
SECTION 3

1997/98 CAPITAL BUDGET AND THE PROJECTED FIVE YEAR CAPITAL PLAN

INTRODUCTION AND PROGRAM GOALS

The 1997/98 Capital Budget and the projected five-year Capital Plan represent the continuation of an ambitious program of renovation and new construction begun several years ago. By the year 2000, Stanford will have completed the cycle of seismic repair and strengthening that began after the 1989 Loma Prieta earthquake; attended to its most critical deferred maintenance needs; dramatically improved and enlarged the stock of student housing; and added much-needed modern research facilities in the sciences.

The years from 1996 through 2002 represent the most intense period of construction in the history of the University, with the peak years being 1995/96, 1996/97, and 1997/98. During this three year period we will spend approximately \$607 million on construction activity. Roughly 60 percent of this amount represents investments in the renewal and strengthening of existing facilities; 40 percent is for the addition of new space.

As President Casper said in his most recent State of the University address, the capital plan is directed toward a clear purpose: the physical renewal of Stanford's infrastructure for the future. By the end of the century, our goal is to assure that the campus is second to none not only in its beauty, but also in its functionality.

THE 1997/98 CAPITAL BUDGET

The one-year Capital Budget represents both a financial plan and an operational plan. From a financial standpoint, the Budget gives substantial detail on the proposed sources and uses of funds for capital investment. Funds for facili-

ties come from several sources, including gifts, project-generated revenue (as in the case of housing projects), and reserves set aside from operating income. University debt provides long-term financing for projects that are not fully funded by gifts or reserves.

As an operating plan, the Capital Budget shows an expected level of activity for the Facilities Department and related University departments for both ongoing and new projects. The goal of the Facilities Department is to manage the entire body of work represented in the Capital Plan as effectively as possible, and to assure that maximum value is received for each dollar of capital investment.

Among the many challenges of managing such an ambitious capital plan, Stanford finds itself in the midst of one of the busiest local construction markets in the country. Non-residential construction in the Bay Area is at an all-time high, and the pressure on costs for labor and materials is expected to continue to be intense. For projects estimated before the Spring of 1997, we anticipate as much as 10 percent in increased costs due to market conditions. We have attempted to counter this trend by managing the design process as carefully as possible, looking for ways to pre-purchase or bundle the purchase of materials and services, and by reducing the scope of some projects. We have also increased contingencies in selected project estimates and against the capital plan as a whole. We have added \$10 million in estimating contingencies across the entire Five Year Plan to offset the effects of adverse market conditions, particularly for projects in which the budget is based only on conceptual plans.

Of the \$285.0 million anticipated expenditures in 1997/98, \$196.4 million will be for renovation and new construction of academic facilities; \$80.3 million for deferred maintenance, infrastructure and compliance; and \$8.3 million will provide for financial contingencies such as estimating contingencies and construction financing. This year will mark the peak of the intense period of construction, with several multi-year projects underway simultaneously during the year. Some major examples include:

Center for Clinical Sciences Research

The School of Medicine's Center for Clinical Sciences Research (CCSR) building will include about 215,000 gross square feet, housing a total of 69 faculty representing 6 different departments and 4 inter-departmental research themes. The CCSR themes include cancer research, clinical immunology, applied human genetics, and translational medicine. Organized in this way, the faculty in the CCSR will be uniquely positioned to function at the boundaries between basic scientific research and clinical research in order to provide fundamental new insights into the nature of disease and to assist in the development of new techniques of treatment.

Completion of the CCSR will also enable the School of Medicine to address seismic deficiencies in the Edwards Building in a cost-effective manner. The CCSR will permit the Edwards Building laboratories to be vacated and reused as offices and lower-intensity research space. The code-related costs of the building's seismic work will be reduced considerably in this way. In addition, the office space to be created will enable the School to vacate rented space both on Welch Road and in SHS.

The CCSR is budgeted at a total project cost of \$88.7 million, the largest single building project in Stanford history. The project is funded from a combination of gifts (\$77.1 million) school reserves (\$6.6 million) and university funds (\$5.0 million). Construction will begin in the summer of 1997.

Science and Engineering Quad (SEQ)

Construction of the Science and Engineering Quad, scheduled for completion in late 1998, is well underway. The project is funded in part by a generous gift of \$76.8 million from William Hewlett and David Packard. Portions of the project, including Varian, the demolition of existing structures, and utilities work, have been completed.

The capital plan for 1997/98 contains most of the remaining construction for SEQ: Electrical Engineering, the McCullough Annex, and the creation of the central quadrangle and connective elements. The Regional Teaching Facility, which will replace Bloch Hall as the center for undergraduate instruction in the sciences and engineering, will be open for classes by the start of the 1997/98 school year. Sequoia Hall, housing the Statistics Department, will be completed at the same time. Together, these projects total \$95.2 million. An additional \$17 million is included in the capital plan for the renovation of McCullough Hall which, in conjunction with the McCullough Annex, will provide new offices and laboratories for advanced materials sciences. All SEQ projects will be completed by the end of calendar year 1998.

Green Library West

The West Wing of Green Library has been closed since the 1989 Loma Prieta earthquake. Reconstruction began in 1996 and is scheduled for completion in 1998/99. The restored building will house the Library's Special Collections, extensive reader services such as the Humanities Resource Center, and stacks. In addition to traditional printed resource materials, the building will support the delivery of state-of-the-art digital resources for research and instruction. The total project cost will be \$44.5 million, supported by a combination of gifts (\$26.2 million), funds from the Federal Emergency Management Agency (FEMA) (\$15.8 million), and University reserves (\$2.5 million). The Green Library Interlink project will con-

1997/98 Capital Budget

(in millions of dollars)

Project Name	Annual Budget	Identified	Sources of Funds	
			Gifts to be Raised	Debt
Earthquake Repair & Seismic Risk Mitigation				
Green Library	16.0	16.0		
Green Library Interlink	1.5	1.5		
Hanna House	0.7	0.7		
Museum of Art	17.5	17.5		
1-160 Political Science	1.2	1.2		
1-250 Asian Languages	2.3			2.3
1-360 Environmental Geology	0.3			0.3
2-500 Mech Engr Office	2.7			2.7
2-510 Mechanical Engineering Back Labs	0.6			0.6
2-570 HTGL	0.4			0.4
4 Escondido Village Midrises (H&DS)	0.9			0.9
4-156 Mitchell Earth Sciences	2.1	0.4		1.7
Durand Building	0.7			0.7
Edwards (seismic)	0.5			0.5
Lagunita (H&DS)	1.0			1.0
Total Earthquake Repair and Seismic Risk Mitigation	48.3	37.2		11.0
Academic Program Development				
Electrical Engineering	14.8	14.8		
McCullough Annex	13.7	13.7		
Regional Teaching Facility	3.8	3.2		0.6
SEQ Connective Elements	6.7	6.7		0.0
SEQ Site Prep & Utilities	2.9			2.9
South Service Road	0.3			0.3
Statistics	3.8	1.3		2.5
CCSR	38.0	38.0		
Encina Central Wing	3.5		3.5	
Encina East Wing	9.6		1.8	7.8
GSB Link Addition	8.3		8.3	
Library Technical Services Bldg	6.7			6.7
McCullough Remodel	12.0	9.2		2.8
Aquatics Facilities – Phase 1	1.0	1.0		
Artificial Turf Field	1.8		1.8	
Cobb Track Bleachers	1.7	1.2	0.5	
DAPER Stadium Improvements	1.2	1.2		
Alway-3	1.2	1.2		
Edwards 2	1.4	1.4		
Engineering Lab Renovations	1.0	1.0		
Grant 2	0.7	0.7		
H&S Lab Renovations	5.0	5.0		
Libraries and ITSS	0.8	0.8		
Lucas Center Expansion	1.2	1.2		
Margaret Jacks Hall	2.5	2.5		
Med School Renovations	1.4	1.4		
Memorial Hall Upgrades	1.0			1.0
Other Renovations	1.8	1.8		
School of Education	0.5		0.5	
Total Academic Program Development	148.1	107.1	16.4	24.6
Deferred Maintenance				
Medicine Deferred Maintenance	0.4	0.4		
Medicine Facil Renewal	1.1	1.1		
University Deferred Maintenance	7.3	1.8		5.4
University Facil Renewal	6.4	6.4		
H&DS Deferred Maintenance	21.9			21.9
Total Deferred Maintenance	37.0	9.7		27.4
Infrastructure				
Applications	11.7	11.7		
Infrastructure	9.6	9.6		
Networking & Comm Services	1.1			1.1
Utilities Expansion	2.6			2.6
Utilities System Control Impr.	1.0			1.0
Utilities Wear-Out	3.4			3.4
Develop Serra Street as Bike/Ped Mall	2.0		2.0	
Redevelop SUMC Entry	4.1		3.5	0.6
Transportation Programs	5.1	5.1		
Total Infrastructure	40.6	26.4	5.5	8.7
Compliance				
H&DS Asbestos & ADA	0.8			0.8
Placeholder for ADA Compliance	0.7			0.7
Fire and Life Safety Medical School	0.1	0.1		
Fire and Life Safety University	1.0	1.0		
Utilities Regulatory Compliance	0.1			0.1
Total Compliance	2.7	1.1		1.6
Financial Contingencies				
Estimating Contingencies	3.4			3.4
Construction Financing	4.9			4.9
Total Financial Contingencies	8.3			8.3
Total 1997/98 Capital Budget	285.0	181.5	21.9	81.6

nect Green Library West, Green Library East, and the Meyer Library with an east-west corridor on the second level of the Green complex. This will allow the three libraries to function as a single facility, and facilitate access to users.

Encina Hall

The East Wing of Encina Hall, built in 1891 as the first men's dormitory, has been closed since suffering damage in a fire in 1972. Further damage occurred during the 1989 earthquake. The East Wing is now being restored as a home for several research centers within the Institute for International Studies (IIS), which also currently occupies part of the central wing of Encina. The restoration of the East Wing will cost approximately \$14 million, funded by a combination of gifts to IIS and debt.

Further plans for Encina include the creation of additional IIS offices and a conference center on the first floor of the central wing. Design has begun on this project, with construction anticipated to be completed by the end of calendar 1998. It is also anticipated that the South Wing, which has been closed since 1989, will be repaired within the next few years, thus fully restoring Encina Hall to use.

Seismic

In 1990, Stanford undertook an agreement with Santa Clara County to strengthen all unreinforced masonry (URM) buildings on campus by the year 2000 or to discontinue occupying them. This includes all of the buildings and arcades on the main quadrangle, plus most of the other buildings built during the University's first years.

By the end of 1996/97, work will be completed on Buildings 10, 40, 50 and 240, leaving just three buildings to be completed on the main Quad: Buildings 160, 250, and 360. Programming will be underway for each of these facilities in 1997/98. We will also finalize plans for buildings 500, 510, Edwards, and the Art Gallery and will begin work on Lagunita Residence Hall. During the coming year we will also

evaluate the remaining major campus buildings covered by the agreement with the County: the Bakewell and Brown buildings (formerly the Athletics administration building and Encina Gym), and Old Chemistry.

Given the progress on the URM program, the University has turned its attention to selected buildings of other construction types for which seismic strengthening is recommended. Seismic strengthening will be completed in the coming year on the Mitchell Earth Sciences Building and will continue in the five Escondido Village mid-rise buildings.

Deferred Maintenance

In 1994 a study of Stanford's deferred maintenance backlog was conducted by outside consultants. They identified about \$100 million in maintenance needs across most of the University, of which approximately \$40 million was located on the central campus. The backlog consisted of three categories of projects: those which will enhance safety and prevent property loss, those which respond to code requirements, and those which would correct advanced deterioration. In addition, the consultants recommended expansion of the University's planned maintenance program to address life cycle maintenance and anticipated deficiencies.

Over the past three years, Stanford has made good progress in reducing the deferred maintenance backlog. Projects affecting safety and the preservation of property value have been completed, and code upgrades are underway in several facilities. In all, approximately \$32.5 million of the critical \$40.0 million in projects will be completed by the end of 1997/98.

Outside of the central campus, about \$77.0 million in deferred maintenance work has been identified in the five-year Capital plan. The bulk of this work is in Housing and Dining Services buildings and will be addressed as part of their Capital Improvement Plan.

Systems

Systems are an important part of our investment in infrastructure. We plan to spend \$6.3 million to upgrade the networks and communications systems vital to new technologies in the next five years. In addition, we will spend \$28.0 million in 1997/98 on information technology initiatives, as described in the previous section of this document. Of this \$28.0 million, \$21.3 million for Applications and Infrastructure are included in the Capital Budget and the remaining \$6.7 million is included in the Consolidated Budget for Operations.

Capital Utility Program (CUP)

The Capital Utility Program contains projects that will improve and enhance electrical, steam, water, and sewage systems. Projects identified each year are intended to meet one of four criteria: system wear out, regulatory issues and code compliance, system expansion, and system controls. The budget for the CUP program in 1997/98 is \$7.1 million. The largest portion of this, approximately \$3.4 million, will be used to repair and replace aging components of the central steam and electrical distribution systems. Another \$2.6 million will be used to expand the system to accommodate growth in the campus and increased demand for electricity.

Stanford Infrastructure Program (SIP)

The Stanford Infrastructure Program consists of projects and programs proposed and developed for the betterment and general support of the University's academic community and its physical plant. The infrastructure system is in direct support of the academic missions of teaching and research and the overall vitality of the institution.

SIP is supported by a 9% charge on most building projects. The amount to be spent in 1997/98 for the SIP campus program is \$3.3 million and includes: roads, paths, storm sewers, landscape, lighting, outdoor art, and signs as well as the advance planning efforts that support each of these. A major component

of SIP is the Transportation Program which includes improvements for the parking and bicycles systems, campus transit system improvements, and pedestrian zone safety improvements.

THE FIVE YEAR CAPITAL PLAN

The five year Capital Plan represents a combination of academic, financial, and physical planning. The five year outlook allows us to anticipate and plan for needed resources. Since 1993/94, the multi-year Capital Plan has been guided by three fundamental objectives: 1) to provide appropriate facilities for promising academic programs where they are most critically needed; 2) to complete the seismic strengthening program begun after 1989; and 3) to address any deferred maintenance issues while providing adequate annual funding for planned maintenance.

The five year Capital Plan includes projects that have already been approved as well as projects yet to be approved and anticipated over the five year period 1998 to 2002. Budgets for anticipated projects are estimates that require further study before they are presented to the Board. Inclusion of a project in the Capital Plan does not replace the standard approval process through the Board of Trustees. While projects expected to cost less than \$3 million will no longer be individually reviewed by the Board's Committee on Land and Buildings during the year, we will continue to report on projects over \$1 million in the one year Capital Budget and in the Five Year Capital Plan.

The following charts provide a financial overview of the Five Year Capital Plan.

Overview (Charts 1 and 2)

Charts 1 and 2 show the anticipated capital activity over the next five years by project category and funding source. Of the \$717.8 million total planned expenditures, \$127.1 million will be completed by the end of the

Chart 1

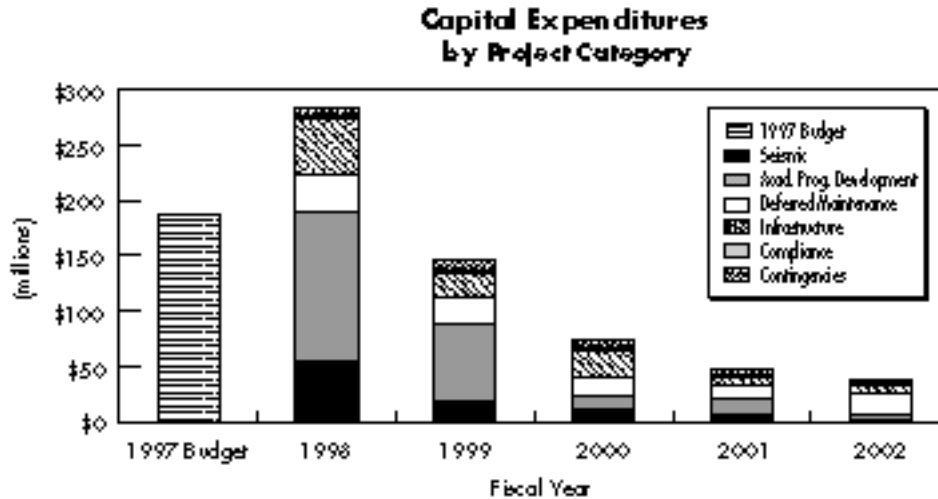
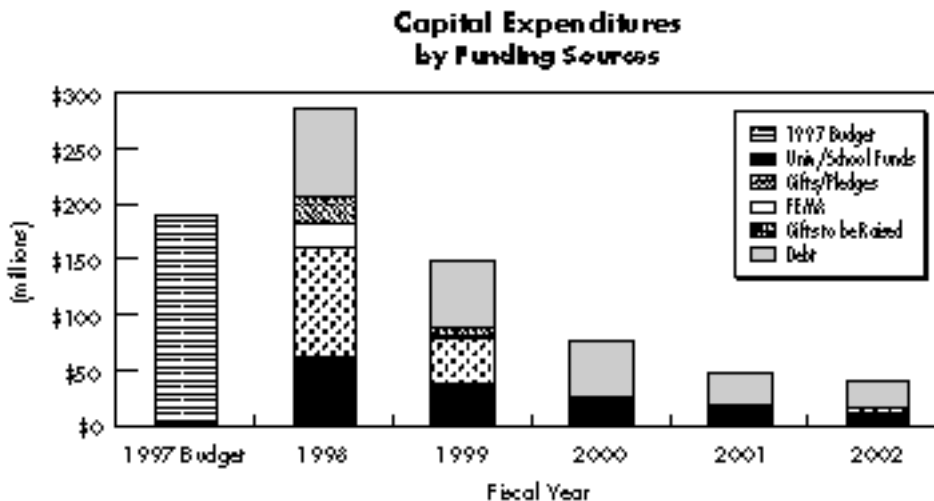


Chart 2



fiscal year, 1996/97. This leaves \$590.7 million of work to be done over the five year period, 1998/2002. We have identified about \$418.6 million in the form of gifts in hand, pledges, university reserves, unrestricted budget support, and government support to finance the construction. We expect to pay for the remainder with \$36.5 million in gifts to be raised and \$262.6 million in debt.

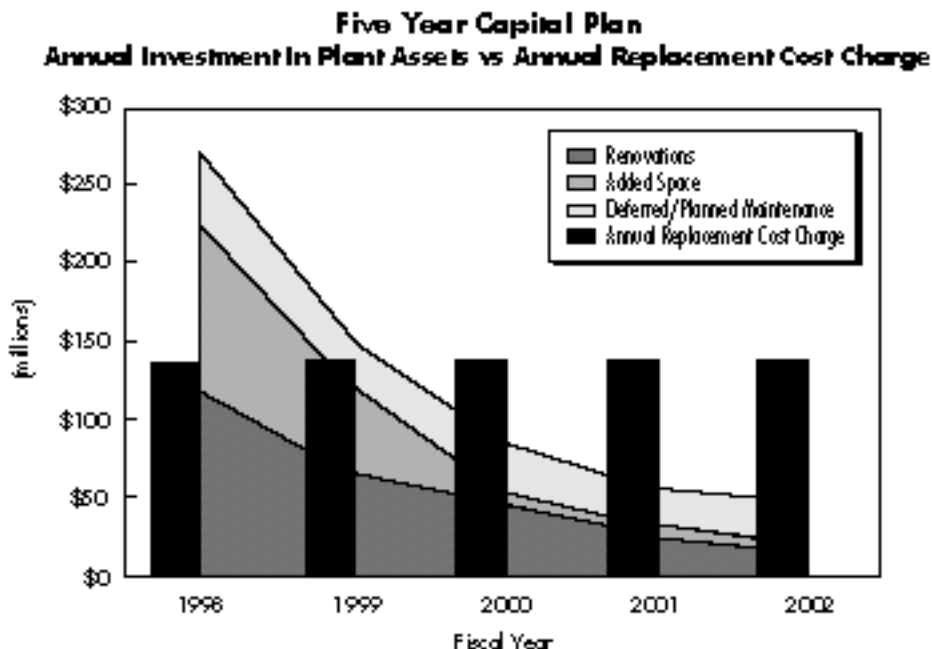
As shown on Charts 1 and 2, capital expenditures will be concentrated in 1997/98 with work ramping up on CCSR and peaking on the Electrical Engineering Building, McCullough Annex and McCullough remodel.

Total Investment in Plant (Chart 3)

We are often asked how much we are investing in the Plant relative to how much would be required on a replacement cost basis. Depreciation charges in our Financial Statements are based on the historical cost of the asset and use the average life of a broad class of assets. We have developed a proxy for the Annual Replacement Charge based on the market value of the assets and an accelerated depreciation schedule to reflect the useful life of each type of facility.

Chart 3 shows the relationship between the Annual Replacement Cost Charge and the Annual Investment in Plant, which includes

Chart 3



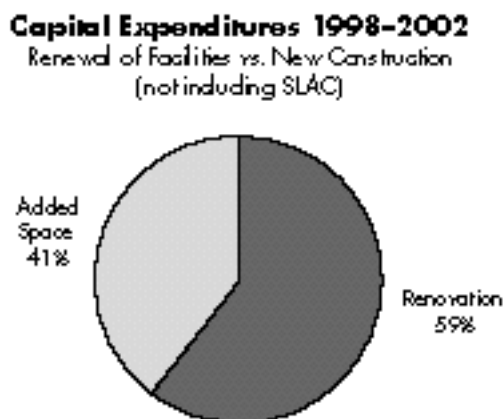
three components: Renovations, Added Space, and Deferred and Planned Maintenance. The Annual Replacement Charge has risen by 15% in the past year, given the conditions in the construction market. The Annual Investment in Plant exceeds the Annual Replacement Cost Charge in fiscal years 1997/98 and 1998/99 with the completion of the SEQ and the Museum of Art, and the construction of the Center for Clinical Sciences Research. The sharp decline in the Annual Investment in Plant for

fiscal years 2000 to 2002 is explained in part by the uncertainty of forecasting capital projects five years out. We should note however, that the Annual Investment in Plant has exceeded the Annual Replacement Charge by a wide margin between 1996 and 1998.

Type of Space (Chart 4)

As Chart 4 indicates, renovation accounts for a large majority of the construction activity on campus today; 59% of the construction expenditures will be spent for the renovation, remodeling, or replacement of current space and 41% on new construction over the period of the five year Capital Plan.

Chart 4



Projected Funding 1998-2002

Identified Funds

Over half of the \$717.8 million in projected capital expenditures have already been identified. The majority of the funds identified are gifts received or pledged, to be supplemented by future unrestricted budget allocations current fund balances, and recoveries from FEMA.

Gifts to be Raised

We have had most generous support from our friends to accomplish this ambitious Capital Plan: 34% of the projected expenditures have already been raised, and a remaining 6% needs to be raised.

Debt

Over one-third of the projected expenditures will be funded by debt. Of the \$262.6 million in projected debt, \$136.5 million will be serviced by the budgets of auxiliaries and service centers, principally Housing and Dining Services and Utilities. Approximately \$116.5 million will be supported by the general funds budget. The remaining \$9.6 million will be supported by School funds. We have included \$21.3 million in financial contingencies for construction financing costs incurred on projects that are debt funded. Construction financing costs have not been reflected in the Capital Plan in the past since these costs have been carried outside the project budgets. Construction financing costs are capitalized upon completion of the project and charged to the entity financing the facility.

Debt requirements: We have used approximately \$144.0 million of the proceeds from the \$150.0 million 30 year bond issued in March of 1994, and still have \$50.0 million of the proceeds from the Medium Term Note issued under the April 1996 \$150.0 million Board authorization. We will require \$81.6 million in debt to fund the 1997/98 capital budget. Depending on market conditions, we will likely be issuing more debt under the \$150 million authorization in the coming year.

Debt Ratings: As discussed on page 16 the format of Stanford's financial reports has changed as of the end of 1995/96, when the University adopted Statement of Financial Accounting Standards 116 and 117. Moody's has recently developed median ratios used in assigning debt ratings to private colleges and universities to reflect the new accounting standards. Stanford falls within the "Aaa" range

for most of the median ratios, even when the total debt authorized is considered outstanding.

THE PLANNING PROCESS

Stanford's approach to planning is grounded in the objectives of the academic programs themselves and their supporting programs such as those at the medical center. From these programs, component elements (e.g., academic facilities, residential facilities, utility infrastructure, transportation, and the general environmental character) are defined to form the bases for all of our physical plans and related planning processes. We tend often to focus our attention on the academic buildings themselves. However, much effort is spent in setting the appropriate groundwork in these broader component areas so that the necessary governmental approvals can be obtained as needed, so that the facilities will operate economically and efficiently throughout their life cycle, and so that the campus will retain its cohesion and aesthetic character. The Capital Utility Plan and the Stanford Infrastructure Program are examples of the kind of long-term infrastructure planning that supports the growth and development of the campus.

In a continuing effort to improve the processes by which we manage individual capital projects, we have introduced a new step in the early stages of planning. Prior to the development of detailed programs, we have begun a Project Formulation Process managed within the Office of the Provost. During this phase, the goals and constraints on each project are clearly established in a process involving the project client, the Planning Office, Facilities Project Management, and outside consultants as needed. The intention is to clarify the project so that risks are minimized to the greatest extent possible, and so that decision-making during the programming and design phases is guided by better information and better communication.

The programmatic goals which were first

articulated in 1993/94 will be largely met within the next three years. Thus, the level of expenditure anticipated in the final two years of the Capital Plan drops sharply. While it is certain that new projects will emerge in the coming years, we do expect that the total level of capital spending will return to more normal levels—roughly half the annual rate of expenditure seen during this peak period.

We will, in the coming year, reexamine the strategic goals which will guide capital planning in the early years of the next century. A number of factors will shape our long-term planning. For example, we must prepare for still more stringent seismic building codes and the increased regulation of facilities containing hazardous materials. We must consider the limits of the existing County general use permit which will begin to constrain the number of

square feet on campus until it is revised. We must constantly plan for the upgrades in networking systems, telecommunications and utilities necessary to the increasing demand for more technology in teaching and research. We will also need to reexamine our methods of financing new construction in light of the University's overall debt capacity and other financial constraints. Above all, we must continue to plan for a campus that meets the changing needs of the faculty and students who depend upon our facilities for their work. New approaches to teaching, the application of new technology in academic work, and new frontiers of research all require that our campus infrastructure be continuously modified and renewed. In this sense, campus and facilities planning is and must be closely aligned with academic planning. We are working to improve this alignment.

