY 1981. This represented the second highest incremental amount in the past decade (see Figure 2). If the $2.6 million special allocation for the Division of Services to Crippled Children is removed from the FY 1980 totals, the FY 1981 increment for programmatic improvements is within $200,000 of being the highest for the decade.

5. In combination with the conversion of the Abbott Power Plant at Urbana-Champaign from oil to natural gas (funded internally by the University), sufficient funds were provided for utilities price increases so that it appears now that the utilities funding base for FY 1981 may be adequate to meet energy needs.

On the other hand, several less positive aspects of the FY 1981 budget process must be recognized:

1. While it appears we may not have lost ground on the compensation issue in FY 1981, neither will we improve our below average competitive position. As outlined in further detail in the Compensation section of this document, the Governor has expressed his firm commitment to work with higher education representatives to derive a plan by which compensation for Illinois universities can be brought to more competitive levels--a commitment which provides the basis for some degree of optimism for FY 1982, inspite of the disappointment in FY 1981.

2. The FY 1981 budget fails to provide funds beyond the general price increase amount of 7 percent for library acquisitions. This action especially affects the University of Illinois Library, where foreign publications, technical and specialized materials, journal holdings, and other costly acquisitions must be maintained more extensively than at other libraries.

3. Persistent inflation during FY 1980 affecting all segments of society, continued to erode the purchasing power of the incremental funds available to the University. Inflation blunts the impact of deficiency recovery funds received in the past, and lengthens the time required for real progress to be made. Inflation is a nationwide problem, by no means restricted to Illinois. Its effects must be accounted for, however, before the problems of past years can be eliminated.

In short, the outcome of the FY 1981 budget process can be seen in several different lights. Viewed from the perspective of the 1970's, the FY 1981 budget was the most successful of the entire decade. In comparison with the very recent past, FY 1981 can be seen as continuing the progress began in FY 1979 and extended in FY 1980. Measured against what ultimately must be accomplished, FY 1981 must be seen as only partially successful. Some funds were provided for deficiency elimination, and some measure of program funds were received. The inability to continue progress toward improvement of our competitive position in faculty and staff compensation means that FY 1981 cannot be viewed as a genuine success.

Issues for FY 1982

The major budgetary issues which confront the University in FY 1982 continue. Employee compensation must be improved. This has been and will continue to be the University's number one priority. Priority will also be given to elimination of equipment and O and M deficiencies; providing adequate price increases in a period of inflation; and attaining funds for essential academic program improvement.

Perhaps the most central budgetary issue for FY 1982 will be helping those who must make decisions on the level of funding for the University understand that unless each of these priorities is met in a balanced approach, the overall position of the University will not be strengthened. It is unrealistic to think that each of these priorities can be fully met in any single year. Likewise, it is imprudent to single out only one priority for attention, at the expense of all others. Even with competitive compensation levels, top quality faculty and staff members cannot be attracted to an institution whose facilities have deteriorated, whose equipment is outmoded and obsolete, or which cannot offer the opportunity for program improvement in the most critical academic areas.

The task for FY 1982 thus becomes the development of a budget request which will provide for the appropriate balance in each of these areas for progress, and yet a budget which remains within the bounds of realism with respect to overall funding.

The FY 1982 Operating Budget Request

Within this context, the FY 1982 Operating Budget Request is presented in Table 1. Table 2 identifies specific individual programs which are included in the request. The FY 1982 request is highlighted by the following:

--A compensation improvement request totaling 10.8 percent, and which calls for compensation increases of 9 percent, plus an additional 1.8 percent to provide for "catch-up" funding to insure progress toward the third place ranking within the Big Ten.

--$4 million in deficiency funding, with $2.2 million for operations and maintenance and $1.8 million for equipment deficiencies.

--$6.4 million for programmatic expansion and improvement, which includes nearly $2 million for the replacement of Federal capitation funds for the health professions. Without these replacement funds, current efforts at both the Medical Center and the College of Veterinary Medicine will require reduction.

--Price increases of 20 percent for utilities; 15 percent for library acquisitions; 9 percent for Worker's Compensation; and 8 percent for other goods and services.

TABLE 1
Fiscal Year 1982 Operating Budget Request
(Dollars in Thousands)

I. CONTINUING COMPONENTS		
A. Compensation Improvement		$27,334.9
1. Annualization of FY 1981 Increases	$ 3,231.8	
2. Compensation Increases (9%)	20,085.9	
3. Compensation Catch-Up (1.8%)	4,017.2	
B. Price Increases		9,041.3
1. Regular (8%)	3,435.9	
2. Utilities (20%)	4,889.0	
3. Library Acquisitions (15%)	716.4	
C. Operations and Maintenance, New Areas		417.8
1. Medical Center, including Affiliated Hospitals	74.8	
2. Urbana-Champaign	343.0	
D. Workers' Compensation		101.6
Subtotal		($36,895.6)
% FY 1981 Base[1]		10.44%
II. PROGRAMMATIC COMPONENTS		
A. Recovery of Deficiencies		4,000.0
1. Operations and Maintenance	2,200.0	
a. Chicago Circle	(200.0)	
b. Medical Center	(570.0)	
c. Urbana-Champaign	(1,430.0)	
2. Equipment	1,800.0	
a. Chicago Circle	(445.0)	
b. Medical Center	(340.0)	
c. Urbana-Champaign	(1,015.0)	
B. New, Expanded and Improved Programs[2]		6,393.8
1. Chicago Circle	900.0	
2. Medical Center	3,009.5	
3. Urbana-Champaign	2,281.9	
4. General University	202.4	
Subtotal, Programmatic Components		($10,393.8)
% FY 1981 Base		2.94%
III. SPECIAL FUNDING/SERVICES COMPONENTS		
A. County Board Matching		328.7
B. Telenet Expansion		46.6
C. Cooperative Extension Service Video		48.0
D. Fire Services Institute		219.3
E. Library Computer System		63.7
Subtotal, Special Components		($ 706.3)
% of FY 1981 Base		.2%
Grand Total FY 1982 Request[3]		$47,995.7
% of FY 1981 Base		13.58%

[1] FY 1981 Base = $353,550.2, excluding retirement

[2] Individual Programs in this section are identified in Table 2

[3] Excludes retirement

TABLE 2
FY 1982 NEW, EXPANDED, AND IMPROVED PROGRAMS
(Dollars in Thousands)

ACCESS TO UNIVERSITY PROGRAMS

I.	Facilitating Access to University Programs		$2,082.3
	A. Extended Day - Chicago Circle	$ 447.0	
	B. Response to Changing Student Demand	761.3	
	Chicago Circle ($140.0)		
	Urbana-Champaign ($621.3)		
	C. Support for Graduate Fellowships	220.0	
	Chicago Circle ($ 50.0)		
	Urbana-Champaign ($170.0)		
	D. College of Medicine Enrollment - Medical Center	140.4	
	E. College of Dentistry Enrollment - Medical Center	513.6	
II.	Replacing Federal Capitation Funds		2,150.6
	A. Medical Center	1,960.0	
	B. Urbana-Champaign	190.6	
III.	Providing High Demand Programs for Specified Clientele		668.5
	A. B. S. in Nursing - Completion Program Quad Cities - Medical Center	135.5	
	B. AHES Programs - Medical Center	260.0	
	C. Public Service Programming in Region 2 (Metropolitan Chicago) - General University	120.0	
	D. State/University Liaison Program General University	40.0	
	E. B. S. in Business Administration - Chicago Circle	113.0	
	Subtotal, Access to University Programs		($4,901.4)

ENHANCEMENT OF UNIVERSITY PROGRAMS

I.	Expanding Research Programs		492.4
	A. Urban Transportation Center - Chicago Circle	50.0	
	B. Institute for the Humanities - Chicago Circle	50.0	
	C. Jane Addams Center - Chicago Circle	50.0	
	D. Surface Water Quality - Urbana-Champaign	150.0	
	E. Research Program on Illinois Industry - Urbana-Champaign	150.0	
	F. Gerontology Center - General University	42.4	
II.	Improving Program Quality		700.0
	A. College of Veterinary Medicine - Urbana-Champaign	500.0	
	B. College of Law - Urbana-Champaign	200.0	
III.	Improving Support to Programs		300.0
	A. Teaching Improvement Program - Urbana-Champaign	100.0	
	B. Graduate Research Board - Urbana-Champaign	200.0	
	Subtotal, Enhancement of University Programs		($1,492.4)
	University Total		$6,393.8
	Chicago Circle $ 900.0		
	Medical Center 3,009.5		
	Urbana-Champaign 2,281.9		
	General University 202.4		

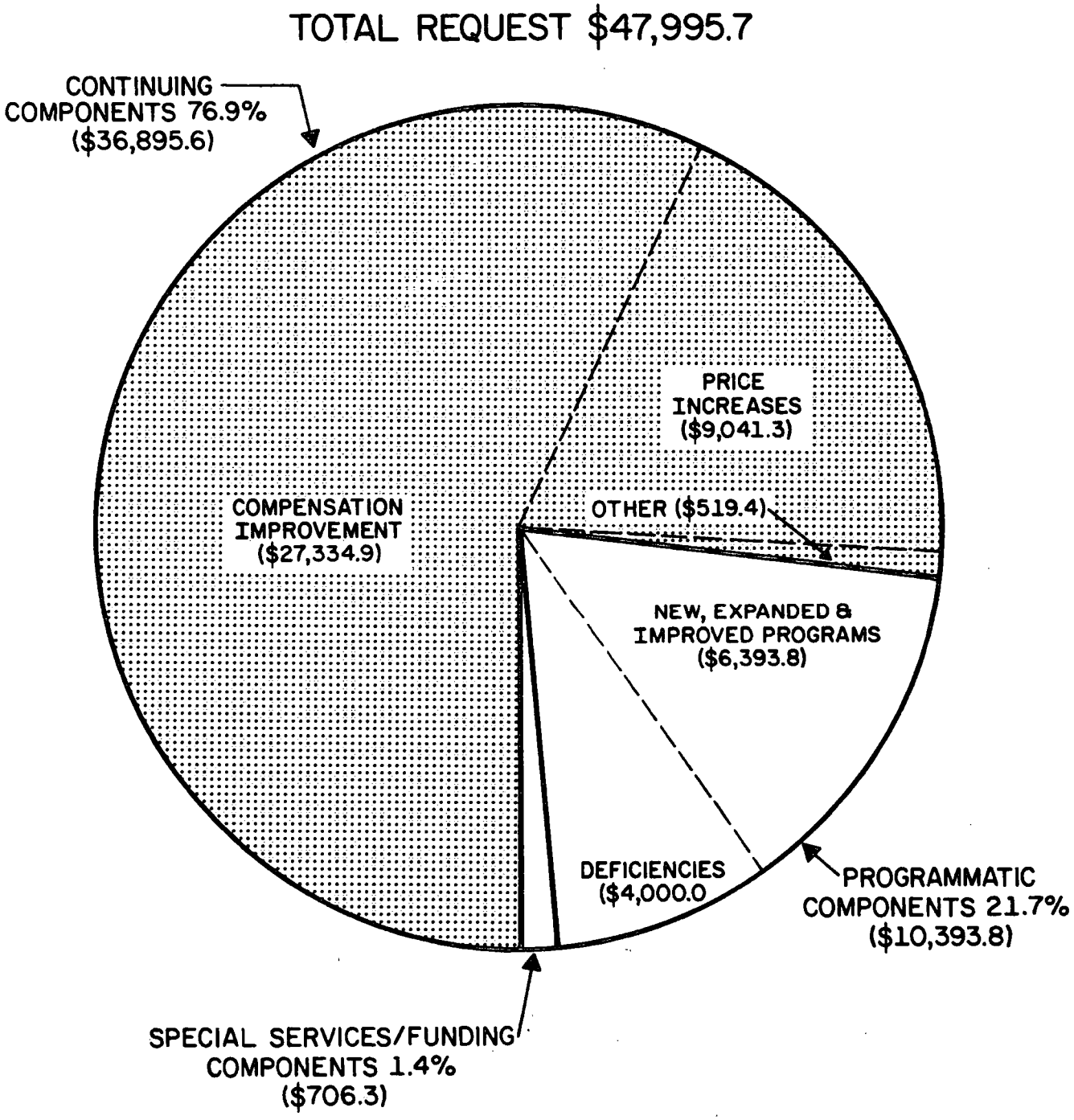
The operating budget request for FY 1982 totals $47,995,700 and represents a 13.58 percent increase over the FY 1981 operating budget base. By comparison the FY 1981 request was 12.93 percent above the prior year and the FY 1980 request was 12.89 percent above FY 1979. This slight but nonetheless significant increase is attributable to several factors: the necessity to provide for substantial compensation improvement; the need to make genuine progress toward the elimination of O and M and equipment deficiencies; the growing likelihood that all Federal capitation awards for health professions will be eliminated by FY 1982, requiring $2 million in replacement funds to maintain the current operations; and the need to continue to recognize the funding requirements of energy-related commodities and services.

The composition of the FY 1982 request reflects the significance of these needs as depicted in Figure 3. More than three-quarters of the total request (76.9 percent) is devoted to the Continuing Components--those items required to maintain the current level of University operations, without expansion of programs. Of the Continuing Components, nearly three-quarters of the incremental funds sought (74.1 percent) are for Compensation Improvement. This increment alone accounts for more than half of the total request (57 percent) and demonstrates once again that compensation improvement is the highest priority for FY 1982. Nearly one-quarter of the Continuing Components (24.5 percent) is comprized of Price Increase increments for goods and services, utilities and library acquisitions. The remaining 1.4 percent is divided between O & M Support for New Areas and for Worker's Compensation.

In addition to Continuing Components, 21.7 percent of the total request is allocated to Programmatic Components. Of that amount, well more than one-half (61.5 percent) is provided for New, Expanded and Improved Programs. The balance (38.5 percent) is provided for Deficiency Recovery in Operation and Maintenance and in equipment. Finally, a very small percentage of the total request (1.4 percent) is devoted to Special Services and Funding requests for activities which are outside the core operations of the University's teaching, research and public service functions. As has already been stressed, each of these components requires attention in FY 1982.

FIGURE 3

COMPONENTS OF THE FY 1982 OPERATING BUDGET REQUEST (DOLLARS IN THOUSANDS)



Sources for Additional Funding

Just as the University must seek adequate General Revenue fund support, the soundness of the financial base depends on balanced strength in all fund sources. Tuition revenues as a fraction of instructional costs, for example, have declined from a high of some 25 percent in FY 1973 to an estimated 19 percent in FY 1980. The relative level of tuition at the University of Illinois in comparison with other Big Ten universities has declined during the same period. Data for FY 1981 suggest likely continuation of that trend this year.

In combination with the apparent willingness of the General Assembly and the Governor to respond to the General Revenue fund deficiencies from prior years, the gradual restoration of the earlier position of tuition revenues in the overall financial base of the University of Illinois appears important also.

In July 1980, the Board of Trustees held very preliminary discussions about the possible rationale which might underlay any restructuring of tuition charges. More detailed discussions will be held during the coming months. The FY 1982 tuition levels need not follow precisely the same calendar required for approval of the Budget Request. Careful discussion of tuition options will be required before any final action can be recommended.

Nonetheless, the University's need to create a balanced financial base warrants the careful study of tuition policy alternatives in the budget planning process for FY 1982. A recommendation for some form of tuition increase beyond the adjustment recommended by the Illinois Board of Higher Education may be expected.

The Enrollment Picture

A review of fall term enrollment data for the University with actual data for FY 1978-1980, and projections through FY 1985 is set forth in Table 3. Both headcount and full-time-equivalent data are provided. The picture presented by these data is one of relative enrollment stability. For the Urbana-Champaign campus, the present outlook is for the enrollment demand to continue to remain relatively high for the foreseeable future. It is expected to remain significantly above the campus' ability to accommodate those who wish to attend. The data in Table 3 do reflect a planned enrollment reduction to 24,700 undergraduate and 6,900 graduate and professional students (headcount) by FY 1984. This results from the campus'

TABLE 3

FALL TERM ON-CAMPUS HEADCOUNT ENROLLMENT
UNIVERSITY OF ILLINOIS

	FY 1978		FY 1979		FY 1980		FY 1981		FY 1982		FY 1983		FY 1984		FY 1985	
CAMPUS AND LEVEL	HDCNT	FTE	HDCNT	FTE	HDCNT	FTE	HDCNT	FTE	HDCNT	FTE	HDCNT	FTE	HDCNT	FTE	HDCNT	FTE
Chicago Circle																
Lower Division	10,073	9,615	9,644	9,184	9,375	8,835	9,100	8,366	8,970	8,195	8,830	8,024	8,675	7,853	8,520	7,682
Upper Division	7,925	7,084	7,682	6,857	7,661	6,749	7,450	6,734	7,340	6,597	7,220	6,460	7,100	6,322	6,980	6.184
Total Undergrad	17,998	16,699	17,326	16,041	17,036	15,584	16,550	15,100	16,310	14,792	16,050	14,484	15,775	14,175	15,500	13,866
GI	1,816	1,197	2,242	1,461	2,423	1,578	2,590	1,886	2,785	2,012	3,000	2,138	3,225	2,265	3,450	2,392
GII	849	663	773	585	826	630	860	754	905	811	950	868	1,000	920	1,050	972
Total Grad	2,665	1,860	3,015	2,046	3,249	2,208	3,450	2,640	3,690	2,823	3,950	3,006	4,225	3,185	4,500	3,364
Total - Chicago Circle	20,663	18,559	20,341	18,087	20,285	17,792	20,000	17,740	20,000	17,615	20,000	17,490	20,000	17,360	20,000	17,230
Medical Center - Excluding Residents and Interns																
Lower Division	456	451	353	350	293	290	327	323	327	323	327	323	320	317	310	307
Upper Division	1,241	1,213	1,382	1,353	1,375	1,338	1,366	1,329	1,377	1,340	1,385	1,347	1,390	1,351	1,390	1,350
Total Undergrad	1,697	1,664	1,735	1,703	1,668	1,628	1,693	1,652	1,704	1,663	1,712	1,670	1,710	1,668	1,700	1,657
Professional	1,960	1,948	2,014	2,009	2,013	2,007	2,079	2,073	2,128	2,122	2,142	2,136	2,152	2,146	2,170	2,164
GI	447	372	481	399	556	403	585	428	587	429	599	437	607	442	607	442
GII	215	175	248	205	230	181	223	178	223	178	223	178	223	178	223	178
Total Grad	662	547	729	606	786	584	808	606	810	607	822	615	830	620	830	620
Total - for External Enrollment Reports Excludes Residents and Interns	4,319	4,159	4,478	4,318	4,467	4,219	4,580	4,331	4,642	4,392	4,676	4,421	4,692	4,434	4,700	4,441
Residents and Interns[1]	424	424	452	452	456	456	483	483	489	489	493	493	492	492	491	491
Total - Including Residents and Interns	4,743	4,583	4,930	4,770	4,923	4,675	5,063	4,814	5,131	4,881	5,169	4,914	5,184	4,926	5,191	4,932
UC - Nursing[2]	(28)	(27)														
UC - BMS and Clinical[2]	(101)	(94)														
Total - UC[2]	(129)	(121)														
Total - for External Enrollment Reports	4,614	4,462														
Urbana-Champaign																
Lower Division	12,847	12,767	13,001	12,916	13,434	13,363	13,100	13,031	12,900	12,832	12,700	12,633	12,700	12,633	12,700	12,633
Upper Division	12,472	12,061	12,412	11,952	12,693	12,215	12,950	12.462	12,600	12,126	12,100	11,644	12,000	11,548	12,000	11,548
Total Undergrad	25,319	24,828	25,413	24,868	26,127	25,578	26,050	25,493	25,500	24,958	24,800	24,277	24,700	24,181	24,700	24,181
Law	646	644	627	625	613	609	616	612	625	621	630	626	643	639	643	639
Veterinary Medicine	334	331	339	335	340	338	359	357	364	362	377	375	390	387	403	401
Total Professional	980	975	966	960	953	947	975	969	989	983	1,007	1,001	1,033	1,026	1,046	1,040
GI	3,538	3,086	3,417	2,986	3,373	2,908	3,358	2,895	3,300	2,845	3,250	2,802	3,250	2,802	3,250	2,802
GII	3,980	3,335	3,888	3,234	3,923	3,277	3,772	3,151	3,700	3,091	3,650	3,049	3,650	3,049	3,650	3,049
Total Grad	7,518	6,421	7,305	6,220	7,296	6,185	7,130	6,046	7,000	5,936	6,900	5,851	6,900	5,851	6,900	5,851
Total - Excluding Medical Students	33,817	32,225	33,684	32,048	34,376	32,710	34,155	32,508	33,489	31,877	32,707	31,129	32,633	31,058	32,646	31,072
Nursing[2]	28	27														
BMS and Clinical[2]	101	94														
Total and Clinical[2]	129	121														
Total - for External Enrollment Reports	33,946	32,346														
GRAND TOTAL UNIVERSITY OF ILLINOIS	59,223	55,367	58,955	54,905	59,584	55,177	59,218	55,062	58,620	54,373	57,876	53,533	57,817	53,344	57,837	53,234

[1] Residents and Interns have been included in external enrollment reports for FY 1978, 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 FY 1977 counted at the campus that awards their degrees.

desire to reduce enrollments to a level more consistent with the overall level of State funding it presently is receiving. Such a drop has actually been encouraged by recent Board of Higher Education enrollment policy statements, and no penalty in the form of reduced funding is anticipated for such a reduction.

For the Medical Center, the major item is the replacement of Federal capitation funds, along with the final year of dentistry enrollment increases begun in FY 1979.

For the Chicago Circle campus, headcount enrollments are expected to stabilize at 20,000. FTE enrollment may decrease over the five year period from the current 17,792 to approximately 17,230 in FY 1985. Within this overall change, there will likely be more pronounced shifts in the mix of students, as full time undergraduate students decline and graduate students increase. Change in the mix of part time and full time students is also anticipated. The success of the Extended Day program and its ability to serve students not otherwise served by the typical 8:00 a.m. to 5:00 p.m. class day suggests that Chicago Circle may also experience a relatively stable enrollment for the next several years.

CAPITAL BUDGET REQUEST

As was the case for the FY 1981 request, the University's FY 1982 Capital Budget Request is comprised of three principal components: Regular Capital Improvements, Energy Conservation/Fuel Conversion, and Food for Century III. The "Regular" Capital Improvements component consists of those projects necessary to support the University's ongoing programmatic activities. The Energy Conservation/Fuel Conversion component is a special group of projects designed to help control growing utilities expenditures. Projects included in the Food for Century III component are those construction and planning projects necessary at this time to permit the eventual completion of this program over the next several years.

The University's regular Capital Budget Request for FY 1982 is $29,175,600. This request contains projects designed to: (1) maintain the structural integrity of the existing facilities, (2) renovate facilities to accommodate changing academic programs, (3) upgrade building systems, and (4) provide special purpose facilities which cannot be obtained through building renovation.

The most urgent need, however, continues to be additional stack space for the University library. Accordingly, the highest priority project in the University's FY 1982 Capital Budget Request is the full funding of the Library Sixth Stack Addition.

Table 4 presents a summary of the FY 1982 capital projects in priority order.

The Library

Planning funds have been appropriated for FY 1981 to complete the architectural and engineering work necessary to construct the Sixth Stack Addition. Although the total funding needed for the Sixth Stack was not approved for FY 1981, the planning fund appropriation demonstrates the State's recognition of the need for this facility. Given this initial support of the Sixth Stack Addition in FY 1981, full support, in the form of construction funds, is expected to be forthcoming in FY 1982. Every effort will be made to complete planning activities in time to begin construction of the Library Sixth Stack Addition in FY 1982.

TABLE 4
UNIVERSITY PRIORITIES - FY 1982 CAPITAL BUDGET REQUEST

University Priority	Campus Priority	Project	Budget Category	Project Cost	Cumulative Total	Chicago Circle	Medical Center	Urbana-Champaign
1	UC-1	Library Sixth Stack Addition	BLDG	9,577,000	9,577,000			9,577,000
2	UC-2	Library Sixth Stack Addition	UTIL	141,500	9,718,500			9,718,500
3	CC-3	SR^3	REMD	872,100	10,590,600	872,100		
4	MC-3	SR^3	REMD	1,491,000	12,081,600		1,491,000	
5	UC-5	SR^3	REMD	2,651,400	14,733,000			12,369,900
6	UC-6	SR^3 - Equipment	EQUP	175,800	14,908,800			12,545,700
7	CC-1	Library Improvements	PLAN	285,000	15,193,800	1,157,100		
8	CC-2	Relocate OAR	REMD	990,800	16,184,600	2,147,900		
9	MC-1	Pharmacy Building Remodeling	REMD	3,293,000	19,477,600		4,784,000	
10	GU-1	Electrical Upgrade - RRB	REMD	447,500*	19,925,100			
11	UC-3	English Building Remodeling	REMD	2,540,000	22,465,100			15,085,700
12	CC-5	Handicapped Remodeling	REMD	598,900	23,064,000	2,746,800		
13	UC-7	Auditorium Remodeling	PLAN	92,000	23,156,000			15,177,700
14	UC-8	Pilot Training Facility	BLDG	1,277,300	24,433,300			16,455,000
15	UC-9	Pilot Training Facility	UTIL	57,000	24,490,300			16,512,000
16	CC-3	SR^3	REMD	402,200	24,892,500	3,149,000		
17	CC-4	SR^3 - Equipment	EQUP	320,700	25,213,200	3,469,700		
18	MC-3	SR^3	REMD	1,238,000	26,451,200		6,022,000	
19	UC-12	SR^3	REMD	2,160,600	28,611,800			18,672,600
20	UC-13	SR^3 - Equipment	EQUP	165,200	28,777,000			18,837,800
21	UC-10	Television Building Addition	PLAN	398,600	29,175,600			19,236,400

*General University Project not included in campus totals.

Realignment, Renewal and Replacement (SR^3)

The remainder of the FY 1982 regular Capital Budget Request emphasizes the University's need for Space Realignment, Renewal and Replacement (SR^3) and major remodeling projects. The need for funding of these types of projects ranks second only to the need for the Sixth Stack Addition.

An important tenet of the SR^3 concept is that for a campus as a whole, minor remodeling work will be required on an annual basis to preserve the functional and structural integrity of campus buildings. Specific projects will vary from year to year, but some remodeling and renovation must be accomplished each year. Since State funds were not appropriated for SR^3 in FY 1981, the FY 1982 needs have become greater and more urgent than usual.

Major remodeling and planning for major remodeling projects are also of high priority for FY 1982. Well over 35 percent of the University's space is 30 years of age or older. While this space is basically sound, major remodeling is necessary to meet changing program needs and improve the quality of space. Through a combination of major renovation and SR^3 remodeling efforts, it is believed that the life of the University's existing facilities can be extended almost indefinitely.

Examples of facilities which are in need of major remodeling include the English Building at Urbana-Champaign, Library at Chicago Circle, and the Pharmacy Building at the Medical Center. Major renovation projects have been developed for each of these facilities and are included in the FY 1982 request.

In some cases, it is not possible to meet physical facilities needs adequately through remodeling. Facilities that have reached advanced stages of deterioration usually cannot be restored economically. The Pilot Training Facility, requested for FY 1982, is designed to replace a unique instructional facility which is essentially worn out. The planning request for the Television Building Addition is also aimed at replacing in the future, special purpose instructional space that has deteriorated beyond repair.

Energy Conservation and Fuel Conversion

The University's Energy Conservation/Fuel Conversion program received initial support from the State in FY 1981. Funds have been appropriated for the conversion of Abbott Power Plant to burn Illinois coal and for several smaller conservation projects. Once completed, these projects will benefit the University and the State by helping to control the spiraling cost of energy.

The FY 1982 request for Energy Conservation/Fuel Conversion projects contains essentially those projects identified in the FY 1981 request for which funding was deferred. The FY 1982 request consists of forty-five energy conservation projects ($11,833,400) and three fuel conversion projects ($8,859,700). All energy conservation and fuel conversion projects have a payback period of less than 12.5 years. Table 5 presents a summary of the FY 1982 energy conservation projects in priority order and Table 6 summarizes the FY 1982 Fuel Conversion request.

As in the past, the Food for Century III request is described in a separate document.

TABLE 5
FY 1982 ENERGY CONSERVATION PROJECT PRIORITY LIST

Priority	Campus	Project	Payback	Project Cost	Cumulative Total
1	CC	Light Fixture Lens Replacement--University Hall	1.09	$ 51,000	$ 51,000
2	CC	Modify Control Systems--6 Bldgs	1.15	70,700	121,700
3	CC	Zone Radiation--3 Bldgs	2.16	61,900	183,600
4	CC	Heat Reclaim Systems--5 Bldgs	2.19	822,500	1,006,100
5	CC	Modify Domestic Hot Water System	2.42	61,900	1,068,000
6	UC	Animal Room Improvement--Large Animal Clinic	2.44	291,000	1,359,000
7	MC	Upgrade Fan System--Medical Science Addition	2.51	234,000	1,593,000
8	MC	Upgrade Heating Controls--3 Bldgs	2.60	81,000	1,674,000
9	UC	Ventilation Turndown--Gregory Hall	2.87	13,500	1,687,500
10	UC	Domestic Hot Water--Control--2 Bldgs	3.05	12,500	1,700,000
11	MC	Install Heat Recovery Systems--Biolog Resources Lab	3.22	138,000	1,838,000
12	UC	Temp Control Remodeling and Replacement--12 Bldgs	3.28	966,500	2,804,500
13	CC	Install Variable Air Volume Systems--2 Bldgs	3.34	546,900	3,351,400
14	MC	Building Equipment Automation--Peoria Sch of Med	3.36	108,000	3,459,400
15	MC	Upgrade Fan System--Library	3.39	99,000	3,558,400
16	UC	Conversion to Central Fan Syst--Armory	3.47	69,000	3,627,400
17	UC	Reheat Systems--Zone Control--14 Bldgs	3.59	351,000	3,978,400
18	UC	Install Air Curtains Above Entryways--3 Bldgs	3.84	39,000	4,017,400
19	UC	Summer--Winter Ventilation Rate--3 Bldgs	3.96	34,500	4,051,900
20	MC	Install Heat Recovery System--Dentistry	4.11	40,000	4,091,900
21	UC	Conversion to Zoned Ventilation--Arts/Design Bldg	4.34	165,000	4,256,900
22	UC	Radiation--Zone Control--7 Bldgs	4.63	88,500	4,345,400
23	UC	Pipe Insulation--Electrical Engineering Bldg	4.72	28,500	4,373,900
24	UC	Reheat Systems--Zone Control--11 Bldgs	4.77	239,000	4,612,900
25	UC	HVAC Retrofit--2 Bldgs	4.78	384,000	4,996,900
26	UC	Domestic Hot Water--Control--4 Bldgs	5.09	20,500	5,017,400
27	UC	Steam Absorption Machine Control--4 Bldgs	5.17	130,000	5,147,400
28	UC	Domestic Hot Water Control--7 Bldgs	5.24	53,000	5,200,400
29	UC	Radiation--Zone Control--28 Bldgs	5.30	444,500	5,644,900
30	UC	Animal Room Ventilation Improvements--3 Bldgs	5.99	686,000	6,330,900
31	UC	Air Conditioning System Revision	6.02	218,000	6,548,900
32	UC	Reheat Systems--Zone Control--4 Bldgs	6.16	123,000	6,671,900
33	UC	Animal Room Ventilation--3 Bldgs	6.36	321,500	6,993,400
34	MC	Modify Fan System--Dentistry	6.58	128,000	7,121,400
35	UC	Radiation Zone Control--28 Bldgs	6.85	499,500	7,620,900
36	UC	Domestic Hot Water--23 Bldgs	7.09	341,500	7,962,400
37	UC	HVAC Retrofit--3 Bldgs	7.20	581,500	8,543,900
38	UC	Heating System Remodeling--9 Bldgs	7.20	1,450,000	9,993,900
39	UC	Indoor Lighting--2 Bldgs	7.43	162,500	10,156,400
40	MC	Install Heat Recovery System--EEI	9.30	181,000	10,337,400
41	MC	Roof Insulation and Repairs--Pharmacy	10.20	248,000	10,585,400
42	MC	Rehabilitate Radiator System--1919 W. Taylor	10.38	303,000	10,888,400
43	MC	Modify Chilled Water and HVAC Systems--RSM	10.38	313,000	11,201,400
44	MC	Window Replacement H. A.	12.02	234,000	11,435,400
45	UC	Indoor Lighting--4 Bldgs	12.43	398,000	11,833,400

TABLE 6
FY 1982 FUEL CONVERSION PROJECTS
PRELIMINARY PRIORITY LIST

Priority	Campus	Project	Project Cost	Cumulative Total
1	MC	Convert Boilers to Coal Burning, Steam Plant	$4,186,000	$4,186,000
2	CC	Interconnect Two Chicago Power Plants	4,407,700	8,593,700
3	UC	Conversion from Oil to Gas - Willard Airport	266,000	8,859,700

PART II

FISCAL YEAR 1982 OPERATING BUDGET REQUEST

INTRODUCTION

Table 7 presents an historical summary of the Board of Trustees Operating Budget requests from FY 1975 through FY 1981. As discussed in Part I, the overall FY 1981 increase of 10.1 percent in appropriated funds continued the improvement achieved in the past three years, with the 10.1 percent increase equalling the second highest annual increase in the past decade. Several special actions taken by the General Assembly combined to make the FY 1980 percentage increase an especially high one. For example, $2.6 million was appropriated for special assistance to the Division of Services for Crippled Children (DSCC); $401,000 was provided in a supplemental appropriation last fall to alleviate the effects of flood damages at the Urbana-Champaign campus; and another $508,000 for DSCC, initially vetoed by the Governor, was provided as the result of an override of the veto. If these special assistance items are excluded, the FY 1980 percentage increase is 9.9 percent. Overall, the steady progress in increasing the percentage of incremental funds over the past three years is one of the most encouraging aspects of the University's budget experiences.

The FY 1982 Operating Budget Request is presented in three major parts: Continuing Components; Programmatic Components; and Special Services/Funding Components. Table 8 presents the full FY 1982 Operating Budget Request outlined by major category. Table 9 identifies the individual programmatic and special services/funding requests for each campus. The request for Retirement funding for the University of Illinois is presented separately in Appendix II.

CONTINUING COMPONENTS

The items requested in this category are those which are essential to the maintenance of <u>current</u> levels of operation for the University. The following individual requests are included within the Continuing Components: 1) compensation improvement for continuing staff; 2) price increases for goods and services; 3) operation and maintenance support for new areas; and 4) Worker's compensation.

TABLE 7
History of the Operating Budget Action FY 1975 - 1981
University of Illinois
(Dollars in Thousands)

	(1) Previous Year's Base[1]	(2) University Request	(3) IBHE Rec.	(4) Allocation of Gov. Budget	(5) Legislative Action	(6) Governor's Action	(7) Final	(7 ÷ 1) % Final of Previous Base	(7 ÷ 2) % Final Of System Request
FY 1975	$198,381.5	$22,800.2	$16,743.0	--	$27,523.0	$20,043.0	$20,043.1	10.1%	87.9%
FY 1976	218,424.5	32,343.5	23,899.4	--	29,375.8	16,950.7	16,950.7	7.8	52.4
FY 1977	235,375.5	26,780.3	21,233.3	$10,064.5	15,950.7	10,172.5	14,644.3	6.2	54.7
FY 1978	250,019.4	31,036.0	23,305.4	16,551.6	17,423.0	15,906.3	15,906.3	6.4	51.3
FY 1979	265,925.8	34,106.6	26,415.5	24,568.1	24,799.6	24,755.6	24,755.6	9.3	72.6
FY 1980	290,681.4	37,473.3	28,320.4	27,550.8	31,279.3	31,279.3	32,188.6[2]	11.1[2]	85.9
FY 1981	321,158.3[3]	41,086.4[4]	33,830.6	32,391.9	34,688.3	32,391.9	32,391.9	10.1	78.8

[1]Excludes Retirement and IBA

[2]Includes non-recurring funds of $401.0 for flood damages, and $508.3 for Division of Services for Crippled Children override; percentage without these funds is 10.8.

[3]Excludes non-recurring funds of $401.0 flood damage, $508.3 DSCC override. FY 1981 funding no longer includes an appropriation (of $802.4) for Refunds.

[4]BOT printed request of $40,445.4 plus DSCC price and salary increases of $641.0.

TABLE 8
Fiscal Year 1982 Operating Budget Request
(Dollars in Thousands)

I. CONTINUING COMPONENTS		
A. Compensation Improvement		$27,334.9
1. Annualization of FY 1981 Increases	$ 3,231.8	
2. Compensation Increases (9%)	20,085.9	
3. Compensation Catch-Up (1.8%)	4,017.2	
B. Price Increases		9,041.3
1. Regular (8%)	3,435.9	
2. Utilities (20%)	4,889.0	
3. Library Acquisitions (15%)	716.4	
C. Operations and Maintenance, New Areas		417.8
1. Medical Center, including Affiliated Hospitals	74.8	
2. Urbana-Champaign	343.0	
D. Workers' Compensation		101.6
Subtotal		($36,895.6)
% FY 1981 Base[1]		10.44%
II. PROGRAMMATIC COMPONENTS		
A. Recovery of Deficiencies		4,000.0
1. Operations and Maintenance	2,200.0	
a. Chicago Circle	(200.0)	
b. Medical Center	(570.0)	
c. Urbana-Champaign	(1,430.0)	
2. Equipment	1,800.0	
a. Chicago Circle	(445.0)	
b. Medical Center	(340.0)	
c. Urbana-Champaign	(1,015.0)	
B. New, Expanded and Improved Programs[2]		6,393.8
1. Chicago Circle	900.0	
2. Medical Center	3,009.5	
3. Urbana-Champaign	2,281.9	
4. General University	202.4	
Subtotal, Programmatic Components		($10,393.8)
% FY 1981 Base		2.94%
III. SPECIAL FUNDING/SERVICES COMPONENTS		
A. County Board Matching		328.7
B. Telenet Expansion		46.6
C. Cooperative Extension Service Video		48.0
D. Fire Services Institute		219.3
E. Library Computer System		63.7
Subtotal, Special Components		($ 706.3)
% of FY 1981 Base		.2%
Grand Total FY 1982 Request[3]		$47,995.7
% of FY 1981 Base		13.58%

[1] FY 1981 Base = $353,550.2, excluding retirement

[2] Individual Programs in this section are identified in Table 9

[3] Excludes retirement

TABLE 9
FY 1982 NEW, EXPANDED, AND IMPROVED PROGRAMS
(Dollars in Thousands)

ACCESS TO UNIVERSITY PROGRAMS

I.	Facilitating Access to University Programs		$2,082.3
	A. Extended Day - Chicago Circle	$ 447.0	
	B. Response to Changing Student Demand	761.3	
	Chicago Circle ($140.0)		
	Urbana-Champaign ($621.3)		
	C. Support for Graduate Fellowships	220.0	
	Chicago Circle ($ 50.0)		
	Urbana-Champaign ($170.0)		
	D. College of Medicine Enrollment - Medical Center	140.4	
	E. College of Dentistry Enrollment - Medical Center	513.6	
II.	Replacing Federal Capitation Funds		2,150.6
	A. Medical Center	1,960.0	
	B. Urbana-Champaign	190.6	
III.	Providing High Demand Programs for Specified Clientele		668.5
	A. B. S. in Nursing - Completion Program		
	Quad Cities - Medical Center	135.5	
	B. AHES Programs - Medical Center	260.0	
	C. Public Service Programming in Region 2		
	(Metropolitan Chicago) - General University	120.0	
	D. State/University Liaison Program		
	General University	40.0	
	E. B. S. in Business Administration - Chicago Circle	113.0	
	Subtotal, Access to University Programs		($4,901.4)

ENHANCEMENT OF UNIVERSITY PROGRAMS

I.	Expanding Research Programs		492.4
	A. Urban Transportation Center - Chicago Circle	50.0	
	B. Institute for the Humanities - Chicago Circle	50.0	
	C. Jane Addams Center - Chicago Circle	50.0	
	D. Surface Water Quality - Urbana-Champaign	150.0	
	E. Research Program on Illinois Industry - Urbana-Champaign	150.0	
	F. Gerontology Center - General University	42.4	
II.	Improving Program Quality		700.0
	A. College of Veterinary Medicine - Urbana-Champaign	500.0	
	B. College of Law - Urbana-Champaign	200.0	
III.	Improving Support to Programs		300.0
	A. Teaching Improvement Program - Urbana-Champaign	100.0	
	B. Graduate Research Board - Urbana-Champaign	200.0	
	Subtotal, Enhancement of University Programs		($1,492.4)
	University Total		$6,393.8
	Chicago Circle $ 900.0		
	Medical Center 3,009.5		
	Urbana-Champaign 2,281.9		
	General University 202.4		

COMPENSATION IMPROVEMENT
($27,334,900)

The University follows well-established processes for reviewing salary and compensation levels of faculty and staff members in comparison with peer groups. These studies help to determine the relative competitiveness of the University's ability to attract and retain high quality people. For academic staff members, salary and compensation levels in the Big Ten are compared; for nonacademic staff, comparisons are made with regional employees outside the University.

The University has worked for several years toward the goals of attaining compensation levels which rank at least third among Big Ten institutions, and of achieving salary levels for nonacademic employees which are competitive with comparable employment markets outside the University. Although further efforts will be required before these goals can be achieved, the General Assembly and Governor have been responsive to them, and have provided funding increases to begin meeting them. Special salary increments for lower paid Civil Service employees were provided in FY 1978 and 1979. The University's overall salary increases for FY 1979 were the highest in the Big Ten, improving the competitiveness of faculty, staff, and nonacademic salaries among their peer groups.

Although the University's overall FY 1980 ranking in cash salary levels remained fourth in the Big Ten as displayed in Table 10, ranking in total compensation--cash salary plus fringe benefits--shows that the University's relative position among Big Ten institutions is near the bottom. As can be seen from Table 11, the University stood at ninth place in FY 1979 and moved to eighth in FY 1980, far below the third place goal. Rankings for FY 1981 are expected to continue to show the University of Illinois faculty compensation to be eighth in the Big Ten.

FY 1981 Increases for the University of Illinois

The University's FY 1981 compensation request of 9.7 percent approved by the Board of Trustees included an 8 percent salary increase component and a 1.7 percent compensation improvement component. The latter represented the annual amount needed to close the gap between the University of Illinois and the third place Big Ten institution over a three year period.

TABLE 10
RANKINGS OF AVERAGE CASH SALARY
UNIV ILLINOIS COMPARED TO ALL BIG TEN INSTITUTIONS
ALL RANKS COMBINED AND WEIGHTED TO THE
UNIVERSITY OF ILLINOIS DISTRIBUTION

Institution	FY 1979 Weighted Average Cash Salary	Rank	FY 1980 Weighted Average Cash Salary	Rank	Percent Change	Rank
Illinois	$23,249	4	$24,971	4	7.41	2
A	22,839	6	24,528	6	7.40	3
B	22,619	7	23,821	8	5.31	10
C	23,212	5	24,848	5	7.05	4
D	24,152	2	25,692	2	6.38	8
E	23,676	3	25,309	3	6.90	5
F	24,915	1	26,556	1	6.59	6
H	22,207	9	23,511	9	5.87	9
I	21,344	10	22,730	10	6.49	7
J	22,209	8	23,951	7	7.84	1
Mean Less Illinois	23,019		24,550		6.65	
Mean Big Ten	23,042		24,592		6.72	

Each year's data includes all full-time faculty whose primary responsibilities are teaching, research or public service. All salaries are reported on a nine month basis, using 0.8182 to convert Fiscal Year appointments. Each institution's salaries have been weighted to the University of Illinois distribution of faculty between 9 and 11 month appointments and by rank.

The following schools have been included: Indiana, Iowa, Michigan, Michigan State, Minnesota, Ohio State, Purdue, Wisconsin, Northwestern.

TABLE 11
RANKINGS OF AVERAGE COMPENSATION
UNIV ILLINOIS COMPARED TO ALL BIG TEN INSTITUTIONS
ALL RANKS COMBINED AND WEIGHTED TO THE
UNIVERSITY OF ILLINOIS DISTRIBUTION

Institution	FY 1979 Weighted Average Compensation	Rank	FY 1980 Weighted Average Compensation	Rank	Percent Change	Rank
Illinois	$26,690	9	$28,872	8	8.18	1
A	28,048	3	30,219	3	7.74	4
B	27,757	4	29,332	6	5.67	10
C	27,278	6	29,445	5	7.94	2
D	28,599	2	30,583	2	6.94	5
E	27,727	9	29,630	4	6.86	6
F	30,160	1	32,102	1	6.44	8
H	26,800	8	28,406	9	5.99	9
I	26,090	10	27,852	10	6.75	7
J	27,039	7	29,137	7	7.76	3
Mean Less Illinois	27,722		29,634		6.90	
Mean Big Ten	27,619		29,558		7.03	

Each year's data includes all full-time faculty whose primary responsibilities are teaching, research or public service. All salaries are reported on a nine month basis, using 0.8182 to convert Fiscal Year appointments. Each institution's salaries have been weighted to the University of Illinois distribution of faculty between 9 and 11 month appointments and by rank.

The following schools have been included: Indiana, Iowa, Michigan, Michigan State, Minnesota, Ohio State, Purdue, Wisconsin, Northwestern.

The Board of Higher Education recommended an 8 percent salary increase and an additional 1 percent for fringe benefit improvements, with the funds for those improvements going directly to the State Universities Retirement System (SURS). In his FY 1981 budget message, the Governor supported salary increases of 8 percent but included no recommendation for additional fringe benefit improvement.

During the General Assembly's consideration of higher education appropriations for FY 1981 the additional SURS funding for fringe benefit improvements was not approved, but additional monies were added to the funds available for salary increases. When sent to the Governor, the University's legislation contained funds for salary increases of 8.5 percent for the total personal services base. Given normal staff turnover, this amount would have enabled the University to grant salary increases averaging 9 percent. Unfortunately, the Governor was unable to approve the salary increase level passed by the General Assembly, and the amount was reduced to the 8 percent level contained in the Governor's original budget message. No funds were provided for additional fringe benefit improvement.

Preliminary FY 1981 Increases for the Big Ten

The formal comparative salary studies for Big Ten institutions conducted each year will not be completed for several months. Preliminary information from other Big Ten institutions, however, indicates that the salary increases will average some 9.2 percent. In response, and in an effort to avoid losing ground in compensation rankings, the University reallocated funds sufficient to bring the overall faculty and staff salary increases toward the Big Ten FY 1981 average. This was done by committing funds normally held in reserve for unexpected needs, eliminating vacant positions, or reducing base budgets in some areas. Any such effort exacts its cost and, obviously, cannot be used on a recurring basis. Yet, on a one-time emergency basis, these costs were outweighed by the critical need to avoid reversal of the gains achieved in compensation during the prior two years.

The net result was to improve by some three quarters of one percent the available salary increase levels for employees and--it appears--to stay even with the average increase of 9.2 percent in Big Ten universities.

It is not expected that the University of Illinois will improve its current position, either for cash salaries or for total compensation in FY 1981. Thus even with the special efforts to bring University of Illinois salary increases to the Big Ten average, it appears that the best the University can hope for when final rankings are known is to maintain the status quo, with no advance beyond FY 1980 rankings.

Under these circumstances, the request for compensation improvement takes on even greater significance for FY 1982. If the University is to retain the qualified faculty and staff members which have been recruited over the past several decades, and fill new openings with quality people, it must achieve compensation levels which are competitive with other top quality institutions. The goal of achieving at least third place within the Big Ten in compensation is a realistic goal and must be achieved.

The Governor's message on the occasion of the reduction in the FY 1982 salary monies indicates his keen recognition of the compensation issue and the need to strengthen the University's ability to attract and retain high quality faculty and staff members. In that message the Governor wrote,

> "It is vitally important that Illinois institutions attract and retain quality personnel to preserve academic excellence for Illinois students. In order to effectively evaluate the needs for future compensation, I am willing and committed to work with the Board of Higher Education and institutional personnel during the coming months to examine ways of achieving additional compensation increases across a multi-year period to maintain our competitive standing."

This strong statement of support from the Governor paired with encouraging evidence of General Assembly support gives some hope that the compensation improvement request will achieve an even higher priority in the FY 1982 budget process.

Nonacademic Salary Comparisons

For nonacademic employees, annual salary comparisons are made with employers outside the University which are most directly competitive for the services of the nonacademic staff. In some cases, comparisons are made with local employers; in other cases, broader comparisons are made if the market for particular employee skills is statewide or greater. It is important to understand that these are comparisons between the

the salary range midpoints for University of Illinois Step Plan grades, and identified market midpoints for comparable employment levels. The University of Illinois data do not represent actual average salaries of employees within pay grades.

The data in the table below identify selected University of Illinois grade comparisons with market midpoints:

Grade/ Location	UI FY 1980 Midpoint	Projected Market as of 9/1/80	UI FY 1981 Midpoint	% Behind Market
5 Chicago	$ 8,287	$ 9,200	$ 9,006	2.2%
5 Urbana	7,656	8,800	8,321	5.8%
14 (Both)	12,306	14,100	13,375	5.4%
19 (Both)	15,915	18,500	17,296	7.0%
33 (Both)	32,919	38,900	35,774	8.7%

The FY 1981 range midpoints for the University of Illinois, effective August 31, 1980, have been adjusted upward by 8.6 percent. This adjustment was accomplished through two procedures: one is a 4.5 percent adjustment which came from the "market movement" increase which is part of the normal operation of the step plan. The second is an additional range adjustment of approximately 4.0 percent accomplished with funds provided from internal sources within each campus. This latter adjustment, termed a "rollover," will provide more opportunities for growth within the range in future years and higher, and therefore more competitive, salaries at the time of initial employment. This step, combined with a similar rollover implemented several years ago to provide internal funds for nonacademic salaries, has further helped to reduce disparities with market salaries.

In addition to the market movement increases, a large majority of employees will receive an additional 4.0 percent step increase on their anniversary dates of employment. This combination of incremental funds plus internal funding of the "rollover" will result in actual average salary increases of approximately 9 percent for nonacademic employees. Figure 4 presents a graphic comparison of current University of Illinois range midpoints, FY 1981 range midpoints, and projected market midpoints as of September, 1980. Tables 12 and 13 provide the specific range beginning

FIGURE 4

OPEN RANGE MARKET SALARY COMPARISONS

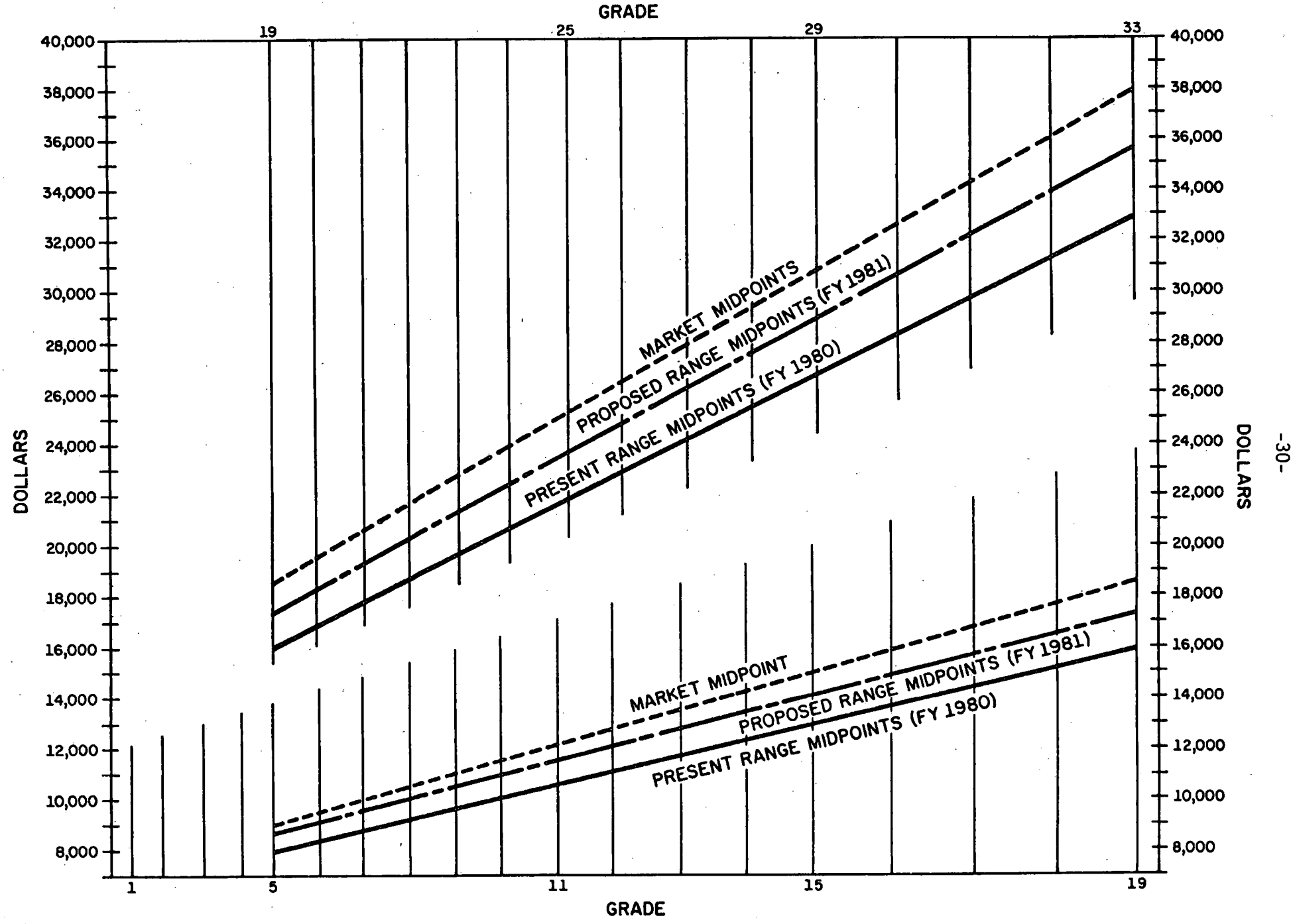


TABLE 12
FY 1980 Nonacademic Range Rates
(Ranges Effective August 19, 1979)

	Minimum Rate (Step A)		Range Comparability Rate	
	Annual @ 37½	40 Hour Rate		
Grade	Chicago	Urbana	Chicago	Urbana
1				
2	6382		7467	
3	6479		7592	
4	6764		7937	
5	7051	6514	8287	7656
6	7353	6905	8657	8129
7	7669	7273	9045	8578
8	7996	7600	9447	8979
9	8338	7951	9871	9413
10	8710	8330	10332	9881
11	9085	8750	10801	10402
12	9477	9360	11294	11154
13	9880	9790	11811	11696
14*	10273*		12306*	
15	10751		12912	
16	11279		13586	
17	11858		14330	
18	12465		15113	
19	13081		15915	
20	13757		16772	
21	14456		17661	
22	15167		18570	
23	15939		19561	
24	16748		20605	
25	17580		21682	
26	18453		22820	
27	19395		24050	
28	20365		25330	
29	21382		26678	
30	22461		28116	
31	23587		29626	
32	24774		31228	
33	26016		32919	

* Above Grade 14 the annual minimum rate for 37½ hours at Chicago differs by no more than $4.00 a year from the Urbana rate for 40 hours. A common comparability point has been based on the Urbana rates which are the ones shown.

TABLE 13
FY 1981 Nonacademic Range Rates
(Ranges Effective August 31, 1980)

	Minimum Rate (Step A)		Range Comparability Rate	
	Annual @ 37%	40 Hour Rate		
Grade	Chicago	Urbana	Chicago	Urbana
1				
2	6936		8115	
3	7043		8252	
4	7351		8626	
5	7663	7080	9006	8321
6	7991	7504	9408	8834
7	8334	7906	9829	9325
8	8691	8259	10268	9757
9	9061	8642	10727	10231
10	9467	9052	11230	10738
11	9872	9509	11736	11305
12	10297	10173	12271	12123
13	10744	10639	12836	12710
14*	11165		13375	
15	11685		14034	
16	12259		14767	
17	12887		15573	
18	13547		16425	
19	14216		17296	
20	14953		18230	
21	15710		19193	
22	16484		20182	
23	17324		21260	
24	18202		22392	
25	19106		23636	
26	20055		24801	
27	21076		26137	
28	22133		27529	
29	23237		28992	
30	24410		30555	
31	25636		32199	
32	26923		33937	
33	28273		35774	

*Above Grade 14 the annual minimum rate for 371/2 hours at Chicago differs by no more than $4.00 a year from the Urbana rate for 40 hours. A common comparability point has been based on the Urbana rates which are the ones shown.

points (Step A) and midpoints (comparability rates) for both the Chicago campuses and Urbana-Champaign for FY 1979 and 1980 respectively.

State of Illinois Code Department Comparisons

In addition to market comparisons among competing employers, salary comparisons between nonacademic employees and State of Illinois Code Departments are reviewed annually to gain a general impression of relative equity among University of Illinois employees and their counterparts in State government. Based upon data compiled by Dr. Charles Brim of the Illinois Board of Regents, the following comparisons can be made:

Salary Deficiencies Between University of Illinois Nonacademic Employees and State of Illinois Code Department Employees, FY 1977-1980

	Fall 1976	Fall 1977	Fall 1978	Fall 1979
Chicago Circle	-10.57%	-4.28%	-4.47%	-4.93%
Medical Center	-7.14%	-1.29%	-2.94%	-4.63%
Urbana-Champaign	-24.42%	-17.40%	-15.71%	-18.76%

These comparisons make no attempt to adjust salaries for regional differences in cost of living, nor for regional differences in market competition. Thus, they're most useful to gauge changes over time, rather than absolute differences in any one year. Significant improvements can be seen from the Fall of 1976 to the Fall of 1977, as special funds were made available for lower paid employees. A slight erosion of that improvement is also obvious in later years, emphasizing the need for additional progress in FY 1982.

FY 1982 Compensation Request

The FY 1982 request for compensation funds is intended to insure that progress is made toward the goal of reaching at least third place among Big Ten institutions in total compensation over the next two years. Preliminary FY 1981 salary increase information for other Big Ten institutions indicates that the increase is 9.2 percent, and that average compensation for the University of Illinois will be approximately 3.7 percent below the third ranked institution.

To close the compensation gap, the University of Illinois in FY 1982 must receive regular compensation increases which at least match the median for the Big Ten, and achieve an additional compensation increase which will help to offset the 3.7 percent gap between the University and third place in the Big Ten. The best estimate at this time is that the median Big Ten increase will be 9 percent for FY 1982. In line with the plan initiated last year for closing the compensation gap over a three year period beginning in FY 1981, a 1.8 percent additional compensation increment will be required in FY 1982 to permit the University to catch up with the third-place Big Ten institution. Thus a compensation increase totalling 10.8 percent (9 plus 1.8) is required for FY 1982.

As was the case in FY 1981, the University continues to study ways in which compensation catch-up funds might be used to provide expanded and improved fringe benefits for University employees. Table 14 outlines one possible plan for distributing additional compensation funds over various types of fringe benefits.

Appendix I contains the calculations used to arrive at the incremental amount of $27,334,900 needed to meet the 10.8 percent increase.

TABLE 14
COMPENSATION NEEDS - FISCAL YEAR 1982

COMPENSATION DEFICIENCY[1]	$1,347
SALARY DEFICIENCY[1]	338
BALANCE FOR FRINGE BENEFIT IMPROVEMENTS	$1,009

ONE POSSIBLE ALLOCATION OF $1,009 BALANCE AMONG BENEFIT AREAS:

	ADDITIONAL EMPLOYER CONTRIBUTION PER PARTICIPATING STAFF MEMBER (ESTIMATED)
LIFE INSURANCE--	
Increase Coverage to 2 Times Salary	$128
HEALTH INSURANCE--	
Pay One-half Cost for Low Option Coverage for Dependents[2]	247
Pay for Dental Insurance for Employees	33
SURVIVORS INSURANCE--	
Improve Benefit to near the Average Within Big Ten	97
DISABILITY BENEFIT--	
Improve Benefit to near the Average Within Big Ten	52
RETIREMENT BENEFIT--	
Raise Automatic Annual Increase in Retirement Annuity[3]	452
	$1,009

[1]Amount needed to achieve third place among Big Ten Institutions, based upon FY 1980 comparisons.

[2]A 10 percent higher contribution would be needed to pay for half the difference between low and high option coverage for dependents.

[3]The exact increase purchasable with $452 per staff member could only be determined by an actuarial study. The present automatic increase is 3 percent.

PRICE INCREASES
($9,041,300)

Price increases for goods and services needed for the operation of the University are based upon inflation projections. Table 15 describes the University's experience over the past half-decade with respect to price increase funds received and the inflation rate in the Consumer Price Index. Figure 5 displays this experience graphically.

Within the total range of goods and services required by the University, several specific components have in the past been singled out for differential price increases due to special factors affecting price behavior. Utilities components and library materials are examples of areas where differential price increases have been sought in the past and supported by the Illinois Board of Higher Education, the General Assembly, and the Governor. Price increases for other goods and services have been related to general inflation indices such as the Consumer Price Index.

General Price Increases - ($3,435,900)

For goods and services not subject to unusual price behavior, several estimates of FY 1982 inflation rates have been examined. Both the Data Resources, Inc., projections and the Chase Econometrics forecast have been reviewed. They project an FY 1982 Consumer Price Index increase of approximately 9.5 percent.

One component included in each of these projections was energy-related fuels such as electricity, natural gas, heating oil, and so forth, which have exhibited extreme volatility in the recent past and for which differential price increases have been provided to the University in the past. Therefore, to determine an inflation estimate for FY 1982 general price increase needs, estimated energy-related inflation increases were removed from the projections.

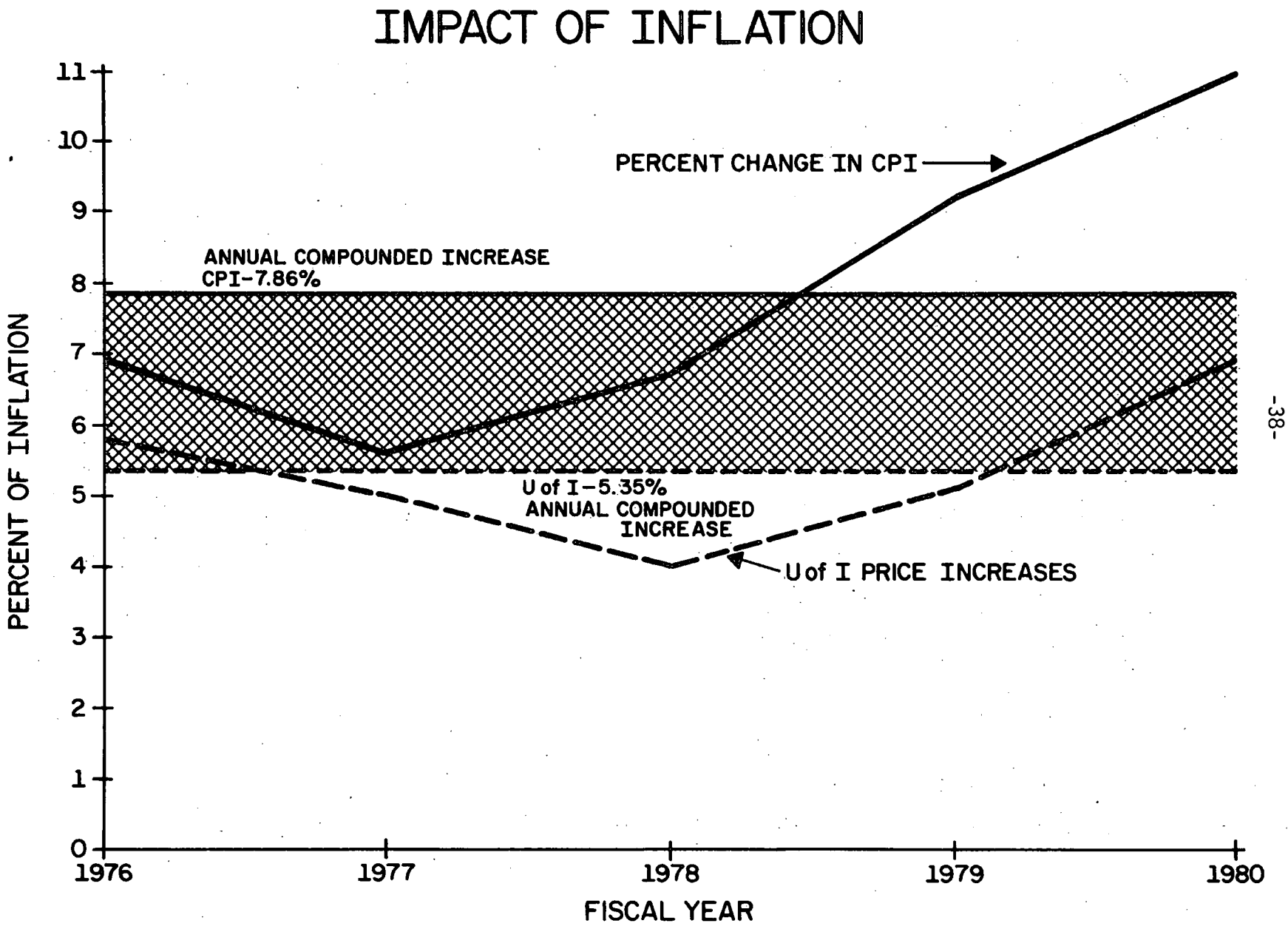
Estimation of energy-related price increases for a period twelve to twenty-four months in the future is at best an imprecise task. Both DRI and Chase project a lower rate of increase for FY 1982 than has been experienced in FY 1980, but the effects of new Federal regulations,

TABLE 15
IMPACT OF INFLATION

GENERAL EXPENSE ITEMS

Fiscal Year	% Change in CPI Less Energy	vs	U of I Price Increases (Includes General Items and Library)
FY 1976	6.9%		5.8%
FY 1977	5.6%		5.0%
FY 1978	6.7%		4.0%
FY 1979	9.2%		5.1%
FY 1980	11.0%		6.9%
Compounded FY 1976 - FY 1980	46.0%		29.8%

FIGURE 5


IMPACT OF INFLATION
PERCENT OF INFLATION
11
10
9
8
7
6
5
4
3
2
1
0
PERCENT CHANGE IN CPI
ANNUAL COMPOUNDED INCREASE
CPI-7.86%
U of I-5.35%
ANNUAL COMPOUNDED
INCREASE
U of I PRICE INCREASES
1976
1977
1978
1979
1980
FISCAL YEAR
EXCLUDES ENERGY

changing demands for various types of fuels, and so forth, make an accurate assessment impossible. Based upon the University's recent experiences with energy-related price increases and the FY 1982 economic projections noted above, it appears that a reduction from 9.5 percent to 8 percent in the amount needed for general price increases will reflect the differential price increase expected for utilities while at the same time recognizing that the exact impact of the utilities differential is impossible to determine. Thus, an 8 percent increment for general price increases will be sought for FY 1982.

In addition, beginning with the FY 1982 request, the object of expenditure "Awards and Grants" will be included in the general price increase base. This object contains funds which provide student fellowships and fee payments for fellowship winners. This object has been excluded from receiving any type of increase in the past, in effect reducing the impact of fellowship awards for the students who receive them. In order to maintain their viability, fellowships should be increased annually in recognition of increases in living costs. It is therefore appropriate that they become part of the general price increase base. For FY 1981, the Awards and Grants base totals $821,200 for the University as a whole.

Library Materials - ($716,400)

Cost increases have been unusually steep in the publishing industry for both American and foreign publications, directly affecting the costs of library acquisitions. For example, for American publishing, the price of monographs increased by 13.4 percent in 1979; and the price of periodicals is projected to increase at a rate of 13.7 percent in 1980. Prices for foreign publications have risen even faster, compounded by devaluation of the dollar against foreign currencies.

For FY 1982, current estimates from the University Library are for an inflation rate averaging 15 percent for library materials. A price increase of at least this amount will be required to permit the University to maintain the current rate of library acquisitions.

Utilities - ($4,889,000)

The unit costs of various fuels used to provide heat, light, and power to the University's campuses rose dramatically during FY 1980. For example, the Chicago campuses experienced a 42 percent increase in the cost of fuel oil, and a 27 percent increase in the unit cost of both natural gas and electricity. Likewise, the Urbana-Champaign campus experienced a 68 percent increase in average fuel oil costs, a 31 percent increase in average natural gas costs, and a 9 percent increase in the average unit cost of electricity.

These dramatic increases in energy sources could well have produced a serious University-wide utilities budget shortfall. However, through the beneficial effects of the conversion of the Abbott Power Plant at Urbana-Champaign and generally less severe winter weather than in the recent past, a shortfall was averted. The natural gas burned at Urbana-Champaign during FY 1980 was approximately one-half the price, per equivalent heating unit (BTU), of the fuel oil it displaced.

It is important to note that the gas conversion project represents only a temporary solution to the problem of soaring fuel prices. As natural gas becomes more widely substituted for fuel oil, the cost differential will decrease significantly. In fact, in the Chicago area, natural gas prices (per BTU) are virtually equivalent to prices of #6 fuel oil and are currently subject to the same variation in price.

The extreme volitility of fuel prices is expected to continue through 1982 due to 1) changes in Federal regulations, 2) the specific mix of fuel sources required by the University, and 3) local market conditions. No single economic index adequately reflects the University's utilities situation. The best current estimate of utilities requirements for FY 1982 indicates that increases of approximately 20 percent will be needed.

Appendix I provides an outline of the calculations used to determine the price increase needs.

OPERATION AND MAINTENANCE FOR NEW AREAS ($417,800)

This category includes requests for funds for operations and maintenance (O & M) costs associated with new space to be maintained by campus Operation and Maintenance Divisions. These costs vary, depending upon the type of space added and the nature of the activities conducted there. Also included in this category are operation and maintenance costs for new or remodeled space in hospitals affiliated with programs of the Medical Center.

For FY 1982, a total of $417,800 is requested. This includes $405,600 for O & M support for new campus space, and $12,200 for affiliated hospitals. The individual campus requests are summarized in Table 16 and are described below. The request for affiliated hospital funding is outlined in Table 17.

Medical Center

Convent Building - $62,600 is requested to provide for operations and maintenance support for what is known as the Convent Building, located at 2035 W. Taylor in Chicago. Since 1972, the University has leased the building from the Sisters of Charity of the Blessed Virgin Mary of Dubuque, Iowa. In the FY 1980 Capital Budget funds were appropriated to enable the University to purchase the building. The building has been used since 1972 by the School of Public Health, and its purchase and continued use by the School were an integral part of the space planning for the use of the School's facilities at 2121 W. Taylor Street. The sale of the facility will be completed in FY 1981, and it will become part of the State-funded space maintained by the Chicago Physical Plant. Its 21,000 Gross Square Feet will require a total of $62,600 in additional funds.

Urbana-Champaign

Ice Rink - $149,000 is required to provide basic building services for the University Ice Rink. The Urbana-Champaign campus took over responsibility for the utilization and support of

TABLE 16
FY 1982 REQUESTS FOR OPERATION AND MAINTENANCE SUPPORT FOR NEW AREAS

Building/Campus	(A) Gross Square Feet	(B) Total Unit Cost ($/GSF)	(C) Date of Occupancy	(D) No. Mos. Funding	(E) Annual Cost	(F) FY 1982 Report
Convent Building (MC)	21,000	$2.98	Occupied	12	$ 62,600	$ 62,600
Ice Rink (UC)	54,694	2.71	Occupied	12	149,000	149,000
Police Training Institute (UC)	1,300	2.00	July 1, 1981	12	2,600	2,600
Aviation Classroom Facility (UC)	8,067	3.00	July 1, 1981	12	24,200	24,200
Plant Clinic (UC)	2,592	3.00	July 1, 1981	12	7,800	7,800
1006 West Oregon (UC)	4,123	3.00	July 1, 1981	12	12,400	12,400
Crash Rescue Facility (UC)	4,500	3.00	July 1, 1981	12	13,000	13,000
Veterinary Medicine Research Buildings 4, 5, and 6	10,650	3.00	July 1, 1981	12	32,000	32,000
Swine Research Center	34,000	3.00	July 1, 1981	12	102,000	102,000
Total					$405,600	$405,600

the Ice Rink from the Athletic Association in FY 1979, and to date, no incremental State funds have been received to support the facility.

The Ice Rink is used for a wide variety of instructional, recreational and athletic events, and it is used by University students, faculty and staff, and by the local community. In this regard, the facility is identical to other University physical education facilities such as Freer, Kenny and Huff gymnasia, which have long been a part of the State-funded O & M base.

The Ice Rink has two types of operation and maintenance needs: basic building maintenance and custodial services, typical of virtually all instructional facilities; and specialized needs related to the maintenance of the ice surface. The University's intent is to secure State Operating funds to cover only the basic building maintenance requirements which any other campus facility of this type would receive. Users of the facility will be charged fees to cover the additional costs for specialized maintenance. Basic building services for the facility for FY 1982 are estimated to require $2.71 per Gross Square Foot.

Swine Research Center - $102,000 is needed for operation and maintenance support for the Swine Research Center. This facility is a part of the Food for Century Three Program, for which construction funds were provided in FY 1980. The Research Center consists of several different facilities to be utilized to study nutrition, genetics, management, environmental hazards, and non-pathogenic ailments of swine. These facilities total 34,000 gross square feet, and will require an O & M rate of $3.00 per GSF.

Veterinary Medicine Research Buildings 4, 5, and 6 - $32,000 is necessary to maintain these three new buildings, which are also a part of the Food for Century Three Program for which construction funds were provided in FY 1980. These are the final three of a total of six research structures at the Veterinary Research Farm for the study of food producing animals. One facility was in place when the Food for Century Three program was begun. Construction funds for Buildings 2 and 3 were provided

in FY 1978, and O & M funds for them were appropriated in FY 1980. This request will complete the funding for the structures. Together these three research buildings total 10,650 gross square feet, and require funding at $3.00 per GSF.

Aviation Classroom Facility - $24,000 is required for O & M support for the Aviation Classroom facility at the Institute of Aviation. This facility was formerly a hangar used for aircraft storage at Willard Airport. The needs of the Institute of Aviation for on-site classroom space became so critical that in FY 1980, remodeling of the hangar was undertaken to turn it into a classroom facility of 8,067 gross square feet. It now has the O & M requirements of a typical classroom building, and will require $3.00 per GSF in funding.

Crash Rescue Facility - $13,000 is needed to support the O & M requirements for this new facility which serves the Willard Airport and Institute of Aviation. Funds were appropriated in the University's FY 1978 Capital Budget to provide the University's share (25 percent) of the total construction cost for this project. 75 percent of the building cost was provided from Federal funds. This facility, which totals 4,500 gross square feet of space was completed in FY 1980 and provides housing for crash-rescue fire equipment, housing for operating personnel, a centralized control location for all types of emergencies, a centralized location for dispatching, and space for training and maintenance of equipment. A total of $13,000 in O & M funds is requested, based upon the $3.00 per GSF rate.

1006 W. Oregon, Urbana - $12,400 is necessary to provide O & M support for this 4,123 gross square foot facility which was donated to the Urbana-Champaign campus in FY 1980. Formerly a private residence, the building is well within the campus perimeter. Minor remodeling will be completed during FY 1981 and the facility will be used for office space to house academic programs. The building will require O & M services typical of any office building.

Plant Clinic - $7,800 is requested to provide O & M support for an addition to the Plant Diagnostic Clinic. The Clinic contains 2,592 gross square feet, and was constructed using Federal Hatch Act Grant funds. It will be reported to the IBHE as an Instructional NonAppropriated Capital improvement. The Plant Clinic provides diagnostic services for the College of Agriculture, the Cooperative Extension Service, campus-wide research projects and the general public.

Police Training Institute - $2,600 is requested for O & M support for an addition to the Police Training Institute training facility. The addition was constructed using PTI revolving funds, and will be reported as an Instructional NonAppropriated Capital improvement. The addition contains 1,300 gross square feet of office and practical exercise and training space. It will require funding at the rate of $2.00 per GSF.

Affiliated Hospitals

A relatively small amount of new space is scheduled to be added in FY 1982 to University-related programs in hospitals affiliated with the Medical Center. A total of 2,679 gross square feet is expected to be added by July 1, 1981. Funds will be required at the rate of $4.57 per GSF. Table 17 describes the total amount of space to be activated at the beginning of FY 1982 in each affiliated hospital.

TABLE 17
FY 1982 REQUESTED OPERATION AND MAINTENANCE SUPPORT
FOR AFFILIATED HOSPITALS

	Gross Square Feet	
	Activated by 6/30/81	Cost @ $4.57/GSF
Metropolitan Group		
Illinois Masonic	37,614	$171,896
Lutheran General	56,745	259,325
MacNeal Memorial	30,229	138,147
Mercy	29,265	133,741
Ravenswood	17,132	78,293
Weiss Memorial	20,955	95,764
Peoria		
Methodist	14,947	68,308
Proctor	15,012	68,605
St. Francis	27,447	125,433
Rockford		
Rockford Memorial	17,875	81,689
St. Anthony	7,747	35,404
Swedish American	13,469	61,553
Total	288,437	$1,318,158
Current Funded Base (1981)	285,758GSF x $4.57/GSF	1,305,914
FY 1982 Increment Related to Additional Space		$ 12,244

WORKER'S COMPENSATION
($101,600)

The last five years have seen a significant increase in expenditures for Worker's Compensation. Liberalized benefits available in legislation enacted in 1976 have been a major factor in driving up Worker's Compensation costs. Rising medical care costs have also contributed to larger individual Worker's Compensation claims. In addition, a growing number of cases have been referred to the Illinois Industrial Commission for settlement, delaying the final outcome for as long as one or even two years. As a result a backlog of pending cases has built up, affecting the level of charges against subsequent appropriations.

The nature of the budget request process for State appropriations is such that the level of Worker's Compensation funding must be projected nearly a full year in advance of the beginning of the year for which it will be used. By the end of that year, the volatility of costs has been such that expenditures have been well above the budgeted amount, as shown in the following table:

(Dollars in Thousands)

	Budget	Expenditures	% Change in Expenditures
FY 1975	$ 145.0	$ 145.0	
FY 1976	180.0	214.7	48.1%
FY 1977	288.0	296.0	37.9%
FY 1978	360.0	490.0	65.5%
FY 1979	440.0	570.0	16.3%
FY 1980	590.0(840.0)	840.0	47.4%
FY 1981	1,003.5 est		

For FY 1980, expenditures have been increased by the settlement of several long-standing cases, to the extent that a mid-year budget transfer of $250,000 was required to meet total estimated expenditures.

For the past two years the University has utilized the services of an actuarial firm for assistance in determining an appropriate budget request level for Worker's Compensation. With that assistance,

the level of $1,003,500 was set for FY 1981, and funds sufficient to reach that level were appropriated by the General Assembly and approved by the Governor.

Since the base level recommended by the actuarial firm has been achieved in FY 1981, it is expected that the increase required for FY 1982 will be at the same rate as the rate of increase for the University's total State funded personal services base. The FY 1982 increment will represent a 10.12 percent increase of the FY 1981 level, or an increment of $101,600.

PROGRAMMATIC COMPONENTS

Introduction

Requests for new, expanded, and improved programs for the University of Illinois total $6,393,800 for FY 1982. These funds will provide the University with the necessary flexibility to keep programs current, initiate new program emphases, meet student demands for specific areas of study, and maintain its research and public service leadership. These incremental funds are requested to provide the University with the ability to respond to societal demands and to continue and expand its leadership role in the creation of new knowledge through research and the application of that knowledge through instruction and public service. These requests come from the three campuses and General University units.

The programs developed and presented for approval for FY 1982 are outlined in the following tables. The program requests fall into two major areas: (1) access to University programs and (2) enhancement of University programs. Improving access to University programs is accomplished by offering more courses, programs and support services through Extended Day, increasing resources to areas of high student demand, increasing graduate fellowship stipends, and providing additional resources for maintaining the increased enrollments in medicine and dentistry. In addition to facilitating access through these programs, continued replacement of Federal capitation funds is needed to maintain enrollments at the Medical Center and in the College of Veterinary Medicine at Urbana. Additional access to University programs is provided through off-campus programs such as the Bachelor's of Science in Nursing completion program for the Quad-Cities; AHES programs in Rockford, Peoria, and Urbana-Champaign; public service activities through Region 2 programming and the State/University Liaison Program; and the proposed B. S. in Business Administration for Chicago Circle.

The enhancement of University programs is accomplished through the continuing development of research programs, expanding and improving program quality, and improving support services to programs. The research programs for which funding is requested consist of research in a wide variety of areas such as transportation, humanities, social policy, aging,

surface water quality, and Illinois industry. The expansion and improvement of program quality will result from support for interdisciplinary courses and programs for the College of Law, research capability for the College of Veterinary Medicine and lower student-staff ratios for both Colleges. Increased support to programs can be gained through the teaching improvement program as well as through increased funding for the Graduate Research Board.

Each of the programs for which funding is requested is described in more detail in the following pages. The programmatic request section is divided into two subsections which correspond to the two principal emphases: access to and enhancement of University programs. Following these subsections are sections devoted to the Special Services and Base Deficiency funding requests.

Budget Request for the Police Training Institute

A request for $469,700 for the Police Training Institute (PTI) was identified in the FY 1982 "Needs Budget" presented to the Board of Trustees in June. The request was based upon recent changes in minimum basic training requirements stipulated by the Illinois Local Govermental Law Enforcement Officers Training Board. The request, which is shown in Appendix 3 of this document, provides for both additional personnel and classroom and office space required by PTI to meet the new basic training requirements while current enrollment levels are maintained.

As the University's budget planning process carried beyond the identification of needs to the selection of those most critical to the educational priorities of the University, it became evident that it would not be possible to meet the Police Training Institute's need for funds to expand its programs mandated by the law enforcement community. The University recognizes that additional funds for the Institute are fully justified if expanded training requirements are to be met. Without such funds, enrollments will have to be decreased if a 400 hour basic curriculum is implemented. However, the essential needs of the University already require a budget request higher than any in the recent past. Inclusion of an additional nearly one-half million dollars to meet a requirement established as a law enforcement priority is simply not possible. Resources to meet that need will more appropriately come from law enforcement funding sources.

TABLE 18
NEW, EXPANDED, AND IMPROVED PROGRAMS FY 1982
ACCESS TO UNIVERSITY PROGRAMS

I.	FACILITATING ACCESS TO UNIVERSITY PROGRAMS		$2,082,300
	A. Extended Day - Chicago Circle	$ 447,000	
	B. Response to Changing Student Demand	761,300	
	Chicago Circle ($140,000)		
	Urbana-Champaign ($621,300)		
	C. Support for Graduate Fellowships	220,000	
	Chicago Circle ($ 50,000)		
	Urbana-Champaign ($170,000)		
	D. College of Medicine Enrollment - Medical Center	140,400	
	E. College of Dentistry Enrollment - Medical Center	513,600	
II.	REPLACING FEDERAL CAPITATION FUNDS		2,150,600
	A. Medical Center	1,960,000	
	B. Urbana-Champaign	190,600	
III.	PROVIDING HIGH DEMAND PROGRAMS FOR SPECIFIED CLIENTELE		668,500
	A. Bachelor of Science in Nursing - Completion (Quad Cities) - Medical Center	135,500	
	B. AHES Programs - Medical Center	260,000	
	C. Public Service Programming in Region 2 - (Chicago Metropolitan Area) - General University	120,000	
	D. State/University Liaison Program - General University	40,000	
	E. Bachelor of Science in Business Administration - Chicago Circle	113,000	
	TOTAL		$4,901,400

TABLE 19
NEW, EXPANDED AND IMPROVED PROGRAMS FY 1982
ENHANCEMENT OF UNIVERSITY PROGRAMS

I.	EXPANDING RESEARCH PROGRAMS		$ 492,400
	A. Urban Transportation Center - Chicago Circle	$ 50,000	
	B. Institute for the Humanities - Chicago Circle	50,000	
	C. Jane Addams Center - Chicago Circle	50,000	
	D. Surface Water Quality - Urbana-Champaign	150,000	
	E. Research Program on Illinois Industry - Urbana-Champaign	150,000	
	F. Gerontology Center - General University	42,400	
II.	IMPROVING PROGRAM QUALITY		700,000
	A. College of Veterinary Medicine - Urbana-Champaign	500,000	
	B. College of Law - Urbana-Champaign	200,000	
III.	IMPROVING SUPPORT TO PROGRAMS		300,000
	A. Teaching Improvement Program - Urbana-Champaign	100,000	
	B. Graduate Research Board - Urbana-Champaign	200,000	
	TOTAL		$1,492,400

EXTENDED DAY
($447,000)

As an urban, commuter campus, UICC must be able to respond effectively to significant trends in the demand for high quality undergraduate and graduate education within the metropolitan area it serves. Two very important trends, which have been evident at UICC since 1975 and which are expected to continue through the decade of the eighties, challenge public urban universities to provide access to academic programs for ever increasing numbers of "non-traditional" students while simultaneously responding effectively to shifts in demand for particular programs.

1. Demographic changes in the metropolitan population[1], resulting from the decline in birth rates since the 1960's, and migration patterns (the city of Chicago and immediate suburbs continue to lose population), will continue to alter the profile and needs of the clientele served by UICC. The decline in the 18 year old group is expected to reduce the number of full-time undergraduate students by 1985 to a level of 21% to 25% below that of 1975. During this same period, however, the 20 to 34 age cohort will increase by about 15% in the six county area including Chicago, generating increasing numbers of older, part-time students, often seeking access to undergraduate and graduate education during hours other than the normal day hours. These are the "non-traditional" students who require degree programs during the evening and on Saturday due to full-time employment, family obligations, financial constraints or personal choice.

[1]Hinze, Bogue, deVise, Population Projections: Chicago City and Suburban Ring, 1970-2000, Community and Family Study Center, The University of Chicago, 1978.

2. Increasing demand for training in professional, career oriented, applied sciences and service industry areas exerts upward pressure on enrollment capacity in business, engineering, architecture and health care fields. This steady shift in demand occurs among not only the full-time students attending class during the day, but also among part-time evening students who are seeking academic training in these same areas.

Since 1977 UICC has responded to these trends in demand with the very successful Extended Day Program. Now the campus proposes to expand the Extended Day to include undergraduate training in business administration and to meet an escalating demand for graduate training in Engineering during the evening hours and on Saturday.

Since the opening of the UICC campus in 1965, planning documents and mission statements have defined the goals of the institution in terms of providing high quality undergraduate and graduate programs for an urban population. But the campus did not offer these programs during the evening hours until Fall, 1977, when the Extended Day Program began with a modest increment in funding provided entirely through reallocation within the University. In just three years enrollment has grown to 3,148 "Program P.M." students, with an additional 1,686 "shift" students splitting their coursework between day and evening. In Fall, 1980 about 5,700 students will be taking one or more of approximately 350 classes offered after 5:00 p.m., Monday through Thursday.

The importance of Extended Day for older students, for women, and for minority students is highlighted in Table 1, a comparison of the demographic characteristics for day and evening students in Fall, 1979. Women comprise almost 48% of the Program P.M. population compared with 43.7% of the day students. Access to graduate programs is of particular significance for minority students. Slightly more than half of all Hispanic graduate students are enrolled in Extended Day, and this proportion increases to 71% for black graduate students. More than 70% of the undergraduate students in Extended Day are 23 years old or older.

Although enrollment has increased very rapidly during the first three years, budgetary constraints and the need to maintain programmatic quality and balance for the day students have limited development of the Extended Day Program in several areas. Initially, emphasis was placed on development of master's level programs, and, as shown in Table 2, more than half of the students are enrolled in graduate programs. Both Business Administration and Engineering, the two colleges faced with strong demand at undergraduate and graduate levels, have made substantial commitments to meet the demand for graduate work during evening hours, but neither college has been able to stretch scarce resources to support undergraduate degree programs after 5:00 p.m. In fact, although 53% of the investment in Extended Day has been provided through internal reallocation of campus resources, only six departments will offer undergraduate degree programs in Extended Day in Fall, 1980: History, Mathematics, Political Science, Psychology, Sociology, and Spanish. (Full list of Degree Programs is shown on Table 3.) Continued redeployment of campus resources from day to evening becomes increasingly difficult as the Campus moves to expand the undergraduate programs in the evening. Not only are the high demand areas the same for the two time segments, but most evening students attend part-time and tend to progress at widely varying rates through their program. This results in smaller class size during the evening and the need for greater course duplication during one academic year.

The proposed expansion of Extended Day is designed to increase enrollment in three ways: through efficient application of incremental resources for a new undergraduate program, the Bachelor of Science in Business Administration; through increasing support for programs in Engineering; and through improved access to instructional facilities with additional buildings open during the evening and on Saturday mornings. Additional classroom space will be available in three new buildings for the full academic year on Monday through Thursday evenings from 5:00 p.m. to 10:00 p.m. For the first time, Saturday morning classes are planned to start in FY 1982. The same classroom and laboratory space will be available on Saturday mornings as is available during the evening hours.

A major objective of this program request is the proposed B.S. in Business Administration. The College of Business Administration made a major commitment to Extended Day during the first three years with development of the master's program. The College has assigned 13 FTE faculty, about 17% of the total available, to instruction in the evening. Now the College is proposing an effective response to the demand for undergraduate work. This program would enroll 200 students in the first year. Initial funding requirements are estimated to be $113,000 and total incremental support being requested is $155,000. Because of the particular emphasis of this new program, it is discussed in a separate section of this document.

An equally important program component is the expansion of the enrollment in Engineering in Extended Day. The College of Engineering has already made a significant commitment to Extended Day, primarily with graduate programs. About 9 FTE (12% of the total instructional faculty) are teaching during the evening hours and College enrollment in Extended Day exceeds 360 students. (Table 2)

With the rapid growth in enrollments in Engineering programs since 1976, the College cannot continue to redeploy faculty resources away from the day programs. Undergraduate majors, primarily full-time day students, have increased 35% over the past four years, while graduate enrollment, about evenly divided between day and evening, has increased 65% since 1976. If the College is to continue to respond to the heavy demand for graduate enrollment during the evening hours, incremental funding will be required. This program calls for $97,000 in FY 1982 to support an estimated increase of 75 students (ca. 40 FTE) in master's programs in Fall, 1981.

In addition to the targeted enrollment increases in Business and Engineering in Extended Day, the Campus expects to continue expansion of programs offered by other units in response to the trends toward part-time and evening study. This expansion will require incremental funding for O&M costs as the number of buildings in use is increased and as Extended Day moves into Saturday programming ($289,000). Additional support services for the 7,600 students expected to participate

in one or more courses by Fall, 1981 (Table 4) will be required. Although the campus will continue realignment of existing resources among support units, the full costs of this program cannot be absorbed through internal reallocation without unacceptable reductions in service levels during the day.

Support units in general have not been able to expand services during evening hours. The Office of Admissions and Records has been limited to the hours of 8:30 a.m. - 6:00 p.m., Monday - Thursday, and 8:30 a.m. through 4:30 p.m. on Friday throughout the academic year, except for one evening each quarter (excluding Summer) when registration services are available until 8:00 p.m. The Office of Business Affairs operates limited services - cashier, student accounts, and credits and collections - after 5:00 p.m. during seven days at the beginning of each academic quarter. The Office of Financial Aids is limited to the hours of 8:30 - 6:00 p.m., Monday - Thursday throughout the academic year. The Office of Student Affairs, including the Student Counseling Service, is forced to limit services during evening hours to one full-time staff person who answers general questions and makes referrals and appointments for students to see appropriate personnel during the day hours. This proposal includes $61,000 to permit some expansion of these services in FY 1982. Of particular importance as undergraduate enrollment increases in Extended Day will be increased service levels in Student Affairs and Business Affairs. The additional $61,000 in State support allows the two offices to hire new personnel to extend their services to evening students.

TABLE 1
FALL 1979
DEMOGRAPHICS: A COMPARISON OF
DAY AND EXTENDED DAY STUDENTS

	DAY						EVENING					
	UG		GRAD		TOTAL		UG		GRAD		TOTAL	
	N	%	N	%	N	%	N	%	N	%	N	%
Number of Students	15521	90.6	1616	9.4	17137	100.0	1515	48.1	1633	51.9	3148	100.0
Sex												
Male	8789	56.6	862	53.3	9651	56.3	851	56.2	790	48.4	1641	52.1
Female	6732	43.3	754	46.7	7486	43.7	664	43.8	843	51.6	1507	47.9
Race/Ethnic												
Asian	1191	7.7	163	10.1	1355	7.9	47	3.1	104	6.4	151	4.8
Black	2972	19.1	106	6.6	3078	18.0	380	25.1	261	16.0	641	20.4
Caucasian	9556	61.6	1211	74.9	10767	62.8	908	59.9	1161	71.1	2069	65.7
Hispanic	1373	8.8	46	2.8	1419	8.3	142	9.4	49	3.0	191	6.1
Native American	65	0.4	8	0.5	73	0.4	5	0.3	5	0.3	10	0.3
Unknown	363	2.3	82	5.1	445	2.6	33	2.2	53	3.2	86	2.7
Age												
Under 23	10829	69.8	84	5.2	10913	63.7	436	28.8	47	2.9	483	15.3
23 - 27	3193	20.6	638	39.5	3831	22.4	578	38.2	612	37.5	1190	37.8
28 - 32	953	6.1	491	30.4	1444	8.4	305	20.1	528	32.3	833	26.5
Over 32	546	3.5	403	24.9	949	5.5	196	12.9	446	27.3	642	20.4
Average Age	22.0		29.8		22.8		26.4		30.4		28.5	
Residence												
City of Chicago	10914	70.3	911	56.4	11825	69.0	1087	71.7	947	58.0	2034	64.6
Non-Chicago	4607	29.7	705	43.6	5312	31.0	428	28.3	686	42.0	1114	35.4

TABLE 2
EXTENDED DAY ENROLLMENTS (HEADCOUNT)
(Students taking at least 50% of their courses at 5 p.m. or later)

	Fall 1977			Fall 1978			Fall 1979		
	Undergrad	Grad	Total	Undergrad	Grad	Total	Undergrad	Grad	Total
Architecture, Art and Urban Sciences	16	32	48	50	47	97	45	67	112
Business Administration	245	129	374	253	269	522	306	272	578
Education	25	406	431	38	405	443	48	437	485
Engineering	84	84	168	151	201	352	199	164	363
Health, Physical Education & Recreation	4	14	18	16	81	97	7	53	60
Liberal Arts and Sciences	458	110	568	797	160	957	910	240	1150
Social Work	---	106	106	---	110	110	---	193	193
Interdisciplinary	---	90	90	---	132	132	---	207	207
Total	832	971	1803	1305	1405	2710	1515	1633	3148

TABLE 3
DEGREE PROGRAMS OFFERED IN EXTENDED DAY *

	Scheduled for Fall, 1980	Anticipated Additions Fall,1981
Business Administration	MAS	BS Business Admin
Communications & Theater	MA	
Criminal Justice	MA	
Education	M Ed	
Engineering	MS (4 degrees)	
English	MA (3 options)	
French	MA	
Geology	MS	
German	MA	
History	BA, MA, MAT	
Mathematics	BS, MST	
Physical Education	MS	
Political Science	BA, MA, PhD	
Psychology	BA	
Public Agency Admin	MAS	
Public Policy Analysis	PhD	
Slavic Lang & Lit	MA (4 options)	
Social Work	MSW	
Sociology	BA, MA	
Spanish	BA	
Urban Policy & Planning	MUPP	

*Degree programs in Extended Day require that all coursework necessary for completion of that degree within a reasonable amount of time are available to the student after 5:00 p.m. without the student attending in the day except by choice.

TABLE 4
PROJECTED EXTENDED DAY PARTICIPATION
(Fall quarter enrollments in courses beginning 5 p.m. or later)

Headcount	(Actual) 1979	1980	1981	1982	1983	1984
New "EDS" Students	1,773	2,300	3,200	3,700	3,800	3,800
Cont "EDS" Students	1,375	1,600	1,800	2,200	2,500	2,500
Anticipated "Shift" Students*	1,686	1,800	2,600	3,400	3,500	3,500
Total HC**	4,834	5,700	7,600	9,300	9,800	9,800
FTE	1,844	2,280	3,390	4,175	4,455	4,455

*Those students who enroll in both day and evening courses, with more than one-half their load being in day courses.

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

RESPONSE TO CHANGING STUDENT DEMAND ($140,000)

Several instructional programs at UICC are experiencing increasing budgetary problems which are directly related to enrollment growth at both undergraduate and graduate levels. Student demand for programs in architecture, business and engineering has been increasing sharply for more than five years and may be anticipated to continue at very high levels throughout the decade, 1980-1989, in line with the national trends in these fields of study. The major objective of this request is to provide additional resources for business and engineering, which are attempting to respond to particularly strong trends in undergraduate and graduate demand during the day hours while continuing development of Extended Day programs with equally strong demand.

Business Administration

The enrollment demand in the College of Business Administration has been increasing steadily since Fall 1972 when there were 2,563 undergraduate majors in the College, no graduate programs, and the total FTE student enrollment was 1,641. The data in Table 1 indicate an overall increase of 11.4% in majors and a 9.5% increase in FTE students for the College of Business Administration from 1976 to 1979.

Since 1976 the College has given highest priority to the rapidly developing master's program (primarily evening students). Despite increases through campus internal reallocation and new funds for Extended Day, very tight controls on undergraduate enrollment in the College of Business Administration have become necessary since 1978. Additional funding included in the FY 1982 request for Extended Day ($113,000) will permit the College to begin undergraduate programs during the evening hours, but will not permit expansion of the day undergraduate enrollment.

The campus continues to respond to this changing demand through internal reallocation and expects to increase undergraduate Business enrollment in day programs by 100 - 150 in FY 1982 through this process. Current estimates of demand indicate that enrollment would expand to 3,000 students, excluding students enrolling in the proposed new Bachelor of Science in Business Administration which is to be included in

Extended Day, if additional resources were made available. This budget request includes $50,000 which will provide 2.0 FTE faculty and enable the College to target 3,000 undergraduate students in Fall 1981.

The College has proposed several new programs in response to demand for work at all levels. National trends indicate that demand for undergraduate education in business programs will continue to grow throughout the next decade, and this trend will be particularly strong in financial and industrial centers such as Chicago which will continue to have a labor market capable of quickly absorbing the graduates of these programs. Current planning at UICC projects an undergraduate enrollment of 3,600+ and a graduate enrollment of 600 by 1985.

Engineering

Engineering has experienced extremely rapid enrollment growth between 1976 and 1979, with increases of 35% in undergraduate majors, 65% in graduate majors and 39% in total FTE students. Although applications for Fall 1980 are currently running ahead of Fall 1979, it is unlikely that the College can continue to absorb this rate of growth.

No significant additions were made to the base budget of the College to support the growth from 1976 to 1979, primarily because the downturn in Engineering enrollments during the early 1970's had left the College with some excess capacity. In Fall 1979, however, undergraduate enrollment exceeded the projections by almost 200 students, and funding support per FTE student dropped more than 11% below the level for 1976.

The apparent decline in FTE faculty since 1976 is offset with substantial increases in the number of graduate assistants. Faced with rapidly escalating salary levels for qualified faculty, due to the national trends in enrollments and competition from the private sector which is experiencing a shortage of engineers, the College has been forced to rely on graduate assistants to an excessive degree. A significant internal reallocation was made for FY 1981, and the campus

expects to continue the reallocation in FY 1982. However, due to the high cost of engineering education, it does not appear possible to reallocate from other areas in sufficient amounts to meet the resource requirements unless the undergraduate enrollments are severely restricted for several years.

The engineering component of this program for FY 1982 amounts to $90,000 to be used for additional faculty in response to the enrollment pressures. These funds, together with continued realignment of campus resources, are anticipated to provide approximately 4.0 FTE faculty for the College.

The long-term outlook for the College projects continued enrollment growth for the next five years. Current planning anticipates enrollment will grow to 3,300 undergraduates and 600 graduate students by Fall 1985. Although some of the costs will be absorbed by Extended Day and internal realignment will offset a portion, additional requests totaling almost $290,000 may be anticipated in FY 1983 through FY 1985.

TABLE 1
FALL TERM ENROLLMENT TRENDS

	1976	1977	1978	1979	1980 (Projected)
Business					
Majors					
Undergrad	2,719	3,065	2,744	2,789	2,750
Graduate	88	161	250	334	385
Total Majors	2,807	3,226	2,994	3,123	3,135
FTE Students	2,045	2,260	2,295	2,240	2,245
Engineering					
Majors					
Undergrad	2,143	2,309	2,545	2,889	2,850
Graduate	228	283	396	377	400
Total Majors	2,371	2,592	2,941	3,266	3,250
FTE Students	913	1,043	1,219	1,268	1,265

RESPONSE TO CHANGING STUDENT DEMAND ($621,300)

Since FY 1971 there have been rather significant shifts in student interest toward engineering, accounting, business administration, finance, economics, chemistry, computer science, and agriculture and away from education, physical education, humanities, and social sciences. These shifts in interest have placed severe pressures on the Colleges of Agriculture, Engineering, and Commerce and Business Administration, on the School of Chemical Sciences, and on the Department of Mathematics which provides service courses for the other areas mentioned. Instructional units generated in these areas have increased tremendously:

	Instructional Units		
	Fall 1970	Fall 1979	Percentage Increase
College of Agriculture	18,295	25,189	37.7 %
College of Commerce and Business Administration	35,853	58,506	63.2 %
College of Engineering	61,169	82,274	34.5 %
School of Chemical Sciences	24,319	34,281	41.0 %
Department of Mathematics	41,384	45,698	10.4%

Perhaps the most significant result of this load pattern in these colleges is the growing inability of UIUC to respond to student and societal needs. In the subject areas represented by these colleges and departments, where jobs after graduation are generally most prevalent, student entrance has had to be severely restricted because of a lack of resources. Because students are admitted on the basis of "best-qualified-first", the entrance requirements for these units have risen steadily as the pressure for admission has grown. The mean high school percentile rank of entering freshmen in most of these areas is now above 90 and the mean ACT scores for the group range from 26 upward, depending on the discipline involved.

The pressures have grown so great in some curricula in these units that the number of on-campus transfer students has had to be reduced drastically and the number of off-campus transfer students has been

cut back also. This latter move has strained long-standing commitments and agreements with community colleges and other 4-year institutions of higher education in the State. However, it seems totally unreasonable to raise entrance requirements even higher for entering freshmen in order to accept transfer students who may have lower qualifications.

Before UIUC can even begin to think about accepting more students in the high-demand curricula cited, it first has to provide the units offering those curricula with sufficient funds to meet the needs of the students they presently have. During the last decade, the Urbana-Champaign campus has internally reallocated hundreds of thousands of dollars to the units mentioned here, but those reallocations have fallen short of the mark. Internal reallocation strategies have been severely restricted by the fact that the University's budget has not kept pace with the rate of inflation and, in large part, students have been moving from less costly disciplines to more costly disciplines.

The goal that UIUC has been working to achieve for the units mentioned is to provide enough faculty and accompanying support to reduce the extremely high teaching loads in these areas to a level at least approximating their average teaching loads for past years. To determine how much this would cost, the administration has estimated what the various units will have to pay for new assistant professors in FY 1982, and has further determined tne current relationship in each unit's budget between academic salaries and nonacademic salaries, wages and academic salaries, and expense and equipment and academic salaries. Using the ratios generated for each of these relationships, the costs related to hiring each assistant professor were calculated. Support costs were not developed for the teaching assistants. Only their salaries have been shown.

The budget for what is needed is shown below:

Academic Staff

College of Agriculture	
6.00 FTE Assistant Professors	$ 133,800
3.00 FTE Graduate Assistants	37,500
College of Commerce and Business Administration	
40.00 FTE Assistant Professors	1,112,000
17.00 FTE Graduate Assistants	212,500

College of Engineering	
90.00 FTE Assistant Professors	$ 2,403,000
42.00 FTE Graduate Assistants	525,000
School of Chemical Sciences	
3.00 FTE Assistant Professors	75,500
2.00 FTE Graduate Assistants	25,000
Department of Mathematics	
18.00 FTE Assistant Professors	401,400
9.00 FTE Graduate Assistants	112,500
Nonacademic Staff	
College of Agriculture	
4.00 FTE Secretarial Staff	36,200
College of Commerce and Business Administration	
12.00 FTE Secretarial Staff	111,200
College of Engineering	
31.00 FTE Secretarial Staff	286,200
School of Chemical Sciences	
2.00 FTE Secretarial Staff	23,100
Department of Mathematics	
1.00 FTE Secretarial Staff	10,800
Wages	
College of Agriculture	2,300
College of Commerce and Business Administration	57,600
College of Engineering	247,500
School of Chemical Sciences	7,100
Department of Mathematics	16,200
Expense and Equipment	
College of Agriculture	22,100
College of Commerce and Business Administration	70,000
College of Engineering	197,100
School of Chemical Sciences	13,400
Department of Mathematics	73,800
TOTAL	$ 6,212,800

UIUC proposes that the State provide half these funds during the period of the next five years (annual allocations of $621,300) and that the Urbana-Champaign campus match those assignments of funds with funds acquired from internal reallocation.

GRADUATE FELLOWSHIPS
($50,000)

University of Illinois fellowship programs are designed to attract exceptional students and to provide them with the opportunity to concentrate their academic efforts on education. The quality of a graduate institution is in large measure determined by the quality of its students. With a strong financial aid program, the University can attract and retain the best graduate students. The enrollment of highly qualified students helps to create a stimulating intellectual environment benefiting the entire University.

For UICC to fulfill its function and to meet its responsibility to the people of the metropolitan area, it is necessary to develop and offer quality programs. It is also necessary to provide conditions under which potential students can avail themselves of these educational opportunities. UICC 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.

The State of Illinois has developed an exemplary system of financial aid to undergraduate students through the Illinois State Scholarship Commission. However, this form of direct aid is not available to graduate students. The University therefore provides a variety of forms of financial support. It employs many of its graduate students as teaching and research assistants; it offers tuition and fee waivers to others. This campus offers instruction in many areas in the late afternoon and evening hours in order to allow students to combine study with full-time and part-time outside employment. Through the recent development of Program P.M., the University is now open to many who could not afford regular daytime study for financial or personal reasons.

All these forms of financial aid, however, have severe limitations. Teaching and research assistantships are available only in limited numbers and only in certain areas; they are essentially unknown in other fields of study. While tuition and fee waivers may reduce the financial burden to an acceptable level for some, this kind of aid is not sufficient for many others. Evening programs and part-time study are certainly an answer for

many students, but it often places such students at a greater academic disadvantage when compared with those who can afford full-time study. In many areas, part-time study, particularly at the doctoral level, is a poor substitute for a full immersion into the learning and research process. It is unfortunate that because of insufficient support, far too many of our brightest students have been forced to forgo the benefits of a full-time, concentrated learning and research experience.

The Graduate College requests that additional State funds be provided to maintain the current number of graduate fellowships. The additional $50,000 allows the Graduate College to increase the level of support for graduate students to an average of $4,000 per year. In order to meet inflationary increases in the cost of living and general expenses for students, UICC must provide more than the current average of $2,500. If the University of Illinois at Chicago Circle wants to compete for the best students, the Graduate College must be able to offer fellowships which are competitive with other programs.

When graduate programs first started at UICC in 1967, thirteen university fellowships were allocated to this campus. At that time, the ratio of graduate students to fellowships was approximately 33 to 1. While the number of university fellowships at UICC has increased from 13 to 33, the graduate enrollment has increased from 434 to an expected 3,500 in Fall, 1980. Thus, the ratio between graduate students and fellowships will be approximately 107 to 1.

Although the Graduate College wants to bring this student-to-fellowship ratio to a more acceptable level, it is most important at this time to attract the best students with competitive awards. In order to maintain the present 33 fellowships at an average of $4,000, an additional $50,000 is needed in State support. Because of the unique role Chicago Circle plays in providing graduate educational opportunities to many in the Chicago area who have historically been deprived of such opportunities, such an investment by the State and the University is justifiable and sound.

GRADUATE STUDENT SUPPORT
($170,000)

The Graduate College requests that additional State funds be provided in support of its fellowship programs for graduate students.

The Urbana-Champaign campus was among the earliest institutions to gain major State support for its fellowship programs. That early support contributed significantly to the high rankings achieved by many UIUC graduate programs within the past three decades, for the quality of a graduate institution is in large measure determined by the quality of its students. A strong program of fellowships and grants-in-aid is essential if a university is to attract and to retain the most highly qualified graduate student body. Moreover, the presence of these top-quality students is essential to the maintenance of a top-quality faculty: Great professors attract the best students and vice versa. It is not possible for departments to build and to maintain faculties of the first quality if they cannot compete financially for the very best graduate students.

Financial aid funds have been instrumental in the Graduate College's successful efforts to promote diversity in the graduate student body and to provide opportunities for graduate education to underrepresented racial and ethnic minority groups. Both the size and the number of the fellowship stipends dedicated to these purposes have, however, limited the Graduate College's achievements in this area. Although graduate enrollments of some racial minorities have stabilized or even increased, black graduate enrollment has decreased since 1974. While sociological factors external to the University have contributed to this decline, it is also attributable in part to the inability of the Graduate College to offer qualified minority students an attractive financial aid package.

The competitive position of the University of Illinois programs for financial aid to graduate students has declined seriously in the past ten to fifteen years. Since the development of the post-Sputnik Federal fellowship programs (most of which have since disappeared), UIUC fellowship programs have been financed in part by State funds and in part by Federal cost-of-education allowances. While the former have increased from $400,000 in the mid-sixties to $565,000 at present, cost-of-education allowances in the same period have decreased from over $1,400,000 to $150,000. As a result,

UIUC programs have disappeared, shrunk, or survived only to become less and less competitive as peer institutions have increased their levels of support to meet inflationary increases in the cost of living and general research expenses.

In order to begin the process of recovering the competitive position of the three major UIUC graduate fellowship programs (University Fellowships, Graduate College Fellowships, and Creative and Performing Arts Fellowships), $170,000 is requested for FY 1982. This amount will make possible an increase in the average eleven-month stipend for these awards to approximately $3,900. Future budget requests are projected to further increase the stipend level in FY 1983 ($268,500) and to stabilize the base of the major fellowship programs by removing their dependence on increasingly scarce Federal cost-of-education allowances and other soft monies, freeing what remains of those funds to finance supplementary programs now supported precariously on a year-to-year basis ($164,000 in FY 1983). To firm the reestablishment of a competitive position for the fellowship programs, an increment of $310,000 is projected for FY 1984 to expand the numbers of students supported. Thereafter, annual cost-of-living increments, geared to the rate of inflation, will be required to maintain that position.

	FY 1982	FY 1983	FY 1984
To increase average stipend level to $3,895	$ 170,000		
To increase average stipend level to $5,000		$ 268,500	
To provide full state funding for major programs		$ 164,000	
To increase the number of fellowships			$ 260,000
To reinstitute a program of summer fellowships (50 at $1,000)			$ 50,000
TOTAL	$ 170,000	$ 432,500	$ 310,000

COLLEGE OF MEDICINE ENROLLMENT
($140,400)

The first year class entering the College of Medicine in 1978 was increased from 342 to 348 students. Funding to support this increase in enrollment was provided for one year in FY 1980 and a second year in FY 1981. To maintain the increase from 342 to 348 through four years will require $140,400 in new State dollars for FY 1982 and a similar amount, adjusted for inflation, in FY 1983.

INCREASE IN CLASS SIZE
COLLEGE OF DENTISTRY
($513,600)

New State funds were appropriated in FY 1979, FY 1980, and FY 1981 to allow the College of Dentistry to expand its class size from 132 to 165. These funds support the increase through the first three years of the curriculum. Additional funds are required in fiscal year 1981 to fund fully the added complements of students. In addition to meeting the enrollment level recommended by the Board of Higher Education, this enrollment expansion allows the University to meet enrollment commitments made to the Federal government upon receipt of $1,250,000 for the equipping of the College's new facility.

The requirement for additional funds in FY 1982 is $513,600 to support an increase of 33 students in the fourth year class. This amount will provide an additional 9.3 FTE academic faculty, 2.7 FTE nonacademic staff, and associated costs.

The appropriation of $513,600 in FY 1982 will complete the requirements to fully fund the dental student expansion to 165 students per class.

REPLACEMENT OF FEDERAL CAPITATION FUNDING ($2,150,600)

As noted in previous operating budget requests, the enrollment expansion in the health professions during the early to mid-70's was supported in part by awards from the Federal Government referred to as "Capitation". These grants have been made using a student per capita formula to the programs in Dentistry, Medicine, Nursing, Pharmacy, Public Health and Veterinary Medicine. The amount of such support has been reduced in the past several years and it is apparent that the intent of the Federal Administration and Congress is to eliminate the Program. In FY 1979, FY 1980 and FY 1981, State appropriations were made to the University to replace some of these lost Federal dollars.

A replacement plan has been formulated with the Board of Higher Education which will allow the phasing in of State funds to enable Colleges at the Medical Center and Urbana-Champaign to maintain the enrollment supported earlier by the Federal grants. It now appears that Federal capitation funds will be awarded for State FY 1981, however, it will not be known for several months whether any Federal awards will be made in State FY 1982.

The accompanying tables summarize the status of the current replacement plans and present projections of needs for replacement of Federal dollars in FY 1982 and FY 1983. The Medical Center's requirement for FY 1982 is $1,960,000 and Urbana-Champaign's is $190,600, assuming that no Federal awards are made in that year.

MEDICAL CENTER
UPDATED PLAN FOR REPLACEMENT OF CAPITATION FUNDS
(Dollars in Millions)
Based Upon IBHE FY 1981 Recommendations

	Actual FY 1978	Actual FY 1979	Actual FY 1980	Estimated FY 1981	Estimated FY 1982	Estimated FY 1983
Beginning Balance	$ 1.79	$ 1.28	$ 1.23	$ 0.81	$ 0.34	$ 0.03
Awards	2.76	3.24	2.58	2.00	0	0
Replacement of Capitation by State Funds						
Increment	0	0.29	0.50	0.80	1.96	0.31
Cumulative (from previous years)**	0	0	0.31	0.87	2.18***	4.45
Expenditures**	3.27	3.58	3.81	4.14	4.45	4.79
Ending Balance	$ 1.28	$ 1.23	$ 0.81	$ 0.34	$ 0.03	$ 0

* Estimated
** Inflated by 7.2% from FY 1979 to FY 1980, by 7.9% from FY 1980 to FY 1981, and by 7.5% for other years.
*** Includes 0.29 (escalated to 0.36) provided as capitation replacement in FY 1979 used for an additional 17 students in FY 1979 through FY 1981. These additional students were necessary to remain eligible for capitation awards.

VETERINARY MEDICINE
PLANS FOR REPLACEMENT OF CAPITATION FUNDS
(Dollars in Thousands)

	Actual FY 1978	Actual FY 1979	Estimated FY 1980	Estimated FY 1981	Estimated FY 1982	Estimated FY 1983
1. Beginning Balance	$ 0.0	$121.1	$162.4	$103.9	$ 44.9	$ 0.0
2. Awards	$230.6	$248.6	$202.4	$160.0	$ 0.0	$ 0.0
3. Replacement of Capitation by State Funds	$250.0	$451.3	$533.8	$603.0	$838.8	$950.0
Increment	250.0	182.6	50.0	27.0	190.6	48.3
Cumulative (from previous years)**	0.0	268.7	483.8	576.0	648.2	901.7
4. Expenditures**	$359.5	$658.6*	$794.7	$822.0	$883.7	$950.0
State Replacement	250.0	451.3	533.8	603.0	838.8	950.0
Capitation Funds	109.5	207.3	260.9	219.0	44.9	0.0
5. Ending Balance(1+2+3-4)	$121.1	$162.4*	$103.9	$ 44.9	$ 0.0	$ 0.0

* Estimated.

**Inflation: 7.5% from FY 1978 to FY 1979, 7.2% from FY 1979 to FY 1980, 7.9% from FY 1980 to FY 1981, and 7.5% from FY 1981 to FY 1982 and FY 1983.

NOTE: Estimated expenditures based on average of FY 1975-FY 1977 expenditures.

B.S. IN NURSING COMPLETION PROGRAM - QUAD CITIES ($135,500)

The College of Nursing at the University of Illinois at the Medical Center continues to plan nursing education to meet the health care needs of the people of the northern half of Illinois. Under the University of Illinois Medical Center Area Health Education System (AHES), academic nursing education programs have been established in three regional locations. The programs in Urbana-Champaign (AHES Region 3B) and designed for Rockford (AHES Region 1A) provide Bachelor of Science in Nursing (BSN) Completion Programs for registered nurses, while Peoria (AHES Region 1B) provides a Master of Science in Nursing for BSN-prepared registered nurses. Continuing education programs are offered by the UIMC College of Nursing on a limited basis throughout northern Illinois to meet the ongoing learning needs of practicing nurses.

The need for expansion of existing BSN programs to areas of the State with identified need and adequate resources for quality education was delineated in the 1976 Illinois Board of Higher Education Master Plan for Postsecondary Education in Illinois. This need was reaffirmed in the recent IBHE (9/12/79) draft paper, An Assessment of Progress in Education for the Health Professions Since 1968, in which it was noted that the Quad-Cities area (HSA 10) has no BSN or BSN completion programs.

In accordance with the stated scope and mission of the University of Illinois and the commitment of the College of Nursing to meet the needs of underserved areas, a BSN Completion Program is proposed for the Quad-Cities area. This program includes cooperative arrangements with existing Quad-Cities educational institutions for program facilities and a curriculum utilizing locally available, transferable, nonnursing courses for prerequisite and support requirements.

The UIMC College of Nursing will initiate a BSN Completion Program for registered nurses to be located in the Quad-Cities area (HSA 10). In FY 1980 $41,120 was reallocated internally to permit planning for this

program. The program incorporates the same promotion and graduation standards, entry requirements, and long range objectives currently utilized in existing UIMC College of Nursing BSN completion curricula.

The initial goal of this program is to provide for career mobility within nursing service by preparing technical nurses for professional nursing practice. It is designed specifically for, and limited to, registered nurses who are graduates of Associate Degree programs or diploma schools of nursing. While preparing nurses for first-level organizational leadership/management positions and for the provision of care to patients/families/communities in increasingly complex situations, the program will also prepare a cadre of qualified students for a master's level nursing program.

The funds requested will provide 2 FTE faculty, 1.5 FTE non-academic staff, and support services. A portion of the request will be used to contract for services in the local hospitals.

REPLACEMENT OF AREA HEALTH EDUCATION SYSTEM (AHES) FUNDS ($260,000)

The University of Illinois at the Medical Center was first awarded its Area Health Education Center (renamed Area Health Education System in Illinois) contract in September 1972. This award to the College of Medicine provided increased funding over a five-year period, which allowed the Campus to establish new educational programs in several allied health disciplines and in nursing, allowed expansion of the College of Medicine's family practice residency programs, and provided support for expansion of continuing education. At the conclusion of the five-year period, new legislation was enacted allowing an extension of the program, but calling for decreasing amounts of awards. Table 1 shows the amounts expended in each of the first seven years of funding, the current-year contract amount, and the anticipated amount for the ninth year of the contract.

The projected amounts reflect the Department of Health and Human Services' announced plan to decrease AHEC funding through the (final) ninth year. Thus, from a high of about three million dollars, on an annual basis, in years 04 and 05, funding has decreased to a current year level of $1.61 million, with the final contract year award expected to be $800,000.

AHES Programs

Although a variety of activities and programs have benefited and continue to benefit from the $16 million in AHEC funds which have been awarded to the University from 1972 through 1980, a large share of these resources has been allocated for the direct management and support of new student programs in the College of Medicine, the College of Nursing, and the College of Associated Health Professions in the Rockford (AHES Region 1-A), Peoria (1-B), and Urbana-Champaign (3-B) regions. Funding has also allowed the development of consortial and other educational approaches in family practice, the allied health

professions, and in nursing among the member institutions of the Metropolitan Group of Hospitals in Chicago (Region 2). Other funding has enabled the establishment of regional Offices of Continuing Education Services in each of the four geographic settings.

Continuing Replacement Plan

The University of Illinois at the Medical Center proposed in its FY 1981 Budget Request that the State of Illinois provide the funds necessary to replace the diminishing Federal AHEC funds so that the four primary program areas (regional allied health, regional nursing, graduate medical education, and health professions continuing education services) could be sustained. The availability of AHES resources has enabled the campus to establish new programs and increase enrollments in areas of Illinois which lacked such program opportunities. In doing so, the Campus has been able to continue to pursue the mission established by the University and the Illinois Board of Higher Education to provide increased opportunities for health professions education to citizens throughout the northern part of Illinois. Without continued replacement of AHES funds by the State, some of the programs will be eliminated, and others will be markedly reduced.

The FY 1982 Request would have the effect of partially replacing the remaining AHES funds (a total of $584,400) with State dollars. In FY 1982 dollars (inflated by 8% for FY 1980 and FY 1981) $260,000 in incremental State funding is necessary for continuing the phase-out of Federal monies. Table 2 displays the actual programmatic expenditures from AHES contract funds in years 05, 06 and 07. Also displayed is the 08 budget including one quarter of FY 1981 State replacement and projections for years 09, 10, and 11. The diminution of funds in all programs from year 07 to year 09 reflect the elimination of all non-essentials from the programs.

Because the AHEC contract year runs from October to October, a translation must be made to calculate the replacement amount in each of the State's fiscal years (Refer to Table 3). The total program expenditures planned for FY 1982 is $1,144,600, which is projected to remain the same (uninflated) in FY 1983. As existing State funds currently supplement the AHES contract, the new, incremental resources necessary to support the programs are $260,000 in FY 1982, and $324,400 in FY 1983. The total phase-out of Federal awards will then be complete.

TABLE 1

LEVELS OF FEDERAL AHEC CONTRACT FUNDING
UNIVERSITY OF ILLINOIS AT THE MEDICAL CENTER

AHEC Contract Year*	Months in Contract Year	Expenditures ($ in millions)
01 (1972-73)	13	0.41
02 (1973-74)	12	1.10
03 (1974-75)	12	2.22
04 (1975-76)	12	2.96
05 (1976-77)	11	2.81
06 (1977-78)	12	2.60
07 (1978-79)	12	2.32
08 (1979-80)	12	1.61 (award)
09 (1980-81)	12	0.80 (estimated)

*Generally, the AHEC contract year runs from October 21 to October 20.

TABLE 2

ACTUAL AND PROJECTED PROGRAM COSTS
(Dollars in Thousands)

	Expenses, by AHEC Year			Budget	Projected Budget	Estimated Program Costs*	
	05	06	07	08**	09**	10	11
Graduate Medical Education	527.0	407.9	320.0	151.9	92.2	99.6	107.5
Nursing Education	270.2	413.8	454.6	307.4	328.0	354.2	382.5
Allied Health Education	903.3	685.5	585.4	436.6	472.9	510.7	551.6
Continuing Education	298.7	451.8	364.9	412.1	251.5	617.2	666.6
	1,999.2	1,959.0	1,724.9	1,308.0	1,144.6	1,236.2	1,335.1

*Inflationary cost increases of 8% are included in Year 10 and 11 estimated program costs.

**Dollars stated for Years 08 and 09 include contract amounts plus State Replacement Dollars at approved FY 1981 levels.

TABLE 3
REPLACEMENT OF FEDERAL INSTRUCTIONAL FUNDS (A.H.E.C.) FY 1980 - FY 1985
(Dollars in Thousands)

	Federal A.H.E.C. Funding	Existing State Funding	New State Funding	Temporary Funding (Other Sources)	Total Resource Requirement
FY 1980	1,724.9	- 0 -	- 0 -	- 0 -	1,724.9
FY 1981	768.9	- 0 -	516.8	22.3	1,308*
FY 1982	188.2	560.2**	260.0	136.2	1,144.6
FY 1983***	- 0 -	820.2	324.4	- 0 -	1,144.6
FY 1984	- 0 -	1,144.6	- 0 -	- 0 -	1,144.6
FY 1985	- 0 -	1,144.6	- 0 -	- 0 -	1,144.6

*Includes costs that will not be continued in FY 1982

**Inflated by 8.39%

***No inflationary factors assumed beyond FY 1982

PUBLIC SERVICE PROGRAMMING IN REGION 2 ($120,000)

The primary objectives for public service programming in the University of Illinois Public Service Region 2 (Cook County and eight contiguous counties) for FY 1982 are as follows:

1. To meet the educational needs of citizens in the area by offering quality programs consistent with those provided on campus.
2. To enrich both research and teaching efforts by increasing participation of University of Illinois faculty in continuing education and public service programming.

To attain these goals, $120,000 in new State funding is requested for FY 1982 to initiate two major components; programming in Region 2; and exploration of a University-wide data system.

Programming in Region 2

Program Development ($36,000)

These funds will be utilized to expand and/or develop specialized programs which address community needs. An example of the type of program under consideration is noncredit coursework designed to assist small business operators. Faculty in the disciplines of Commerce, Business Administration, and Engineering would prepare relevant seminars on topics such as financing small businesses, marketing techniques, inventory control, computers, and advertising. These types of programs result in providing Region 2 with the benefit of the University of Illinois' academic expertise across a wide range of utilitarian topics with direct application to the business sector. Funding will allow presentation of 10 complete programs.

Division of Continuing Education ($20,000)

The Division of Continuing Education in Chicago has recently experienced considerable growth in conference, seminar, and short-course activity for professionals. Consequently, very few new or innovative programs are undertaken each year. However, increased State requirements

for mandatory continuing education, and additional pressure from professional associations for periodic updates have combined to stimulate greater demand for this service. This demand for professional continuing education programs is not being adequately addressed. Funding of this request would provide partial staff support to develop new and innovative programs in a variety of disciplines.

Program Support ($42,000)

Program support relates to opportunities for the University to improve its outreach activity via use of remote delivery technology. This phase will involve expansion of the electronic blackboard in Region 2 to offer both credit and noncredit continuing education opportunities. Remote learning equipment will be located at Oak Brook for the delivery of courses which are currently conducted only on campus.

Sub-Regional Office Expansion ($12,000)

This request will enable expansion or establishment of additional sub-regional offices, with emphasis on teaching sites for Chicago Circle's College of Education. Such centers will improve accessibility for persons remote from campus, by providing University of Illinois educational programs closer to their home or work base.

University-Wide Data System ($10,000)

Currently, no data system exists which records programmatic efforts in continuing education at either campus or system-wide levels. Consequently, collection and maintenance of basic information for reporting purposes is time-consuming and problematic. Funding is requested for part-time staff support to conduct a feasibility study designed to determine the overall data requirements for a University-wide system. The specific purposes of this system would include recording continuing education and public service activities for use in planning, delivering, and evaluating those services.

In summary, $120,000 is requested in new State funding to develop and improve continuing education programming efforts in Region 2, and to explore implementation of a University-wide data system. A similar request is anticipated for FY 1983.

STATE/UNIVERSITY LIAISON PROGRAM
INSTITUTE OF GOVERNMENT AND PUBLIC AFFAIRS
($40,000)

There is growing awareness both nationally and statewide that higher education needs to develop more effective research communication channels with State government officials. Many State officials are simply unaware of potential contributions that University of Illinois faculty can make in addressing research issues of public policy facing Illinois. The need to improve cooperation has arisen from several recent trends. First, State government is increasing its use of private consultants to provide expertise on scientific and technological issues. Second, the information explosion has created difficulties in keeping abreast of current public policy research for State officials. Finally, University/State exchange has traditionally relied upon close individual working realtionships. This type of informal communication, while very beneficial, is nonsystematic and difficult to access for all persons with policy interests.

The President's Assembly on State Policy Research held in October, 1978 provided the impetus to initiate a program in which faculty and State officials can work together in a systematic manner on public policy issues affecting Illinois. The primary objectives of the State/University Liaison Program are: to increase accessibility to research resources by State government policy officials; to assist in matching these research needs with faculty expertise in the University; and to encourage participation from other Illinois universities with relevant research capabilities in project activities.

The program builds upon two current projects of the Institute:

1. Coordinator for Government Service Programs - This position was designated within the Institute for FY 1980 to strengthen the interaction of University faculty and State agency research needs. The coordinator, with guidance from the State/University Relations Committee, developed and distributed to State officials a publication entitled University of Illinois Service to the State: A Directory of Faculty Research Resources.

2. Higher Education Cooperation Grant (HECA) - The Institute has been awarded a HECA grant for FY 1981 to develop a computer-based faculty research data bank for State government. This project, entitled Faculty Research Assistance to the State (FRATS) will produce a user-initiated data bank of university research expertise (Statewide) that can be brought to the service of State agencies and commissions. Through existing computer terminals in their agencies, State research and policy officials will have direct access to the data bank identifying research expertise within the Illinois university community that they are seeking.

Specific proposed activities include:

- Placement of faculty or postdoctoral students in State government units, for a designated period or project, as research or policy scientists.
- Development of a series of faculty-State agency research briefings or seminars on issues of Statewide importance.
- Development of a University-State sponsored grant program to provide support for faculty research on issues of both intermediate and long-term significance to State government.

The State/University Liaison Program will benefit the State of Illinois in improved quality of information available to government policy-makers; bringing faculty research expertise to bear on issues of Statewide public policy; increased visibility of the University's research capabilities; and enhancement of inter-institutional cooperative activities among Illinois universities.

Total resource requirements include a full-time administrator (Coordinator for Government Service Programs), clerical support, project expenses, and general program expenses. A total of $40,000 new State money is requested for FY 1982.

BACHELOR OF SCIENCE IN BUSINESS ADMINISTRATION ($113,000)

The College of Business Administration is proposing a new major which will provide broad training in all fields of business rather than a high degree of specialization. In large part, this new major responds directly to the strong current demand for a business degree program available to part-time students, particularly those who can attend classes only at night. The major in business administration is a highly structured program with few electives and little allowed variation among individual student programs. Not only are the general education and business administration core courses prescribed, but the 36 hours of advanced business courses that make up the major are predetermined. Evening students will enroll as a cohort and move through the program as a group, enrolling in a given cluster of courses each term until all have completed the requirements for graduation. Attrition in each cohort will be met by admitting qualified transfer students to the cohort as appropriate. A new cohort will begin the program each fall term. Students, upon completion of requirements, will receive the degree of Bachelor of Science in Business Administration.

While any student enrolled in the College of Business Administration may elect this new program, a major purpose is to meet the needs of students who want to earn a degree in business during the evening. These students include those who:

1. have been employed full-time since high school and who wish to pursue a degree in the evening;
2. have completed some of the lower division requirements in a community college and who wish to finish their degree at night;
3. have been full-time day students but who must complete the degree requirements in the evening for financial reasons;
4. are nondegree students, admitted as space permits, who wish to take business courses for credit at night but do not presently wish to enroll in a degree program at UICC.

Inquiries at UICC indicate that there is a strong demand for business degree programs at the bachelor's level at night though none is available at Chicago Circle campus. The College of Business Administration has been able to offer a small number of evening courses, but the evening student cannot earn a degree at present. By offering the proposed general business program in Business Administration in a highly structured format in the evening, the needs of many working students can be met in an economically efficient manner.

URBAN TRANSPORTATION CENTER
($50,000)

The Urban Transportation Center coordinates the research and direct service functions provided by the University of Illinois at Chicago Circle in urban transportation. The Center serves as a repository for transportation and transportation-related materials, including technical literature and documents. In addition, several types of extension programs have been developed to serve transportation agency staff in this region. The work of the Center's associated faculty over the past year has enhanced the reputation of this campus and the Center. The Urban Transportation Center can and does compete effectively for outside funds in the areas of urban transportation planning, system evaluation, and transportation policy development.

The Center acts as a focal point for research conducted at three levels: 1) applied research on regional problems; 2) intermediate-range policy studies done under regional agency direction; and 3) theoretical research. The Center works closely with City and regional agencies (e.g., Chicago Transit Authority, Regional Transportation Authority, Northeastern Illinois Planning Commission, Chicago Area Transportation Study, Illinois Department of Transportation) to identify transportation problems, which can be addressed through joint efforts. During the past year, the Center has developed an excellent working relationship with the regional transportation agencies. Because of its experience in assessment and evaluation, and its unique relationship with regional agencies, the Center has received a number of grants to review the design and development of new transportation systems in the Chicago area.

The Urban Transportation Center makes significant contributions toward meeting the research and urban missions of this campus. The Center is most concerned with the application of its research. The research seeks to provide solutions for pressing urban transportation problems found in the metropolitan area. Chicago is the hub of the American transportation network; and UICC is now recognized as a noted transportation research institution.

There are a number of important trends in the growth of Federal and State support for university-based sponsored research, which coincide with the Center's focus on intermediate-range policy studies and theoretical research. One trend is in transportation energy conservation. The Center has worked with the Federal Highway Administration and the Department of Energy in developing new methods of reducing automobile usage in urban areas. The Department of Transportation is making a major effort to encourage this type of planning for transportation energy conservation. With additional financial support, the Urban Transportation Center can capitalize on its early work in this important area and can expand its research efforts in the analysis of regional transportation policy.

A second trend for Federal and State agencies is in long-range and continuing support of university research and technical services in transportation. UICC, through its Urban Transportation Center, continues to work with the Urbana-Champaign campus, Northwestern University, and Illinois Institute of Technology to develop a regional transportation center. A Consortium Committee has been established and the group is expected to be in full operation during the next year. UICC has assumed the lead responsibility for work in the urban transportation area. This program offers the long term possibility for cooperative research and service in transportation among Illinois universities.

During the next year, the Urban Transportation Center expects to generate about $250,000 in sponsored transportation research. Last year, the Center received a $150,000 continuing grant from the Urban Mass Transportation Administration for transportation research and training. The Office of the Secretary of the Department of Transportation awarded a grant to the Center to develop new methods of transportation policy analysis. Both singly and in consortium, the Center can attract significant support and can expect to share in the expected growth in the transportation research market.

It is clear that the future in sponsored support for urban transportation research is excellent. Since half the nation's petroleum usage is in transportation, the requirements for energy conservation alone

assure major Federal, State and local investment in transportation research. In addition, the transportation sector accounts for approximately 20% of all national expenditures, which assures the continued importance of providing technical services and training to the transportation agencies.

With additional basic support for the Urban Transportation Center, UICC can become an urban transportation research institution of first rank. The $50,000 request for additional State funds would allow the University to hire a minimum number of new staff; to provide the necessary resources to broaden the available technical skills; and to expand the Center's capacity to attract more non-State support.

Within the next three years, the Center expects to establish and maintain a minimum rate of return of approximately $4 in sponsored research for every $1 the University provides in support. In addition, the Center plans to expand its staff and activities through external funding sources. By FY 1984, it is estimated that more than half of the Center's funding requirements will be met through external funding sources.

The additional resources for the Urban Transportation Center will allow increased involvement of both faculty and students in transportation research. The education and training programs can be expanded to include more agencies and staff from the Chicago area. Finally, the additional resources allow the Center to continue to take the lead in urban transportation planning, system evaluation, and transportation policy development.

INSTITUTE FOR THE HUMANITIES
($50,000)

The Institute for the Humanities, a multi-disciplinary unit located in the College of Liberal Arts and Sciences, is a new program designed to support research in the humanities. The proposed Institute has three main objectives. The first objective is to promote interdisciplinary research among the humanities and between the humanities and other disciplines. The Institute will provide support to increase and improve research productivity at UICC. A second, important objective is to foster interdisciplinary curricular changes suggested by the work of the Institute's Fellows. The Institute plans to hold semi-monthly seminars on current research work. The seminars will include those members of the faculty who are most directly responsible for the curricula and programs of the departments represented by the Fellows. Finally, the third objective of the Institute is to plan and supervise the public service activities of the Fellows. The Institute is responsible for the creation of those instruments by which the work of the Fellows is presented to the world beyond the University.

The Institute for the Humanities will make a significant contribution to both the teaching and research missions of the University of Illinois at Chicago Circle. The Institute adds a program dimension which has been missing at UICC. The Institute encourages interdisciplinary research, teaching and professional service, which can attract both national attention and respect. In addition, the expected curricular changes add to the spectrum of educational choices, which UICC makes available to the citizens of the largest metropolitan area in the State.

The humanities faculty at UICC has an outstanding record of success in research, instruction and public service activities. During the last two years, faculty members obtained grants in excess of $700,000 from the National Endowment for the Humanities. The stature of humanists as a group at UICC can be gauged by the number who have been recipients of such prestigious awards as the John Simon Guggenheim Memorial Foundation Fellowships (16) and the National Endowment for the Humanities Fellowships for Independent Study (13). The excellence of the humanities departments

at UICC is also seen in the substantial number of faculty publications and in offices held by faculty in national scholarly organizations.

A base of State support is required to further improve the research and public service productivity in the humanities, as well as to effect a substantial increase in the level of external funding. Both Federal and private funds are more readily available to institutions that have established a scholarly record in the humanities (which UICC has done), and also a record of internal financial support for organized research in those disciplines. State funds will support a small administrative staff charged with identifying grant opportunities for the humanities and with assisting in the preparation of grant proposals. In addition, the staff will organize the symposia and seminars that will attract eminent scholars from all fields to this campus on a regular basis. The staff of the Institute will collect and disseminate information about all current UICC interdisciplinary research that involves the humanities. Within the next five years, the Institute plans to seek external support so that many of the Institute's activities may be conducted on a self-sustaining basis.

The expected practical results of this current proposal include improved scholarly productivity, increased external funding for the humanities, and the stimulation of curricular change across a wide spectrum of departments. These results support and enhance a larger and perhaps more important objective of the Institute, which is to strengthen the role played by humane values in the lives of individuals and society.

JANE ADDAMS CENTER FOR SOCIAL POLICY AND RESEARCH ($50,000)

The Jane Addams Center for Social Policy and Research was established in 1979 to address critical social problems through research, training, and public service activities. Women, children, the aged, minorities and other neglected and underserved populations are the groups with the most critical needs in the Chicago metropolitan area. The emphasis on women, minorities and other disadvantaged groups in research and public service activities reflects the current character of social service programming in urban areas. The Center provides the mechanism and structure by which the research capabilities of the College of Social Work can be linked to social service agencies in designing and implementing training, demonstration and research projects.

The Jane Addams Center received $50,000 in FY 1980 to support a core administrative staff. With this minimal amount of support, the Center attracted over $100,000 in sponsored research funds. During the next fiscal year the Center expects to generate the same ratio of $2 in external funding for every $1 in State support. The additional $50,000 in State funds for FY 1982 is requested to support the public service activities of the Center, which have yet to be fully implemented.

The research and public service activities of the Jane Addams Center supplement and enhance the mission of the University of Illinois at Chicago Circle. The Center brings the resources and the technical expertise of the University to the government and community agencies, which must respond to the needs of the disadvantaged and underserved throughout the Chicago area. Research endeavors in the human services must increasingly demonstrate the potential for immediate application in actual situations. In addition, the importance of field-relevant, inter-disciplinary research and training projects to government funding sources demands greater collaboration between the University and human services agencies. The Jane Addams Center provides both an opportunity and a focal point for the University to stimulate and conduct this valuable research.

The public service activities of the Center are an integral part of the effort to respond to the social welfare problems of the Chicago metropolitan area. With additional support in FY 1982, the Jane Addams Center plans to expand its public service efforts in three areas:

1. Provide technical assistance to government agencies and to non-profit community agencies and organizations. This assistance includes help in identifying needed services for priority populations; developing programs to meet those needs; identifying potential funding sources; and developing grant proposals.
2. Provide assistance to city and State officials through periodic analyses of the impact of their agency policies upon target populations in the Chicago metropolitan area. This includes policy analyses on the use and effects of social welfare programs among critical population groups in the city.
3. Provide assistance to city and State officials through identification and mobilization of appropriate academic and community professionals in task forces to help with major service delivery problems. These action task forces develop short-range solutions to crisis service delivery problems by identifying the people needed to resolve the problem and by coordinating the activities to implement the solution.

Experience during this past year indicates that the lack of a strong public service role is a serious handicap for the Center. With additional funds, the Center can meet its public service mission and develop important network relationships with community and government agencies.

The Jane Addams Center has been very successful in its first year. The Center is already recognized by external funding agencies for its strong research and training capabilities. With additional institutional support, the Center can further develop its interdisciplinary research, training and public service activities in order to maximize its contribution to the community.

INTERDISCIPLINARY RESEARCH AND EXTENSION PROGRAM TO IMPROVE SURFACE WATER QUALITY IN RURAL AREAS ($150,000)

This proposed program is the College of Agriculture's request for funds to respond to the needs identified in the Illinois Water Quality Management Plan submitted by Governor James Thompson to the U.S. Environmental Protection Agency in 1979.

The objective of the program is for the UIUC Agricultural Experiment Station and the Cooperative Extension Service to conduct research and educational programs that will enable farmers to produce food efficiently to meet the needs of the people of the State of Illinois and the nation, now and in the future, while enhancing the quality of the surface water flowing from agricultural lands.

The Agricultural Experiment Station would conduct the following research related to improving water quality in Illinois:

1. determining cultural management practices for optimum sustained crop production/crop protection systems for land where excessive erosion now occurs;
2. quantifying erosion and sediment transport processes and determining parameters that will provide for evaluation of alternative production systems that reduce soil erosion and pesticide transport in water;
3. evaluating long-term effects of reduced tillage systems on diseases, insects, weeds and soil losses and the need for pesticides;
4. determining the economic impact of higher costs of fertilizers and pest control chemicals on alternative production systems;
5. developing technology to reclaim severely eroded sites and to control erosion on surface-mined soils;
6. examining the economic incentive system now used to encourage the adaptation of erosion control systems, and developing strategies for speeding up the adoption of known technology needed to conserve soil resources;
7. evaluating the effectiveness of applying alternative soil conservation practices on water quality; and
8. evaluating the impact of wind erosion on water and air quality standards.

The Cooperative Extension Service would conduct educational programs on the following subjects related to improving the water quality of the State:

1. estimating soil erosion and evaluating the impact of soil erosion and production practices on land and water quality;
2. determining the cost and benefits of specific soil conservation and production practices;
3. selecting the best combination of agricultural production practices for particular farm situations; and
4. making the best use of the technical and financial resources and assistance available to develop and to implement food production systems.

The Illinois Environmental Protection Agency (EPA) estimates that an average of 181.4 million tons of soil is eroded by water each year in the State. Of this amount, 158 million tons of soil are lost from agricultural land because of sheet or rill erosion. This erosion causes the loss of 8,000 acre-feet of reservoir storage capacity each year. Replacing this lost storage capacity would cost the citizens of the State $17.7 million annually in terms of dredging, or $3.1 million annually in new construction. Soil erosion exceeds the soil loss tolerance on an estimated 10 million acres (42%) of Illinois cropland, and it has an extremely deleterious effect on the quality of the water in the State.

Soil conservation technology has not kept pace with the enormous changes that have occurred in agricultural production. More intense cropping practices, greater dependence upon chemical fertilizers and pesticides, and the use of large capacity machines create new conservation problems. There is an urgent need for both basic and applied research and for transfer of the information derived to students, to agricultural producers, to governmental and regulatory agencies, and to the citizens who ultimately determine the desirable level of regulations and bear the financial burdens associated either with regulation or with failure to make the best use of the State's natural resources.

The Agricultural Experiment Station at UIUC would mount a substantially expanded research program if sufficient additional funds were to be made available. The research program would address the problems of erosion, pest management (weeds, insects, and plant diseases), and water quality. Sophisticated research methods involving personnel from numerous UIUC departments and the Illinois State Natural History Survey would be employed to insure favorable economic, environmental, and sociological consequences.

County Cooperative Extension Service advisers would continue to be the primary delivery agents for the expanded soil-erosion and water quality educational program. Extension specialists at UIUC would take the lead in developing needed educational materials on soil erosion, soil fertility, and pest control problems and would provide continual in-service training for county and area Extension personnel, arranging meetings and organizing conferences and seminars to facilitate effective interaction among agencies and organizations involved and maintaining a continual flow of information to the people of Illinois via the mass media.

A total of $150,000 is being requested to begin the implementation of this expanded program in FY 1982. An additional increment of $2,272,200 will be required for FY 1983 and FY 1984, bringing the total for the three years to $2,422,200 which is consistent with the amount specified in the State Water Quality plan.

Academic Staff	
(Soil Erosion Research)	
3.00 FTE Technicians	$ 54,000
1.50 FTE Research Assistants	18,000
(Extension)	
1.00 FTE State Specialist	26,500
Nonacademic Staff	
1.00 FTE Clerical Staff	9,800
Expense	
Travel	10,500
Commodities	6,000
Telecommunications	1,500
Contractual Services	3,700
Equipment	20,000[1]
TOTAL	$ 150,000

[1] Nonrecurring amount.

PROGRAM OF FUNDAMENTAL ENGINEERING RESEARCH DIRECTED TO ILLINOIS INDUSTRY ($150,000)

The industrial component represents by far the largest segment of the Illinois gross state product (GSP) at 44% or nearly $6 billion. The overall economy of the State is governed mainly by the strength and economic health of the industrial sector. In the face of competition with other U.S. and foreign industries supplying similar goods and services, Illinois industry requires new products, progressive development of existing products, and substantial increases in productivity to sustain and expand its crucial role in the State's economy.

Research service to Illinois industry was the original function of the Engineering Experiment Station (EES) when it was chartered by the State in FY 1904. For three quarters of a century, EES has provided support to Illinois industry through the information generated in its research program and the students educated through that research. Since World War II, a higher and higher fraction of research support has been provided through grants and contracts sponsored by the Federal government. Therefore, although a strong fundamental program of continuing research has been established which does provide support for the further development of Illinois industry, the fraction of effort targeted to the specific needs of large and small companies operating in Illinois has diminished appreciably. The objective of this proposal is to bring balance to the situation once more by providing a strong program of fundamental research focused on the needs of Illinois industry.

"Fundamental" research directed toward a need is that mode of research that lies toward the center of the spectrum defined on the one extreme by scientific research and on the other by applied industrial research and development. A research program based on the needs of Illinois industry will not be inconsistent with federal priorities, and it is expected that significant Federal supplements can be obtained to support such research.

An Industrial Advisory Board, composed of leaders of Illinois industry and representing both large and small firms, would advise on basic policy, would suggest appropriate major areas for research activities,

would serve as a high-level liaison between the EES and Illinois industry, and would assist in the continuing evaluation of the program. Once the major areas of research had been broadly sketched by the Industrial Advisory Board, a series of Advisory Panels, including experts from inside and outside the University, would be appointed to provide a more precise focus within the areas outlined by the Advisory Board.

Based on the areas identified by the Advisory Panels, the faculty of the College would then select topics from these areas for fundamental research and submit proposals to the Advisory Panels. They would evaluate the proposals and make recommendations for funding to the Dean of the College and to the Director of the Engineering Experiment Station.

A total of $2.4 million is requested over a four-year period to establish the program. Projects to be supported would average $50,000 a year for part-time support of faculty members, graduate students, support personnel, equipment and other necessary expenses and services. A typical budget for such a project is detailed below:

Academic Staff		
.25 FTE Principal Investigator (includes full-time summer appointment)	$	14,000
1.00 FTE Graduate Research Assistant		12,000
Nonacademic Staff		
.50 FTE Technical or Clerical Employee		7,000
Wages		
Student Help or Part-time Technical Personnel		5,000
Expense		
Commodities		4,000
Contractual Services		2,000
Equipment		
Research Equipment		6,000
TOTAL	$	50,000

The program would initiate three projects in the first year for an average duration of three years. In the second year, twelve more would be initiated, eighteen in the third year, and thirty in the fourth and subsequent years.

The indicated incremental state-funded support is $150,000 for the first year, $600,000 for the second, $750,000 for the third, and $900,000 for the fourth.

By the third year, the impact of Federal funds would become evident. In the fourth year, Federal support would constitute a significant portion of the incremental funding. It is expected that Federal support would ultimately exceed the State support for this program by a large margin, since a number of new Federal programs has just been announced. These programs are being developed to enhance the type of joint industry-university research being contemplated.

The ability of the faculty of the College of Engineering is exemplary. For each of the last five years the separately-budgeted research program of the EES has been the second highest of all U.S. institutions. The EES is responsible for more than 5% of all engineering college research nationally. In FY 1979 the College attracted more than $24.0 million in Federal support for research (including indirect costs).

The total budget request for this project for FY 1982 is shown below:

Academic Staff	
1.20 FTE[1] Faculty Members	$ 42,000
3.00 FTE Graduate Research Assistants	36,000
Nonacademic Staff	
1.50 FTE Technical or Clerical Employees	21,000
Wages	
Student Help or Part-time Technical Personnel	15,000
Expense	
Commodities	12,000
Contractual Services	6,000
Equipment	
Research Equipment	18,000
TOTAL	$ 150,000

[1] Three faculty at .25 FTE for two semesters and 1.00 FTE for the two months of the summer session.

GERONTOLOGY CENTER
($42,400)

The primary goal of the Gerontology Center is to stimulate the development and application of research related to the aged. It is also involved in teaching and public service, provides clearinghouse and coordinating functions, links the University to outside funding sources, and serves as a focal point for community concern for older persons.

Interest in the field of gerontology is growing in a number of sectors. Many State and local agencies are initiating programs for the aged. Emerging consumer groups and service organizations are actively seeking assistance in program development. With the rapidly increasing numbers of elderly, public administrators also require professional support in planning, delivering, and evaluating a wide variety of services. Given current resources, this increasing demand is beyond the capacity of the Center to adequately address.

This request is for $42,400 in new State funds to develop three campus-based offices to augment the core program of the Center. Campus offices are necessary to respond to local campus and community interests, while initiating and coordinating multidisciplinary gerontological research. Also, campus level offices will provide greater visibility and accessibility to planning, research, and teaching efforts. Funding this proposal will facilitate work of individual faculty members and collaborative teams in making disciplinary contributions to gerontology. Finally, this all-campus office system would allow Center staff to concentrate on development of external funding sources through private foundations and governmental agencies.

In summary, campus centers will result in expanded opportunities for research, increased efforts to obtain outside funding, and improved teaching and public service efforts in gerontology.

COLLEGE OF VETERINARY MEDICINE
($500,000)

The major goals of the College of Veterinary Medicine for the next five years are as follows:

1. to complete the construction program outlined in the Food Production Research Program (Food for Century III) through the capital budgeting process,
2. to replace Federal capitation support with State funds,
3. to reach a level of State support of $19,600 per FTE student (FY 1982 dollars),
4. to expand the first-year class to 104 students when the State support level of $19,600 per student FTE is realized, and
5. to improve the teaching, research, and public service programs of the College.

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

Construction funds ($21,017,800) have been allocated for the Veterinary Medicine Basic Sciences Building. Architectural plans have been completed, bids approved, and construction is now underway. It is expected that the building should be ready for occupancy in the summer of 1982.

Two swine confinement research buildings funded in FY 1979 have been completed and are in use. These facilities have allowed the College to strengthen its swine research program quite markedly. An architect has been selected and funding ($909,000) has been released for the design and construction of three additional buildings on the Research Farm (swine gestation building, rabbit and dog kennel building, and support building).

The College established a projected goal in FY 1977 of $15,000 per student FTE in State-appropriated funds as a support level that would provide additional faculty and staff to allow the planned changes in a new curriculum and provide faculty for a major expansion in the College's teaching, research, and service programs. The goal of $15,000 support per student was projected following a comparative study of State-appropriated support levels of veterinary colleges in the United States with recognized

strong programs. Even though the goal of $15,000 was below the average level of the leading institutions, it was a level that would provide major improvement in the College's teaching and research efforts. The FY 1982 projection of $19,600 per student FTE reflects increases from the original support level equivalent to the average academic salary increases received by the University and College since 1977.

The Board of Trustees has approved requests for additional State operating funds for the College totaling approximately $4 million for the years FY 1971 through FY 1981. The College has received slightly more than $1 million in response to those requests.

A number of positive changes have occurred in the College in recent years. The research programs of the College of Veterinary Medicine were reviewed by a USDA Evaluation Team in the Spring of 1979. The team reported a vast improvement in the general research programs of the College and cited a number of areas as being outstanding. The recent expansion of both the toxicology and reproductive physiology research programs was considered excellent. Research programs in food animals dealing with blood-borne parasites, enteric infections, and drug residues were particularly strong. Research programs in comparative cancer and immunology were also mentioned.

Funded research projects from outside sources in the College increased from 70 in FY 1977 to 89 in FY 1979. In addition, $200,000 in formula funding and additional competitive grant funding were received in FY 1980 under the new Federal USDA Animal Health and Disease Research program. Additional grants have been received from other Federal agencies by faculty members in the College, increasing available research funding by approximately $800,000 during the past year.

The College has finalized improvements in its professional curriculum that will provide students with a broader course selection and expanded opportunities for clinical training during the last two years of the students' education. Particular attention is being given to the food animal curriculum in line with the objectives stated in the Food for Century III program. The quality of the professional education the College is providing is attested to by the annual above-average scores of the

graduates on national boards as compared with students from other institutions and by their competitiveness for postgraduate internships at other institutions.

New curriculum demands are expected to increase the teaching load. Research output will increase only as the faculty to student ratios decrease as the result of adding new faculty. The number of research faculty also has a favorable impact on the College's ability to compete for dollars under the USDA animal health research formula-funded program for research faculty FTE's and research dollars from other sources designated for food animal research.

Although the College of Veterinary Medicine has made great strides forward on the new funds provided in recent years, it has reached a very critical point in its history. A number of new colleges of veterinary medicine are now opening in this country, and several more are scheduled to open during the next two to three years, making competition for good faculty extremely fierce. The College must be prepared to face this competition in order to maintain its present momentum and must continue to strengthen its research programs. Finally, it must be able to add faculty to accommodate its changing teaching curriculum. If the College is to continue to move forward in meeting these goals, it must receive the financial support outlined in the table that follows. If the requested support is not forthcoming, the College must consider the reduction of the level of its entering classes to maintain quality.

The $500,000 in program improvement funds will be utilized to maintain and to improve the teaching and service programs of the College. Emphasis is again being placed on the clinical teaching programs. New faculty will also be added to lower the teaching contact hours of existing faculty to acceptable levels, thus allowing for more faculty time to expand research programs.

If the financing schedule as currently planned can be maintained each year, the College will be able to reach its goal of $19,600/FTE student in FY 1985 at the same time increasing the size of the entering freshman class to 104 professional students. The additional cost of this move will be approximately $250,000/year for the three-year period.

COLLEGE OF LAW
($200,000)

The College of Law has three major goals for FY 1982:

1. to achieve student/faculty ratios more comparable with those presently in existence at peer law colleges in the nation;
2. to be responsive to the rapid developments in the law through the introduction of additional courses in areas of national concern;
3. to introduce additional interdisciplinary work into the law curriculum as well as to be able to respond to the needs of other academic units on campus that want law components in their instructional and research programs.

Enrollment pressures remain high for the College of Law. The 1978 entering class had a median college grade-point average of 4.65 and a median LSAT score of 679. Hundreds of excellent students have been denied admission to the College during the last decade as enrollments have been reduced and held constant between 600 and 650 per year. Still, the College is understaffed. At the present time the student/faculty ratio in the College of Law is 22.1/1. At other law schools of comparable quality and size, the ratio ranges from 16.2/1 to 20.3/1. The College is striving to reduce its student/faculty ratio to a more reasonable 18.0/1.

At the end of FY 1980, six outstanding faculty members left the College. Since there are approximately thirty faculty members in the College, it is apparent that these losses constitute an exodus of serious proportions. Although the heavy teaching loads are a major concern to faculty members in the College, their frustration derives more from their inability to include more courses in the curriculum and to adopt the new approaches in law instruction that are appearing elsewhere.

In recent years, it has become apparent that some aspects of legal education (especially beyond the first year of instruction) require smaller classes. This is particularly true in problem-oriented courses such as estate planning, business planning, closely supervised instruction in trial advocacy and in clinical education, legal ethics, and labor negotiations. Because the College has not had enough faculty members, it has not been able to be responsive to these needs.

An excellent law school must be able to offer specialized instruction in new areas as they appear on the horizon. Such areas as legal management of resources and energy, deferred compensation, corporate finance and securities law, labor law and negotiation, and real estate financing are current examples of such areas. The College must also be able to respond to requests from fellow faculty members across the campus who need its help in establishing joint degrees such as the J.D./M.B.A., the J.D./A.M. in Labor and Industrial Relations, the J.D./M.A.S. (Master of Accounting Science), the J.D./M.A. in Public Administration, and the J.D./M.D. The College should also be able to release faculty time for teaching of law-related courses in other academic units. New interdisciplinary courses are presently needed within the College too: Law and Economics, Law and Medicine, Law and Drugs, Law and Psychiatry, and Legal History--to name a few. The present staffing of the College does not permit it to address any of these needs adequately, for the faculty members must devote nearly all their time to maintaining the basic curriculum.

Additional secretarial and technical services will be required to support the new directions described. The new needs of the program will require increased in-house production of teaching materials, videotaping of student performances in trial advocacy and negotiation-type courses, and modern research tools, such as the Lexis computer-based retrieval system for State and Federal case and statutory law.

The College of Law derives its national standing, in large measure, from the research contributions its faculty members have made in virtually all the important areas of law. Faculty members are also heavily involved in public service activities: Commission on Uniform State Laws, Illinois Pattern Jury Instructions, etc. To maintain these two components of the College program, time, as well as additional staff and financial support, is required. The secretarial and technical services and the level of student research assistance are presently inadequate.

If the goals of the College of Law are to be met, an incremental amount of $323,000 will have to be added to its budget during the next two years. The funding for FY 1982 is outlined below:

Academic Staff

4.00 FTE Assistant Professors	$136,000
1.00 FTE Professor (summer appointment)	9,000

Nonacademic Staff		
3.00 FTE Secretarial Staff		$ 27,600
1.00 FTE Machine Operator II		8,500
Wages		
Student Research Assistance		14,000
Equipment		
Office Equipment		4,900
	TOTAL	$ 200,000

CAMPUS TEACHING PROGRAM - OFFICE OF INSTRUCTIONAL RESOURCES ($100,000)

The Office of Instructional Resources (OIR) at UIUC has been operating a Campus Teaching Program for the past several years that basically is a program designed to improve teaching on the campus. To date, the results of this effort have been quite successful, and departments that have been involved through graduate teaching assistants and faculty members have urged that the program be expanded.

The Program directly involves graduate teaching assistants and faculty members who may elect to participate. It is specially tailored for the particular department in which it is to be presented and is designed well in advance after a great deal of discussion between personnel from OIR and the department.

Although the Program varies a good deal from department to department, it usually includes two components. One is a series of seminars selected from the following topics: 1) lecturing, 2) leading discussion sections, 3) writing quizzes and examinations, 4) evaluating teaching, 5) adjusting instruction to student differences, 6) effectively using questions, 7) involving and motivating students, and 8) grading. The second part includes the videotaping of each participant presenting a short lesson to his or her peers, the videotaping of each participant teaching in his or her own classroom at both the beginning and end of the term, and the critiquing of those tapes by an OIR staff member in various private meetings with the participant.

During the fall of 1979, OIR staff members worked with approximately 175 graduate teaching assistants and nearly 25 faculty members in eighteen different departments. In addition, a series of monographs were produced: Improving Your Lecturing, Improving Your Test Questions, and Grading. A videotape on lecturing skills was also produced. These materials have been exceptionally well received on campus and nationally.

As the number of people participating in the program has increased, the number requesting services continues to grow. Last year, as an experiment, a letter was sent to all new faculty members in one college informing them of the program and offering consultation to those who

wished it. Twenty-five percent of those addressed responded and every faculty member who participated in the seminars requested additional consultation.

The present staff schedules are to capacity in Fall 1980. While requests for substantial additional help continue to be received, they can only be responded to tentatively, contingent upon additional funding.

The proposed budget for the expansion of the Teaching Improvement Program is as follows:

Academic Staff		
3.00 FTE Teaching Consultants		$ 63,000
.50 FTE Graduate Assistant		7,000
Nonacademic Staff		
.50 FTE Clerk-Typist III		6,000
Wages		
Hourly employees		1,000
Expense		
Commodities		23,000
	TOTAL	$ 100,000

GRADUATE RESEARCH BOARD
($200,000)

Since 1932, the Campus Research Board has operated as a committee decision-making structure for research funds. These funds support faculty research in response to applications submitted by individual faculty or groups of faculty. The Board helps new faculty initiate their research on the UIUC campus, provides seed money for research programs for which external support is available, supports pilot projects, provides modest resources for important research for which external sources are not available, assists in provision of matching funds sometimes required by external sponsors, and responds to emergency research requests as well as requests to take advantage of unusual research opportunities. The Research Board is not a substitute for external granting agencies but is particularly important for support of preliminary studies and in disciplines where Federal funding is minimal.

The Urbana-Champaign campus of the University of Illinois is a major research enterprise. Its research capacity is a driving force in its undergraduate and graduate teaching programs and provides a strong base for its public service role. A responsibly-managed research enterprise must provide for adequate support of new research ventures and for maintenance of research capacity. Such support is a critically important investment for an enterprise which depends heavily on external sources for research support.

The return on investment in seed projects at a strong research institution is substantial. In FY 1979, the Research Board provided approximately $400,000 in seed money support. By Spring 1980, external project support of more than $1.4 million had already resulted from this investment, even though for most of the projects a year's time is far too soon to expect much return.

The Research Board plays a substantial part in supporting new research ventures and in maintaining research capacity for the UIUC campus. However, in recent years its ability to meet this responsibility has been seriously curtailed. Severe budget reductions and inflation have eroded its purchasing power to less than one-third of what it was

in FY 1969. At the same time, the number of research requests submitted to the Research Board has increased markedly as other campus and departmental resources have become strained. The percentage of applications to the Research Board which receive any support at all has declined noticeably, and many awards offer only partial support. Unfunded and underfunded requests total $1.5 million each year. Several types of support are no longer offered at all. These facts discourage potential applicants and stifle exploration of new research ideas. Important research needs at UIUC are, therefore, not being met.

It is essential that a major adjustment be made in the budget base for the Research Board. Funds would be used for the purposes described previously, but emphasis would be placed on research investments which would support the campus strategy to maintain and enhance its quality. For example, the Research Board would help provide substantial research initiation support to assist in attracting exceptionally able young researchers in fields of special promise. It would provide travel grants to assure that the ablest scholars have access to important research resources elsewhere and have opportunities for scholarly exchange and presentation of their work. It would help assure that the present faculty's promise is not wasted by serious research equipment inadequacies.

The $200,000 increment requested for FY 1982 is an important initial step toward the goal of increasing the base budget of the Research Board by $2.0 million to meet critical research needs at UIUC. It is important to note that the Research Board is a very effective mechanism for distribution of scarce resources to support research. Both faculty and administrators recognize it as a legitimate, effective, and autonomous body, capable of finding and fostering excellence in research in all fields.

BASE DEFICIENCIES

In the past few years recognition has been given to base deficiencies in operation and maintenance of the physical plants at all three campuses of the University. Base deficiencies in funding for equipment replacement have also been identified. An appropriation of $650,000 for the equipment deficiency was provided in FY 1981, and $1,367,000 was appropriated for operation and maintenance deficiencies.

These deficiencies are a result of the effects of inflation upon the University's ability to maintain facilities and equipment at adequate levels. Although annual increases have been provided for equipment and the operation of the plant, deficiencies have continued to mount. The State's recognition of this continuing deterioration and the appropriation of deficiency funding to begin the recovery process are important steps toward solving the problem. The continuing impact of inflation however, serves to reduce the impact of recovery efforts, and to heighten the need for continuing the recovery process at an accelerated rate.

DEFICIENCY IN THE OPERATION AND MAINTENANCE OF PHYSICAL FACILITIES ($2,200,000)

The proper maintenance and repair of physical facilities are essential to the support of faculty and educational programs. In recent years the impact of inflation and insufficient incremental funds has created a backlog of deferred maintenance projects. Since FY 1971, sufficient funds have not been available for the University of Illinois to maintain and repair its physical facilities at the appropriate level.

Actual operation and maintenance expenditures for FY 1979 (FY 1980 data are not yet available) were $44,798,970. When prevailing inflation rates are applied to the FY 1971 base, the funds required in FY 1979 to provide services at the FY 1971 level were $53,979,930. These data indicate a $9,180,960 gap between actual expenditures and those which would be required to achieve the FY 1971 services level. (See Table 1).

It is reasonable to expect that some efficiencies in productivity have been accomplished since FY 1971. Therefore, an adjustment to the deficiency must be made to account for this factor (1% per year). In addition, the University has generally received sufficient funding to cover utility costs during the last decade. Consequently, the utilities component of the O&M base should not be considered a significant factor in the calculation of the O&M deficiency. An adjustment was made to the calculation to eliminate the utilities component. The resulting total deficiency in funds for operation and maintenance after adjustments for utilities and productivity was $5,885,062 in FY 1979. When this deficiency is inflated to FY 1982 dollars and FY 1980 and FY 1981 incremental dollars are subtracted out, the resulting gap is $5,140,745 (see Table 2). This total deficiency represents underfunding of $470,810 at Chicago Circle, $1,329,462 at Medical Center, and $3,340,473 at Urbana-Champaign.

The identified underfunding has resulted in deferred maintenance for many of the University's buildings. Consequently, projects which may have been minor and completed at minimal expense, have become major

remodeling needs due to neglect. It is imperative that the University maintain its current facilities in order to adequately serve its students and faculty.

State money which has been appropriated to the University of Illinois for operation and maintenance deficiency recovery has had an impact on reducing the deficiency. However, with high inflation rates, it is projected that the operation and maintenance deficiency will recover at a slow rate. The attached table presents initial estimates of the FY 1982 operation and maintenance deficiency. The calculations indicating the actual deficiency will be made after FY 1980 data are available.

The University is requesting $2,200,000 for operation and maintenance deficiency recovery for FY 1982. This would allow for funding of $770,000 for the Campuses in Chicago ($201,000 at Chicago Circle $569,000 at Medical Center), and $1,430,000 at Urbana-Champaign. With this support, assuming no further losses to inflation, recovery would occur in approximately 3.0 years.

TABLE 1

FUNDS REQUIRED FOR O & M SERVICES

	FY 1971	FY 1972	FY 1973	FY 1974	FY 1975	FY 1976	FY 1977	FY 1978	FY 1979
Gross Square Feet (GSF) Maintained by O & M									
Chicago Circle	2,939,309	3,064,941	2,962,749	2,759,464	2,759,464	2,759,464	2,759,464	2,759,464	2,759,464
Medical Center	2,061,994	2,144,163	2,338,141	2,573,534	2,614,362	2,751,131	2,994,023	3,029,061	2,867,083
Urbana-Champaign	7,821,910	8,138,169	8,141,363	8,151,041	8,265,054	8,312,526	8,431,497	8,478,204	8,710,636
TOTAL	12,823,213	13,347,273	13,442,253	13,484,039	13,638,880	13,823,121	14,184,984	14,266,729	14,337,183
Actual O & M Expenditures									
Chicago Circle	$ 6,352,435	$ 6,085,065	$ 6,364,229	$ 6,545,450	$ 7,578,707	$ 7,974,851	$ 8,539,761	$ 9,070,084	$ 9,859,048
Medical Center	5,905,880	4,865,983	5,559,016	6,222,805	7,190,706	8,776,108	9,624,615	10,441,848	11,558,194
Urbana-Champaign	12,631,299	12,750,282	13,330,929	13,810,344	16,124,667	17,781,471	19,425,411	21,255,792	23,381,728
TOTAL	$24,889,614	$23,701,240	$25,254,174	$25,578,599	$30,894,080	$34,532,430	$37,589,787	$40,767,724	$44,798,970
Funds Required to Provide Services at the FY 1971 Level (Reflecting Changes in Campus GSF)									
Chicago Circle	$ 6,352,435	$ 7,030,974	$ 7,086,895	$ 7,646,475	$ 9,084,157	$ 9,845,767	$10,463,887	$11,294,486	$12,412,070
Medical Center	5,905,880	5,682,818	6,382,783	8,291,370	10,005,517	11,349,658	13,230,253	14,407,052	14,843,628
Urbana-Champaign	12,631,299	13,940,683	14,654,454	16,114,609	18,497,190	20,257,625	21,955,618	24,058,435	26,724,232
TOTAL	$24,889,614	$26,654,475	$28,124,132	$32,052,454	$37,586,864	$41,453,050	$45,649,758	$49,759,973	$53,979,930
O & M Deficiency Relative to FY 1971 Level of Service									
TOTAL UNIVERSITY	-0-	$ 2,953,235	$ 2,869,958	$ 5,473,855	$ 6,692,784	$ 6,920,620	$ 8,059,971	$ 8,992,200	$ 9,180,960

TABLE 2

FY 1982 PROJECTED OPERATION AND MAINTENANCE DEFICIENCY

1.	Total FY 1979 Deficiency	$9,180,960
2.	Less Utilities	(199,013)
3.	Less 1% Productivity (9 years) Compounded Daily (9.4%)	(3,096,885)
4.	Total FY 1979 Deficiency Less Utilities and Productivity	5,885,062
5.	Impact of Inflation on Deficiency (FY 1979-80) Δ 9.2%[1]	541,426
6.	FY 1980 Incremental Dollars for O & M Deficiency	980,400
7.	FY 1980 Projected Base Deficiency (4+5-6)	5,446,088
8.	Impact of Inflation on Deficiency (FY 1980-81) Δ 11.7%[2]	637,192
9.	FY 1981 Incremental Dollars for O & M Deficiency	1,367,000
10.	FY 1981 Projected Base Deficiency (7+8-9)	4,716,280
11.	Impact of Inflation on Deficiency (FY 1981-82) Δ 9.0%[2]	424,465
12.	FY 1982 Projected O & M Deficiency	$5,140,745

[1]CPI "All Items" less Energy

[2]Estimated

EQUIPMENT DEFICIENCY
($1,800,000)

In the past several years, the University of Illinois has accumulated a backlog of obsolete equipment requiring replacement. A large portion of the University's equipment was purchased during the growth period of the 1960's and since that time, has become obsolete due to normal wear and tear and rapid technological change.

The University's inability to replace this obsolete equipment poses a serious threat to its ability to maintain high quality programs and attract high quality students and faculty. Many disciplines at the University of Illinois, particularly Engineering, Agriculture, Veterinary Medicine, and Liberal Arts and Sciences, require sophisticated pieces of equipment to conduct their instructional and research programs. Equipment which is unreliable, malfunctioning, or outdated can seriously detract from the otherwise outstanding educational opportunities offered in these fields.

Previous State appropriations for equipment acquisition have helped somewhat in easing the equipment obsolescence problem. Annual funding over the past several years has enabled the University to keep pace with some equipment upgrading needs. However, the annual appropriations for equipment did not provide sufficient funding to address the accumulated deficiency.

The University sought $600,000 in its FY 1981 budget request for reduction of the equipment deficiency. The Illinois Board of Higher Education, the legislature, and the Governor supported this request with an FY 1981 appropriation of $650,000. Through this appropriation, the University will be able to make significant progress toward the recovery of the deficiency. However, serious deficiencies remain in equipment necessary for direct instruction and for related laboratory research. To continue the processing of reducing this deficiency, the University requests $1,800,000 for FY 1982. This amount will provide $445,000 for Chicago Circle, $340,000 for Medical Center and $1,015,000 for Urbana-Champaign.

SPECIAL SERVICES/FUNDING COMPONENTS

Budget requests for essential services provided by the University of Illinois to residents of the State are summarized in this section. These services are outside the University's core functions of instruction, research, and public service. As such, the resource requirements of these services should not compete for educational funding.

Included in the special services section are requests for County Board Matching Funds (UC), Completion of Cooperative Extension Service TeleNet System (UC), Color Videotape Capability for Cooperative Extension Service Programming (UC), Fire Service Institute (GU), and the Library Computer System (GU).

TABLE 20
SUMMARY OF SPECIAL SERVICES/FUNDING REQUESTS FOR FY 1982

I.	URBANA-CHAMPAIGN		$423,300
	A. County Board Matching	$328,700	
	B. Expansion of Telenet System	46,600	
	C. Color Videotape Capability	48,000	
II.	GENERAL UNIVERSITY		283,000
	A. Fire Service Institute	219,300	
	B. Library Computer System	63,700	
	TOTAL		$706,300

COUNTY BOARD MATCHING FUNDS
($328,700)

Under the County Cooperative Extension law which was amended by the General Assembly in 1979, the State, through the University of Illinois, is required to provide appropriations from the Agricultural Premium Fund (APF) to partially match allocations from county sources in support of county extension work. The State money supplements county funds, and the law provides for a gradual increase in the matching rate up to a 50-50 ratio by 1984.

County or multi-county Extension Councils, which were established according to guidelines approved by the University of Illinois Board of Trustees, forward proposed county or multi-county budgets to the Director of the University of Illinois Cooperative Extension Service for review and approval. The approved budgets are then submitted to the appropriate county governing board by the county or multi-county Extension Council. Local funds are then paid to the University of Illinois to be maintained in county trust funds and are used along with the APF matching funds in a manner consistent with the approved budgets. Trust funds are used to pay local costs such as rent, some salaries, program materials, local travel, etc., of the more than 100 county extension offices.

The amended County Cooperative Extension Law calls for an increase in the matching provision from 35 to 40 percent for FY 1982. This means that the counties will provide 5 percent less, and 5 percent more is to be provided from APF. This change is to be effective July 1, 1981.

The State Agricultural Premium Fund allocation for FY 1979 matching was $762,800 (25 percent match requirement). The FY 1980 allocation was $1,070,300 (30 percent match requirement). The FY 1981 appropriation at the 35 percent level is $1,371,300.

Incremental funds for FY 1982 are requested in the amount of $328,700 to comply with the 40 percent matching requirement of the amended State Law. (See the following table for a more complete description of the distribution of required funds over a 7-year period.)

Agricultural Premium Fund
County Match

Year	County Sources	APF State Match	Change In APF Allocations Actual & Estimated	Total Budget
1977-78[1]	$ 2,114,400 (75%)	$ 704,800 (25%)	$	$ 2,819,200
1978-79[1]	2,288,500 (75%)	762,800 (25%)	58,000	3,051,300
1979-80[1]	2,497,400 (70%)	1,070,300 (30%)	307,500	3,567,700
1980-81[2]	2,546,700 (65%)	1,371,300 (35%)	283,000	3,918,000
1981-82[3]	2,550,000 (60%)	1,700,000 (40%)	328,700	4,250,000
1982-83[3]	2,600,000 (44%)	2,127,300 (45%)	427,300	4,727,300
1983-84[3]	2,650,000 (50%)	2,650,000 (50%)	522,700	5,300,000

[1] Numbers reflect actual allocations received from counties and matched with APF funds.

[2] Numbers reflect estimates contained in University of Illinois FY 1980 request.

[3] FY 1982 and beyond are forecasts based on annual increases in County sources of 2 percent a year.

COMPLETION OF COOPERATIVE EXTENSION SERVICE TELENET SYSTEM ($46,600)

The Cooperative Extension Service TeleNet System consists of amplified phones tied together 24 hours a day by dedicated telephone lines. The TeleNet System was instituted in the Fall of 1970 with an initial installation at 17 county extension offices. The system currently is operational in 85 county and regional extension offices, leaving 27 offices unserved.

TeleNet is used for a variety of educational programming activities. Technical updating is provided to field staff members on a weekly basis. Special 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 consists of approximately 1,200 professional, nonacademic, and paraprofessional people. During calendar year 1979 more than 60,000 person-contact hours of programming were conducted for all purposes via TeleNet.

The TeleNet System has become an increasingly important part of the CES delivery system. Because of tight travel budgets, increasing travel costs, the need to conserve energy, and the expansion of CES responsibilities--particularly in urban communities--it has become apparent that TeleNet must be used to its fullest potential.

General communication and specific teaching opportunities are limited by the lack of TeleNet outlets in about one-fourth of the Extension offices in the State. Staff members have to duplicate efforts with alternate delivery methods in areas of the State that cannot be reached via TeleNet.

The recurring costs of operating the station TeleNet System in FY 1980 amounted to approximately $155,000. Thirty-eight percent of operating costs was provided from county resources, 44 percent from Federal resources and 18 percent from State resources in FY 1980.

Currently, 3.00 FTE staff in the College of Agriculture coordinate production activities and programming for TeleNet.

The long-range plan, in addition to completing the basic network, is to provide the efficient and effective visual support technology and techniques for each of the TeleNet locations. Counties will be expected to pay half of the technology costs and to continue paying part of the basic operating costs of the system. When the system is mature, the counties will be expected to pay one-half of the operating costs exclusive of any on-campus salaries. It is anticipated that this point will be reached by FY 1985.

The proposed budget will provide TeleNet capability to the remaining 27 offices currently not served by the system.

Expense

Equipment rental and purchase of amplifying equipment (telephones, lines, and installation charges for TeleNet)	$46,600
TOTAL	$46,600

COLOR VIDEOTAPE CAPABILITY FOR COOPERATIVE EXTENSION SERVICE PROGRAMMING ($48,000)

Because travel costs have been increasing so rapidly, the Cooperative Extension Service (CES) has been working to improve its remote instruction capability. The intent is to offer a higher fraction of CES instruction by remote technology and thus to keep travel costs within manageable limits. Color videotape provides an excellent visual and audio capability to augment instruction offered over the CES voice-only TeleNet System. This added capability will contribute greatly to the improvement of the quality of remote instruction throughout the State.

The most serious limitation of TeleNet, the dedicated telephone network that will soon be completed and will provide a link to all CES offices in the State, is that it is a sound-only system. Its success to date has rested on the ability of CES to supplement it with colored slides and printed materials. CES would like to augment such materials with videotapes that would be comparable in quality to the programs its clientele is used to seeing on television every day. Short videotaped presentations could be shown simultaneously in various areas of the State as a part of TeleNet instruction given by an Urbana-based specialist. These videotaped materials would be available also in counties for individualized instruction.

Color videotape programs would also find widespread use and greatly enrich the programs of the Homemakers Extension Federation and 4-H Clubs. Within the State there exist 1,893 homemakers' organizations with 41,000 members. In addition, there are 4,600 4-H Clubs with nearly 110,000 4-H members. Most clubs and units meet in members' homes. Through color videotapes, CES subject-matter specialists would be able to teach in members' living rooms with a resultant upgrading of instruction.

Color videotapes would also be used to provide packaged inservice training for county staff members. Training tapes would allow staff members to absorb new concepts and to learn new ideas at their own pace and would eliminate some of the need for travel to the campus for training sessions and refresher courses.

The color videotape capability for the Cooperative Extension Service would mesh well with existing production equipment that has been provided for the undergraduate teaching program and that is accommodated in the Office of Agricultural Communications. That office already has audio-recording and studio facilities, and its staff provides excellent art and still photographic support. Any equipment purchased for the project would also complement the equipment of the Office of Instructional Resources, the campus-wide instructional support unit.

CES proposes involving 40 counties in a cooperative pilot effort that would provide them with the equipment to use color videotapes and with the tapes themselves. Over a three-year period the program would be expanded to include 80 counties. Each participating county would contribute $1,250 plus the costs related to maintaining its own tape library. It is expected that to institute the program in 40 counties would cost $98,000 on a non-recurring basis and that the counties would provide $50,000 of that cost. The amounts requested for the three-year period FY 1982 - FY 1984 are shown below:

	FY 1982	FY 1983	FY 1984
Equipment and Color Videotapes	$48,000[1]	$24,000[1]	$24,000[1]
TOTAL	$48,000	$24,000	$24,000

[1]Nonrecurring amount.

FIRE SERVICE INSTITUTE
($219,000)

Public Act 81-1147, the Illinois Fire Service Institute Act, mandates the Board of Trustees of the University of Illinois "...to operate a state Fire Academy...for the purpose of instructing fire protection personnel throughout the State of Illinois, providing service to public and private fire departments in Illinois, and conducting research in the methods of maintaining and improving fire protection and control services consistent with the needs of Illinois communities." The Act stipulates that the Institute provide, as a minimum, instructional programs in areas necessary to meet certification rules and regulations of the State Fire Marshal for student training. The Act provides that programs beyond this minimum may be conducted.

The Act also provides funding provisions to enable the University of Illinois to carry out the Institute's mandate. One-eighth of the funds deposited annually into the Fire Prevention Fund are made available for appropriation to the University of Illinois "for the purpose of maintaining the Institute, paying the expenses and providing the facilities and structures incident thereto...and for no other (purpose)." Prior to passage of Public Act 81-1147, the funds were deposited into the Fire Prevention Fund on the basis of one-half of one percent of the gross premium receipts of fire insurance companies in Illinois. The Act raises the basis of deposits from one-half to one percent. Until passage of Public Act 81-1147, the Fire Service Institute was operated through a contract with the State Fire Marshal.

Instructional Programs

The instructional programs of the Fire Service Institute have traditionally been directed in two areas: a field training program in which instructors travel throughout the State to work with small, usually volunteer fire departments; and a more specialized program of courses taught on campus to provide instruction for career fire fighters who require certification for career advancement.

The funding level provided through the contractual arrangement with the State Fire Marshal has been the same for each of the past three years. As a result, some program reductions have been required to meet unavoidable cost and salary increase requirements of the Institute. For FY 1980, the Institute director estimates that between 40 and 50 requests for field training programs, affecting 800 to 1,000 students, had to be refused because of a lack of instructional personnel. Moreover, an average of 95 students per year have been turned away from on-campus programs each of the past three years.

In addition, the Division of Personnel Standards and Education, Office of the State Fire Marshal, has recently announced new certification requirements in the program areas of arson detection and investigation, fire prevention and inspection, and executive development. These new certification needs will require a minimum of 680 clock hours of additional instructional programs, which will be initiated over the course of Fiscal Years 1981 and 1982.

Funds available in FY 1981 will allow for the addition of one new faculty member plus additional equipment and materials for program expansion. For FY 1982, it is planned to add one more full-time faculty member, one-half FTE clerical person, and approximately 2 FTE part-time instructors to permit additional further growth in the areas outlined above.

Facilities Needs

Before significant program growth can be accomplished to meet the full mandate of the Fire Services Institute Act, suitable facilities for fire training and instruction must be available. The Fire Service Institute presently has the use of a parcel of land of slightly more than 20 acres at the extreme southwestern edge of the Urbana-Champaign campus for a training site. In many respects this is an ideal location, for it is in a relatively remote portion of the campus, yet is accessible by roads already in place. It is in a low-traffic area for both campus and community use. It is sufficiently large to permit

virtually all types of training and demonstrations of fire-fighting techniques. Some water-delivery systems are already in place and can easily be expanded.

The site presently has only one building: a fire tower which has enclosed walls on the first story to provide for fire apparatus storage and open walls on the remaining five stories to allow for various fire-fighting demonstrations. The tower contains no classroom or office facilities; when on-site instruction is conducted, the apparatus room must be used.

Offices for the Fire Service Institute are presently housed in a University-owned converted residence, some three miles from the training site. Classroom space is presently obtained in the Illini Union for on-campus instruction. This multiple location situation is highly unsuitable to effective instruction and efficient management of the Institute's programs. Utilizing Illini Union facilities presents scheduling difficulties for conduct of specialized courses. For the best instructional setting, students should be able to move rapidly from the classroom to the demonstration area and back. For obvious reasons, a fire-fighting demonstration/practice facility cannot be located on the main campus in proximity to current classroom facilities. The current training site is an ideal location, and by far the most cost- and program-effective solution is to provide instructional facilities on the present training site.

It is currently expected that a classroom/office building of approximately 12,000 gross square feet will meet the needs of the Fire Service Institute for instructional and office space. Locating this facility on the present training site would alleviate many of the inefficient conditions which presently exist and would provide sufficient space to permit the Institute to expand its programs to the extent necessary to meet the mandate of the new legislation.

While no final decisions have been made regarding the size of the facility or the type of construction to be used, it appears from preliminary studies that a pre-engineered facility may be the most appropriate. Construction of such a facility could be accomplished

with relative speed and at a cost significantly lower than for typical "brick and mortar" construction.

Beyond the primary need for an on-site classroom/office building, the Fire Service Institute foresees only a few relatively minor capital needs: a fire environment building (a partially constructed simulation of a typical local community commercial facility or office building for fire-fighting demonstration purposes), a volatile materials storage facility, and some remodeling in the present fire tower to provide sprinkler and fire alarm laboratories. Without question, the most pressing need is for the classroom/office building described above. Meeting these needs is consistent with the specific mandate for the Institute.

The FY 1981 appropriation for the Fire Service Institute includes $111,800 to begin site preparation and facilities masterplanning. The incremental funds which will become available in FY 1982 and FY 1983, when the Fire Prevention Fund deposit rate changes from one-half to one percent, will be used primarily to fund construction of the classroom/office building identified above.

Availability of Funds

As noted earlier, the University of Illinois is eligible to receive one-eighth of the monies deposited annually in the Fire Prevention Fund. The following estimates of funds available have been used in budget planning for the Institute:

(Dollars in Thousands)

	FY 1981	FY 1982*	FY 1983
Total Fire Prevention Fund Deposits	$3,400.0	$5,500.0	$7,500.0
University of Illinois Share	425.0	687.5	937.5

*Assumes one-half year at old rate of .5%; one-half year at 1.0% contribution rate.
Amounts for FY 1982 and 1983 are subject to later revision.

It is expected that program growth will be possible in FY 1982, 1983, and 1984 at a rate approximately equal to that in FY 1981, while the bulk of the increase in funds available is used for construction of the classroom/office building. After that time, the majority of those funds will be available for program support as necessary.

Further planning efforts will be required before a more precise breakdown between program and capital use can be made. Masterplanning activities in FY 1981 will include determination of the cash flow sequence which will be necessary to maintain a construction schedule for the classroom/office facility within the funds available each year.

FY 1982 Budget

The Fire Prevention Funds available to the University of Illinois for FY 1982 will be used for the following purposes:

1.	Provide for continuing support of current Fire Service Institute programs, excluding Retirement	approximately $320,000
2.	Provide for program growth through addition of 1 FTE instructor; .5 FTE clerical; and 2 FTE part-time instructors	approximately $ 32,000
3.	Provide for beginning construction of a classroom/office facility	approximately $300,000
	Total Fire Prevention Funds, excluding Retirement	$652,500
	Total Incremental Funds (FY 1982-FY 1981), excluding Retirement	$250,000
	Incremental Funds for Expanded Programs and Facilities	$219,300

LIBRARY COMPUTER SYSTEM
$63,700

Since FY 1978, State funding has been provided to the University for development and operation of the Library Computer System (LCS). Through this continuing support, considerable progress has been made in improving the accessibility of library resources to the University and other sectors of the State. The Library Computer System is fully operational and will be essentially complete if funding is provided for this final phase of the project.

Approximately 340 terminals have been installed Statewide and provisions have been made to connect these terminals to the University computer. In addition, service has been expanded through the recent implementation of the Library Delivery System. This delivery system complements the circulation and search system by transporting library materials to patrons throughout the State.

To complete the implementation and expansion of LCS as specified in the original plans, approximately 60 terminals must be added to the System in FY 1982. These terminals will be installed at participating institutions and are not a part of this request. However, to accommodate the new terminals in FY 1982 additional funding will be required by the University to expand its existing computer equipment.

For FY 1982 the University is requesting $63,700 to purchase the additional equipment specified below.

Communication Controllers for 63 ports	$17,200
On-line Storage (2 IBM 3350's)	28,800
Disk Controller (IBM 3830)	13,600
Tapes, Paper, etc.	4,100
Total	$63,700

BASES AND CALCULATIONS FOR
CONTINUING COMPONENTS INCREMENTS
(Dollars In Thousands)

I. Compensation Improvement

A. FY 1980 Personal Services Base: $255,144.1

B. FY 1981 Personal Services Base: $278,676.1

C. Calculations for Compensation Improvement

1. Annualization of FY 1981 Increase for two months
FY 1980 P/S Base x .08 x .95 x 2/12 =
$255,144.1 x .08 x .95 x 2/12 = $ 3,231.8

2. Compensation Increase for FY 1982: 9% for 10 months
(FY 1981 P/S Base + Annualization) x .09 x .95 x 10/12
($278,676.1 + $3,231.8) x .09 x .95 x 10/12 = $20,085.9

3. Compensation Catch-Up for FY 1982: 1.8% for 10 months
(FY 1981 P/S Base + Annualization) x .018 x .95 x 10/12
($278,676.1 + $3,231.8) x .018 x .95 x 10/12 = $ 4,017.2

4. Total Compensation Improvement Request (1 + 2 + 3) $27,334.9

II. General Price Increases
A. FY 1981 Base = $42,948.7
B. FY 1982 Percentage Increase = 8%
C. Calculation: $42,948.7 x .08 = $3,435.9

III. Utilities Price Increase
A. FY 1981 Base = $24,444.9
B. FY 1982 Increase Percentage = 20%
C. Calculation: $24,444.9 x .2 = $4,889.0

IV. Library Price Increase
A. FY 1981 Library Acquisitions Base (State Funds) = $4,776.1
B. FY 1982 Increase Percentage = 15%
C. Calculation: $4,776.1 x .15 = $716.4

Total Price Increases (II + III + IV) = $9,041.3

RETIREMENT
($27,953,600)

For FY 1979 a significant improvement in the financing of the State Universities Retirement System (SURS) was achieved when the amount of incremental funding approved for the University was increased from the "net payout" level to the "gross payout" level. In essence this improvement meant that instead of providing funds sufficient only to cover costs of pensions for employees already retired ("net payout") the State provided funds to cover those current costs plus an additional amount to be placed in reserve for future costs of pensions of employees still active prior to retirement ("gross payout"). For FY 1980, the Retirement appropriation provided funds beyond the gross payout requirement by one-half of one percent of the total payroll for covered employees.

The FY 1981 Retirement appropriation passed by the General Assembly and approved by the Governor was again based upon the Gross Payout Level. As noted in the discussion of Compensation Improvement earlier in this document, the IBHE recommended an additional one percent of the total higher education personal services base for appropriation to SURS to purchase additional fringe benefits for State employees covered by SURS. The funds for additional fringe benefits were not approved.

As a matter of long-standing policy, the Board of Trustees of the University of Illinois has set the Retirement request at the statutorily required funding level. For FY 1982, the statutory funding level will require an increment of $27,953,600 for the University of Illinois, based upon data supplied by SURS.

POLICE TRAINING INSTITUTE
($469,700)

Background

The Police Training Institute was established at the University of Illinois by the Illinois Legislature in 1955 "for the purpose of training police officers in the State of Illinois in the methods of maintaining police services at a level consistent with the needs of the community" (144 I.R.S. 63b). The Illinois Local Governmental Law Enforcement Officers Training Board was created by the Illinois General Assembly in 1965 to establish minimum standards basic law enforcement training, certify training facilities and course offerings under the Police Training Act, and encourage local units of government to provide a full range of training to their police personnel to improve Illinois law enforcement (85 I.R.S. 501-514). Public Act 79-720 provides that all full-time local law enforcement officers must successfully complete the minimum standards basic law enforcement training program prescribed and certified by the Training Board within the first six months of their initial employment. There are five agencies certified by the Training Board to deliver the mandated basic training program. Of the five, only the Police Training Institute, in keeping with its mandate, can and does provide a year-around program of training for local law enforcement personnel to meet the requirements of Public Act 79-720.

An extensive study of law enforcement training in the United States in 1978 disclosed that the Illinois minimum standard basic training program of 240 curriculum hours delivered in a six-week period was 64 hours less than the national average and 160 hours less than the surrounding states of Indiana, Iowa, Kentucky and all the major population states. As a result, on December 6, 1979, the Training Board acted to expand the State-mandated basic law enforcement training program, effective July 1, 1981, to 400 curriculum hours to be delivered in a ten-week period. Concurrently, the Training Board adopted the following policy statements in its Long-Range Plan: "To maximize the quality of local law enforcement training, the Board shall discourage further proliferation of the number of institutions delivering training; and by November 1 of each year, each (certified) training agency will submit to the Board an annual basic law enforcement training plan for the

next State fiscal year, the plans to be on a three-year cycle." In so doing, the Training Board as representing the Illinois law enforcement community clearly indicated that the Police Training Institute and other certified agencies will be expected to train the same number of officers in the expanded basic law enforcement program as in the past as well as maintain the same level of advanced, specialized and technical courses offered annually.

Justification

To provide the expected level of training under these new requirements, the Institute will have to deliver 10,000 curriculum hours of basic training (25 courses X 400 hours) and 2,000 curriculum hours of advanced, specialized and technical training (50 weeks X 40 hours). The performance orientation of a vocational law enforcement program requires more than one instructor per instruction hour. Experience and analysis of the expanded basic training curriculum shows that the ratio of instructor to instruction hour will be 2.15:1, or 21,500 instructor contact hours per year. From past experience, the ratio for advanced, specialized and technical courses is 1.25:1, or 2,500 instructor contact hours annually. Therefore, the expanded program will require 24,000 instructor contact hours to deliver, with 89.58% devoted to State-mandated basic training and 10.42% to advanced, specialized and technical course delivery.

The expanded program will require additional staff (academic and non-academic), increased utilization of law enforcement practitioners as temporary/part-time instructors, as well as additional facilities and transportation capabilities. A critical analysis of the expanded program indicates a minimum need, allowing for holidays, vacation, illness, in-service training, sabbatical, course coordination, administration, etc., for 31 full-time academic staff and 22 full-time nonacademic staff (includes clerical, classroom support and transportation operators). These staff levels are premised on full-time academic staff for 15,000 of the 24,000 instructor contact hours, with the remaining 9,000 instructor contact hours assigned to law enforcement practitioner, part-time instructors. The latter would be to reduce costs without adverse effect on program quality.

Space Needs

The expansion of the basic law enforcement program will require additional classrooom, practical exercise and staff office space. Minimum total facility requirements would be 14,823 GSF for classrooms and classroom support, 14,640 GSF for practical exercise facilities, and 13,837 GSF for staff and administrative offices, for a total of 43,300 GSF plus 23,200 GSF parking. The most complex issue surrounding space needs is related to practical exercise space. At present the Institute schedules practical exercises around the availability of usable University space, none of which is designed for expected learning outcomes or effective utilization. The present 240-hour mandated basic law enforcement curriculum outlines twelve separate practical exercises comprising 81 instructional hours. The expanded basic law enforcement curriculum, as presently outlined, identifies 20-22 separate practical exercises, comprising 159-165 instructional hours. Effective July 1, 1981, the need for practical exercise space will double the current need, creating a serious scheduling problem. The expanded training program will necessitate four basic law enforcement classes in session concurrently as opposed to two or three concurrent classes at the present time. Optimally, space needs would be met through a single facility which would provide instructional, support, and office space in addition to housing and practical exercise facilities.

Although a single facility would provide the optimal long-range solution to meeting the law-enforcement priority of increased training for police officers, higher education priorities do not presently allow an investment of that magnitude. Nor is additional space available on the Urbana-Champaign campus. At the minimum, a total of 6,207 ASF of classroom and classroom support space and 2,582 ASF of office space will be required in FY 1982 in addition to the current space at Urbana-Champaign already utilized by the Institute. The only option available will be to secure rental space for the minimum needs for a total of 8,789 ASF.

For FY 1982, therefore, the request is for those incremental funds needed to meet the increased level of training. Those incremental needs are:

Personnel Needs

	Current Staff Supported by State Funds	Required FY 1982	No. Additional Staff supported by State Funds	Required Additional State Funds
Academic/ Administrative	22	31	9	$198,000
Non-Adacemic	17	22	5*	47,500
Part-Time Instructor (9,000 contact hours)	--	--	--	127,500
Total Personnel Needs	39	53	14	$373,000

*Includes one clerical, one classroom support, and three transportation operators. Subject to revision once final transportation needs are defined.

Space Needs

8,789 Assignable Square Feet @ $11/ASF	$ 96,700
Total Incremental Funds Required	$469,700

PART III

FISCAL YEAR 1982 CAPITAL BUDGET REQUEST

Introduction

The University's FY 1982 Capital Budget Request is comprised of three major segments: (1) Regular, (2) Energy Conservation/Fuel Conversion, and (3) Food for Century III. The regular segment of the request includes remodeling, renovation, and construction projects necessary to support the University's ongoing programmatic activities. The Energy Conservation/Fuel Conversion segment represents a special effort initiated in FY 1981 to help control spiraling energy costs through retrofit improvements to the building and mechanical systems. The third segment of the request consists of those projects considered essential to the continued progress of the Food for Century III Program.

This section of the document presents a description of the regular segment of the FY 1982 capital improvement request. The Energy Conservation/Fuel Conversion segment is presented in a separate section immediately following the regular request documentation. A separate request document has been prepared to describe the University's FY 1982 Food for Century III request.

The projects which appear in the regular capital budget priority list represent the highest priority items contained in the sixty million dollars of capital improvement needs originally submitted by the campuses for consideration in FY 1982. The priority list emphasizes the University's most urgent capital improvement needs, while also recognizing that State financial resources are limited. The present list, exceeding $29 million assumes that two equipment projects and planning for the Library Sixth Stack Addition are funded in FY 1981.

The FY 1982 Capital Budget Request, as described in July, has been revised to include construction funds for the Library Sixth Stack Addition. Final action on the FY 1981 capital appropriation bill resulted in a planning appropriation for this project rather than the full amount needed to construct the facility.

Regular Capital Segment

The regular segment of the University's FY 1982 Capital Budget Request emphasizes a need to upgrade the University library system, and a continuing need to maintain the structural integrity of the physical plants. Table 1 presents a summary of the proposed FY 1982 Capital projects in priority order.

The libraries at the University of Illinois represent a major State and national resource and are central to the effective operation of high quality programs in instruction and research. To maintain this high level of quality, new space for new acquisitions must be added to the system and some existing space must be renovated.

The University's first priority project continues to be the Library Sixth Stack Addition. At the Urbana-Champaign campus, stack space has not kept pace with the growth of the library's collection. Rapidly changing technologies and advances in basic scientific research have led to a dramatic increase in the number of new publications. To provide adequate support to research and teaching efforts, activities which require access to current literature, the Urbana-Champaign library has added approximately 150,000 volumes per year to its collection over the last several years.

Since 1970 there have been no additions to the General Library Bookstack. Efforts to make room for the new volumes, e.g., fore-edging books, have provided an interim solution to the problem. Finally, in FY 1979, a warehouse facility was leased by the campus to provide temporary storage for the overflowing stacks. Even the temporary facility is now overflowing.

Planning funds have been appropriated for FY 1981 to complete the architectural and engineering specifications for a Sixth Stack Addition to the Urbana-Champaign Library. It is anticipated that the necessary planning activities will be completed in time to begin construction in FY 1982. Accordingly, the University is requesting $9,577,000 for FY 1982 to finance construction of this facility.

The remainder of the Capital Budget Request for FY 1982 reflects the University's philosophy of meeting physical facilities needs, where practicable, through alteration and improvement of existing facilities.

TABLE 1
UNIVERSITY PRIORITIES - FY 1982 CAPITAL BUDGET REQUEST

University Priority	Campus Priority	Project	Budget Category	Project Cost	Cumulative Total	Chicago Circle	Medical Center	Urbana-Champaign
1	UC-1	Library Sixth Stack Addition	BLDG	9,577,000	9,577,000			9,577,000
2	UC-2	Library Sixth Stack Addition	UTIL	141,500	9,718,500			9,718,500
3	CC-3	SR^3	REMD	872,100	10,590,600	872,100		
4	MC-3	SR^3	REMD	1,491,000	12,081,600		1,491,000	
5	UC-5	SR^3	REMD	2,651,400	14,733,000			12,369,900
6	UC-6	SR^3 - Equipment	EQUP	175,800	14,908,800			12,545,700
7	CC-1	Library Improvements	PLAN	285,000	15,193,800	1,157,100		
8	CC-2	Relocate OAR	REMD	990,800	16,184,600	2,147,900		
9	MC-1	Pharmacy Building Remodeling	REMD	3,293,000	19,477,600		4,784,000	
10	GU-1	Electrical Upgrade - RRB	REMD	447,500*	19,925,100			
11	UC-3	English Building Remodeling	REMD	2,540,000	22,465,100			15,085,700
12	CC-5	Handicapped Remodeling	REMD	598,900	23,064,000	2,746,800		
13	UC-7	Auditorium Remodeling	PLAN	92,000	23,156,000			15,177,700
14	UC-8	Pilot Training Facility	BLDG	1,277,300	24,433,300			16,455,000
15	UC-9	Pilot Training Facility	UTIL	57,000	24,490,300			16,512,000
16	CC-3	SR^3	REMD	402,200	24,892,500	3,149,000		
17	CC-4	SR^3 - Equipment	EQUP	320,700	25,213,200	3,469,700		
18	MC-3	SR^3	REMD	1,238,000	26,451,200		6,022,000	
19	UC-12	SR^3	REMD	2,160,600	28,611,800			18,672,600
20	UC-13	SR^3 - Equipment	EQUP	165,200	28,777,000			18,837,800
21	UC-10	Television Building Addition	PLAN	398,600	29,175,600			19,236,400

*General University Project not included in campus totals.

Given the prevailing stable enrollment trends and the basically sound structural characteristics of most existing campus buildings, this philosophy is viewed as the most effective and prudent approach to managing available resources. Consistent with this philosophy, approximately thirty percent of the total funds requested for FY 1982 are programmed for Space Realignment, Renewal and Replacement (SR^3) projects. The need for SR^3 funding is acute at all three campuses, and the University has ranked the most urgent SR^3 projects second only to the Library Sixth Stack Addition request. A detailed list of the campuses SR^3 project requests is presented on Table 2, and the calculation of SR^3 remodeling requirements is shown in Table 3. Table 4 displays the University's FY 1982 Capital Budget Request by campus and budget category.

Approximately twenty percent of the funds requested for FY 1982 are programmed for the completion of major remodeling projects. 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 these projects were generated by changes in programmatic needs and building component deterioration.

In terms of overall priority, the major remodeling and planning for major remodeling projects are ranked seven through thirteen in the University priority list. Heading the list of major remodeling projects is a request for planning funds to complete architectural and engineering specifications for a major renovation of the Chicago Circle campus library. In conjunction with this planning request is a remodeling request which will permit relocation of the Office of Admissions and Records. The Office of Admissions and Records currently occupies valuable library space, and its relocation will allow the library space to be returned to its intended function.

The Medical Center's acute need to correct mechanical systems deficiencies in the Pharmacy Building is represented by the Pharmacy Building Remodeling request. The building has no operable windows and the mechanical systems currently serving this facility are inadequate to provide the levels of ventilation and cooling required by the programs operating in the building.

TABLE 2
SR^3 PROJECTS BY CAMPUS

CHICAGO CIRCLE

	Project	Amount
	Remodeling	
	Exterior Masonry Repairs	$253,200
I	Electrical Upgrade-12KV Underground System	46,900
	Lighting Modification	203,300
- - -	Upper Walkway Feasibility Study and Modifications	368,700
II - -	College of Engineering Laboratory Remodeling	402,200
		$1,274,300
	Equipment	
	College of Engineering	$320,700
		$320,700

MEDICAL CENTER

	Project	Amount
	Remodeling	
	Construct Utility Shafts, H. A.	$117,000
	Install Laboratory Utility Risers, H. A.	166,000
	Install Domestic Water and Waste Risers, H. A.	250,000
I	Install Acid Waste Risers, H. A.	42,000
	Revise and Install Ventilation System, H. A.	716,000
- - -	Exterior Masonry and Tuckpointing, Various Buildings	200,000
	Exterior Masonry and Tuckpointing, Various Buildings	88,000
II	Elevator Renovation, COMET	508,000
	Remodel Tenth Floor, COMET	297,000
	Remodel Room 200, Pharmacy	345,000
		$2,729,000

Remodeling:

CC:	part I = $ 872,100	part II = $ 402,200
MC:	part I = $1,491,000	part II = $1,238,000
UC:	part I = $2,651,400	part II = $2,160,600

Equipment:

CC:	part I = $320,720	
UC:	part I = $175,800	part II = $165,200

URBANA-CHAMPAIGN

	Project	Amount
	Remodeling	
	Paraplegic Ramp Improvements	$ 85,400
	Rest Room Accessibility	92,700
	Classroom Renovation	200,600
	College of Commerce-Remodeling	175,000
	College of Veterinary Medicine-Remodeling	30,100
	Animal Room Improvements	124,000
	Davenport Hall Biophysics	626,800
I	Elevator Installations	181,000
	Boneyard Overflow Protection	54,000
	Krannert Center Performing Arts-Remodeling	355,400
	Roger Adams Laboratory-Remodeling	181,800
	Morrill Hall-Remodeling	36,000
	Sprinkler Systems	312,700
	Loomis Laboratory-Remodeling	89,200
- - -	Natural History Building-Remodeling	106,700
	Astronomy Building-Remodeling	238,600
	Roof Replacements	590,700
II	Fume Hood Improvements	481,400
	David Kinley Hall-Room 114	306,400
	Huff Gym Basement Remodeling	304,300
	Mechanical Engineering Building-Remodeling	72,100
	Visual Arts Laboratory	167,100
		$4,812,000
	Equipment	
	Classroom Renovation	$29,000
	College of Commerce Remodeling	14,000
I	Animal Room Improvements	38,400
	Davenport Hall-Biophysics	94,400
- - -	Astronomy Building Remodeling	38,900
	David Kinley Hall-Room 114	8,900
II	Huff Gym Basement Remodel	20,000
	Visual Arts Laboratory	97,400
		$ 341,000

TABLE 3
GENERATION OF SR^3 FUNDS FOR EACH CAMPUS-ESTIMATE OF
SPACE REALIGNMENT, RENEWAL, AND REPLACEMENT
FUNDS TO BE REQUESTED IN FY 1982

	Chicago Circle	Medical Center	Urbana-Champaign
1. Estimated Replacement Cost of Facilities (as of Fall, 1979), escalated to January, 1982	$367,349,339	$436,279,027	$1,648,933,911
2. Existing Space (GSF) as of Fall, 1979	3,069,432	3,469,535	14,026,259
3. Average Replacement Cost ($/GSF) of Existing Facilities (Step 1 ÷ Step 2)	119.68	125.75	117.56
4. Annual Space Realignment, Renewal, and Replacement Generation: $/GSF x .667 (2/3 to be remodeled) x .01 (1 time/100 years)	0.7983	0.8388	0.7841
5. Area of Campus Maintained by Physical Plant (GSF) with State Funds (FY 1979 Space Figures Adjusted for Space Additions and Deletions through Fall, 1981.)	2,943,769	4,572,857	8,594,508
6. FY 1982 Funds Generated at Each Campus (Step 4 x Step 5) Including Architectural/Engineering Fees and Contingency	2,350,011	3,835,712	6,738,954
			$12,924,677

TABLE 4
SUMMARY OF THE FY 1982 CAPITAL BUDGET REQUEST
BY CAMPUS AND CATEGORY

	Category	Chicago Circle	Medical Center	Urbana-Champaign	Total
1.	Buildings, Additions, and/or Structures	$ 0	$ 0	$10,854,300	$10,854,300
2.	Land	0	0	0	0
3.	Equipment	0	0	0	0
4.	SR^3 Equipment	320,700	0	341,000	661,700
5.	Utilities	0	0	198,500	198,500
6.	Remodeling	2,037,200*	3,293,000	2,540,000	7,870,200
6a.	Space Realignment, Renewal, and Replacement	1,274,300	2,729,000	4,812,000	8,815,300
7.	Site Improvements	0	0	0	0
8.	Planning	285,000	0	490,600	775,600
	TOTAL	$3,917,200	$6,022,000	$19,236,400	$29,175,600

*Includes a General University project @ $447,500.

Another major remodeling project is the provision of an adequate back-up electrical system to the Roosevelt Road Building. This Building houses the University Administrative Computer Center and it is essential to have an alternate power source in the event of a power failure in the primary source.

The English Building Remodeling and Auditorium Remodeling Planning requests are designed to improve two important structures on the Urbana-Champaign campus. The FY 1982 request for the English Building project represents the third phase of a four-phased project designed to completely renovate that facility. The planning funds requested for the Auditorium will permit the engineering and architectural work to be completed for the eventual restoration of this building. The Handicapped Remodeling project requested by Chicago Circle will allow for significant improvements to be made in the Campus' overall accessibility.

Following the major remodeling projects in the FY 1982 capital priority list are requests for a new building, planning for a new building addition, and several SR^3 projects. As a result of the deteriorated condition of the existing pilot training facilities, funding for a new facility is requested for FY 1982. The existing structure, due to the extent of deterioration, is considered beyond repair. The Television Building Addition Planning request is also designed to replace deteriorated space with a new facility. Table 5 shows the cost per square foot of the major remodeling, new construction, and planning projects requested for FY 1982. Table 6 presents the future funding implications of these projects.

TABLE 5
COST PER SQUARE FOOT OF NEW BUILDING AND MAJOR REMODELING PROJECTS BY CAMPUS

Category/Project (by campus)	Project Cost	Gross Square Feet	Assignable Square Feet	Efficiency ASF/GSF	$/GSF	$/ASF
Chicago Circle Campus						
Major Remodeling (FY 1982 Request)						
Relocate OAR	$990,800		16,855			$58.78
Handicap Remodeling	598,900		--		--	--
Medical Center Campus						
Major Remodeling (FY 1982 Request)						
Pharmacy Building Remodeling	3,293,000	270,738	167,523	.62	--	--
Urbana-Champaign Campus						
New Buildings						
Library Sixth Stack Addition	9,577,000*	76,860	63,000	.82	124.60	152.02
Pilot Training Facility	1,277,300	13,800	11,500	.83	92.56	111.07
Major Remodeling (FY 1982 Request)						
English Building Remodeling	2,540,000	118,140	61,490	.52	21.50	41.31

*Excludes planning.

TABLE 6*
PROJECTIONS OF FUTURE COST OF PROJECTS
REQUESTED IN FY 1982

	Total Cost	Approved Prior to FY 81-82	Budget Year FY 81-82	2nd Year FY 82-83	3rd Year FY 83-84	4th Year FY 84-85	5th Year FY 85-86
Buildings, Additions, and/or Structures	$17,885,720	$840,220	$10,854,300	$ 6,191,200	0	0	0
Land	0	0	0	0	0	0	0
Equipment	1,048,800	0	0	798,800	$ 250,000	0	0
SR3	661,700	0	661,700	0	0	0	0
Utilities	289,200	0	198,500	90,700	0	0	0
Remodeling and Rehabilitation**	21,978,700	1,922,500	7,870,200	4,732,000	3,600,000	$1,726,000	$2,128,000
SR3	8,815,300	0	8,815,300	0	0	0	0
Site Improvements	0	0	0	0	0	0	0
Planning	775,600	0	775,600	0	0	0	0
TOTAL	$51,455,020	$2,762,720	$29,175,600	$11,812,700	$3,850,000	$1,726,000	$2,128,000

*Excludes energy conservation projects
**Includes General University project at $447,500

TABLE 7
HISTORY OF RECENT CAPITAL BUDGET REQUESTS

	FY 1976	FY 1977	FY 1978	FY 1979	FY 1980	FY 1981
Campus Requests						
Chicago Circle	$ 8,447,100	$10,939,113	$12,775,128	$ 7,788,520	$ 4,439,095	$ 6,518,400
Medical Center	8,146,300	7,227,319	10,731,019	12,409,965	12,889,300	15,017,600
Urbana-Champaign	23,152,700	16,001,929	26,609,843	16,937,056	15,795,600	20,782,400
Total	($39,746,100)	($34,168,361)	($50,115,990)	($37,135,541)	($33,123,995)	($42,318,400)
IBHE Recommendations						
Chicago Circle	$ 1,109,320	$ 9,699,428	$ 3,203,420	$ 3,311,200	$ 1,810,400	$ 3,271,300
Medical Center	5,640,000	4,228,342	4,878,227	5,111,500	4,489,800	4,103,200
Urbana-Champaign	9,951,100	5,203,520	11,887,700	13,524,100	9,144,500	11,446,900
Total	($16,700,420)	($19,131,290)	($19,969,347)	($21,946,800)	($15,444,700)	($18,821,400)
Appropriation*						
Chicago Circle	$ 1,504,920	$177,500	$ 0	$1,715,000	$1,710,400	$ 0
Medical Center	4,907,200	148,400	296,800	2,430,900	1,336,600	225,000
Urbana-Champaign**	10,982,900	234,130	1,273,600	4,440,500	2,252,700	919,200
Total	($17,395,020)	($560,030)	($1,570,400)	($8,586,400)	($5,299,700)	($1,144,200)
Appropriations for Special Projects						
Replacement Hospital	$51,250,000	$0	$6,000,000	$ 0	$ 0	$ 0
Food Production Research	0	0	2,450,000	28,715,700	4,329,000	4,045,000
Energy Conservation						8,745,800
Total	($51,250,000)	($0)	($8,450,000)	($28,715,700)	($4,329,000)	($12,790,800)
Total University of Illinios Appropriation	$68,645,020	$560,030	$10,020,400	$37,302,100	$9,628,700	$13,935,000

*Excludes Replacement Hospital and Food Production Research.
**The FY 1979 figure includes $110,000 for a Capital Project appearing in SB 1524.

TABLE 8
STATUS OF BUILDING & MAJOR REMODELING PROJECTS
(as of September 1, 1980)

Project	Year Authorized	Estimated Cost	Estimated Completion	Status
Chicago Circle				
Building Equipment Automation	1979	$ 1,010,000	5/81	25% complete
Medical Center				
Replacement Hospital	1976	53,000,000	12/80	Seventh Floor (east) occupancy 6/80
SUDMP Remodeling	1979	1,339,500	8/81	1% complete
Urbana-Champaign				
Energy Management System	1979	710,000	9/81	10% complete
English Building Renovation	1979	1,500,000	2/81	35% complete
Food for Century III				
Veterinary Medicine Basic Sciences Building	1979	21,027,800*	3/82	25% complete
Agricultural Engineering Science Building	1979	7,612,900*	N/A	Redesign & Rebid
Meat Science Laboratory Remodeling	1980	1,026,000	10/81	Bids due 9/80
Veterinary Medicine Research Buildings	1980	909,000*	7/81	Bids due 9/80
Swine Research Center	1980	1,742,400*	7/81	Bids due 9/80

*Construction Funds

TABLE 9
STATUS OF FY 1980 CAPITAL APPROPRIATIONS (NEW)
As of August 1, 1980

	Amount Appropriated	Release of Funds: U of I Requested	Release of Funds: CDB Action	Release of Funds: Governor Released
Chicago Circle				
SR^3: ($1,499,100)				
1) Lecture Center Roof	$ 350,000	8/24/79		
2) Stair & Upper Walk	139,000		$ 139,000/12-13-79	$ 139,000/07-01-79
Art & Photo	77,900		77,900/11-08-79	
College of H.P.E. & R.	75,300		75,300/11-08-79	
Biol. Science SEL	25,400 (317,600)	8/24/79	25,400/11-08-79	$ 178,600-07-09-80
3) Computer Center SEL	42,800		42,800/11-08-79	
Modify Air Handling	225,000		225,000/11-08-79	
Modify Temp. Control	53,500 (321,300)	8/24/79	53,500/11-08-79	$ 321,300/07-09-80
4) Exterior Masonry Rep.	166,000		166,000/09-15-79	
Stack Emission	65,000		65,000/09-15-79	
Univ. Theatre-Lite	279,200 (510,200)	8/24/79	279,200/09-15-79	$ 510,200/11-19-79
Site Improvements	152,500	8/24/79	152,500/12-13-79	$ 152,500/05-16-80
Equipment (SR^3)				
1) A & A Building	1,200	3/10/80		
2) PE Building	3,900	3/10/80		
3) Science & Engin. Lab.	53,700	3/10/80	53,700/06-12-80	$ 53,700/07-21-80
Medical Center				
SR^3: ($1,094,600)				
1) First Floor Ortho	175,000		175,000/12-13-79	
Hospital Building	224,000 (399,000)	8/24/79	224,000/12-13-79	$ 399,000/07-09-80
2) OSHA & Code	100,000		100,000/02-14-80	
Anatomy Lab	196,000 (296,000)	8/24/79	196,000/02-14-80	$ 296,000/07-01-80
3) Provision for Hdcp.	43,000		43,000/09-15-79	43,000/07-01-80
Roof Repairs & Ext. Mas.	66,600		66,600/09-15-79	66,600/07-01-80
Bldg. Eq. Auto	90,000		90,000/09-15-79	90,000/07-01-80
Electrical Upgrade Syst.	200,000 (399,600)	8/24/79	200,000/12-13-79	200,000/07-09-80
School of Public Health Land	242,000	5/7/80	242,000/06-12-80	242,000/07-21-80
Urbana-Champaign				
SR^3: ($2,128,700)				
1) Animal Room Improv.	225,000		225,000/12-13-79	
Morrill Hall Remodel	197,400		197,400/12-13-79	
Noyes Lab	75,000		75,000/11-08-79	
Environmental Res. Labs	96,600 (594,000)	8/24/79	96,600/12-13-79	$ 594,000/05-05-80
2) KCPA	351,800	8/24/79	351,800/12-13-79	351,800/05-05-80
3) Elev. Installation	650,400		650,000/12-13-79	
Elev. Replacement	95,000		95,000/12-13-79	
Parapl. Ramp Improv.	80,000 (825,400)	8/24/79	80,000/12-13-79	$ 825,400/03-11-80
4) Energy Conserv. Vent. Turndown	107,400		107,400/11-08-79	
Temp. Control Remodel	80,100		80,100/11-08-79	
Foreign Lang. Simp.	170,000 (357,500)	8/24/79	170,000/11-08-79	$ 357,500/05-05-80
Vet. Med. Res. Bldgs, 4, 5, & 6	909,000	8/24/79	909,000/12-13-79	909,000/03-03-80
Meat Science Labs	1,026,000	8/24/79	1,026,000/11-08-79	1,026,000/12-04-79
Swine Research Center	1,742,400	8/24/79	1,742,400/11-08-79	1,742,400/12-04-79
Western Ill. Agr. - Land	503,100	3/3/80	503,100/05-08-80	503,100/06-24-80
Equipment				
1) Vet. Med. Res. Fac.	148,500			
2) Burrill Hall (SR^3)	49,000	1/3/80	49,000/	$ 49,000/03-11-80
3) KCPA (SR^3)	25,000			
4) Morrill Hall (SR^3)	50,000			

Status of Current Capital Projects

Table 7 provides a historical summary of the University's capital budget requests and appropriations from FY 1976 to FY 1981. As these data indicate, substantial State funding has been obtained for special projects during this period; however, support of the regular segment of the capital request has been limited. Appropriations for special projects during the six year period total over $105.5 million, while appropriations for regular capital improvements total approximately $34.6 million. Table 8 shows the status of major remodeling and new construction projects funded between FY 1976 and FY 1980.

Table 9 summarizes the current status of appropiration releases for projects funded in FY 1980. As of the close of FY 1980, only 80 percent of the FY 1980 capital appropriation had been released. It is important to note that due to the delay in release of these funds, a reduction in the scope of several projects will be necessary to keep costs within the amounts appropriated. Although most of the FY 1980 funds have been released during the past few months, the impact of inflation during the delay will be significant and will result in a reduction in the scope of the project. Continued efforts are being made by the University to secure the release of the remaining funds as quickly as possible.

Table 10 lists the University's FY 1981 capital improvement projects which have received legislative and gubernatorial approval. This level of funding represents approximately 3 percent of the University's total FY 1981 capital budget request.

Detailed descriptions of each campus' FY 1982 Capital Budget Request are presented in the following section. Preceding each campus' project descriptions is a table summarizing the request by budget category.

TABLE 10
FY 1981 REGULAR CAPITAL PROJECTS IN SB 1665
AS APPROVED BY THE GOVERNOR

1.	Buildings, Additions, and/or Structures	
	Urbana-Champaign-Library Sixth Stack Addition	$ 840,220
2.	Land	0
3.	Equipment	
	Medical Center-Second Unit-SUDMP Building	225,000
	Urbana-Champaign-English Building-Phase II	79,000
3a.	SR^3 Equipment	0
4.	Utilities	
	Urbana-Champaign-Library Sixth Stack Addition	0
5.	Remodeling and Rehabilitation	0
5a.	SR^3 Remodeling and Rehabilitation	0
6.	Site	0
7.	Planning	0
	TOTAL	$1,144,220

CHAPTER TWO

DETAILS OF THE FY 1982 CAPITAL BUDGET REQUEST

CHICAGO CIRCLE

The Chicago Circle Fiscal Year Capital Request consists of six projects excluding energy conservation projects, with an estimated total cost of $3,469,700. This budget request contains projects which are essential to support academic programs, maintain the physical plant, and enhance the utilization of existing space.

Chicago Circle's capital improvement plan for the 1980's emphasizes attention to the maintenance needs of the plant. Repair and rehabilitation must be ongoing processes if the campus is to use existing facilities as effectively as possible. Hence, the SR^3 projects are ranked high on the priority list. Within the SR^3 grouping, the rankings take into consideration the urgency of the requests.

Also of high priority is the request for funds for planning the remodeling of the Library. Improvement of the library collection and services to support changing academic programs is critical to fulfillment of the campus mission. The remodeling of the Library will be a major step in carrying forward a clearly defined program of meeting the needs of all library users.

Subsequent items in the request are geared to the support of academic research and more efficient and cost effective administrative services. Additional projects deal with improved services to all persons using the campus, and improved security.

In keeping with the spirit of Section 504 of the Rehabilitation Act of 1973, Chicago Circle continues to emphasize the need to improve services to the handicapped through its capital requests. Funding for additional improvements were requested for FY 1981. For FY 1982 the campus is requesting funding to implement the first phase of a multi-phased accessibility improvement plan. If funded this plan will greatly enhance services available to handicapped students and faculty.

TABLE 1
CHICAGO CIRCLE CAMPUS
LIST OF FY 1982 PROJECTS BY CATEGORY

Projects	Estimated Cost
1. Buildings, Additions, and/or Structures	$ 0
2. Land	0
3. Equipment	0
3a. Equipment Related to Space Realignment, Renewal, and Replacement Projects	320,700
4. Utilities	0
5. Remodeling and Rehabilitation	
Relocate OAR	990,800
Handicapped Remodeling	598,900
Subtotal	($1,589,700)
5a. Space Realignment, Renewal, and Replacement	1,274,300
6. Site Improvements	0
7. Planning	
Library Improvements	285,000
Subtotal	($285,000)
TOTAL FY 1982 CAPITAL BUDGET REQUEST - CHICAGO CIRCLE	$3,469,700

EQUIPMENT

SEL - Remodeling - College of Engineering - Phase II - ($320,700)

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

In FY 1976, $200,055 was appropriated for the first phase of remodeling SEL. In FY 1982 another $320,700 is necessary to implement phase two of the remodeling.

These equipment funds will provide for essential movable equipment to establish the graduate educational program for Energy Engineering, Information Engineering, and Materials Engineering in the remodeled space.

The following equipment is required:

1. Energy Engineering

   Chemical reaction laboratory, PH meters, x-y recorders
   High speed camera
   Laser system
   Portable terminal
   Programmable digital voltmeter
   High capacity compressor and ancilliaries
   Magnetic filter
   Ice maker
   Absorption refrigerator
   Particle counter and optics
   Dialarc H. F. welder
   Indexing set with chuck and face plates
   Lecroy recorder and terminal
   Four (4) access boxes for 240^{V} a.c. @ $200
   ASTM engine accessories
   Shop and incluned coaxial microscopes

2. Information Engineering

   Microwave/Millimeterwave Imaging Facility (MMIF)

   One complete mm-wave set-up for imaging
   Anechoic imaging chamber (26.5 - 40 GHz)
   Spectrum analyzer and broadband sampling scope
   Electronically controlled rotary imaging platform
   Electronically automated scanning set-up
   Imaging models

3. Materials Engineering

   12 Channel myoelectric signal conditioning and recording unit (Grass, or equivalent)
   12 Channel FM analog tape recorder unit (Honeywell, or equivalent)

3. Materials Engineering (continued)

Laboratory data processing mini computer system (DEC PDP11 or equivalent)
Lifting Device, LVDT's, Prestressing Jacks and Anchors, etc.
Electronic Data Reduction System Time-Lapse Equipment

REMODELING AND REHABILITATION

Relocate OAR from Library - ($990,800)

This project will provide the necessary funding to move the Chicago Circle Office of Admissions and Records out of the Library and into a more suitable location. The relocation of this campus unit will allow valuable Library space to be returned to its intended function.

The new location for the Office of Admissions and Records will be in the Architecture and Art Building, 845 West Harrison Street. Departments presently using the proposed space will be relocated to the newly acquired Formfit Building.

As proposed, the remodeling in Architecture & Art includes approximately 14,300 square feet of existing floor space, and approximately 1,000 square feet of found floor space. An elevator will be added to the building to provide accessibility for handicapped persons. The addition of the elevator will enhance the accessibility of academic programs offered by the College of Art and Architecture as well as serve the Office of Admissions and Records.

The Office of Admissions and Records presently occupies 15,275 square feet of space in the Library. The combination of the need to move the Office of Admissions and Records from the Library, the need to keep it centrally located, and the availability of the Architecture & Art space make this 15,300 square foot remodeling project an excellent alternative for relocation.

Handicapped Accessibility - ($598,900)

Section 504 of the Rehabilitation Act of 1973 provides that "no otherwise qualified handicapped individual shall, solely by reason of his handicap be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving federal assistance." Each program and activity, viewed in its entirety must be readily accessible and offered in the most integrated setting appropriate. For institutions of higher education this means that complete programmatic accessibility must be available to all students, staff and faculty.

During the Summer of 1978, in order to identify physical obstacles, the Physical Plant Department surveyed the campus and collected data concerning the physical accessibility of rooms, lavatories and drinking fountain facilities in each building and the availability and usability of elevators in each building. An analysis of these data revealed that the primary obstacles facing handicapped students involved getting onto the campus, approaching buildings, and using exterior doors.

A multiphase program has been developed to improve accessibility by making rooms accessible and providing accessible toilet, lavatory, drinking fountain, and telephone facilities within each building of the campus.

Phase I of the Chicago Circle handicapped accessibility program will accomplish the following:

1. Provide one passenger/freight elevator with four stops at the exterior of Ulysses S. Grant Hall.
2. Provide two bridges at the third level between Grant and Douglas Halls, and between Douglas and Lincoln Halls.
3. Relocate conduit and piping at eight locations.
4. Provide three handicapped entrances.
5. Provide toilet modifications for six restrooms.
6. Modify several drinking fountains.
7. Provide air assisted entrances for Grant, Douglas, Lincoln classroom complex.
8. Provide twenty-nine (29) air assisted entrances for the handicapped, exact locations to be determined during preliminary design phase of project. These air assisted doors will increase the ease with which handicapped persons can gain entry to buildings.

SPACE REALIGNMENT, RENEWAL, AND REPLACEMENT ($1,274,300)

Exterior and Interior Masonry Repairs - Phase III - ($253,200)

This project includes completion of repairs to east/south walls, terrace, and exterior theater walls of the Education and Communications Building (ECB). Phases I and II involved work on the north, east, and south walls of the Education and Communications Building. Work on the exterior walls will require grinding out of mortar joints on exterior brickwork, removal of weathered caulking, removal of bricks and stone where necessary, replacing flashing, modifying shelf angles, tuckpointing where indicated, and recaulking and reinstalling the exterior masonry temporarily removed during the project. Interior work will include: removing damaged plasterboard walls, ceilings, columns, and trim; the replacement of the damaged sections; painting, caulking, and patching; repairing window sills; and floor repairs, where damaged, will also be considered.

Electrical Upgrade of 12KV Underground Electrical System - ($46,900)

This project wil rehabilitate and realign, at two (2) locations, the underground concrete six-cell electrical ducts carrying the Chicago Circle campus primary 12KV electrical distribution system.

At the two locations, the Lecture Center and Services Building, the ducts have broken away from the buildings and are settling, causing the high voltage cables serving the building to be "pinched." Further settlement of these ducts could sever these cables, causing a complete electrical outage in these buildings, as well as in a number of additional buildings interconnected to the same primary cabling system. No alternate means of primary electrical supply is available to these buildings should these cables be cut, since both the primary and emergency high voltage cables are located in the same duct run to each building. New cables require approximately six months for delivery.

Lighting Modification-Art & Architecture Building and Lecture Center - ($203,300)

The purpose of this proposal is to improve interior and exterior lighting levels in the Architecture and Art Building and the Lecture Center.

Interior lighting. Inside the Lecture Center, substituting acrylic prismatic lenses for the existing plastic diffusers, coupled with installation of additional fixtures will supplement the present interior flourescent lighting. This will provide higher, more acceptable lighting levels in the Lecture Halls. In the galleries and stairwell/galleries of the Architecture & Art Building, the existing incandescent track lighting will be replaced with flourescent lighting that will provide higher lighting levels while lowering operating costs and reducing energy consumption.

Exterior lighting. Underneath the elevated walkway outside the Lecture Center Halls, there are 124 flourescent lighting fixtures which require immediate replacement. Installing new fixtures will accomplish the dual purpose of providing adequate lighting levels for the security of the area, and bringing the lighting system up to a maintainable standard.

During Phase III of the exterior lighting program high pressure sodium lighting was installed in most exterior campus areas. Relative to this standard exterior lighting level, two areas of the campus remain dark. To correct this deficiency, a forty foot fixture near the SEL Building and two 25 foot fixtures near the SES Building are included in the current request.

Stairway and Upper Walkway Repairs - Phase II - ($368,700)

The Circle Campus has an elevated or upper walkway system that extends in a north-south direction much like a spine running through the center of the campus. The north segment begins in a concrete ramp at the Rapid Transit terminal in the Eisenhower Expressway and continues southward to Harrison Street. At this point the elevated walkway becomes a system of granite slabs supported by concrete columns. The north segment continues southward terminating at the Lecture Center which is the focal point or central core of the campus. There are a number of bridge type links between the walkway and the second floors of the classroom buildings connected to it. A north branch of the system extends westward to accommodate the northwest buildings. The central section of the elevated walkway connects the Circle Center and the Library to the upper part of

the Lecture Center and it also extends southward connecting classroom buildings and the Science and Engineering Laboratory Building, terminating by rising over Roosevelt Road and extending into the Physical Education Building.

Movement of the walkway structures over a 13-year period has resulted in broken concrete stairways, and numerous separations of the granite slabs. Some initial repairs to several of the more than a dozen different concrete stairways leading to the upper walkway have been completed. The remaining stairway repairs as well as several ramp repairs have been combined with the first phase of correcting conditions to meet OSHA standards.

The project includes planning Code Corrections plus handrail height modification on the second level of the walkway system to meet OSHA standards. Future phases will replace the bollards and chains on the upper walkway and make other changes deemed necessary by the consultant. In addition, recaulking, replacing stops and flashing in the walkway, resetting some existing granite pieces, replacing some damaged stairs, and other work necessary to restore this facility to an acceptable state of repair will be accomplished as part of this program.

SEL-Remodeling College of Engineering - Phase II - ($402,200)

The first phase of a multiphased remodeling of the College of Engineering Laboratories in the Science and Engineering Laboratories Building (SEL) funded in FY 1976 has been completed and occupied. The second phase of this project was requested in the FY 1977, FY 1978, FY 1979, FY 1980 and FY 1981 Capital Budgets. 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 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 ongoing academic enterprise.

The specific areas designed for FY 1982 funding are listed as follows:

Department	Room	NASF
Energy Engineering	3294	2684
	3294A	60
		(2744)
Information Engineering	3263	600
	3263A	300
	3263B	300
	3267	625
	3267A	625
		(2450)
Material Engineering	1100D	350
	1100E	175
	1100F	175
	1100G	285
		(985)
Systems Engineering	4211	1902
		(1902)
TOTAL		(8,081)

PLANNING

Library Renovation - ($285,000)

This project will involve developing architectural and engineering design specifications for renovating the Library. The program for remodeling the Library can, for the purpose of explanation, be separated into three parts:

1. Found space, the recovery of space by a) filling in the remaining wells on the fourth floor; b) enclosing the balconies on the second, third, and fourth floors; c) designing library space in the north and south ends of the basement in space originally designed for mechanical equipment; d) remodeling space presently occupied by the Office of Admissions and Records but designed originally as Library space.
2. First floor remodeling
3. Second floor remodeling

With the completion of this remodeling program, the campus will have recovered all available space in the UICC library building.

Found Space

Space found by enclosing the balconies on the second, third, and fourth floors will represent a gain of approximately 3,300 square feet per floor, or a total gain of 10,000 square feet. The space found by filling in the wells on the fourth floor will represent a gain of 2,400 square feet. Space on this floor will be used for patron seating and decreasing the stack deficiency by freeing an equivalent amount of space elsewhere in the building for additional bookstacks.

The areas to be remodeled in the basement will be used for the storage of manuscript and archival materials now stored in various locations inside and outside the Library. If space permits, the Staff Lounge will be relocated on the first floor and the basement space previously used as a lounge will be converted to materials storage. Compact shelving installations will be planned for these areas. Existing shelves will be used for expansion on other floors of the building.

Approximately 13,000 square feet will be recovered from OAR space on the first floor. The use of the space is described in the first floor remodeling.

The total found and remodeled space is about 31,850 NASF.

First Floor-Remodeling

The first floor will become the location for the most heavily used and basic public services--reserve books, current journals and newspapers, the circulation desk, and seats for studying one's own material between classes as well as for using library books and other media. Commuting students and faculty will be able to rapidly locate and use these vital services. These areas also will be designed to remain open while the rest of the building is closed. In other peripheral, but strategically located spaces, the appropriate technical service units will be grouped around the loading dock. The administrative offices and the personnel office will be located at the Morgan Street door.

Second Floor-Remodeling

The second floor of the Library is as important as the heavily used first floor. The second floor entrance will be closed and the front stairs leading to the first floor removed. Round tables and informal seating will be provided so as to create an attractive area for users.

The original reference counter will be removed, thereby allowing the reorganization of the reference and bibliographic collections on second floor north with accessibility for the reference librarians on duty at the information desks, the bibliographers in the Collections Development offices, and the staff members of the Cataloging Department. Offices for the reference librarians will also be provided in three locations surrounding the card catalog, the reference and bibliographic collections, and the information desks.

MEDICAL CENTER CAMPUS

The Medical Center's FY 1982 Capital Budget Request is based upon a review of current and projected facility needs for each of the Medical Center's regional programs through 1985-86. Facility needs anticipated during this 5-year budget period total more than $167 million. Many of these requests originate from long-deferred capital requirements in Chicago, whereas others represent needs of maturing programs in Peoria, Rockford and Urbana-Champaign.

Through discussions conducted by the Campus Planning Committee it has been agreed that the principal need of the Medical Center is to upgrade the older buildings on the Chicago campus, particularly those housing the College of Medicine. It has become apparent that the lack of remodeling funds over many years has contributed to deteriorated, out-dated and worn-out facilities. Furthermore, inadequate facility resources are contributing directly to problems of attracting and retaining high quality personnel and programs.

To confront the enormous task of renovating these older buildings, an inventory of required improvements has been developed over several years. Many of the renovations are significant cost items, or provide services throughout a building, and are therefore incorporated in major building remodeling requests. For FY 1982 the highest priority Remodeling and Rehabilitation project at the Medical Center campus is the remodeling of the Pharmacy Building. A total $3,293,000 is requested for the project.

Other improvements are comparatively less expensive and minor in scope, and are therefore requested as Space Realignment, Renewal and Replacement (SR^3) projects. A total of $2,729,000 is requested in Fiscal Year 1982 for these minor remodeling projects. Still other improvements are energy related and are presented as part of the University's Energy Conservation request.

TABLE 1
MEDICAL CENTER CAMPUS
LIST OF FY 1982 PROJECTS BY CATEGORY

Project	Estimated Cost
1. Buildings, Additions, and/or Structures	$ 0
2. Land	0
3. Equipment	0
3a. Equipment Related to Space Realignment, Renewal, and Replacement Projects	0
4. Utilities	0
5. Remodeling and Rehabilitation	
Pharmacy Building Remodeling	3,293,000
Subtotal	($3,293,000)
5a. Space Realignment, Renewal, and Replacement	2,729,000
6. Site Improvements	0
7. Planning	0
TOTAL FY 1982 CAPITAL BUDGER REQUEST - MEDICAL CENTER	$6,022,000

REMODELING AND REHABILITATION

Remodel College of Pharmacy Building - ($3,293,000)

This project involves the upgrading of the air conditioning and ventilation system by the installation of additional ventilating systems, including air handling systems, air distribution systems, chilled water piping and pumps, automatic temperature controls and related electrical services. Additional chilled water capacity to support the new ventilating system is to be obtained from a chilled water generating plant external to the College of Pharmacy Building.

The problem dates back to the original construction of the facility. The building design and appropriation request were based on the development of an enclosed "T" shaped building with the air conditioning capacity to be located in the back of the building. However, the appropriation was sufficient only to construct the front part of the building thus creating a building with fixed windows and no air conditioning. When the three small additions were constructed, they were air conditioned. Unfortunately these areas encompass only a small part of the facility and include very few instructional or faculty areas. To further exacerbate the problem, the existing ventilation system is inadequate. Those two factors unite to create an unhealthy, unsafe and counter-productive environment.

The American Council on Pharmaceutical Education, in its 1974 accreditation report, cited the problem in its evaluation of the College's physical facilities. "Unfortunately, the building is inadequately ventilated and sealed without provision for air conditioning which leads to discomfort and inefficiency."

The combination of lack of air conditioning and inadequate ventilation manifests itself in several ways: extreme heat (temperatures often reach 90^{o} and higher) in both the winter and summer; extreme fluctuation in temperature; the introduction of noxious and toxic fumes exhausted from several laboratories into other areas; and the introduction of large

amounts of black soot into areas. The extreme heat and toxic fumes create hazards to both students and staff. Due to these aggregate problems, much time, money and patience have been exhausted in trying to correct or at least make the situation tolerable.

SPACE REALIGNMENT, RENEWAL AND REPLACEMENT

Construct Utility Shafts, Hospital Addition - ($117,000)

Construction of the Replacement Hospital will permit the reassignment and reuse of much of the Hospital Addition to College of Medicine offices and laboratories. To accommodate this new use, it is necessary to transform a hospital building with patient bed rooms to an academic building containing research laboratories. This transition requires installation of new utility services.

Plans for this transition of building use is based upon a comprehensive analysis of the building conducted by the consulting firms of Richardson, Severns, Scheeler, Greene & Associates, Inc. and Sandhu and Associates, and documented in their report "Building Use and Condition Survey", October, 1978.

As an initial step in this transition, vertical shafts must be constructed through the fourteen (14) floors of the structure to carry utility services. Utility services will be installed as funding permits and will be made available at each floor level to accommodate subsequent space remodeling.

Install Laboratory Utility Risers, Hospital Addition - ($166,000)

Conversion of the Hospital Addition from a patient care facility to an academic office and research laboratory facility requires installation of laboratory utilities through the vertical rise of the structure. Provisions for the vertical distribution of distilled water, deionized water, compressed air, vacuum and natural gas are required. These laboratory utility services will be made available at each floor level to accommodate subsequent space remodeling.

Install Domestic Water and Waste Risers, Hospital Addition - ($250,000)

The building use and condition study prepared by Richardson, Severns, Scheeler, Greene & Associates, noted that water supply piping in the Hospital Addition has a reduced effective opening, due to corrosive build-up, so great that adequate pressure cannot be maintained for even

present usage. In addition, cross-ties installed over the years make shut-off controls ineffective. To adapt this building to research use, new domestic water and waste risers are required through the fourteen (14) floors of the structure.

Install Acid Waste Risers - ($42,000)

Conversion of sizeable areas in the Hospital Addition from patient care to wet laboratory functions requires installation of an acid waste system to collect and treat corrosive and contaminating chemical waste used in laboratory research. This project will provide for the installation of the acid waste risers and the waste dilution sump required before discharge into the city waste disposal pipelines.

Revise and Install Ventilation System-Hospital Addition - ($716,000)

Ventilation systems in the Hospital Addition are nonexistent, partial, nonfunctioning, or in need of replacement, depending upon the area of the building being considered. This project provides for installation of ventilation systems on the 5th through 12th floors. These floors are reassigned to the College of Medicine for office and research laboratory use. The east wing of each floor is to be used as office space and is to be served by a variable air volume system. The north/south wings are to house research laboratories and will be served by a double duct system. Approximately 100,000 gross square feet of building space is included in the ventilation plan on these eight (8) floors.

Exterior Masonry and Tuckpointing, Various Buildings - ($200,000)

This project represents a phase of an ongoing campus tuckpointing program. There are five campus buildings involved in this section. Due to the deterioration of mortar joints, window caulking and rusting of steel lintels, this work is an absolute necessity to preserve the integrity of the exterior masonry and stop further deterioration of interior plaster walls.

The following is a list of the buildings involved and a brief description of the work that will be performed on each.

-Administrative Service Building - Baker Building wing only general tuckpointing, all elevations.

-College of Medicine West Tower (908 Building) - General tuckpointing north elevation only.

-College of Medicine West Tower (909 Building) - Wolcott Street Wing-general tuckpointing, east and west elevations. Polk Street Wing-general tuckpointing from the fifth floor level down to grade, north elevation only. South elevation work was completed under another phase.

-College of Medicine East Tower-General tuckpointing-north and east walls. The south and west elevations, in the inner court, were completed under a previous phase.

-Hospital Addition-Tower Section/third through fifteenth floors-replacement of approximately sixty (60) steel lintels and general tuckpointing and window frame caulking, all four elevations. The low-rise portion of this building (first and second floors) was completed under a previous phase.

Maintaining these buildings in good repair will provide a secure environment free of water seepage and deteriorating walls and ceilings. The buildings provided for in this project are to be retained for use for the foreseeable future. Attention to the integrity of the basic building structure is essential.

Exterior Masonry and Tuckpointing, Various Buildings - ($88,000)

This project represents a phase of an ongoing campus tuckpointing program. There are four campus buildings involved in this phase. Due to the deterioration of mortar joints, window caulking and rusting of steel lintels, this work is an absolute necessity to preserve the integrity of the exterior masonry and stop further deterioration of interior plaster walls.

The following is a list of the buildings involved and a brief description of the work that will be performed on each.

-1919 West Taylor Street - Re-caulking of the wall coping jointing and tuckpointing of the roof penthouses.

-Hospital Addition - Tower Section/3rd through 15th floors-replacement of approximately 60 steel lintels and general tuckpointing and window frame caulking, all four elevations. The low-rise portion of this building (first and second floors) was completed under a previous phase.

-College of Pharmacy - General tuckpointing, all elevations. In addition, the marble joints at the main entrance will be re-caulked.
-Biologic Resources Laboratory-West Wing (one story portion) general tuckpointing all elevations. East Wing (two story portion) - re-caulking of the brick panels laid into the exposed structural steel framing.

Maintaining these buildings in good repair will provide a secure environment free of water seepage and deteriorating walls and ceilings. The buildings provided for in this project are to be retained for use for the foreseeable future. Attention to the integrity of the basic building structure is appropriate.

Elevator Renovation, Two Passenger, College of Medicine East Tower (COMET) - ($508,000)*

The existing manually operated elevators have been in service for over forty (40) years receiving only routine maintenance. Renovation of these elevators will provide full utilization of this building for its new occupants, who are now limited to the hours dictated by the manual operation of these elevators. This upgrading will also provide relief from increasing maintenance costs, and the growing risk of equipment failure due to age and extensive usage.

The current request will renovate the two passenger elevators serving the basement and fourteen (14) floors of the building. The restoration will meet usage demands of the occupants; code requirements for both the City Fire Department and highrise buildings; and also comply with section 504 guidelines for handicapped accessibility.

Specifically, the existing manually operated elevator equipment will be replaced with new selective collective automatic elevator controls. In addition, modifications to the elevator cars and doors will be made to accommodate the new automatic operations. Conversion of a service elevator has been temporarily deferred. The conversion of these cars to automatic controls will include revisions and/or replacement of the following equipment:

*Second Unit Dentistry Medicine Pharmacy has been renamed College of Medicine East Tower

New Equipment

- -Gearless Type Drives
- -Automatic Controllers
- -Motor Generator Sets
- -Cabs with Automatic door operations and doors
- -Hydraulic Buffers
- -Fireman Recall System

Existing Equipment

- -Modifications to counter weights
- -Modifications to railing systems
- -Modifications to car structures

Building Modifications

- -New hatchway doors
- -New hatchway joints

Remodel Tenth Floor, COMET, Center for Educational Development (CED) - ($297,000)

This project consists of remodeling approximately 2,800 net square feet of space on the tenth floor of Building #910, COMET. The area will be utilized for administrative offices; a learning resources center; a conference/classroom; and secure rooms for test development; all slated to be part of the Center for Educational Development.

During Project II (SUDMP Remodeling) this entire space was "demolished." Specifically, walls and ceilings were removed, as were ducting, piping, electrical circuitry, and other mechanical and electrical systems. Originally, remodeling the tenth floor was included in SUDMP. However, a shortage of funds precluded full implementation of the program.

Work anticipated on the current project is necessary to bring the building into full operation, and meet the Medical Center's long-range plan for campus services development.

Specific modifications required include re-configuring the tenth floor into a new campus of rooms with appropriate lighting, heating, and electrical services. A suspended ceiling and new floor covering will also be added. The suite will be served by a mechanical system comparable to the system presently functioning on the lower floors. The equipment will be installed in mechanical rooms on the tenth floor, and operate in conjunction with equipment on the fifteenth floor.

Remodel Room 200, Pharmacy - ($344,700)

This project involves the realignment of an existing laboratory of 6600 ASF to provide research space for approximately 10 graduate students. This will be accomplished by utilizing dividing partitions; relocating existing laboratory benches; installing new lab benches, fume hoods, and lab furniture; and rearranging lighting, ventilation, electrical and laboratory services. This remodeling will substantially reduce the present overcrowding of graduate students in the Department of Pharmacy.

The original design of the Pharmacy Building provided for student instruction in sizeable groups in such large laboratories, and was focused upon training dispensing pharmacists. In recent years, however, emphasis has been placed on smaller teaching groups and training clinical pharmacists, rendering old laboratories such as Room 200 inefficient. The remodeling would reduce the size of this laboratory and free space that is currently occupied by graduate students for other uses.

URBANA-CHAMPAIGN

The FY 1982 Capital Budget Request contains ten projects for a total cost of $19,236,400. Construction of the Library Sixth Stack Addition continues to be the first priority of the Urbana-Champaign campus. This project will provide urgently needed storage space for the growing University General Library book collection. The University has a net addition of 120,000 to 150,000 bound volumes annually to its collection as well as an additional 50,000 items of Library material such as maps, photographs, sound recordings, music scores, audiovisual cassettes, microtexts, newspapers, etc. The growth of the collection has filled to capacity the General Library bookstack and each of the 34 departmental libraries despite efforts to compact storage facilities and leasing remote storage space to manage excess materials. The proposed Library Sixth Stack Addition will alleviate the present overcrowded conditions, improve the operating efficiency of the entire library, and allow funds now being spent on remote storage to be redirected to other Library needs.

The Remodeling and Rehabilitation and the Space Realignment, Remodeling and Replacement (SR^3) categories represent the second thrust of this year's Capital Budget Request. The combined request for projects in these categories accounts for over one-third of the campus request. The major Remodeling project, Renovation of the English Building, is budgeted for a cost of $2,540,000. This third phase of the four phase project will renovate the west center portion of the building into classrooms and offices better suited to the programs the building houses. It is estimated that the total remodeling costs for the project will be 40-50% less than the construction of a new facility. The two Space Realignment, Renewal and Replacement groups contain 22 separate projects at a total cost of $4,812,000. These projects are intended to upgrade portions of existing space to improve the utilization and condition of these facilities.

The Pilot Training Facility is a small but needed replacement project. Deterioration of the existing facility due to aging and weather damage has occurred to the point where the building is unsafe, costly and not conducive to learning. Construction of a new facility was proposed only after it was determined the existing facility could not be remodeled economically.

Two Planning projects (Auditorium Remodeling and Television Building Addition) play a significant role in the FY 1982 Capital Budget Request. Auditorium Remodeling planning funds are requested to design a new roof system and related mechanical and electrical changes made necessary by the deteriorating condition of the metal roof dome. Planning for the Television Building Addition provides the opportunity for space consolidation and program coordination activities that will result in substantial operating economies for the Division of Broadcasting.

Various other equipment and utility projects are also included in the Request.

TABLE 1
URBANA-CHAMPAIGN CAMPUS
LIST OF FY 1982 PROJECTS BY CATEGORY

Projects	Estimated Cost
1. Buildings, Additions, and/or Structures	
Library Sixth Stack Addition	$9,577,000
Pilot Training Facility	1,277,300
Subtotal	($10,854,300)
2. Land	0
3. Equipment	0
3a. Equipment Related to Space Realignment Renewal and Replacement Projects	341,000
4. Utilities	
Library Sixth Stack Addition	141,500
Pilot Training Facility	57,000
Subtotal	(198,500)
5. Remodeling and Rehabilitation	
English Building Remodeling	2,540,000
Subtotal	($2,540,000)
5a. Space Realignment, Renewal, and Replacement	4,812,000
6. Site Improvements	0
7. Planning	
Auditorium Remodeling	92,000
Television Building Addition	398,600
Subtotal	($490,600)
TOTAL FY 1982 CAPITAL BUDGET REQUEST - URBANA-CHAMPAIGN	$19,236,400

BUILDINGS, ADDITIONS AND/OR STRUCTURES

Library Sixth Stack Addition

Estimated Total Project Cost	$10,672,720
Estimated Bond-Eligible Funds Required in FY 1982	9,718,500
Total Non-State Funding for Which the Project is Eligible	-0-
Estimated Non-State Funding	-0-
Gross Square Feet	76,860
Assignable Square Feet	63,000
Building Efficiency	82%

This project will provide urgently needed storage space for the continuously growing University General Library book collection. To meet the instructional and research needs of students and faculty, the University Library adds approximately 120,000 to 150,000 bound volumes a year to its collections as well as an additional 50,000 items of Library material such as maps, photographs, sound recordings, music scores, audio-visual cassettes, microtexts, newspapers, etc. The University Library also serves as a "last copy" book repository for the State Library System and is both a state and national resource.

The General Library bookstack, which houses approximately 80% of the collection of over 9,000,000 items is 100% full. The 34 departmental libraries, which house the remaining 20% of the collection have reached capacity and can no longer transfer their less frequently used materials to the main bookstacks to make room for new material in their working collections. This severe overcrowding has occurred in spite of the fact that the Library has been conducting an extensive program of compacting storage facilities, and fore-edging for several years. Each of these procedures is time consuming, inconvenient for staff and users, and expensive. Fore-edging, this is shelving the books on the front edge, is especially wasteful because bindings are not visible, and locating and servicing the collection becomes several times more exhaustive of staff.

During FY 1979, the University Library was forced to lease storage

space at a remote location in order to house Library materials. Even the remote storage space (12,258 sq. ft.) has been filled since July 1980. In addition, the use of remote storage for Library materials is expensive and servicing the collection puts a severe strain on the Library's budget and staff. A conservative estimate is that it will cost the Library $42,340 a year to operate the remote storage, not including the cost of the initial move into the space.

The proposed Library Sixth Stack Addition would alleviate the present overcrowded conditions, improve the operating efficiency of the entire Library, and allow the funds now spent on remote storage to be redirected to other urgent Library needs. 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 five capital budget requests and has been supported by the State Board of Higher Education. For FY 1981 planning funds were appropriated to complete the architectural and engineering specifications for the construction of this facility. This request is for funding to construct the Sixth Stack Addition.

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 February, 1984. The estimated total project costs (by budget category) and the amount requested for FY 1982 are as follows:

	Estimated Total Project Cost	Requested for FY 1982	Requested for FY 1983 and Beyond
Basic Building Cost (Including Fixed Equipment and Professional Fees)	$ 9,577,000*	$9,577,000	0
Funds to Complete Bond-Eligible Buildings	0	0	0
Equipment	114,000	0	$114,000
Utilities	141,500	141,500	0
Planning (Included in FY 1981 Appropriations)	(840,220)	0	0
TOTAL	$10,672,720	$9,718,500	$114,000

*Excludes planning funds appropriated in FY 1981.

Upon completion of this project, the lease will be terminated for the remote storage facility at 401 North Broadway, Urbana.

Pilot Training Facility ($1,277,300)

Estimated Total Project Cost.	$1,444,000
Estimated Bond-Eligible Funds Required in FY 1982	1,344,300
Total Non-State Funding for Which the Project is Eligible	-0-
Estimated Non-State Funding	-0-
Gross Square Feet	13,800
Net Assignable Square Feet.	11,500
Building Efficiency	83%

This project has been given a high priority by the campus administration because of the badly deteriorated condition of the present Facility. The building area now occupied by Pilot Training for its academic program in Aviation was constructed in 1945. This structure is a lean-to building attached to Hangar #1. The hangar was originally erected in Grady, Arkansas, during World War II. It was dismantled and shipped to the University of Illinois-Williard Airport and re-erected. While the building has been upgraded (on a temporary basis) and remodeled to furnish minimum facilities, it is rapidly deteriorating and requires 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 where water collects on the floor. The present space is also extremely energy wasteful and must be corrected in consideration of energy conservation.

In order to clear the site for this project, the existing Pilot Training Facility, containing 3,393 NASF, must be razed. The structure planned to replace the current facility 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 Building
Instructional Lab (210)	6,600
Office (310)	4,000
Lounge (650)	400
Food Facilities (630)	500
TOTAL	11,500

This project is planned for completion by the Fall of 1983. The total estimated project cost is $1,868,800 of which $1,758,800 will be required for authorization in FY 1982 and the remainder in FY 1983. The estimated total cost (by budget category) and the amount requested for FY 1982 are as follows:

	Estimated Total Project Cost	Requested for FY 1982	Requested for FY 1983 and Beyond
Basic Building Cost (Including Fixed Equipment and Professional Fees)	$1,277,300	$1,277,300	-0-
Funds to Complete Bond-Eligible Buildings	-0-	-0-	-0-
Equipment	110,000	-0-	$110,000
Utilities	57,000	57,000	-0-
Planning (Included in Basic Building Cost Above)	(99,400)	(99,400)	(-0-)
TOTAL	$1,444,300	$1,334,300	$110,000

EQUIPMENT

Classroom Renovation - Equipment - ($29,000)

The classroom renovation-equipment project is a companion request to the SR^3 project involving upgrading and modification of 16 classrooms over 50 years old. Approximately 450 new movable arm chairs will be purchased to replace old fixed chairs. The chairs would be located in Engineering Hall and Noyes Laboratory. Installation of this equipment is in keeping with Urbana-Champaign's goal of modernizing outdated facilities to better accommodate progressive instructional methods.

College of Commerce Remodeling - Equipment ($14,000)

This request relates to and supports the SR^3 item for College of Commerce Remodeling in David Kinley Hall and Commerce West. The major portion of the equipment to be purchased will be office equipment such as desks, chairs, file cabinets and bookcases. This movable equipment will allow teaching staff members to use the remodeled space in an effective manner.

Animal Room Improvements - Equipment ($38,400)

This request relates to and supports the SR^3 item for Animal Room Improvements project in Electrical Engineering Annex. The major portion of the equipment to be purchased will be stainless steel cat and rodent cages. There will be some general support equipment purchased such as a wet-dry vacuum and storage cabinets. The caging equipment in particular is needed to meet federal guidelines for the housing of laboratory animals.

Davenport Hall--Biophysics Equipment ($94,400)

This request relates to and supports the SR^3 item for Davenport Hall--Biophysics remodeling project. The major portion of the equipment involves centrifuges, a laminar flow fume hood, bench top growth chambers and office furniture. This movable equipment allows the Biophysics Division of Physiology to use the space to be remodeled in an effective manner.

Astronomy Building Equipment - ($38,900)

This request relates to and supports the SR^3 item for Astronomy Building--Remodeling. The major part of the equipment will be telescopes which will be used in Astronomy's instructional program for night sky observing sessions. Office furniture and research equipment items make up the balance of the equipment needs.

David Kinley Hall - Room 114 ($8,900)

This request relates to and supports the SR^3 item for the David Kinley Hall - Room 114 remodeling project. The basic remodeling of this major lecture room is being done to make it possible to use audio-visual methods for instruction. The necessary equipment consists of a motion picture projector, slide projectors, an overhead projector, a lectern and stand, and a screen.

Huff Gym Basement Remodeling - Equipment ($20,000)

This request relates to and supports the SR^3 item for remodeling for the Department of Leisure Studies in the basement of Huff Gym. The major portion of the equipment involves purchasing office furniture and audio-visual equipment. This movable equipment allows Leisure Studies to do a certain amount of office landscaping in the department's administrative office complex.

Visual Arts Laboratory Equipment ($97,400)

This request relates to and supports the SR^3 item for the Visual Arts Laboratory project in the Fine Arts Building. The major part of the equipment will be cinematography cameras and related equipment. The equipment used in this type of instruction is a very important part of the course since the students are evaluated on their use of the equipment.

UTILITIES

Pilot Training Facility - ($57,000)

This request is in conjunction with the proposed construction of the Pilot Training Facility. It represents funding for all ongoing utility costs, such as electrical service, water, heating, and air conditioning. Although the water, storm sewer, and sanitary sewer lines are located in close proximity to the proposed structure, initial connection costs are necessary. In addition, the electrical service must be extended from Hangar One into the new building. These start-up costs comprise the bulk of this request.

Library Sixth Stack Addition - ($141,500)

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 leneal 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 $141,500 with all the funds required in FY 1982.

REMODELING AND REHABILITATION

English Building Remodeling - ($2,540,000)

This request represents the third of a multiphased project to completely renovate the English Building. The four-phase program budget is estimated at $7,410,000 -- a cost savings of 40-50% over expenditures necessary for construction of a new facility of the same size. The scope of this program includes: a new heating and air conditioning system for the building; construction of a new fire rated stair; enclosing two existing stairs; installation of an elevator; additional rest rooms and new plumbing installations; new structural flooring in west half of the building; plus normal partitioning, lighting and ceiling improvements. After the total project is completed, the English Building will essentially be equivalent to a new building inside the exterior walls.

The English Building, located on the west side of the quadrangle, was originally constructed as a Women's Building some seventy-five years ago with two subsequent additions in 1913 and 1923 to provide a facility to house the home economics and the women's physical education program. The original programs which were conducted in this facility required many large rooms. This space arrangement presents serious difficulties for the Department of English, which needs a large number of offices to house faculty and teaching assistants. The gymnasiums and locker rooms (previously used by physical education) are particularly inappropriate for any other use without extensive remodeling.

Consequently, the primary purpose of this project is to remodel the 61,490 NASF and 118,140 GSF contained in the English Building. The building's interior will be transformed into office/classroom space, which will successfully match the facility with the programs it will house in the foreseeable future. The proposed remodeling will give the Department of English adequate classroom and office space to conduct its program in space designed to meet current needs. The Department will also be able to house the Business and Technical Writing Division in the English Building for the first time, making those faculty members feel that they are a part of the Department of English.

The phase currently requested involves renovation of the northwest section of the building as well as the west center portion on the first, second and third floors. This remodeling of 22,500 NASF will provide office space, and three instructional areas. It includes the installation of an elevator, and construction of new structural floors in the areas to be remodeled. An accompanying equipment request for Phase III will be submitted in FY 1983.

SPACE REALIGNMENT, RENEWAL AND REPLACEMENT

Paraplegic Ramp Improvements - ($85,400)

This project involves the installation of new paraplegic ramps in the Mechanical Engineering Building, Woodshop and Foundry Laboratory, Institute of Labor and Industrial Relations Building, and the Student Services Building. The existing means of entrance/exit in all four buildings do not meet current requirements for paraplegic use. The ramps are much to steep, or in the case of the Mechanical Engineering Building, it is necessary for the individual to enter the building through a laboratory which is not a safe situation for paraplegics. These four buildings are heavily used by students, making it necessary that the entrances meet specifications of Section 504 of the Rehabilitation Act of 1973. This request is a portion of an overall accessibility improvement program at the Urbana-Champaign campus to make permanent buildings readily accessible to the handicapped. There will be similar requests in future years for this type of improvement at the Urbana-Champaign campus.

Rest Room Accessibility - ($92,700)

This project includes the conversion of old rest room facilities in ten (10) permanent buildings for accessibility by handicapped students, faculty, employees and/or guests of the University of Illinois--Urbana campus. Work would include the widening of a water closet shelter, installation of grab bars, reswinging of doors, lowering of mirrors and towel dispensers, and in some cases the removal of urinals or other stools to provide access space required. Upon completion of the project nineteen (19) rest rooms will be converted in buildings that presently have rest rooms which are not accessible. These ten (10) buildings have 159 classrooms and 69 instructional laboratories plus offices, gymnasiums, pools, etc.

Classroom Renovation - ($200,600)

This project is the first year of a multiphased program to upgrade and modernize a number of the older classrooms on campus. Forty-five percent of the classrooms are over 50 years old and several have not been substantially altered in many years. This phase will remodel approximately sixteen rooms in Engineering Hall and Noyes Laboratory which are centrally located and heavily used. Nine of the rooms in Engineering Hall are over eighty years old and seven of the rooms in Noyes Laboratory were constructed in 1915. The goal of this project is to modernize the classroom space to support current methods of instruction. Improving audio-visual capability and installing movable seating, new high quality chalkboards, and variable lighting controls typify the work planned. Also, the general design and appearance of many of these rooms will be updated. To properly equip the rooms, a separate equipment request in the amount of $29,000 is included in this budget.

College of Commerce Remodeling - ($175,000)

The College of Commerce and Business Administration has experienced a 9.5% annual growth rate in undergraduate majors since the fall of 1970. Similar growth has been experienced in transfer students and the graduate student population. The expansion from a 3,000 student population to more than 5,000 in less than a decade has severely impacted available office and classroom space. Additional classroom space has been allocated to the College but new office space is not available.

This request is designed to alleviate this pressing problem, by expanding the number of offices within the current space available to the College. The project will expand eleven offices (2,907 NASF) in Commerce West into twenty offices; and convert three offices in David Kinley Hall into four offices. Work includes installing ten doorways from main corridors; ducting revisions and balancing of air handling systems; electrical revisions; drop ceilings; and the construction of dividing partitions. There is an equipment request associated with the project.

College of Veterinary Medicine Remodeling - ($30,100)

This request involves the purchasing and installation of an anesthetic gas scavenging system in Room 61 Veterinary Medicine - Small Animal Clinic. The Large Animal Clinic and the Surgical Obstetrics Laboratory have waste anesthetic gas scavenging systems that are connected directly at the anesthetic machines and pump the waste gas to the outside, eliminating the possibility of inhalation by room occupants. Room 61 routinely has nine unscavenged anesthesia machines which simultaneously exhaust used anesthetic gases into a room filled with three surgeons, two anesthesiologists, one technician, and forty-two students. The elevated concentrations of exhausted anesthetic gases in Room 61 occur in periods of three hours twice per week for 16 weeks, thus creating an environment which is potentially hazardous to the occupants of the room. Some of the clinical and technical staff serving as instructors or assistants in Room 61 Small Animal Clinic have exposure periods in excess of eight years. Current scientific information released by the U. S. Department of Health, Education and Welfare suggests that chronic exposure to anesthetic gases increases the risk of both spontaneous abortion and congenital abnormalities in offspring among female workers and wives of male workers. Risks of hepatic and renal diseases are also increased among exposed personnel. Obviously these are not optimal working conditions. The installation of the gas scavenging system will greatly reduce health hazards to students and staff.

Animal Room Improvements - ($124,000)

This project involves upgrading the existing animal holding facilities in the Electrical Engineering Annex to a level required by Federal Regulations. Federal grant agencies have threatened to withhold research funds unless our facilities are improved. This is the third of a five-phased program to bring our existing facilities into compliance with the U. S. Department of Health and Human Services standards and regulations governing the humane handling, care, and treatment of laboratory animals.

The work to be done in the Electrical Engineering Annex involves remodeling 853 NASF on the first floor. The project includes modification of

the ventilation system; dropping ceilings; installing sinks; partition changes; and installing a cage washer and a bottle filler. These improvements will allow the Department of Electrical Engineering to do a better job of caring for the animals, while the cage washer and bottle filler will save animal caretaker time. The Urbana campus anticipates that after project completion, the facility will serve the animal holding needs for the Department of Electrical Engineering for a number of years. There is an equipment request associated with this project.

Davenport Hall - Biophysics - ($626,800)

This request involves remodeling the space formerly occupied by the Meats Laboratory into laboratory space for the Biophysics Division of the Department of Physiology. Originally, this area was scheduled for remodeling as a part of the major renovation of Davenport Hall. As that project was not funded, the present proposal is designed to meet the critical space problems of the Biophysics unit. At present, the Biophysics unit is housed in Noyes Laboratory in space "on loan" from Chemistry (which has space needs of its own).

This project would provide space at an excellent location to help alleviate the crowded conditions in the School of Life Sciences. It would also create the core of space needed to develop a Center of Biophysics Research for graduate education.

Additionally, the space on the floor directly above this project will be occupied by a group of scientists from Life Sciences and the College of Agriculture who have a common interest in the study of photosynthesis. The physical proximity of these two groups will allow professional interaction that will be beneficial to all scientists.

Approximately 3,000 NASF would be remodeled into wet laboratory and office space. The work would involve a new floor, partitions, air conditioning, plumbing, lighting and ceiling improvements. A separate equipment request in the amount of $94,400 is included in this budget proposal to properly equip the remodeled area.

Roger Adams Laboratory Remodeling - ($181,800)

This request involves remodeling 1,200 NASF on the Mezzanine "C" level of Roger Adams Laboratory to develop an office area for Chemical Engineering staff and graduate students. Chemical Engineering has experienced a significant growth in enrollment since 1971, primarily due to demand generated by energy/pollution problems faced by industry. Unfortunately, space allocated to the Department has not kept pace with its expansion. This project serves the dual purpose of providing additional space for Chemical Engineering, and completing a portion of a multiphased program designed to upgrade space in Roger Adams Laboratory.

The area on Mezzanine "C" projected for remodeling is presently "open" with no permanent walls. This request involves constructing two concrete block walls; installing new lighting; painting the rooms; and adding central air conditioning.

Morrill Hall - Remodeling - ($36,000)

This project will provide for improvements to the ventilation system for Room 65 Morrill Hall, a coal processing facility. Presently, five circular saws under a common cover run concurrently utilizing oil as a lubricant. When sectioning of a coal ball is completed, the saws' cover is lifted and a hot mixture of coal dust and oil mist is released into the room, thus creating a danger of explosion. To make matters worse, this mixture of fumes and coal dust is recirculated through a fan system which distributes air to many other rooms on the east end of the building.

Ventilation controls must be installed to eliminate a potential explosion and the emminent health risk of breathing contaminated air. The primary step in bringing the air in the lab to a safe level is the installation of a collector with aerosol and dust disposable hepafilters. This device removes airbourne contaminates and returns clean air to the room, eliminating the need to provide conditioned (heated or cooled) make-up air to the lab area if a fume hood were used.

The above improvements are necessary to provide a healthy atmosphere and a safe place for staff and graduate students to work.

Elevator Installations - ($181,000)

This request is a part of an overall program to meet Federal and State laws requiring that all programs be accessible to paraplegic and other handicapped persons. University High School has four floors containing 26,129 NASF and 41,730 GSF and houses the laboratory school for the College of Education. It is a permanent, University of Illinois building, which must conform with standards set by Section 504 of the Rehabilitation Act of 1973.

This project involves the installation of an elevator in University High School, modification of a rest room for men and women, as well as the construction of a ramp at the south entrance to the building.

Boneyard Overflow Protection - ($54,000)

This project consists of completing several preventive measures to reduce the risk of loss in the eventuality of another flood of the Boneyard. On July 30, 1979 the flooding of the Boneyard Creek caused in excess of $400,000 damage to various areas assigned to the College of Engineering.

Improvements to be made at this time include increasing the elevation of the service drive to the south door of Talbot Laboratory approximately one foot. This will decrease the probability of flooding the basement area which includes a small shop with a milling machine, a crane bay, the Laser Laboratory and the Materials Engineering Research Laboratory with its various contiguous areas. The installation of coffer dams around the lower windows of Electrical Engineering Research Laboratory Building will diminish the risk of damages to that basement area. Nine windows and a door at that location will be improved as a part of this project. Future improvements will be requested for the basement area of Engineering Hall and for stabilization work on the banks of the Boneyard Creek on the Engineering campus.

Krannert Center Performing Arts - Remodeling - ($355,400)

This project involves resolving three serious safety problems and remodeling four different areas of the Krannert Center for the Performing

Arts. The areas to be improved support Drama, Dance, Scenery and Piano Storage.

The safety items include repairs to smoke/fire doors in both the Festival and Playhouse fly galleries. During a recent test of the sixty-eight doors in the two theaters, sixteen of them wouldn't open. When the doors are opened, the hardware fails and falls some ninety feet to the floor below because of inadequate rigging. Heavy duty rigging and hardware must be installed on all the doors before they can operate as the original design intended.

Four sets of double doors between the parking levels and the Krannert Center Theaters swing in toward the lobby area. Should a sudden evacuation of the building be required, these "lobby" areas could become death traps for patrons, students and staff. These doors should be reversed so they will swing out into the garage structure.

Presently, no railing exists to prevent workers from falling from the edge of the grid to the stage floor approximately ninety-six feet below. As a part of this project railings will be installed on the grids in both the Festival and Playhouse Theaters.

The remodeling portion of this project includes the removal of the existing wooden floor in the Drama Rehearsal area and installation of a Tarquet dance linoleum over a plywood sub-floor on steel spring supported wood sleepers. The installation of a minimal lighting system would make the space more useful for classroom performance/workshop area for both Dance and Drama. Acoustical treatment of both the Drama Rehearsal area and the Dance Studio must be improved to reduce noise levels for instruction to be conducted properly.

This project will provide a storage room with climate control systems in the backstage area of both the Great Hall and the Festival Theater to properly store Steinway Concert Grand pianos. At present, they are deteriorating rapidly because of the lack of humidity and temperature control caused by turning off the ventilation systems to save energy.

Each of the three largest theaters in the Center do not provide adequate storage. By installing chain link fence in several areas, storage space could be provided adjacent to each of the large theaters.

Additional items of remodeling and safety improvements will be included in future requests.

Sprinkler Systems - ($312,700)

This request involves sprinkler protection for the Natural History Building and the Arcade Building. The Natural History Building contains many of the instructional laboratories for the School of Life Sciences and houses the Department of Geology. This building is located on the Quadrangle and fits into the Urbana-Champaign campus long range safety plan to eliminate the safety deficiencies of our permanent buildings.

The Natural History Building portion of the project consists of planning and installing an overhead sprinkler system for the south portion (55,000 NASF) of the building. The system is necessary to comply with the Chicago Building Code for multi-story buildings and to provide consistent, high quality fire protection for both the building and the lives of its occupants. 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 run the required piping into each room.

The Arcade Building has the same type of construction as the Natural History Building and does not meet current codes. This request involves extending the sprinkler system to protect the 7,500 NASF on the second floor (Mathematics Department) and the storage area on the third floor. The Arcade Building is located on Wright Street near Green Street and is considered a permanent campus building.

Loomis Laboratory Remodeling - ($89,200)

This request involves the installation of an emergency power source to operate a limited number of pieces of research apparatus, operate building sump pumps, and to provide lighting for stairways and interior hallways of Loomis Laboratory of the Physics Building.

The hazards and expenses related to the lack of an emergency power source could be minimized by an emergency generator set. As currently planned this set could be operated by an engine fueled by either city gas

or by propane gas stored on site and equipped with automatic cut over devices to start the engine and supply power. The new system would provide backup power to: 1) selected research apparatus, especially vacuum pumps, on a limited emergency basis in order to keep from losing an experiment that has been underway for a substantial period of time; 2) sump pumps in the basement as a protection against the flooding of mechanical equipment and instructional aids; 3) fume hoods designed for the emission of toxic materials from the Laboratory; and 4) lights placed in strategic positions in the building to aid in emergency exits.

Natural History Building - Remodeling - ($106,700)

The existing air conditioning systems that cool four different areas in the north half of the basement of the Natural History Building are approximately 15 years old, and the units do not cool the areas adequately or operate efficiently. Even though steam lines running through this section of the building have been insulated, the basement still becomes almost unbearable in the Spring and Fall. Matters are made worse by the fact that many rooms have no windows and thus no source of outside air. Plans have been completed to install a chiller and remote condenser and cooler to handle the cooling of the Room 103 complex, Room 104 complex, Room 111 complex and Room 118 complex (approximately 3,365 NASF). This type of air conditioning system will reduce energy use and provide a reliable system for cooling laboratories and offices assigned to Geology.

Astronomy Building--Remodeling - ($238,600)

This project involves the conversion of a large 3,291 NASF open area on the second floor of the Astronomy Building into private offices for the Office for Computer Services, and laboratories for Astronautical research (dark room, library and star chart room, microphotometer room, etc.) for the Department of Astronomy. The Center for Advanced Computation, for which the building was originally built with Federal funds in 1971, suffered a severe cutback in its Federal funding in 1978. In order to provide better utilization of the space in that building and to fulfill a long-recognized need, the Urbana campus moved the Astronomy Department to the Advanced Computation Building and moved the remaining units of the old Center for Advanced Computation to the Observatory space which was vacated by Astronomy.

Although the total available space in the Astronomy Building is adequate for Astronomy's needs, several portions of this space (the second floor and the roof) are not currently in usable form. This means that, until the proposed remodeling is accomplished, both the research and teaching efforts of the Department cannot be optimally carried out. For example, those observers who require darkroom facilities and instructors who conduct night sky observing sessions will have to shuttle back and forth between the old Observatory Building and the Astronomy Building. Also, a teaching lab in Noyes Lab and offices in an old house at 1204 W. Oregon, Urbana will have to be retained until adequate replacement facilities can be provided through this project.

The work to be done involves replacing the existing elevated floor (steel panels supported by jacks) with a permanent floor, constructing partitions with doors, installing three windows in the exterior wall, relocating darkroom equipment from the Observatory to the new rooms in this project, and constructing a platform on the roof for a telescope viewing laboratory.

Roof Replacements - ($590,700)

This project will provide for the replacement of all or a part of the roofs on the following five buildings:

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 valleys, gables, gutters, and apron will also be replaced.

Law Building was constructed in 1954. Certain areas of this roof (approximately 125 squares) have exposed felt, blisters and splits with resulting saturated insulation and numerous leaks. These areas require complete tear-off and replacement. The remaining areas (approximately 340 squares) can be repaired by venting the wet areas, repairing blisters and resaturating. Unless this work is accomplished promptly, the roof will continue to deteriorate and require complete replacement.

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 1 1/2 inch fiberglass insulation base and 3-15 pound pitch felts with 2-6 inch tapered insulation. A new vapor barrier and five-ply built-up roofing will also be installed. Also new curb flashings and new leads at drains will be included.

Architecture Building was constructed in 1926. This project includes the complete removal and replacement of 3,450 sq. ft. roof over the Architectural Library. The present roof is 4-ply asphalt over organic insulation with 3-ply pitch coatings added in 1947 and 1963. The roof is badly blistered with many areas of exposed and torn felt. Flashing is deteriorated and insulation is totally ineffective. This project is essential to prevent further roof leaks over the Architectural Library.

The Psychology Building was constructed in 1969-1970. The existing 11,450 square foot four-ply steeped asphalt build-up roof is capped with a white granulated mineral felt. Fish mouthing and blistering have been evident for five years despite past contractor repairs. In addition, 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.

This request is part of an overall program developed to re-roof many of the Urbana campus buildings requiring new roofs. There will be similar requests in future years to re-roof major buildings.

Fume Hood Improvements - ($481,400)

This project involves the renovation of fume hoods in Noyes Laboratory and the Animal Sciences Laboratory, as part of an overall program to improve fume hoods throughout campus. Improvements would be made to 35 fume hoods located in Rooms 157, 260, 350A, 350B, 355, 357, 450 and 450A Noyes Laboratory. Duct work must be replaced or repaired and the hoods

and fan housings must be made leak proof. Existing leaks in the hoods and ducts allows toxic materials to escape and enter into offices and laboratories located on floors above these rooms. In addition, fans on most of the hoods must be relocated above the roof to meet current code requirements.

The improvements in the Animal Science Laboratory Building involve fume hoods located in 25 rooms. Fan motors must be relocated from the rooms to the penthouse with concurrent installation of extended discharge ducting. The resultant increased face velocity to the fume hoods will compound negative air pressure problems in the building. This situation must then be corrected by increasing the make-up air quantity to the building.

David Kinley Hall Remodeling--Room 114 - ($306,400)

This project consists of the complete renovation of a 2,537 square foot lecture room in David Kinley Hall. This project is one of our continuous efforts to upgrade the 40-50 year old lecture halls. These facilities are totally outdated in ventilation, heating, lighting, seating, and are inadequate for any audio-visual service. Presently this room has a limited use due to the marginal services provided.

The remodeling of this room would consist of an air conditioning/heating system, a new ceiling and lights, new floor tile and seats, plus necessary installations and remodeling to provide audio-visual capabilities needed for certain lectures. The air conditioning/heating system modification is essential to provide temperature controls and ventilation when the audio-visual services are in use. These services require that all doors and windows be closed with black-out shades to prevent light from entering the room during a film showing.

Huff Gym Basement Remodeling - ($304,300)

This project involves remodeling 7,700 NASF on the west side of the Huff Gym Basement to accommodate new offices for the Department of Leisure Studies and new locker room space for women. This remodeling

will make all the activity areas available to women, increase the women's locker room space, and provide office space for the Department of Leisure Studies without imposing a burden on the men's locker facilities.

The construction of the office space will permit the Department to be centrally located and to vacate space in the Armory and the Children's Research Center thus permitting reassignment to other needy departments. The remodeling will involve new partitioning, heating-ventilation, electrical, flooring and ceiling changes and improvements. Included in this project is a new towel distribution room, a conversion for a women's rest room, and a coed corridor connecting all the activity areas.

Mechanical Engineering Building Remodeling - ($72,100)

This project involves the installation of a sprinkler and control system to upgrade life and fire safety in the internal combustion Engines and Vehicle Dynamics Laboratory complex (9,200 NASF) in Rooms 101 - 108 Mechanical Engineering Building. With the number of experiments being conducted at one time, significant amounts of gasoline and other fuels are required within the laboratory area. Although stringent precautions are taken in the handling and storage of these fuels, their presence and use represent a fire hazard. By installing an alarm system, a sprinkler system and creating a better circulation pattern between laboratories we will have provided a much safer place of employment and reduced the danger of fire in a major campus building.

Visual Arts Laboratory - ($167,100)

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 freshman art students. Currently, it is impossible to meet the student demand for the courses in this area of study, and the facilities are taxed to the limit by students enrolled in the courses.

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 and included needed expansion for photographic laboratories. This second phase (6,117 NASF) is to fund the required remodeling for a Cinematography Shooting Studio and several small dark rooms for freshmen and faculty in the Fine Arts Building. Major heating and ventilation changes need to be completed for optimal use of space created by remodeling Phase I and II. A separate equipment request in the amount of $97,400 is also included in this budget request for equipping the Cinematography Studios and dark rooms.

PLANNING

Auditorium (Remodeling) - ($92,000)

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 of these problems, water is leaking into the building, causing interior damage to the plastered ceiling and walls. Because of fear that the ceiling might collapse, the O&M Division has begun a practice of making monthly inspections of the structural members so that, if necessary, the building could be closed on short notice.

The proposed remodeling of this facility will include the complete replacement of all wooden structural members with fireproofed metal framing and non-combustible roof and ceiling material, necessary mechanical and electrical changes, and major renovation of the building, including new seating, to make the space more usable.

The Auditorium has long been a campus landmark and it continues to serve as a site for many campus functions--lectures, student and faculty meetings, musical events, movies, examinations, etc. Except for the roof deficiencies, this historically significant building is basically of sound construction and its value is sufficiently high that razing the structure is not warranted. Also, renovation of the building is considered to be considerably less expensive than constructing equivalent new space.

Planning funds ($92,000) are requested in FY 1982 to design the new roof system and related mechanical and electrical changes. The roof replacement and related work is programmed to be requested in FY 1983 and is estimated to cost $920,000. The interior renovation is programmed to be requested in FY 1985 and FY 1986 for $480,000 and $575,000 respectively.

The total estimated cost of planning plus three phases of remodeling is $2,067,000.

Television Building Addition - ($398,600)

This project will provide replacement space for essentially all units of the Division of Broadcasting at the site of the present Television Building at the corner of Goodwin and Main Streets in Urbana. Completion of this project will allow the razing of four high maintenance buildings and will provide the opportunity for space consolidation and program coordination.

The television and radio stations provide valuable public service to the people of the State of Illinois, reaching more people each week than all of the rest of the University's units combined, at a cost of less than a half-cent per listener-hour. This is the only connection to their state university for many people in Illinois.

Despite the value of these services, the Division of Broadcasting occupies many buildings on campus which were not designed for use as broadcasting facilities (aside from the New Studio Addition built in 1970). Thus, this project addresses two critical needs: 1) providing space of adequate quality and quantity, and 2) centralizing the operations of the Division of Broadcasting for more efficient administration and more economical operation. Additionally, because the Division would be vacating a wing of Gregory Hall on the central campus, there would be a substantial gain of prime space which could be economically reconverted to classrooms and offices.

The existing space occupied by the television station--a former bakery and a former rooming house, are badly deteriorated and require continuing maintenance. One exterior wall of the bakery building was recently rebuilt to prevent water leakage on expensive equipment. The roof is under constant repair but has deteriorated to the point that the repairs will last only temporarily. The dust level in the bakery building is unacceptably high but cannot be reduced because the dust consists of crumbling plaster, paint dust, and insulation fibers. This dust penetrates expensive videotape machines and causes enormous damage and

expense on a continuing basis: videotape operation costs are approximately five times the industry average despite extensive air filtration and dust containment measures undertaken by the division. Even existing office space at the Television Building is inadequate.

This project is programmed to contain the following types and amounts of space:

Room Code and USOE Code	NASF in Proposed Building
Instructional Lab (210,215)	600
Office (310,315,350)	10,000
Audiovisual, Radio, TV (530,535)	10,000
Storage	400
TOTAL	21,000

Upon completion of this project, 11,686 NASF of space will be razed. The buildings to be razed are as follows: 501 South Wright, Champaign (1,801 NASF), Television Building, excluding "New Studio Addition" constructed in 1970 (7,087 NASF), 1110 West Main, Urbana (1,974 NASF), and the TV Annex (former portable classroom, 824 NASF). Additionally, upon the project's completion, 5,653 NASF in the following buildings will be vacated for reassignment to other units: Gregory Hall (4,757 NASF) and 59 East Armory, Champaign (896 NASF).

The total planning cost of the proposed building, including the initial efforts in construction document development, is estimated to be $398,600. It is anticipated that funds for constructing this project will be included in the FY 1983 Capital Budget Request.

GENERAL UNIVERSITY

For FY 1981 the University is requesting remodeling funds to complete important electrical upgrading work in the Roosevelt Road Building. This request is submitted as a General University project since its impact will benefit all three campuses.

Minor Repair and Remodeling - General University

Upgrade Electrical Service Roosevelt Road Building - ($447,500)

The University of Illinois computer system is centralized in the Roosevelt Road Building. This computer system provides the administrative computer capability for all three campuses of the University of Illinois and any power failure for an extended period would seriously disable the University operations. While a standby power system would be the ultimate answer, it is believed that a double source of electrical power supply will be sufficient to ensure suitable continuity of electrical service. At the present time there are two 12,000 volt power distribution lines from two separate high voltage cables coming to the Roosevelt Road Building; however, a bottle neck exists, since there is only one transformer to reduce the voltage to 480 volts. This project will provide a second transformer and complete switch gear that will allow switching from the high voltage cables to the second transformer in the event that the existing transformer fails.

PART IV

THE UNIVERSITY OF ILLINOIS ENERGY PROGRAM

ENERGY CONSERVATION/FUEL CONVERSION PROGRAM

Background

Funding of the University's Energy Conservation/Fuel Conversion Program was first requested for FY 1981 to respond to the then precipitous increase in energy costs. Prior to the initiation of this program, the University had implemented a number of operational measures which resulted in a University-wide reduction of energy consumption of approximately twenty-five percent. During the period from FY 1971 to FY 1980 this reduction in energy consumption accounted for a cost avoidance of several million dollars. However, despite these efforts the cost of providing energy to the three campuses has risen over 300% due to the overwhelming increase in fuel prices.

The operational measures implemented during the past decade evolved from comprehensive analyses conducted on each campus by the Operation and Maintenance Division. Through analysis of the buildings' occupancy levels, mechanical systems, length of daily operation, etc., most of the energy conservation measures which could be operationally achieved were identified and implemented. In evaluating the progress of these efforts, it became apparent that further large scale energy conservation could only be accomplished through an alternate approach.

As a major energy user and responsible consumer of State resources, the University was compelled to develop other means by which its reliance on imported oil and its rising utilities costs could be reduced. To accomplish these goals, a comprehensive energy related capital improvement plan was developed. This capital program includes both energy conservation and fuel conversion projects which are designed to reduce the University's energy costs and thereby recover the initial capital costs in relatively few years. As originally estimated, the combined effects of the conservation and conversion projects would be an annual savings of approximately $20 million in State funds by 1985.

In summary, the fundamental objectives of the University of Illinois Energy Program are:

1. To reduce the use of fuel oil and control energy costs by converting to a combination of alternative energy sources--coal, gas and refuse-generated steam.
2. To conserve energy through building modification and improved operating procedures.
3. To assure that all conversion or conservation projects meet air quality standards at the Federal, State, and local levels.
4. To encourage the use of Illinois coal.

The financial benefits of fuel conversion were dramatically demonstrated on the Urbana-Champaign campus during FY 1980. By substituting natural gas for a portion of the fuel oil normally burned by the Abbott Power Plant, the University averted a potential utilities budget shortfall of approximately $3.0 million. Accomplishing the $3.0 million cost avoidance required an investment of approximately $600,000 to convert the power plant boilers. In this particular case, the total capital cost of the conversion was recovered in approximately 3 months; however, the operational savings will continue to acrue for several years.

The Energy Conservation/Fuel Conversion Program has received enthusiastic support from the Illinois Board of Higher Education, Bureau of the Budget, Legislature, and Governor. Through the support of these agencies and individuals, the University was appropriated $8.7 million to begin the program in FY 1981. Table 1 lists the projects which were funded for FY 1981.

The Current Request

The need for the Energy Conservation/Fuel Conversion Program remains critical. Sharp increases in energy costs have persisted through FY 1980 and are expected to continue through the next several years. For example, in FY 1980 the Chicago campuses experienced a 53 percent increase in the cost of fuel oil, a 24 percent increase in the unit cost of natural gas, and a 17 percent increase in the cost of electricity. Likewise, the Urbana-Champaign campus experienced a 68 percent increase in average fuel oil costs, a 24 percent increase in natural gas costs, and a 12 percent increase in the average unit cost of electricity. Utilities price increases of this magnitude can only be controlled if adequate funding is provided for energy conservation.

TABLE 1
FY 1981 ENERGY CONSERVATION/FUEL CONVERSION PROJECTS
AS APPROVED BY THE GOVERNOR

Project Description	Budget Category	IBHE Recommendation and Governor Approval	
ENERGY CONSERVATION			
Steam Absorption Machine Control - 9 Bldgs	REMD	$ 397,100	
Digital Computer Lab - Process Cooling with Outside Air	REMD	128,400	
Steam Absorption Machine Control - 9 Bldgs	REMD	497,600	1,311,400
Seal Ventilation Ducts - 2 Bldgs	REMD	32,100	
Steam Absorption Machine Control - E.E. Bldg	REMD	64,200	
Steam Absorption Machine Control - 3 Bldgs	REMD	192,000	
Bldg Equip Automation - Dentistry Bldg	REMD	157,000	
Bldg Equip Automation - Medical Sci Addition	REMD	147,700	534,400
Bldg Equip Automation - Eye & Ear Infirmary	REMD	138,400	
Bldg Equip Automation - Benjamin Goldberg Center	REMD	91,300	
SUBTOTAL		$1,845,800	1,845,800
FUEL CONVERSION			
Abbott Power Plant Coal Conversion	REMD	$6,900,000	
SUBTOTAL		$6,900,000	
TOTAL		$8,745,800	

To continue progress toward completion of the Energy Conservation/Fuel Conversion Program, the University is requesting $20,693,100 in capital improvement funding for FY 1982. Included in this request are forty-five energy conservation projects totaling $11,833,400 and three fuel conversion projects totaling $8,859,700. Table 2 presents the energy conservation projects listed in priority order and Table 3 provides a similar display of the fuel conversion projects.

The fuel conversion projects are designed to convert the power plant at the Medical Center and a remote heating system at the Urbana-Champaign campus from fuel oil to less expensive fuels. In addition, a project to connect the Chicago Circle campus to the Medical Center's power plant is also requested. The energy conservation projects entail modifications to various campus buildings to make them more energy efficient. All energy conservation and fuel conversion projects have estimated paybacks of 12.5 years or less. With few exceptions, the projects included in the FY 1982 energy request are those which were part of the original program requested last year.

TABLE 2
FY 1982 ENERGY CONSERVATION PROJECT PRIORITY LIST

Priority	Campus	Project	Payback	Project Cost	Cumulative Total
1	CC	Light Fixture Lens Replacement--University Hall	1.09	$ 51,000	$ 51,000
2	CC	Modify Control Systems--6 Bldgs	1.15	70,700	121,700
3	CC	Zone Radiation--3 Bldgs	2.16	61,900	183,600
4	CC	Heat Reclaim Systems--5 Bldgs	2.19	822,500	1,006,100
5	CC	Modify Domestic Hot Water System	2.42	61,900	1,068,000
6	UC	Animal Room Improvement--Large Animal Clinic	2.44	291,000	1,359,000
7	MC	Upgrade Fan System--Medical Science Addition	2.51	234,000	1,593,000
8	MC	Upgrade Heating Controls--3 Bldgs	2.60	81,000	1,674,000
9	UC	Ventilation Turndown--Gregory Hall	2.87	13,500	1,687,500
10	UC	Domestic Hot Water--Control--2 Bldgs	3.05	12,500	1,700,000
11	MC	Install Heat Recovery Systems--Biolog Resources Lab	3.22	138,000	1,838,000
12	UC	Temp Control Remodeling and Replacement--12 Bldgs	3.28	966,500	2,804,500
13	CC	Install Variable Air Volume Systems--2 Bldgs	3.34	546,900	3,351,400
14	MC	Building Equipment Automation--Peoria Sch of Med	3.36	108,000	3,459,400
15	MC	Upgrade Fan System--Library	3.39	99,000	3,558,400
16	UC	Conversion to Central Fan Syst--Armory	3.47	69,000	3,627,400
17	UC	Reheat Systems--Zone Control--14 Bldgs	3.59	351,000	3,978,400
18	UC	Install Air Curtains Above Entryways--3 Bldgs	3.84	39,000	4,017,400
19	UC	Summer--Winter Ventilation Rate--3 Bldgs	3.96	34,500	4,051,900
20	MC	Install Heat Recovery System--Dentistry	4.11	40,000	4,091,900
21	UC	Conversion to Zoned Ventilation--Arts/Design Bldg	4.34	165,000	4,256,900
22	UC	Radiation--Zone Control--7 Bldgs	4.63	88,500	4,345,400
23	UC	Pipe Insulation--Electrical Engineering Bldg	4.72	28,500	4,373,900
24	UC	Reheat Systems--Zone Control--11 Bldgs	4.77	239,000	4,612,900
25	UC	HVAC Retrofit--2 Bldgs	4.78	384,000	4,996,900
26	UC	Domestic Hot Water--Control--4 Bldgs	5.09	20,500	5,017,400
27	UC	Steam Absorption Machine Control--4 Bldgs	5.17	130,000	5,147,400
28	UC	Domestic Hot Water Control--7 Bldgs	5.24	53,000	5,200,400
29	UC	Radiation--Zone Control--28 Bldgs	5.30	444,500	5,644,900
30	UC	Animal Room Ventilation Improvements--3 Bldgs	5.99	686,000	6,330,900
31	UC	Air Conditioning System Revision	6.02	218,000	6,548,900
32	UC	Reheat Systems--Zone Control--4 Bldgs	6.16	123,000	6,671,900
33	UC	Animal Room Ventilation--3 Bldgs	6.36	321,500	6,993,400
34	MC	Modify Fan System--Dentistry	6.58	128,000	7,121,400
35	UC	Radiation Zone Control--28 Bldgs	6.85	499,500	7,620,900
36	UC	Domestic Hot Water--23 Bldgs	7.09	341,500	7,962,400
37	UC	HVAC Retrofit--3 Bldgs	7.20	581,500	8,543,900
38	UC	Heating System Remodeling--9 Bldgs	7.20	1,450,000	9,993,900
39	UC	Indoor Lighting--2 Bldgs	7.43	162,500	10,156,400
40	MC	Install Heat Recovery System--EEI	9.30	181,000	10,337,400
41	MC	Roof Insulation and Repairs--Pharmacy	10.20	248,000	10,585,400
42	MC	Rehabilitate Radiator System--1919 W. Taylor	10.38	303,000	10,888,400
43	MC	Modify Chilled Water and HVAC Systems--RSM	10.38	313,000	11,201,400
44	MC	Window Replacement H. A.	12.02	234,000	11,435,400
45	UC	Indoor Lighting--4 Bldgs	12.43	398,000	11,833,400

TABLE 3
FY 1982 FUEL CONVERSION PROJECTS
PRELIMINARY PRIORITY LIST

Priority	Campus	Project	Project Cost	Cumulative Total
1	MC	Convert Boilers to Coal Burning, Steam Plant	$4,186,000	$4,186,000
2	CC	Interconnect Two Chicago Power Plants	4,407,700	8,593,700
3	UC	Conversion from Oil to Gas - Willard Airport	266,000	8,859,700

FUEL CONVERSION

Convert Boilers to Burn Coal - Medical Center Steam Plant - ($4,186,000)

Boiler Numbers 1 through 5 are capable of being reconverted to coal firing. Of these, Boiler No. 1 has the least potential for reconversion since the coal dump scale and distribution chute, as well as the bottom ash hopper have been removed. Reconversion requires installation of a new bottom ash hopper and removal and reinstallation of equipment now installed in the location of Boiler No. 1 bottom ash hopper.

The most desirable candidates for reconversion are Boiler Numbers 4 and 5. These boilers are newer and have a slightly modified design. Also, their location at the end of the coal handling system is the most suitable from the standpoint of allowing reuse of space bunker capacity for live storage. Their age in conjunction with their more desirable physical location makes them the most likely targets for modification to coal burning.

There are two basic criteria for determining the number of boilers to be reconverted to coal firing:

1. Provision for a fallback fuel source which will cover total system requirements in the event of shortages of natural gas or fuel oil.
2. Provision of an alternate source of fuel with lower purchase cost to offset use of higher cost fuels.

The first criterion requires reconversion of one or more boilers sufficient to maximize annual coal usage to offset higher cost natural gas and fuel oil, but does not attempt to cover peak demands with coal firing capability.

The second criterion has been assumed for the basis of this request. The economic evaluation plans for the reconversion of two of the five boilers (Boiler Numbers 4 and 5). Boiler Numbers 4 and 5, at an average continuous capacity of 75,000 lbs. steam per hour, are capable of generating approximately eighty percent of the annual steam requirements. This estimate includes the assumption that each of the boilers will go through an annual maintenance shutdown during the summer for one month each.

Reconversion of two boilers is optimum since it allows a high usage of coal for steam generation purposes at minimum capital investment for reconversion equipment. Each additional boiler conversion will add smaller incremental amounts of coal-fired steam generation on an annual

basis. A third boiler conversion would provide only an additional ten percent coal use to the total annual energy requirements. Also the third boiler would be used for "peaking."

Base loading coal-fired units and peaking with the natural gas or fuel oil-fired units presents minimum operation difficulties. Constant or base loading coal-fired units would provide the best service since fluctuating loads and start up and shutdown periods are difficult as compared to natural gas or fuel oil load fluctuations, start ups and shutdowns.

Conversion of a third boiler is not economically or operationally attractive.

The recommended arrangement is for reconversion of Boiler Numbers 4 and 5 to coal firing.

Interconnect Two Chicago Power Plants - ($4,407,700)

This project is to provide for a physical interconnection between the power plants of the Medical Center and Chicago Circle. The distance between the plants is approximately eight city blocks in a straight line due east from the Medical Center.

The installation, in direct buried conduit, is to pass through Urban Renewal property now vacant and under city streets.

The Medical Center Steam Plant would supply energy to the Chicago Circle High Temperature Water (HTW) system during May, June, July, and August, when the Chicago Circle's high temperature water system loads are less than the capability of one of the present HTW plant units. The potential benefits include:

1. Operator labor savings at the Chicago Circle HTW Plant.
2. Lower fuel costs through the use of coal should the reconversion project be completed.

Conversion from Oil to Gas - Willard Airport, Urbana-Champaign - ($266,000)

This project provides for converting or replacing a total of 51 oil-fired furnaces and heaters to burn natural gas and the removal of 30 oil storage tanks. The local utility company will install gas service piping and 17 meter settings.

TABLE 4
FY 1982 ENERGY CONSERVATION PROJECTS - CHICAGO CIRCLE

Project	Estimated Cost	BTU's Saved/Yr. (in millions)	Payback Estimate (yrs.)
Light Fixture Lens Replacement - University Hall	$ 51,000	2,500	1.09
Modify Control Systems - Six Buildings	70,700	6,000	1.15
Zone Radiation - Three Buildings	61,900	2,800	2.16
Heat Reclaim - Five Buildings	822,500	36,800	2.19
Modify Domestic Hot Water System	61,900	2,500	2.42
Install Variable Air Volume Systems - Two Buildings	546,900	16,000	3.34
	$1,614,900	66,600	

ENERGY CONSERVATION - CHICAGO CIRCLE

Light Fixture Lens Replacement - University Hall - ($51,000)

This project consists of the replacement of approximately 4,000 translucent lamp lenses with an acrylic type which will provide a greater light level per installed unit. This permits the disconnection of two fixtures per room, thus saving a considerable amount of energy as well as providing a higher lighting level.

Modify Control Systems - 6 Buildings - ($70,700)

This project consists of the replacement and/or rehabilitation of existing temperature control devices on the air handling equipment of six Chicago Circle campus buildings.

The buildings are: University Hall, Science and Engineering Laboratories, Library, Behavioral Sciences, Science and Engineering South, and Science and Engineering Offices.

This "fine-tuning" of controls permits the operation of air systems in their most efficient mode, and thereby provides energy savings.

Zone Radiation - 3 Buildings - ($61,900)

This project consists of modifying the hot water piping systems to the existing finned tube radiation heating systems located in University Hall, the Library, and Science and Engineering Offices. Presently the temperature of the water circulating in the systems is controlled by a single outdoor thermostat in each instance. This single control causes warm offices and cold offices depending on sun location as well as a waste of heating energy.

The work requires the separation of each floor's distribution piping and controls into zones of radiation which would respond only to that zone's requirements rather than responding to the building as one zone.

Heat Reclaim Systems - 5 Buildings - ($822,500)

The focus of this project is on reclaiming heated air which is exhausted from five campus buildings. The Science and Engineering

Laboratory, Library, Behavioral Sciences, Science and Engineering South, and the Physical Education Building are all slated for modification.

The work consists of the installation of supplemental heating coils in a number of exhaust discharges of air handling systems located in the buildings. This type of reclaim system is particularly energy efficient due to the amount of makeup air required in each building.

Additional coils, if required, will also be installed in the fresh air intakes of supply air handling units. Interconnecting piping, valves, controls and pumps will also be included to make the coil installations complete systems.

Modify Domestic Hot Water Systems - 4 Buildings - ($61,900)

This project consists of modifying the method of supplying domestic hot water to four Chicago Circle campus buildings. The buildings are: Science and Engineering Laboratories, Library, Services, and Architecture and Art.

Several methods are proposed to supply the needs of hot water to these buildings, primarily in the summer when total building-heat requirements are low. Included are interconnection between the Science and Engineering Laboratories East and West; interconnection and installation of a supplemental electrical hot water heater in the Library; and the installation of an electric hot water heater in the Services Building and in the Architecture and Art Building.

Install Variable Air Volume Systems - 2 Buildings - ($546,900)

This project consists of modifying the existing air distribution system equipment in the Science and Engineering Laboratories and the Architecture and Art Building.

The existing primary air distribution systems located in the two buildings are called "dual duct", meaning the system provides a hot and cold air duct to each room (or zone) of the building.

The modification consists of the changeout of the terminal devices or "mixing boxes", where hot and cold air is presently blended, to units which instead use only the cold air. Thus the "blending" of room air to temper the final temperature of air entering each room (or zone) could be achieved. This project would eliminate the need for hot air and the energy presently used to heat it.

TABLE 5
FY 1982 ENERGY CONSERVATION PROJECTS - MEDICAL CENTER

Project	Estimated Cost	BTU's Saved/Yr. (in millions)	Payback Estimate (yrs.)
Upgrade Fan System - Medical Science Addition	$ 234,000	9,600	2.51
Upgrade Heating Controls - Three Buildings	81,000	3,200	2.60
Install Heat Recovery Systems - Bio. Resources. Lab.	138,000	4,400	3.22
Building Equipment Automation - Peoria Sch. of Med.	108,000	3,300	3.36
Upgrade Fan System - Library	99,000	3,000	3.39
Install Heat Recovery System - Dentistry	40,000	1,000	4.11
Modify Fan System - Dentistry	128,000	2,000	6.58
Install Heat Recovery System - EEI	181,000	2,000	9.30
Roof Insulation and Repairs - Pharmacy	248,000	2,500	10.20
Rehabilitate Radiator System - 1919 W. Taylor	303,000	3,000	10.38
Modify Chilled Water and HVAC Systems - RSM	313,000	3,100	10.38
Window Replacement H. A.	234,000	2,000	12.02
	$2,107,000	39,100	

ENERGY CONSERVATION--MEDICAL CENTER

Upgrade Fan System - Medical Sciences Addition-($234,000)

This project consists of the replacement and/or rehabilitation of the existing air handling equipment located in the building fan rooms.

The work will include the replacement of the existing fan units with units of higher operating efficiency, the modifications of temperature control systems and the replacement of air filter and heating coil units.

Upgrade Heating Controls - 3 Buildings-($81,000)

This project provides for changing temperature control devices as a means of achieving improved temperature control. This "fine tuning" of the controls enables the air systems to operate in their most efficient mode, resulting in energy savings. The buildings included in the project are: the Eye & Ear Infirmary, College of Nursing and the College of Dentistry.

Install Heat Recovery Systems - Biological Resources Lab-($138,000)

This project consists of reclaiming heat in air to be exhausted from the building by placing heat exchange coils in the air handling systems. This system is particularly energy efficient in the Biological Resources Laboratory Building because the air itself cannot be recirculated.

The supplemental coils will be interconnected to other supplemental coils located in the fresh air intake of all the supply air handling units.

Through the use of such "Run-Around" heat recovery systems, heat is extracted from the exhaust air and used to preheat the fresh air entering each air unit.

Building Equipment Automation - Peoria School of Medicine-($108,000)

This project represents a part of a total program which would ultimately convert many of the presently manually operated mechanical equipment systems to an automatically operated type controlled from a remote location. Automated operation of fans, thermostats, valves, dampers and related devices will provide continuous control of air, steam, water, and other resources used for the environmental control of the building.

The installation will include all terminal points, data gathering field cabinets, all electrical and pipefitting work and all system interfaces to be operational from a remote base.

Upgrade Fan System - Library-($99,000)

The project consists of alterations in the air handling systems in the Library of Health Sciences.

Included are such modifications as: providing two-speed motors on fans to operate the air systems at a lower volume in the winter, control devices at the inlets to the primary fans, change out of total fan units to types of a more efficient design, and the modification of damper operation to provide closed-damper operation during periods of warm-up after long shutdown periods.

Install Heat Recovery System - Dentistry-($40,000)

This project consists of the installation of a supplemental heating coil in each of the exhaust discharges of the air handling systems located in the College of Dentistry Building.

The supplemental coil will be interconnected to other supplemental coils located in the fresh air intake of all the supply air handling units.

Through the use of "Run-Around" heat recovery systems, heat is extracted from the exhaust air and used to preheat the fresh air entering each air unit.

Modify Fan System - Dentistry-($128,000)

The project consists of alterations in the air handling systems in the College of Dentistry Building. Included are modifications such as: providing two-speed motors on fans to operate the air systems at a lower volume in the winter, control devices at the inlets to the primary fans, change out of total fan units to types of more efficient design, and modifications of damper operation to provide closed-damper operation during periods of warm-up after long shutdown periods.

Install Heat Recovery Systems - EEI-($181,000)

This project consists of reclaiming heat in air to be exhausted from the building by placing a supplemental heat exchange coil in the air handling systems.

The supplemental coil will be interconnected to other supplemental coils located in the fresh air intake of all the supply air handling units.

Through the use of such "Run-Around" heat recovery systems, heat is extracted from the exhaust air and used to preheat the fresh air entering each air unit.

Roof Rehabilitation and Repairs - Pharmacy-($248,000)

The project consists of completely removing the existing composition roof at the upper level; installation of additional insulation material in conjunction with the current insulation; putting on a new tar and gravel composition roof including new flashings and cappings where necessary; and essential modifications to existing roof drains.

Rehabilitate Radiator System - 1919 W. Taylor-($303,000)

Heating for the upper six floors of 1919 is presently provided by cast iron radiators, which do not have automatic heating controls. Included in the project is the installation of new, more efficient type radiators, piping, insulation, controls, and convector covers for the radiators. This will result in a more energy efficient, maintainable system.

Modify Chilled Water and HVAC Systems - RSM - ($313,000)

Presently the East Building and the North/South Buildings of the Rockford School of Medicine are cooled by two separate, independent chilled water systems. Both systems are complete including piping, pumps, controls and water chilling machines. The system that serves the North/South Building was built as a part of a two phase remodeling and renovation project and utilizes two air cooled compressor-condenser units. The system serving the East Building was built as a part of that building addition project and uses a centrifugal chiller machine.

The East Building centrifugal water chilling machine has capacity to serve the entire complex of Rockford School of Medicine buildings. There is an area at the south end of the first floor of the South Building that is inadequately heated, cooled and ventilated by existing HVAC systems. The area consists of the Office for Family Practice patient lab, x-ray department, patient interview office, the Office for Family Practice Director's office, the Purchasing Department and the Central Receiving Office. At the present time supplemental heating and cooling is provided by portable electric heaters and window air conditioner units.

This project will connect the two chilled water cooling systems and would require only operation of the centrifugal chilling machine, placing the two compressor-condenser units on a stand-by status. The project will consist

mainly of piping and control system work. At the same time an air handler will be installed with heating and cooling coils and controls, and will use existing air distribution systems somewhat modified to adequately serve the underserved areas.

The work would all take place in the same general location in the building complex. Completion of the project will reduce operating and maintenance costs by increasing efficiency of equipment operation, elimination of energy wasting equipment, thereby reducing energy costs and reducing equipment operation resulting in the reduction of maintenance costs.

Window Replacement - H. A. - ($234,000)

The existing wood, double hung, single glazed windows have deteriorated to the point where regular maintenance is no longer effective or economical.

The new windows will be double glazed, metal clad, wood windows which will make a significant reduction on heat loss and maintenance costs. This phase is the first of three and encompasses the lower five floors. Approximately 100 windows will be replaced in this project.

TABLE 6
FY 1982 ENERGY CONSERVATION PROJECTS - URBANA-CHAMPAIGN

Project	Estimated Cost	BTU's Saved/Yr. (in millinos)	Payback Estimate (yrs.)
Animal Room Improvements - Large Animal Clinic	$ 291,000	21,890.0	2.44
Ventilation Turndown - Gregory Hall	13,500	866.0	2.87
Domestic Hot Water - Control - Two Buildings	12,500	752.8	3.05
Temperature Control Remodeling and Replacement - Twelve Bldgs.	966,500	54,200.0	3.28
Conversion to Central Fan System - Armory	69,000	3,652.0	3.47
Reheat Systems - Zone Control - Fourteen Buildings	351,000	17,949.4	3.59
Install Air Curtains Above Entryways - Three Buildings	39,000	1,866.0	3.84
Summer-Winter Ventilation Rate - Three Buildings	34,500	1,600.0	3.96
Conversion to Zoned Ventilation - Arts/Design Building	165,000	6,986.0	4.34
Radiation - Zone Control - Seven Buildings	88,500	3,510.6	4.63
Pipe Insulation - Electrical Engineering Building	28,500	1,111.1	4.72
Reheat Systems - Zone Control - Eleven Buildings	239,000	9,206.0	4.77
HVAC Retrofit - Two Buildings	384,000	14,770.0	4.78
Domestic Hot Water - Control - Four Buildings	20,500	740.2	5.09
Steam Absorption Machine Control - Four Buildings	130,000	4,624.0	5.17
Domestic Hot Water Control - Seven Buildings	53,000	1,857.9	5.24
Radiation Zone Control - Twenty-eight Buildings	444,500	15,405.8	5.30
Animal Room Ventilation Improvements - Three Buildings	686,000	21,066.7	5.99
Air Conditioning System Revision	218,000	6,660.0	6.02
Reheat systems - Zone Control - Four Buildings	123,000	3,672.9	6.16
Animal Room Ventilation - Three Buildings	321,500	9,290.0	6.36
Radition Zone Control - Twenty-eight Buildings	499,500	13,403.0	6.85
Domestic Hot Water - Twenty-three Buildings	341,500	8,859.8	7.09
HVAC Retrofit - Three Buildings	581,500	14,850.0	7.20
Heating System Remodeling - Nine Buildings	1,450,000	37,030.0	7.20
Indoor Lighting - Two Buildings	162,500	1,822.5	7.43
Indoor Lighting - Four Buildings	398,000	2,688.9	12.43
	$8,111,500	280,331.6	

ENERGY CONSERVATION - URBANA-CHAMPAIGN

Animal Room Ventilation Improvements - Large Animal Clinic - ($291,000)

The use of 100 percent outside air in ventilating animal room spaces in one 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. The work will be performed in the mechanical equipment rooms of the Large Animal Clinic.

Ventilation Turndown - Gregory Hall - ($13,500)

The ventilation rate in Gregory Hall is excessive for office-classroom use and causes air noises that prevent quality recording in the WILL radio studio. The work includes reducing fan speeds and rebalancing air flows to all rooms.

Domestic Hot Water Control - Two Buildings - ($12,500)

This project includes the installation of instantaneous water heaters, controls, pumps, and the removal of hot water storage tanks to reduce the steam used by the domestic hot water systems in Morrill Hall and Loomis Laboratory of Physics.

Temperature Control Remodeling and Replacement - 12 Buildings - ($966,500)

This project will replace the existing controls in twelve buildings for 141 fan systems and 2,700 room thermostats. The controls presently operating in these buildings have, through deterioration over the years, become inefficient and obsolete. New sensors and signaling type controls will be installed to improve the ability to control space temperatures in these buildings.

The work will be performed in the following buildings:

Auditorium	Chemistry Annex
Library	Bevier Hall
Gregory Hall Phase II	Water Resources Building
University Press	Morrill Hall
Smith Memorial Hall	Animal Science Laboratory
Noyes Laboratory	College of Veterinary Medicine

Conversion to Central Fan System - Armory ($69,000)

This project provides for the removal of motors, fans, and filters from 56 fan coil units, increasing the duct size to each fan coil unit, and the installation of a bypass valve on each fan coil unit heating coil. Also included is the changing of the thermostat from summer/winter to only heating stat, installation of larger exhaust fans, and the installation of heating and cooling coils in large supply fans on the mezzanine.

Reheat Systems - Zone Control - Fourteen Buildings - ($351,000)

This project is to reduce the steam used by the reheat systems located in the ventilation systems of fourteen ventilated buildings. The project includes the installation of valves and controls to isolate the systems by zones and to shut off the converters and pumps at a predetermined outside and space temperature.

The work will be performed in the following buildings:

Burnsides Research Laboratory
Civil Engineering Building
University Press
Veterinary Medicine Complex
Water Resources Building
Foreign Languages Building
Children's Research Center
Materials Research Laboratory
Natural Resource Studies Annex
Rehabilitation Center
Medical Sciences Building
Law Building
Animal Science Laboratory
Smith Memorial Hall

Install Air Curtains above Entryways - Three Buildings - ($39,000)

This project will provide for the installation of five air curtains over the entrances to prevent cold drafts of outside air from entering the buildings (and resulting structural heat loss) as follows:

Library - north and south main entrance
Institute of Labor and Industrial Relations - south entrance
Armory - northeast and southwest entrance

Summer-Winter Ventilation Rate - Three Buildings - ($34,500)

This project will provide the capability to operate fifty fan systems at lower ventilation rates during the heating season. Savings will result from a reduction of outside air which requires heating prior to delivery to the building space.

The work will be performed as follows:

Pyschology Building	18 fan systems
Law Building	16 fan systems
Music Building	16 fan systems

Conversion to Zoned Ventilation - Arts/Design Building - ($165,000)

This project provides for the removal of the existing mixing boxes and room thermostats and the installation of heating and cooling coils in each of the hot and cold ducts. Also included are controls for separating each floor in the building into north and south zones and the installation of a duct between the main duct and the room service duct for each supply.

Radiation - Zone Control - Seven Buildings - ($88,500)

This project includes the installation of two zone valves, two zone thermostats and two controllers, referred to outside temperatures on the steam supplied radiation in six of the seven buildings listed. This will reduce the amount of steam used by the radiation systems. In the Art and Design Building, the work includes the same as above plus a normally closed valve on the steam to water heat exchanger.

Art & Design and Krannert Art Museum
Materials Research Laboratory
Aero Lab A & Brake Shoe Laboratory
Digital Computer Laboratory
Harding Band Bldg.
Astronomy Building
Chemistry Annex

Pipe Insulation - Electrical Engineering Building - ($28,500)

This project includes the insulation of hot surfaces throughout the building, such as steam and condensate lines from the building entrance to zone valves, hot surfaces on converters and steam absorption machines, and exposed piping throughout the building to prevent heat from escaping through an uncontrolled source in the Electrical Engineering Building.

Reheat Systems - Zone Control - Eleven Buildings - ($239,000)

This project is to reduce the steam used by the reheat system associated with the ventilation system of several buildings. Included is the installation of a time clock, zone valves, a normally closed steam valve on the steam to water heat exchangers and a controller to operate the systems according to outside temperatures.

The work will be performed in the following buildings:

Harding Band Building
Commerce West
Coordinated Science Laboratory
Electrical Engineering Building
Art & Design and Krannert Art Museum
Library Seventh Addition
Psychology Lab
Altgeld Hall
Astronomy Building
Electrical Engineering Annex
Levis Faculty

HVAC Retrofit - Two Buildings - ($384,000)

This project provides for the replacement of the dual duct ventilation systems in Loomis Laboratory of Physics and the Materials Research Laboratory with a variable air volume (VAV) system. Included in the project are thirty fan systems and 430 variable volume units, one in each room of both buildings. This modification will use less energy to produce the room temperatures desired because the systems will not heat and cool simultaneously.

Domestic Hot Water Control - Four Buildings - ($20,500)

This project includes the controls to shut off the domestic hot water systems during the unoccupied time period for each building as follows. Work involves the installation of one time clock, one control valve and controller, and one P. E. switch on each of the domestic water systems.

The work will be performed in the following buildings:

Natural Resource Studies Annex
Burnsides Research Laboratory
Foreign Languages Building
Medical Sciences Building

Steam Absorption Machine - Control - Four Buildings - ($130,000)

This project includes the installation of air operated automatic steam control valves, the removal of solution control valves, and the installation of microprocessing control units. These modifications will reduce the amount of steam used to air condition the buildings.

The work will be performed on absorption machines in the following buildings:

Burnsides Laboratory
Library Seventh Addition
Rehabilitation Center
Psychology Building

Domestic Hot Water - Control - Seven Buildings - ($53,000)

This project includes the controls to shut off the domestic hot water systems during the unoccupied time period for each building, thus reducing the amount of steam utilized. Work involves the installation of one time clock, one control valve and controller, and one P. E. switch on each of the domestic water systems.

The work will be performed in the following buildings:

Animal Science Laboratory
Institute of Labor and Industrial Relations
Children's Research Center
Administration Building
Harding Band Building
Astronomy Building
Turner Hall

Radiation Zone Control - Twenty-eight Buildings - ($444,500)

This project includes the installation of the following control devices in the heating systems of the twenty-eight buildings:

zone thermostats	outside sensing controllers
zone valves	float and thermostatic traps
time clocks	condensate return piping
insulation	control tubing

The purpose of the installation is to reduce the uncontrollable heat input to the building during the heating season.

The work will be performed in the following buildings:

Children's Research Center	Natural Resources and Garage
Burnsides Research Laboratory	Noyes Laboratory
Commerce West	Personnel Services Building
Psychology Laboratory	Physics Research
Rehabilitation Center	President's House
Foreign Languages Building	Stock Pavilion
Animal Science Laboratory	Talbot Lab
Altgeld Hall	Transportation
Agriculture Engineering Research	Arcade
Ceramics	Electrical Engineering Annex
Fire Station	David Kinley Hall
Lincoln Hall	Harker Hall
Mumford Hall	English Building
Natural History	Dairy Manufactures Building

Animal Room Ventilation Improvements - Three Buildings - ($686,000)

The use of 100 percent outside air in ventilating animal room spaces in three buildings requires large energy expenditures to maintain indoor conditions. This project will provide the installation of thermal energy recovery devices which can reclaim up to 70 percent of the energy required for each fan system.

The work will be performed in the following buildings:

Bevier Hall
Burrill Hall
Small Animal Clinic

Air Conditioning System Revisions - Law Building - ($218,000)

This project will provide for converting individual direct expansion refrigeration units on each fan system in the Law Building to a common chilled water system with multiple chillers that can be operated to track cooling demand of the building and minimize resulting peak electrical demand. This new configuration will be compatible with the system in the future building addition and allow for extension of chilled water from the Library Air Conditioning Center.

Reheat System - Zone Control - Four Buildings - ($123,000)

This project is to reduce the steam used by heat systems located in the ventilation systems of four buildings. It involves the installation of 750 reheat coils in 53 ventilation systems.

The work will be performed in the following buildings:

Digital Computer Laboratory
Education Building
Library
Morrill Hall

Animal Room Ventilation - Three Buildings - ($321,500)

The use of 100 percent outside air in ventilating animal room spaces in three buildings require large energy expenditures to maintain indoor conditions. This project will provide for the installation of thermal energy recovery devices which can reclaim up to seventy percent of the energy required for each fan system.

The work will be performed in the following buildings:

Psychology Laboratory
College of Veterinary Medicine and Annex
Morrill Hall

Radiation Zone Control - Twenty-eight Buildings - ($499,500)

This project includes the installation of 116 zone control valves, thermostats, and outside controllers and drip trap assemblies, 420 feet of condensate return pipe and insulation and 1260 feet of control tubing, all designed to reduce the amount of steam used by the radiation systems in twenty-eight buildings.

The work will be performed in the following buildings:

Civil Engineering Building
Education Building
Institute of Labor and Ind. Rel.
Morrill Hall
Physical Plant Service Bldg.
Veterinary Medicine Complex
Water Resources Building
Medical Sciences Building
Law Building
Smith Memorial Hall
Gregory Hall
Coordinated Science Laboratory
Library
Natural Resources Studies Annex
Davenport Hall
Electrical Engineering Res. Lab.
Engineering Research Laboratory
Levis Faculty Center
Huff Gymnasium
Kenny Gymnasium
Speech and Hearing Clinic
Engineering Hall
Coble Hall
University High School Gym
College of Vet. Med. and Annex
Wood Shop and Foundry
Library Seventh Addition
Turner Hall

Domestic Hot Water - Control - Twenty-three Buildings - ($341,500)

This project includes the installation of instantaneous water heaters, controls, pumps, and the removal of hot water storage tanks to reduce the steam used by the domestic hot water systems in twenty-three buildings.

The work will be performed in the following buildings:

Armory
Civil Engineering Building
Commerce West
Coordinated Science Lab.
Digital Computer Lab.
Roger Adams Laboratory
Library
Library Seventh Addition
Veterinary Medicine Complex
Electrical Engineering Bldg.
Rehabilitation Center
Smith Memorial Hall
Psychology Laboratory
Art & Design and Krannert Art Museum
Ceramics Building
Gregory Hall
Aero Lab A and Brake Shoe Lab.
Huff Gynasium
Electrical Engineering Res. Lab.
Kenney Gymnasium
Davenport Hall
Levis Faculty Center

HVAC Retrofit - Three Buildings - ($581,500)

This project provides for the installation of 375 variable volume air control units on existing reheat coils and air volume adjustment of thirty-four air supply units.

The work will be performed in the following buildings:

Administration
Commerce West
Psychology

Heating System Remodeling - Nine Buildings - ($1,450,000)

The project provides for the remodeling of deteriorated heating systems in nine buildings. Most of the original radiation and piping still exists and is manual controlled. This project includes the installation of 350 radiators, 9,000 feet of pipe and insulation, 425 steam traps, 625 valves, and 9 vacuum heating pumps and pressure reducing valve stations. This will provide greater system reliability, conserve energy, and reduce maintenance costs.

The work will be performed in the following buildings:

Natural History
Wood Shop and Foundry
Noyes Laboratory
Engineering Laboratory
Ceramics Building
Ornamental Horticulture & Greenhouse
Agricultural Engineering
Illini Hall
Altgeld Hall

Indoor Lighting - Two Buildings - ($162,500)

Approximately 800 incandescent fixtures in the Electrical Engineering and Mechanical Engineering Buildings will be changed to more efficient flourescent lighting. In general, fixtures will be replaced on a one-for-one basis. In some areas, however, minor design changes will be required to accomodate the different type of lighting.

Indoor Lighting - Four Buildings - ($398,000)

Approximately 1,955 incandescent fixtures in the buildings listed as follows will be changed to more efficient flourescent lighting. In general, fixtures will be replaced on a one-for-one basis. In some areas however, minor design changes will be required to accomodate the different type of lighting.

The work will be performed in the following buildings:

Roger Adams Laboratory	Animal Sciences
Davenport Hall	Law Building