

STANFORD UNIVERSITY  
BUDGET PLAN  
2005/06

SUBMITTED FOR ACTION TO THE  
BOARD OF TRUSTEES  
JUNE 6–7, 2005

This publication can also be found on the World Wide Web at:  
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## SECTION 3

# CAPITAL PLAN AND BUDGET

This section outlines Stanford University's 2005/06–2007/08 Capital Plan and 2005/06 Capital Budget. The Capital Plan forecasts \$1,301.0 million in construction and infrastructure projects and programs that are currently under way or planned to begin over the next three years. The Capital Budget represents \$373.3 million of cash outlays and associated funding of the Capital Plan for the next year.

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### CAPITAL PLANNING OVERVIEW

#### CAPITAL PLANNING AT STANFORD

Stanford's Capital Plan is a three-year rolling plan with budget commitments made for the first year, and then only for projects with fully identified funding. The plan is set in the context of a longer-term (ten-year) capital forecast for the university. The details of the longer-term forecast (particularly funding sources and schedules) are less clear than those of the three-year plan, as we cannot anticipate all of the needs that may emerge over the long-term horizon. In addition, plans inevitably change over time, as some projects prove more feasible than others and as funding realities and academic priorities evolve.

As has been the case for the last several years, this year's Capital Plan has been significantly affected by affordability constraints, debt capacity limits, and challenging fundraising prospects. For several projects, large portions of the funding required are listed either as fundraising goals compiled by the Office of Development (Gifts in Hand/Pledged or Gifts to Be Raised) or as Resources to Be Identified. The Resources to Be Identified are expected to come from sources other than fundraising targets and might include additional school or departmental reserves. In some cases, it will be possible to raise all of the funds required for projects, while in others, it may not be possible to meet fundraising targets. As a result, projects may be scaled back, delayed, or even canceled.

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### MAJOR INITIATIVES IN THE 2005/06–2007/08 CAPITAL PLAN

#### SCIENCE, ENGINEERING, AND MEDICAL CAMPUS

A major part of the Capital Plan is the Science, Engineering, and Medical Campus (SEMC). This initiative consists of eight new buildings to be designed and constructed over the next decade. The buildings include Astrophysics; Biology; the School of Medicine Learning and Knowledge Center (L&KC); the Stanford Institutes of Medicine #1 (SIM #1); and four buildings to be located in a new Science and Engineering Quad (SEQ 2): Environment and Energy (E&E), the School of Engineering Center (SOE Center), the Ginzton Laboratory replacement, and Bioengineering/Chemical Engineering.

Over the last year, the university has developed a master plan for SEQ 2. The master plan addresses site limits, massing, connective elements, fenestration and color and material palettes. The plan illustrates how architectural compatibility and overall campus consistency will be achieved in this important new campus area. The plan also prescribes certain requirements for the future designers of each individual building, outlines the connective elements that define the quad, and establishes a cost and phasing strategy that will enable Stanford to achieve this vision over time. A number of building demolitions will be required to achieve the plan, and these are included in the overall costs.

The priorities for the SEQ 2 master plan were established by an ad hoc committee of the Board of Trustees. The first priority was to accommodate the functional requirements of the program; the second was to achieve a balance between cost and aesthetics; the third was to achieve a high degree of consistency among the buildings; and the fourth was to pursue a sustainable design.

In addition, Stanford has developed a site and building plan for the School of Medicine (SoM). The plan's primary purpose is to establish a sense of order and identity for the school in addition to locating two new school buildings. It addresses existing circulation, service, and delivery challenges and identifies additional future new building sites.

The \$1.3 billion 2005/06–2007/08 Capital Plan includes the costs of seven of the eight SEMC buildings (all except Bioengineering/Chemical Engineering), together with associated connective elements and demolition projects. These costs total \$597.7 million, or 46% of the total plan expenditures. The forecasted capital need for the buildings was determined by Stanford's cost-benchmarking process and reflects the desire to lower capital costs by setting limits and managing to desired cost outcomes.

The following table summarizes the SEMC initiative. The initiative is heavily dependent upon a successful fundraising campaign, the details of which are being developed.

### SEMC PROJECT SUMMARY

[IN MILLIONS OF DOLLARS]

Project	Schedule	Cost *
<b>SEQ 2 Buildings</b>		
E&E	2006–08	113.0
SOE Center	2006–09	60.4
Ginzton Replacement	2008–10	54.6
Bioengineering/ Chemical Engineering	2009–12	114.2
Subtotal		342.2
<b>School of Medicine Buildings</b>		
L&KC	2005–08	65.1
SIM #1	2006–09	135.8
Subtotal		200.9
<b>Other Buildings</b>		
Astrophysics	2004–06	34.2
Biology	2006–09	60.2
Subtotal		94.4
<b>Connective Elements &amp; Utilities</b>		
SoM/Biology	2005–08	41.2
SEQ 2	2006–08	26.3
Subtotal		67.5
Demolitions	2006–10	6.9
<b>Total</b>		<b>711.9</b>

\* Costs are escalated at 3% annually.

### ANNUAL INVESTMENT IN PLANT ASSETS

While the majority of this Capital Plan and Budget section focuses on capital projects, it is important also to address the long term adequacy of the investment in Stanford's physical plant. The central questions from a fiduciary and management perspective are:

- (1) "Are we investing enough capital to preserve and optimize the existing facilities?"
- (2) "Do we understand the level of investment required to renovate buildings and infrastructure that have reached the end of their useful lives?"
- (3) "What are the capital requirements for new facilities development under the General Use Permit (GUP)?"

After two years of analysis, we have developed answers to those questions that are both credible and comforting. We have a model that allows a good understanding of the investments required, and assuming continued investment at historical levels and some selective new funding, the plant will be adequately supported.

Last year's Capital Plan and Budget addressed the university's implementation of a tool capable of assessing the condition of both Stanford's facilities and its infrastructure systems. This analysis resulted in an assessment of deferred maintenance and projected planned maintenance based on the lives of building and infrastructure subsystems. It did not address the need for program changes or code upgrades. This year the analysis was expanded to include plans for long-term facilities renovation and new facilities development under the current GUP.

As a result, the Annual Investment in Plant Assets analysis currently includes average annual financial projections (in 2004/05 dollars) in the following three areas:

- **MAINTENANCE** – both deferred and planned replacement of facilities subsystems (e.g., roofing, HVAC equipment/controls, electrical equipment, interior finishes)
- **RENOVATION** – the complete renovation of facilities, addressing both program and code upgrades, which are not included in Maintenance. (Note: Facilities subsystems may be updated when a building is renovated, which may result in some overlap of financial results. This overlap is eliminated from the Maintenance analysis.)

- **NEW DEVELOPMENT** – the buildout of additional gross square feet (gsf) on campus under the GUP and the accompanying infrastructure expansion. New development occurs as a result of program expansion and may include increasing the gsf of current buildings, further improving land use efficiencies.

### Maintenance

The Maintenance projection is based on the life cycle planning method. The key concept here is that if life expectancies of facilities subsystems are known, then maintenance schedules can be predicted. In 2003/04 the university implemented a database including all campus buildings and infrastructure subsystems, assigned lives to these subsystems, and projected replacement costs when these lives ended. The result of this implementation was a Maintenance database that assesses deferred maintenance and forecasts planned maintenance for fifty years.

The Maintenance database is updated annually by “resetting the clock” on subsystem lives that were replaced during the previous year and reassessing the remaining lives of subsystems through physical inspection by facilities managers. The updated results, looking forward ten years (a time horizon consistent with long term capital planning), is an average of \$42.1 million in maintenance costs per year.

### Renovation

Forecasting the need to renovate buildings that are at the end of their program or physical life was more challenging and more subjective than the Maintenance analysis. For every campus building, the Renovation analysis identified the date of original construction, building type (e.g., lab, housing, classroom), expected life, renovation costs (based on current benchmarks) and practical realities such as the preservation of historical buildings. Given the longevity of Stanford’s buildings, the analysis was based on a ninety-year horizon. It forecasts an average of \$84.1 million in facilities renovation costs annually over the next ninety years. Major renovations were treated as replacements, resetting the Maintenance and Renovation age clocks to zero.

### New Development

The New Development forecast was derived from the university’s growth limitations under the GUP, related

housing linkage conditions and the benchmark costs by project building type. Projected demolitions reduced the forecasted new development costs as the replacement requirements for these demolitions are included in the Renovation analysis above. The time horizon used was twenty-one years (or through 2025) which is when the university expects to exhaust the gsf allowed under the current GUP. The result of this analysis forecasted the funding need as an average of \$69.4 million per year over those twenty-one years.

Although the analysis was performed on a university-wide basis, it was segregated into the following “campuses”:

- Academic (nonformula schools and administrative units) (7,837,270 gsf),
- Residential & Dining Enterprises (R&DE) (4,267,000 gsf),
- Formula Schools (School of Medicine, Graduate School of Business, Hoover Institution) (2,054,730 gsf),
- Department of Athletics, Physical Education, and Recreation (DAPER) (547,000 gsf),
- Utilities distribution and generation (Utilities) (Infrastructure), and
- Roads, landscaping, and hardscape (Roads) (Infrastructure).

The financial responsibilities and funding sources of these campuses are as follows:

- Academic – Shared between general funds and individual schools and departments,
- R&DE, DAPER, and Formula Schools – Responsibility of the individual units,
- Utilities – Capital Utilities Program (CUP) service center, and
- Roads – General funds and the Stanford Infrastructure Program (SIP).

General funds and reserves may be used to fund projects directly or to fund debt service on debt-funded projects.

The following table summarizes the total Annual Investment in Plant Assets forecasted by campus:

**ANNUAL INVESTMENT IN PLANT ASSETS**

[IN MILLIONS OF DOLLARS]

	Maintenance	Renovation	New Development	Average Annual Investment
Academic	16.0	47.1	34.4	97.6
R&DE	8.0	10.0	12.0	30.0
Formula	8.5	21.4	18.7	48.6
DAPER	0.9	4.3	0.2	5.4
Utilities	7.1	1.3	4.1	12.4
Roads	1.6			1.6
Total	42.1	84.1	69.4	195.6

**Funding***Historical Funding*

Over the past nine years the university has invested an average of \$228.5 million per year (escalated to 2004/05 dollars) in capital facilities projects. The following table shows the funding sources for this investment:

**HISTORICAL ANNUAL FUNDING BY SOURCE**

[IN MILLIONS OF DOLLARS]

	Annual Average	Percent
Debt	92.2	40.4%
Gifts	83.0	36.3%
Reserves	44.2	19.4%
Other (e.g., government grants, FEMA)	9.1	4.0%
Total	228.5	100.0%

Though historical trends may not be indicative of the future, particularly with the Loma Prieta Earthquake influencing both the investment timing and the funding (e.g., gift raising and FEMA) in the past nine years, it is worth noting that overall the average annual investment needs are similar to the past.

Applying these historical funding trends to the projected needs of \$195.6 million results in the following:

**PROJECTED ANNUAL FUNDING BY SOURCE**

[IN MILLIONS OF DOLLARS]

	Annual Average	Percent
Debt	78.9	40.4%
Gifts	71.0	36.3%
Reserves	37.9	19.4%
Other (e.g., government grants, FEMA)	7.8	4.0%
Total	195.6	100.0%

The university's aggregate debt capacity is projected at \$84 million per year, (assuming a 9.25% MEP return, a 5.0% payout and a 20% leverage ratio) which is slightly above the projected trend of \$78.9 million. Gift raising for facilities remains a high priority. Gift raising has historically been more successful for new academic buildings and more challenging for housing and renovation projects. Reserves from schools, departments, general funds, facilities reserves, and President's funds have contributed to capital projects. To a lesser extent, so have funds from the National Institutes of Health, the National Science Foundation and the Howard Hughes Medical Institute.

*General Funds Maintenance Funding*

The Academic and Roads categories rely primarily on general funds. Total general funds contributions for these two categories were increased by \$1 million in 2004/05 and another \$2 million in 2005/06. Of the \$16 million in Academic maintenance needs, \$5.8 million represents interior finishes and built-in equipment needs that are funded by the nonformula schools and administrative units. General funds contribute \$9 million, leaving a funding gap of \$1.2 million. Of the \$1.6 million in Roads maintenance needs, \$350,000 is funded by the SIP and \$650,000 is funded by general funds. The remaining funding gap is \$600,000.

**Conclusion**

Stanford's significant capital facilities investments in the 1990s have addressed most of the deferred maintenance on campus. The Maintenance model for the academic campus indicates a modest budgetary shortfall, which will be funded over the next few years. The other campuses will need to rely on increases in operational income and reallocation to address their Maintenance shortfalls. This is particularly the case in R&DE, Athletics, and the formula units. It will take several years of concerted effort to reach that point.

With respect to Renovation and New Development, Stanford will continue to increase funding to maintain the quality of facilities and accommodate program growth. Funding increases will likely come from increased general funds, school and department reserves, an increase in debt allocations (particularly for campuses that can service it, such as formula schools and service centers), and a continued facilities emphasis as a core element of Stanford's comprehensive gift raising campaign.

### OFF-SITE CAMPUS ACQUISITION

Due to GUP limitations on core campus development, the university has been studying options for relocating nonacademic (administrative) programs to off-campus sites, thus reserving core campus space for Stanford's highest academic priorities and objectives. This relocation is considered a strategic objective, not an immediate need. The timing of this effort is opportunistic, due to depressed real estate values in today's market compared to historical values.

Over the past year, a search identified a number of potential sites within a fifteen-mile radius of the campus. In February, the trustees approved the concept of acquiring a site approximately seven miles from the campus at a cost of \$51 million. The site includes approximately 350,000 gsf of buildings on about nineteen acres. Recent discussions have centered on expanding the initiative to include more land and buildings on adjacent parcels, the price of which is estimated at \$35 million. In addition, the Stanford Hospital and Clinics (SHC) is under contract to acquire an adjacent parcel that includes approximately 360,000 gsf on eleven acres. We anticipate that redevelopment of the administrative site will be required and occur sometime over the next ten years.

The property acquisition is currently in the due diligence period, during which the university is reviewing building structures, assessing traffic impacts, reviewing environmental conditions, identifying legal and political issues, projecting costs of site redevelopment, and assessing the market feasibility of releasing the space. Assuming there are no issues that warrant termination, we expect to complete the acquisition in 2005/06. This expenditure of \$86 million is included in the summary table of the three-year Capital Plan on page 51.

### HOUSING

One of the key conditions of approval in Stanford's 2000 GUP is that for each incremental 500,000 gsf of new academic buildings, the university must construct a minimum of 605 net new units of housing. The Munger Graduate Residences are planned to add 600 new graduate student beds on a site proximate to the Law School, along with an underground parking garage with approximately 850 parking spaces. With the construction of the Munger residences, Stanford will have added a total of 1,033 net new graduate student beds since approval of the GUP. Other housing plans include two undergraduate housing projects: Mayfield Row House (Green Dorm), with approximately 50 net

new beds, and Manzanita III Hall and Dining, with approximately 125 net new beds. The completion of these projects will substantially fulfill the GUP requirement of adding 1,210 new beds, which will enable the university to construct up to 1,499,999 gsf of new academic space.

### THE CAPITAL PLAN, 2005/06 – 2007/08

Stanford's central campus, including the Medical School but excluding the hospitals, has approximately 675 major buildings providing almost fifteen million gsf of physical space. The physical plant has a historical cost of \$4.1 billion and an estimated replacement cost of approximately \$5.9 billion.

The Capital Plan is a forecast of Stanford's annual programs designed to restore, maintain, and improve campus facilities for teaching, research, housing, and related activities. Stanford's needs for new and improved teaching and research facilities emerge every year and are planned in a coordinated manner across the university. The Capital Plan carefully balances institutional needs for new and renovated facilities with challenging constraints of limited development entitlements, available funding, and affordability.

Expenditures in the three-year 2005/06–2007/08 Capital Plan, which includes thirty-two major construction projects in various stages of development and numerous infrastructure projects and programs, total \$1,301.0 million, up from \$976.8 million in last year's Capital Plan. The table below provides a comparison of the last three Capital Plans.

#### BUDGET PLAN YEAR

[IN MILLIONS OF DOLLARS]

	2003/04	2004/05	2005/06
Design/			
Construction	173.3	256.7	275.1
Forecasted	567.0	594.6	852.5
Infrastructure	96.8	125.5	87.4
Off-Site Campus			
Acquisition			86.0
Total	837.0	976.8	1,301.0

#### Projects in Design and Construction

As shown in the above table, Design and Construction costs have increased by \$18.4 million in this year's plan. This is largely the result of the following Forecasted

projects moving into Design and Construction: GSB classroom building (\$53 million), Old Union complex renovation (\$24 million), and Barnum Family Center (\$5.3 million). In addition, the Munger Graduate Residences project has increased in scope by \$40 million (now including underground parking and other enabling projects). These additions total \$122 million; they are offset by just over \$100 million in projects being completed and moved off the Capital Plan. These completed projects include Maples Pavilion, the Arrillaga Recreation Center, Lucas Center, the Knoll, Bakewell, Building 500, Center for the Study of Language and Information, and the Graduate Community Center.

### Forecasted Projects

Forecasted costs have increased by \$257.9 million since last year. A variety of new projects have been added to the plan. These include SIM #1 (\$135.8 million), Ginzton Replacement (\$54.6 million), SoM/Biology Connective Elements/Utilities (\$41.2 million), SEQ 2 Connective Elements/Utilities (\$26.3 million), the Stadium (\$55 million), 800 Welch Road (\$19.1 million), 1050 Arastradero (\$17 million), Mayfield Row House (\$7 million), Public Safety (\$4.4 million), Boswell Fish Facility (\$4.3 million), White Plaza (\$4 million), and Childcare (\$3.7 million). These costs total \$372.4 million. They are partially offset by Forecasted projects moving into Design and Construction (as discussed above). Upward and downward changes in project estimates and scope have largely netted themselves out.

### Infrastructure Projects

Infrastructure costs have decreased by \$38.1 million. A \$15 million East Campus parking structure has been deferred; this parking need will be met by the Munger underground parking. Costs for information technology and communication systems decreased \$19 million as a result of the completion of the financial systems conversions. The Capital Utilities Program has been held constant, and other programs have been deferred where possible.

### Off-Site Campus Acquisition

The off-site campus acquisition, slated to cost \$86 million, is described above and is new in this year's Capital Plan. This strategic acquisition will conserve core campus space for academic priorities.

### Overall Summary

A summary table of the three-year Capital Plan appears on the next page. The tables at the end of this section

provide a detailed list of those projects that require approval by the Board of Trustees—that is, projects costing \$3 million and above.

The Capital Plan tables do not include the capital projects of the SHC, Lucile Packard Children's Hospital (LPCH), or Stanford Management Company (SMC) due to their independent organizational structures. The text summarizes these projects in order to present a comprehensive view of all planned construction on Stanford lands.

The projects in the Capital Plan are listed in four categories:

- **DESIGN AND CONSTRUCTION** – The seven projects in Design and Construction represent \$275.1 million (21% of the plan). Some of these projects received Board of Trustees concept approval as recently as April 2005 and now are in design. Construction of other projects is contingent on securing funding.
- **FORECASTED CONSTRUCTION PROJECTS** – These twenty-five proposed projects are listed by size. They will cost a total of \$852.5 million (65% of the plan). Of this funding, \$282.2 million, or 33%, is identified (\$49.7 million in current funds, \$51 million in gifts in hand or pledged, \$178.4 million in debt, and \$3.1 million in government and private foundation grants). There remains \$530.6 million to be raised, and \$39.7 million needs to be identified. Due to these funding challenges, many of these projects may not be completed for a number of years. Only those projects with an anticipated concept approval in 2005/06 and a viable funding plan are considered budget commitments in this rolling three-year plan.
- **INFRASTRUCTURE PROJECTS AND PROGRAMS** – These projects and programs include the nearly complete Sand Hill Road project, as well as a number of utility systems, information technology and communication systems, compliance programs, and GUP mitigations. These projects and programs account for \$87.4 million (7%) of the Capital Plan.
- **OFF-SITE CAMPUS ACQUISITION** – The \$86 million off-site campus acquisition is new to the plan this year and represents 7% of the plan.

The following section addresses the Capital Plan's funding sources; the uses of funds by program category (e.g., Academic/Research, Housing) and by project type (e.g., new construction, renovation); projects planned by other Stanford entities; and resource constraints.

**SUMMARY OF THREE YEAR CAPITAL PLAN 2005/06-2007/08**  
 (IN MILLIONS OF DOLLARS)

	Estimated Project Cost	Capital Budget 2005/06	Project Funding Source						Annual Continuing Costs			Project Expenditures Anticipated Cash Outlay			
			Current Funds <sup>1</sup>	In Hand or Pledged	Gifts	University Debt		Resources To Be Identified <sup>3</sup>	Debt Service	Operations, Maintenance & Utilities	Through 2004/05	2005/06	2006/07	2007/08	Thereafter
						To Be Raised	Auxiliary Debt								
Projects in Design & Construction	275.1	110.6	32.6	67.1	58.0	58.1	49.3	10.0	8.2	3.0	23.3	110.6	104.6	36.6	
Forecasted Projects	852.5	139.9	49.7	51.0	530.6	11.0	167.4	3.1	13.7	14.7	6.4	139.9	345.5	197.2	
Total Construction Plan	1,127.6	250.5	82.3	118.1	588.6	69.1	216.7	3.1	21.9	17.7	29.7	250.5	450.0	233.8	
Infrastructure Programs	87.4	36.8	22.6			37.5	27.3		6.2		16.4	36.8	20.2	14.0	
Off-Site Campus Acquisition	86.0	86.0	86.0									86.0			
Total Three-Year Capital Plan 2005/06 – 2007/08	1,301.0	373.3	190.9	118.1	588.6	106.6	244.0	3.1	28.1	17.7	46.1	373.3	470.3	247.8	
														163.5	

<sup>1</sup> Includes funds from university and school reserves, and the GUP and SIP programs.

<sup>2</sup> "Other" funds represent government and private foundation grants.

<sup>3</sup> Anticipated funding for this category is through a combination of gift raising and school, department and university reserves.



## CAPITAL PLAN FUNDING SOURCES

Stanford's Capital Plan relies on several funding sources: current funds, gifts, service center/auxiliary debt, and academic debt. For a number of projects not all of the funding sources are known. These unfunded costs are shown in the Resources to Be Identified column. Although it is our expectation that some of these funds will be identified, it is possible that they may not. As a result some projects will have to be cancelled, delayed, or scaled back in scope. The chart below outlines the funding sources for the Capital Plan.

### Current Funds

We anticipate that \$190.9 million, or 15% of the Capital Plan, will be funded through current funds. These include school, department, and university reserves, as well as GUP Entitlement Fees and the SIP. GUP Entitlement Fees are assessments levied on capital projects that increase the school's/department's campus space allocation. These fees provide funding for conditions established under the 2000 GUP and the Community Plan. SIP assessments are levied on all capital projects and fund parking, transportation, and other campus infrastructure programs.

### Gifts

The Capital Plan includes gifts of \$706.7 million (54% of the plan). These gifts are a combination of gifts in hand or pledged (\$118.1 million, or 9%) and gifts to be raised (\$588.6 million, or 45%). The Office of Development participated in the Capital Plan process and determined that the gift targets listed are feasible. However, given historical levels of annual giving for buildings, it is likely that the gift timetable will be extended.

### Debt

Debt funding reliance has dropped significantly in recent years, although debt remains one of the key financing sources for the Capital Plan. The amount of debt to be allocated was carefully considered after prioritizing university needs and assessing our ability to service the debt. Approximately 27% of projected expenditures will be funded by \$350.6 million of debt. Of this amount, \$106.6 million is auxiliary and service center debt, principally for R&DE and the CUP. Another \$244.0 million is academic debt, serviced by unrestricted revenues.

### Other

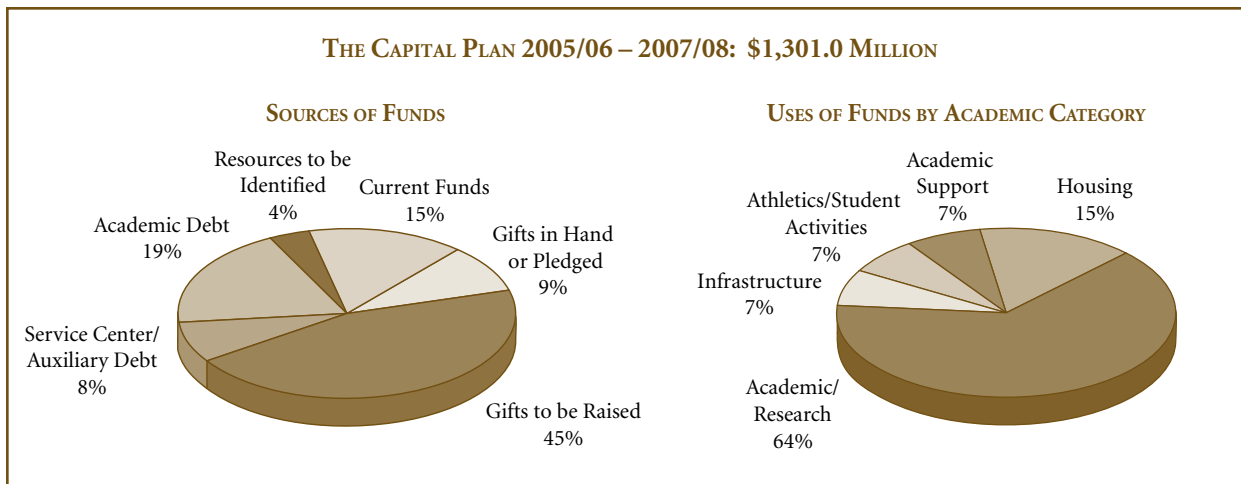
A small portion of the total (\$3.1 million) is from NIH and Howard Hughes Medical Institute grants for an SoM facility.

### Resources to Be Identified

As mentioned above, given the constraints of the economic climate at this time, not all of the funding sources are known for the projects in the Capital Plan. The Resources to Be Identified category amounts to \$49.7 million in the plan, or 4% of the total funding required. While it is possible that funds will be identified within this category, it is not clear at this time that this funding need will be met.

### USES OF FUNDS BY PROGRAM CATEGORY

The Capital Plan is divided into the following program categories: Academic/Research, Housing, Athletics/Student Activities, Academic Support, and Infrastructure. The chart below shows the uses of plan funds by program category.



## Academic/Research

Academic/Research projects directly support Stanford's teaching and research mission and include buildings that have offices, classrooms, and laboratories used by faculty, students, and staff. The Academic/Research projects in the plan amount to \$834.8 million, or 64% of the total.

### *Projects in Design and Construction:*

The following five projects are now in Design and Construction:

- The new Graduate School of Business classroom building (81,000 gsf), designed to house classroom, gathering, and office space for the school.
- The Astrophysics building, which will house Hansen Experimental Physics Laboratory (HEPL) and Astrophysics and Physics programs in 68,000 gsf located between the current Varian building and the Moore Materials Research building. This building is part of the SEMC initiative.
- The Kavli Institute for Particle Astrophysics and Cosmology, a 25,000 gsf state-of-the-art research building being developed at SLAC.
- The Stanford-in-Washington project, a renovation and addition to the School of Humanities and Sciences' Washington, D.C., facility, which houses undergraduate programs.
- The Barnum Family Center for School and Community Partnerships, an 8,328 gsf renovation and upgrade of the Old Bookstore (the former Career Planning and Placement Center) for the School of Education.

### *Forecasted Construction Projects:*

Additional Academic/Research projects planned for Trustee concept approval in the next three years include both new and renovated buildings and a major utilities project.

Forecasted SEMC buildings are the new School of Medicine L&KC (120,000 gsf requested), a new E&E building (166,565 gsf requested), the SOE Center (126,217 gsf requested), a new Biology building (100,000 gsf requested), SIM #1 (200,000 gsf requested), and the Gintzon replacement (formerly called Photonics) (101,850 gsf requested). Extensive SEMC regional utilities projects, a connective elements project, and key demolitions also are required to support this initiative.

Projects in the Medical School include a renovation of 800 Welch Road (the former Blood Center), seismic and infrastructure upgrades of the Edwards building (65,617 gsf), utilities upgrades in the Stone buildings, 72,681 gsf of renovations in the Lane and Alway buildings to accommodate L&KC program needs, a building renovation at 1050 Arastradero Road to house research space, and the Boswell Fish Facility (a 5,000 square-foot renovation of space at the Medical School for new research facilities).

Other forecasted Academic/Research projects include a renovation and upgrade of the Old Anatomy building located next to the Cantor Arts Center for the Art Department (gsf to be determined).

## Housing

Housing projects represent \$193 million, or 15% of total Capital Plan expenditures. These projects reflect the efforts of the university to provide more affordable housing for graduate students and to upgrade existing facilities for both graduate and undergraduate students. The conditions of the General Use Permit also require the university to build new housing as academic space is built. Residential & Dining Enterprises' Capital Improvement Program (CIP) is intended to address deferred maintenance, seismic upgrades, code compliance, and major programmatic improvements in all areas of the student housing system. CIP projects totaling \$22 million are anticipated in the next three years, although most of these projects fall below the \$3 million limit and are not included in this plan.

### *Projects in Design and Construction:*

The Munger Graduate Residences are planned to provide 600 units of housing for law and other graduate students, located adjacent to the Law School academic campus. This housing facility is key to the integrated learning environment that is a hallmark of the school's academic program. The project provides substantial numbers of new beds, contributing to the GUP requirements. It also includes parking and a variety of enabling projects.

### *Forecasted Construction Projects*

Future housing projects include the Manzanita III Hall and Dining project, which will add 125 new undergraduate beds and a new dining facility, and a new Mayfield Row House (designed as a Green Dorm), which will add 50 new undergraduate beds. Other major projects include renovations to Roble and Crothers Halls.

### **Athletics/Student Activities**

The Athletics/Student Activities category covers those facilities that support campus athletics, recreation, and other nonacademic resources/services for students. Projects supporting Athletics/Student Activities represent \$91.7 million, or 7% of total Capital Plan expenditures.

#### *Projects in Design and Construction*

In the student activities area, the planned renovation of the Old Union, Clubhouse, and Nitery (82,292 gsf) will create additional student activity and support space.

#### *Forecasted Construction Projects*

Projects planned in the future for Athletics include a renovation of the Golf Clubhouse and related facilities (Pro Shop and Cart Barn), and a renovation and upgrade of the Stanford Stadium. The White Plaza Landscape and Circulation Redesign, related closely to the Old Union project, will improve the White Plaza campus center outdoor space for student gathering and other activities.

### **Academic Support**

The Academic Support category consists of facilities that help support the academic mission of the university. This category generally includes administrative space, as well as facilities such as libraries and museums. Academic Support projects total \$94.1 million, or 7% of the plan. The Off-Site campus acquisition adds significantly to this category.

#### *Projects in Design and Construction*

There are no academic support projects in design and construction.

#### *Forecasted Construction Projects*

There are two forecasted projects in this category: the Public Safety Building, a 13,000 gsf building to replace the current public safety facilities, and a new Childcare Center (estimated at 7,200 gsf) planned to be located on the eastern side of campus.

### **Infrastructure**

Stanford's ongoing efforts to renew its infrastructure are reflected in a budget of \$87.4 million (7% of total Capital Plan expenditures). Infrastructure programs include the CUP, the Sand Hill Road extension, GUP mitigation, and SIP projects. GUP mitigation and SIP projects are funded through construction project surcharges.

#### *Capital Utilities Program:*

The three-year plan allocates a total of \$31.4 million for CUP projects to improve electrical, steam, water, chilled water, and wastewater utility systems. The CUP is driven by four factors: system expansion, system replacement, system controls, and regulatory requirements. A \$9.3 million Cooling Tower and Support building is planned to meet the increased chilled water loads predicted over the next seven years, with additional expenditures planned beyond the ten-year forecast.

#### *Road Systems and Parking:*

The three-year plan includes the nearly completed \$22.2 million Sand Hill Road Widening project. An 850-stall underground parking garage is planned as part of the Munger Graduate Residences.

#### *GUP Mitigation:*

The Capital Plan provides for \$18.9 million in capital expenditures for mitigation measures required by the GUP and Community Plan approved by Santa Clara County in December 2000. These expenditures relate to Campus Drive widenings, trail easements, and water conservation. Funding will be generated by an internal fee levied on capital projects that increase school/department campus space allocations. Due to potential timing differences between the collection of the fee and the scheduled expenditures, debt may be used as a short-term backstop.

#### *Information Technology and Communication Systems:*

A total of \$11.2 million has been allocated for upgrades to networks and communication systems.

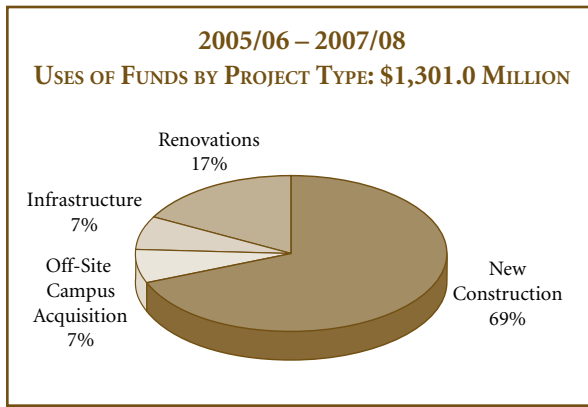
#### *Stanford Infrastructure Program:*

The SIP consists of planning and transportation projects and programs for the improvement and general support of the university's academic community and physical plant. SIP expenditures are expected to total \$3.7 million over the next three years. SIP projects include the construction of small increments of additional parking, campus transit improvements, parking lot infrastructure improvements, site improvements, bicycle and pedestrian paths, lighting, and outdoor art.

## **USES OF FUNDS BY PROJECT TYPE**

### **New Construction**

Major construction projects account for \$900.2 million or 69% of the three-year plan, ranging in size from \$3.7 million to \$140.0 million. These buildings



will support academic and research programs, as well as student housing, athletics/student activities and academic support facilities.

### Renovations

As illustrated in the chart above, renovation projects in the Capital Plan represent \$223.4 million, or 17% of the total project costs over the three-year period. One of the renovation projects (the Barnum Family Center) is among the last unreinforced masonry structures on campus to be seismically upgraded per the requirements of the County of Santa Clara URM ordinance. The URM program has been a significant part of the Capital Plan since the 1989 Loma Prieta earthquake. Remaining seismic-related projects include major renovations of some of Stanford's older buildings, including the Old Union.

### Infrastructure

Infrastructure projects and programs costing a total of \$91.4 million (including the White Plaza Landscape/Circulation Re-Design) account for 7% of Capital Plan expenditures.

### Off-Site Campus Acquisition

This acquisition, discussed in detail above, will cost \$86 million (7% of plan expenditures).

### OTHER STANFORD ENTITIES

For the last several years, the Capital Planning process has included all Stanford entities. This Capital Plan and Budget do not, however, include projects managed by Stanford Management Company (SMC), Stanford Hospital and Clinics (SHC), or Lucile Packard Children's Hospital (LPCH) due to their independent organizational structures and specific Board delegations. Brief descriptions of these projects follow.

### Stanford Management Company

**FACULTY AND STAFF HOUSING** – SMC continues to plan both rental and for-sale housing units for faculty and staff of the university over the next ten years.

**STANFORD RESEARCH PARK** – Although the local real estate market and economic environment have softened somewhat, the Research Park continues to be a desirable location for corporations. SMC recently completed an agreement with a major corporation to develop a thirty-two acre site. In addition, SMC is evaluating redeveloping sites on the edges of the Research Park for housing.

### SHC/LPCH

LPCH has commenced a significant interior renovation project to support current program needs. The School of Medicine, SHC, and LPCH are also engaged in a long-range planning effort that will outline and coordinate the space and program needs of the three entities over time. As discussed above, SHC is under contract to acquire a parcel adjacent to the off-site campus acquisition.

### CAPITAL PLAN CONSTRAINTS

#### Affordability

The additional internal debt service costs expected at the completion of all projects commencing in the three-year plan period (completion dates range from 2005/06 to 2009/10) total \$28.1 million annually. Of this amount at least \$7.5 million will be paid by unrestricted funds, \$8.7 million by auxiliary or service center operations, and \$2.3 million by formula schools (the GSB and the SoM). The remaining \$9.6 million is related to funding the SEMC projects and will be paid by a combination of unrestricted funds and formula school reserves.

The additional operations, maintenance, and utilities (O&M) costs expected at the completion of all projects commencing in the three-year period total \$17.7 million per year. Of this amount, \$5.2 million will be paid by unrestricted funds, \$2.9 million by auxiliary and service center operations, and \$9.6 million by the formula schools.

General funds pay a portion of the debt service on capital projects, as well as O&M costs. These capital-related costs compete directly with other academic program initiatives. The current forecast for the general funds portion of the Consolidated Budget for Operations includes these projected costs.

## Debt Capacity

As of March 2005, the university had approximately \$360 million of capacity from existing debt programs to finance capital projects, including \$31 million of unexpended bond proceeds, \$150 million of tax-exempt commercial paper, and \$179 million of taxable commercial paper. An additional \$95 million will be available through fiscal year-end 2005/06 from internal amortization on previous debt-funded projects.

A total of \$210.9 million will be required to finance:

- \$151.8 million to complete projects already approved or under construction, and
- \$59.1 million for projects to be initiated in 2005/06.

Additional funding will be required to finance the Faculty Staff Housing mortgage portfolio. Refinancings have slowed down and the mortgage portfolio increased \$4 million in 2004 and \$5 million year to date to \$235 million, following an \$11 million decline in 2003. Rising real estate prices will continue to fuel the demand for the subsidized loan programs.

Projects identified in the three-year Capital Plan commencing after 2005/06 will require an additional \$218.7 million in debt. It is important to note that these projects are not currently committed and will be evaluated in the context of debt capacity and GUP limitations.

Total university debt outstanding at fiscal year end 2004 was \$1.3 billion. The pro-forma leverage ratio is in compliance with the university's debt policy.

## Entitlements

The Stanford campus comprises 8,180 acres, which fall within six jurisdictions. Of this total, 4,017 acres, including most of the central campus, are within unincorporated Santa Clara County.

In December 2000, Santa Clara County approved a General Use Permit that allows Stanford to construct up to 2,035,000 additional gsf of academic-related buildings on the core campus. The GUP also allows the construction of up to 2,000 new student housing units and over 1,000 units of housing for postdoctoral fellows, medical residents, faculty, and staff.

Conditions of approval include the following:

- The creation of an academic growth boundary to limit the buildable area to the core campus,
- The approval of a sustainable development study before new construction is developed beyond one million gsf, and
- The construction of 605 units of housing for each 500,000 gsf of new academic building.

Given the stringent requirements imposed by the new GUP and the increasingly difficult entitlement environment, Stanford carefully manages the allocation of new growth. We originally projected that our GUP square footage allocation would be expended over fifteen years at an average rate of approximately 135,000 gsf per year. Funding constraints have slowed this projection. The Capital Plan includes 83,337 new GUP square feet currently in Design and Construction and 531,320 net new GUP square feet in Forecasted projects. Of course, this forecast could change over time, and it presumes funding sources will be available as forecasted. Given funding challenges and closer scrutiny of the expenditure of GUP square feet, we believe the current GUP allocation will last until 2025. The strategic movement of administrative office space to the proposed off-site location will also help to conserve GUP square footage for academic priorities on the main campus.

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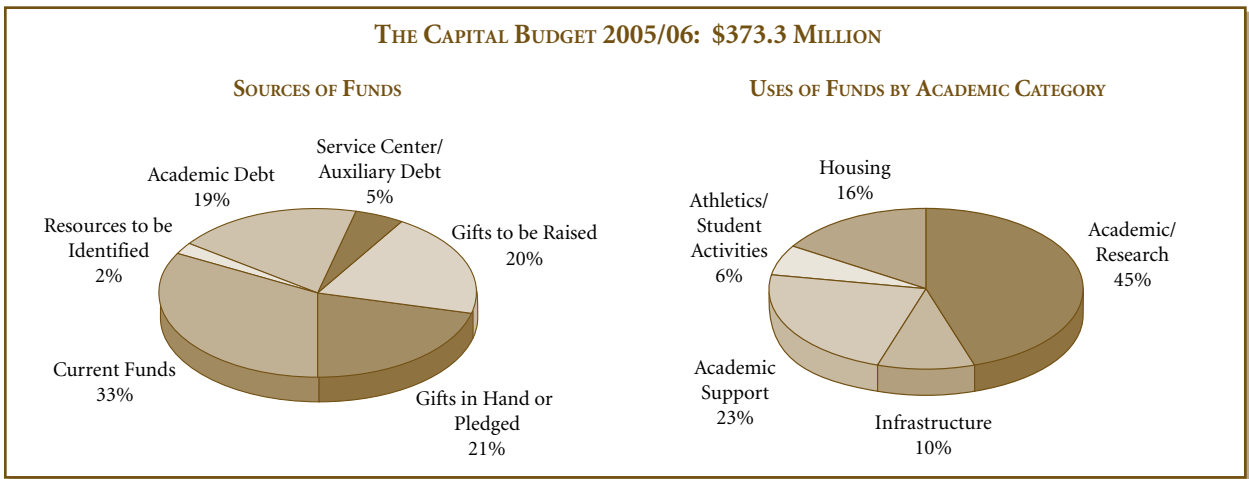
## THE CAPITAL BUDGET, 2005/06

The 2005/06 Capital Budget represents capital expenditures of \$373.3 million for the upcoming fiscal year. These expenditures reflect only a portion of the total costs of the capital projects listed, as most projects have a duration exceeding one year.

### SOURCES AND USES

A breakdown of the Capital Budget's sources and uses of funds is presented in the charts on the next page. Gifts and Debt represent 41% and 24% of the budget, respectively. Current funds (i.e., existing university reserves and fund balances) represent 33%, with the remaining 2% yet to be identified.

Of the \$373.3 million, 45% will be spent on Academic/Research projects. Academic Support, Housing, Infrastructure, and Athletics/Student Activities will represent 23%, 16%, 10%, and 6%, respectively. An estimated 50% of the budget will be spent on new construction projects. The majority of these expenditures are to fund



the Munger Graduate Residences and the Astrophysics, SIM #1, E&E, and L&KC buildings. The off-site campus acquisition contributes 23% to the Capital Budget. Another 17% will be spent on renovation projects such as the Old Union complex and 1050 Arastradero. The remaining 10% will be spent on infrastructure projects and programs, including CUP, Sand Hill Road widening, GUP, and information technology programs.

**CAPITAL BUDGET IMPACT ON 2005/06 OPERATIONS**

The 2005/06 Projected Consolidated Budget for Operations includes incremental debt service and O&M expenses for projects completing in 2005/06. Additionally, this budget includes an incremental increase in debt and O&M expenses for projects completing in 2004/05 that were operational for less than twelve months in 2004/05.

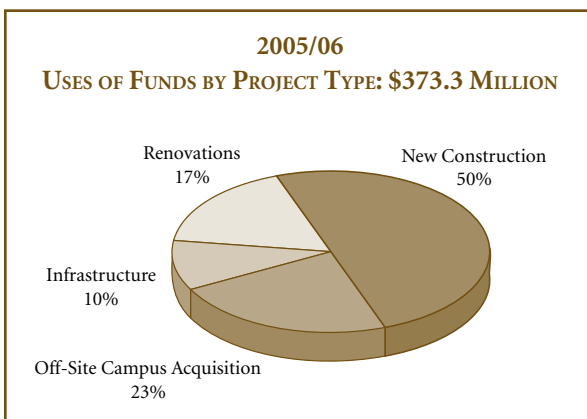
As noted in Section 1, Stanford borrows funds from capital markets and uses them to fund capital projects

and programs, which repay the funds plus interest over their remaining lives. These payments are known as internal debt service. The interest rate for internal debt service is calculated annually as a blended rate of all interest expense and bond issuance costs. The projected blended rate for 2005/06 is 5.74%.

The projected incremental internal debt service funded by unrestricted funds, including the formula units, in 2005/06 is \$2.8 million. This amount represents the additional debt service on ten capital projects and programs and reflects an increase in the blended interest rate from 5.40% to 5.74%. It has been reduced by allocating a portion of the Sand Hill Road extension costs to the hospitals. This additional debt service brings the total annual internal debt service borne by the unrestricted university budget to \$36.6 million.

Total internal debt service, including that borne by auxiliaries and service centers, will increase from \$112.5 million to \$117.5 million, an increment of \$5.0 million.

General funds will cover additional O&M costs of approximately \$1.0 million for projects including the Bakewell Renovation and Astrophysics, which are planned to be completed in 2005/06. These additional general funds also include reactive and preventive maintenance, which are being funded for the first time.



**CAPITAL PLAN PROJECT DETAIL**

Tables showing the details for projects in the Design and Construction, Forecasted, and Infrastructure categories follow on the next three pages.

**2005/06 – 2007/08 CAPITAL PLAN**  
**PROJECTS IN DESIGN & CONSTRUCTION**  
 [IN MILLIONS OF DOLLARS]

	School/Department	Fiscal Year Project Schedule	Estimated Project Cost <sup>1</sup>	Capital Budget 2005/06	Project Funding Source						Annual Continuing Costs		
					Current Funds <sup>2</sup>	Gifts		To Be Raised	University Debt		Resources To Be Identified <sup>4</sup>	Debt Service	Operations Maintenance & Utilities
						In Hand or Pledged	To Be Raised		Service Center/ Auxiliary Debt	Academic Debt			
Munger Graduate Residences (600 units) and Enabling Projects	SLS	2005-07	140.0	49.3	19.9	47.0	5.0	58.1		10.0	4.2	1.7	
Graduate Housing (\$95.0)													
Underground Garage (850 spaces) (\$23.0)													
Enabling Projects (\$22.0)													
Graduate School of Business (GSB) Classroom Building	GSB	2005-08	53.0	2.0			53.0					1.0	
Astrophysics Building (formerly Varian 2)	SEMC <sup>5</sup>	2004-06	34.2	25.6	9.9			24.3			1.8	0.1	
Astrophysics Building (\$32.0)													
Endstation III Buildout (\$1.5)													
HEPL Demolition (\$0.7)													
Old Union Complex Renovation	VPSA	2005-06	24.0	19.2	1.2						2.0		
Kavli Institute for Particle Astrophysics & Cosmology	SLAC	2003-06	10.7	5.0		8.5					0.2	0.1	
Stanford in Washington (SIW) Renovation and Expansion	H&S	2004-06	7.9	5.2		7.9						0.1	
Barnum Family Center (formerly Old Bookstore) Renovation and Expansion	SUSE	2005-06	5.3	4.3	1.6	3.7							
<b>Subtotal – Projects in Design &amp; Construction</b>			<b>275.1</b>	<b>110.6</b>	<b>32.6</b>	<b>67.1</b>	<b>58.0</b>	<b>58.1</b>	<b>49.3</b>	<b>10.0</b>	<b>8.2</b>	<b>3.0</b>	

<sup>1</sup> Costs reflect Board of Trustees approvals.

<sup>2</sup> Includes funds from university and school reserves, and the GUP and SIP programs.

<sup>3</sup> “Other” funds represent government and private foundation grants.

<sup>4</sup> Anticipated funding for this category is through a combination of gift raising and school, department and university reserves.

<sup>5</sup> SEMC represents the Science, Engineering and Medical Campus projects, a series of buildings being planned over the next several years. Funding for these projects is being planned as a combination of debt, reserves, and gifts.

**2005/06 – 2007/08 CAPITAL PLAN  
FORECASTED CONSTRUCTION PROJECTS  
[IN MILLIONS OF DOLLARS]**

	School/ Department	Fiscal Year Project Schedule	Estimated Project Cost	Capital Budget 2005/06	Project Funding Source				Annual Continuing Costs			
					Current Funds <sup>2</sup>	Gifts		University Debt		Resources To Be Identified <sup>4</sup>	Debt Service	Operations Maintenance & Utilities
						In Hand or Pledged	To Be Raised	Service Center/ Auxiliary Debt	Academic Debt			
Science, Engineering and Medical Campus (SEMC) <sup>1</sup> Projects	SEMC	2005-10	563.5	92.8	44.0	386.5	133.0		9.6	11.0		
Stanford Institutes of Medicine (SIM #1) (\$135.8)												
Environment and Energy Building (\$113.0)												
Learning and Knowledge Center (formerly SMILE) (\$65.1)												
School of Engineering Center (SOE Center) (\$60.4)												
Biology Building (\$60.2)												
Ginzton Replacement (formerly Photonics) (\$54.6)												
SOM/Biology Connective Elements/Utilities (\$41.2)												
SEQ2 Connective Elements/Utilities (\$26.3)												
SEMC Demolition Projects (\$6.9)												
Stone Buildings Renovation (\$84.2)	SOM	2006-10	42.2	1.3		34.7		7.5	0.6			
L&KC Renovation - Lane & Alway Buildings Renovation Central Utilities	SOM	2006-07	27.1	9.5				19.3	1.7			
Infrastructure & Seismic - Edwards Building Renovation	SOM	2006-08	14.9	0.6								
Stanford Stadium Upgrades	DAPER	2006-08	55.0	2.2		55.0				0.6		
Art to the Old Anatomy Building	H&S	2006-08	35.6	1.3		20.0				1.0		
Manzanita III Hall & Dining (125 units)	R&DE	2006-07	20.0	6.9		20.0				0.3		
800 Welch Road (Blood Center)	SOM	2006-08	19.1	0.8		19.1				1.2		
1050 Arastradero	SOM	2005-06	17.0	15.5		10.0						
Crothers and Crothers Memorial	R&DE	2007-09	15.0									
Roble Hall Renovation (Phase 2 and 3)	R&DE	2006-07	11.0	5.3				11.0	1.0			
Golf Club House, Pro Shop, Cart Barn Renovation	DAPER	2008-09	8.7			1.0				0.1		
Mayfield Row House - Green Dorm (50 units)	R&DE	2007-10	7.0			5.0				0.1		
Public Safety Building	PRES/PROV	2007-08	4.4		0.8			3.6	0.3	0.1		
Boswell Fish Facility Renovation	SOM	2005-06	4.3	1.1	1.2					0.2		
White Plaza Landscape/Circulation Re-Design	VP&A	2006-07	4.0	1.4				4.0	0.5			
Childcare (East Campus)	PRES/PROV	2006-07	3.7	1.3	3.7					0.1		
Subtotal – Forecasted Projects			852.5	139.9	49.7	51.0	530.6	11.0	13.7	14.7		
SUBTOTAL CONSTRUCTION PLAN			1,127.6	250.5	82.3	118.1	588.6	69.1	21.9	17.7		

<sup>1</sup> SEMC represents the Science, Engineering and Medical Campus projects, a series of buildings being planned over the next several years. Funding for these projects is being planned as a combination of debt reserves, and gifts.

<sup>2</sup> Includes funds from university and school reserves, and the GUP and SIP programs.

<sup>3</sup> "Other" funds represent government and private foundation grants.

<sup>4</sup> Anticipated funding for this category is through a combination of gift raising and school, department and university reserves.



**2005/06 – 2007/08 CAPITAL PLAN  
INFRASTRUCTURE PROJECTS & PROGRAMS  
[IN MILLIONS OF DOLLARS]**

	School/ Department	Fiscal Year Project Schedule	Estimated Project Cost	Capital Budget 2005/06	Project Funding Source				Annual Continuing Costs		
					Current Funds <sup>1</sup>	Gifts		University Debt		Resources To Be Identified <sup>3</sup>	Operations Maintenance & Utilities
						In Hand or Pledged	To Be Raised	Service Center/ Auxiliary Debt	Academic Debt		
Capital Utilities Program (CUP)	LAND AND BUILDINGS										
System Expansion											
Cooling Tower 5		2006-07	9.3	6.0			9.3				0.7
Other System Expansion Projects		2006-08	6.0	0.7			6.0				0.6
System Replacement		2006-08	12.3	2.5			12.3				1.2
Controls		2006-08	1.9	0.6			1.9				0.2
Regulatory		2006-08	1.8	0.2			1.8				0.2
Subtotal-CUP			31.4	10.0			31.4				2.9
Sand Hill Road Widening & Related Improvements	SMC	2004-06	22.2	7.2				22.2			2.2
GUP Mitigation Costs	LAND AND BUILDINGS										
Campus Drive Widening		2006-07	8.5	4.2		8.5					
Trail Easements		2006	6.5	6.5		6.5					
Water Conservation System		2006-07	4.0	2.0		4.0					
Subtotal-GUP Mitigation			18.9	12.7		18.9					
Information Technology & Communications Systems	ITSS	2006-08	11.2	5.5			6.1	5.1			1.1
Stanford Infrastructure Program (SIP)	LAND AND BUILDINGS	2006-08	3.7	1.5		3.7					
Subtotal – Infrastructure Projects & Programs			87.4	36.8		22.6	37.5	27.3			6.2

<sup>1</sup> Includes funds from university and school reserves, and the GUP and SIP programs.

<sup>2</sup> "Other" funds represent government and private foundation grants.

<sup>3</sup> Anticipated funding for this category is through a combination of gift raising and school, department and university reserves.