



1111 Franklin Street
Oakland, California 94607-5200
Phone: (510) 987-9074
Fax: (510) 987-9086
<http://www.ucop.edu>

November 17, 2015

MEMBERS OF THE REGENTS' COMMITTEE ON GROUNDS AND BUILDINGS

Enclosed for your information is the *Annual Report on Major Capital Projects Implementation* for fiscal year 2014-15. This report describes the aggregate status of major capital projects underway at the end of the 2014-15 fiscal year and summarizes management initiatives and market conditions affecting project implementation.

Also enclosed are two supplemental items to the Annual Report on Major Capital Projects Implementation, Fiscal Year 2014-15. One is the 2014-15 Active Major Capital Projects Report (Projects over \$10M); the other is the 2014-15 Capital Projects Look-Ahead List, an excerpt of the first two years of proposed projects in the *2015-25 Capital Financial Plan*. At your request, these supplemental items were provided to you in the last fiscal year and have been updated, consistent with the updated reports to The Regents.

If you have any questions about the report, please be in touch with Executive Vice President Brostrom.

Yours very truly,

Janet Napolitano
President

Enclosure

cc: All Regents
Chancellors



University of California
Capital Programs
**Annual Report on Major Capital Projects
Implementation**

October 2015

I. EXECUTIVE SUMMARY

The 2014-15 *Annual Report on Major Capital Projects Implementation* (MCR) provides an update on the University's in-progress Capital Improvements Program. The report provides the status of major capital projects (projects with budgets of more than \$750,000) including budget and schedule changes, and projects completed in the fiscal year. Within the report are overviews of campus capital programs and project achievements, recent past and forecasted construction market conditions, along with University initiatives for improving project planning and delivery.

Background and Purpose

The University of California (UC) *Annual Report on Major Capital Projects Implementation* provides broad indicators of project delivery performance for active and newly-completed major capital projects. This report documents major capital projects (projects with budgets in excess of \$750,000) underway at the end of FY 2014-15 with a cumulative portfolio budget of \$5.2 billion. The report also assesses construction market conditions, trends, and UC initiatives to improve processes while managing project cost and risk.

Two measures used to assess the general condition of the UC capital program are project budget changes and project schedule changes. It should be recognized that the University's ability to implement its capital program is affected by a number of factors, only some of which are within its control. Factors within University control include project delivery methods, program changes, and budgeting and funding strategies. Factors beyond University control include the construction industry bid climate, local and global market conditions, regulatory changes, State and non-State funding requirements, and unforeseen physical and environmental conditions.

It should also be acknowledged that some project budget and schedule changes are driven by circumstances that are intentional, necessary, and beneficial to the University's mission—such as incorporating program improvements, multiple project phasing, and leveraging of new funding opportunities.

Because many variables affect project delivery, simple indicators do not fully represent the complexity of factors that influence University capital project implementation. Nevertheless, these key indicators of budget and schedule provide valuable

insights into program trends and can highlight where anticipatory or remedial action may be required.

University-wide, 248 major capital projects totaling \$5.2 billion were active at the completion of Fiscal Year (FY) 2014-15, representing a six percent dollar volume and nineteen percent project number increase from the \$4.9 billion total for 208 active projects at the end of FY 2013-14. Total cumulative budget augmentations for active projects amounted to nine percent of the entire \$5.2 billion program, a two percent increase over the prior fiscal year. In FY 2014-15, only twenty percent of projects had schedule extensions compared to thirty-two percent reported last year.

The California construction industry has permanent after-effects from the recent severe recession. There is a shortage of skilled workers throughout the design and construction industry, affecting UC projects with contractors showing reduced interest and less competitive bidding across our campuses. Projects are not able to achieve bid savings in the current environment.

The University continues to utilize a range of construction delivery methods, including public private partnerships, to meet campus needs.

II. UC CAPITAL PROCESS

Capital Project Delivery in the University Context

The University of California Office of the President (OP) and campuses have unique roles and responsibilities to coordinate and to deliver a successful capital development program. At OP, Capital Programs provides coordination, assistance, and oversight for the campuses. Capital Programs serves to provide accountability to the Regents and other stakeholders, establish policy and recommend courses of action to the campuses and to OP leadership, and to help campuses with policy compliance.

The campuses have highly skilled teams of budget officers, planners, design managers, construction managers, and construction building code and quality assurance inspectors. Each campus develops a ten-year Capital Financial Plan—a strategic plan of specific projects prioritized to meet the campus mission, academic, and support needs—that fits within the context of physical and funding opportunities and constraints.

The University operates in a public contract environment that has rigorous controls. UC capital projects are subject to the California Public Contract Code (PCC) to promote a fair, transparent, and competitive bidding environment. Areas governed by the PCC include competitive bidding procedures and strict restrictions on sole-sourcing of products. The campuses and OP Capital Programs collaborate for continuous improvement in the delivery of quality facilities in the most cost-effective and timely manner, consistent with requirements of the research university environment and constraints associated with public work.

Different campuses select certain delivery methods depending on the particular circumstances of the local construction climate and individual projects. Factors such as skilled labor supply and cost, geographic proximity to or remoteness from large metropolitan areas, local custom, and expertise in the contracting community influence these decisions, as well as project-specific factors such as size, complexity, prominence (in terms of location, design, or use), perceived risk factors, and schedule. For example, Design/Build may be considered for projects with tight schedules, well-defined programs and design parameters; Construction Manager at Risk (CMAR) takes advantage of early input and commitment by the contractor for complex projects; and traditional Design/Bid/Build is often suitable for projects in competitive markets.

Campuses coordinate with Capital Programs in the early stages of projects to discuss business case analysis; scope, schedule, and budget; justifications, and other issues specific to each project. Through its units in Capital Planning, Physical and Environmental Planning, Design Services, Construction Services, and Real Estate Services and Strategies, Capital Programs provides guidance to campuses on project schedule and milestones, budget and funding feasibility, alternatives analysis, environmental and physical planning requirements, delivery methods, contracting and other policy requirements, and on any special issues that might rise to the level of Regental concern. When projects are submitted to OP for Regental or senior administrative action, Capital Programs provides staff analysis and recommendations, and coordinates issues related to the action with associated OP offices, including the Office of the General Counsel, Office of the Secretary and Chief of Staff to the Regents, Capital Markets Finance, and other senior administrators. The types of actions (which may occur separately and/or in different combinations) include budget, design, environmental approvals, physical planning, external

finance, and real estate transaction approvals, and certain gift agreements and licenses. Projects with State funding are also subject to a Labor Compliance Program recently overhauled by the State.

State funding for capital improvement projects for the University of California has been reduced over the last eight years as a result of the national recession and the State's objective to reduce overall bond debt. The last general obligation bond for UC was nine years ago in 2006. The University had anticipated approval of general obligation bond measures in the past few voting cycles, but legislation to place bond measures on the ballot was not enacted.

In consideration of the lack of new general obligation bonds, the State took action to pass legislation in 2013, Assembly Bill No. 94 (AB 94), Chapter 50, Section 8 which added, among other provisions, sections 92493 et seq. to the Education Code. This action provided flexibility to the University of California to use State General Funds to finance State-eligible capital outlay projects. Specifically, the University is able to use a portion of its State General Fund allocation to pay debt service on, and make equity contributions to, University capital projects.

Under the AB94 mechanism for use of State funds for capital outlay the University is responsible, on behalf of the State, to review and approve project phases at suitable milestones, and provide ongoing monitoring and reporting to the State. The approval process, including the review of drawings, cost estimates and bids, has been delegated to the University. The MCR includes the 25 projects approved by the Joint Legislative Budget Committee (JLBC) for funding under this mechanism with total budgets of \$706.7 million across fiscal years (FY) 2013-14, 2014-15, and 2015-16.

Once a project receives necessary approvals and project funding, responsibility for successful completion resides on a campus. Regular project reporting for status of project budget and schedule occurs annually. Each campus communicates monthly with Capital Planning on project status in order to provide early notification to the President and the Regents of significant project challenges and potential changes. In addition, this *Annual Report on Major Capital Projects Implementation* provides information on the overall performance and status of the University's capital program.

III. CAPITAL PROGRAM FY 2014-15

Overall, the UC campuses continue to oversee and deliver a broad capital plan that encompasses a variety of projects including academic buildings, housing and infrastructure. Campuses continue to explore a variety of delivery and funding strategies to respond to local market conditions, manage risk, and complete projects in furtherance of the University's mission and the campuses' academic and support needs.

Active Projects

All projects that were active in FY 2014-15 (with approved budgets and in design or construction as of June 30, 2015) are included in this report¹. Thus, this data represents a snapshot in time of a multi-year process.

The aggregate data on the status of major capital project activity at the end of FY 2014-15 is shown below in comparison to the previous fiscal year. All values that refer to budget and schedule changes represent cumulative changes from initial project budget approval until that fiscal year-end, and do not include data prior to official budget approval.

Table 1: Active Major Cap Projects at Year End

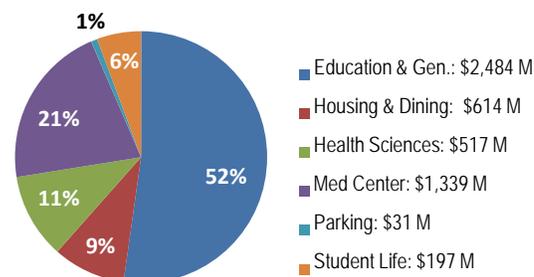
	2013-14	2014-15
Number of active projects	208	248
Amount of original budgets	\$4,547 M	\$4,749 M
Cumulative approved budget changes	\$321 M	\$431 M
Year-end budgets (excludes inflation*)	\$4,868 M	\$5,180 M
Percent change from original budgets	7%	9%
Projects with budget changes	37	38
Projects with schedule changes (more than 90 days)**	66	50

* "Inflation" refers to authorized inflation adjustments on state-funded projects

** A project is considered delayed once it is 90 days beyond completion stated in the original approved schedule

The primary program objectives included in the FY 2014-15 active projects portfolio are shown in Figure 1. The systemwide distribution reflects the impact of enrollment growth; statutory deadlines of SB 1953² for medical facility seismic remediation; health sciences expansion; increased housing need; student life facilities; and expanded parking

Fig. 1: 2014-15 Primary Use

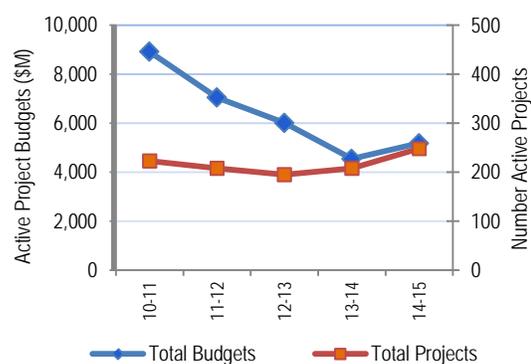


Primary use represented is a percentage of the number of active projects.

The cumulative budget of the portfolio of 248 active projects was \$5.2 billion, a six percent dollar-volume increase from the previous year's total of \$4.9 billion for 208 projects.

In FY 2014-15, 98 projects completed prior to year-end and 125 new projects commenced. The total value of active projects increased by \$312 million through the addition of new projects; cumulative augmentations to previously approved projects; and reversions of funding; or budget reductions. Figure 2 represents year-end budget totals and the number of active projects for the last five fiscal years

Fig. 2: Total Budget and Number of Projects



While the total number of active projects increased by approximately 19 percent in the last year, the total dollar value of active projects increased by only 6 percent, indicating projects are tending to be smaller in response to budget constraints.

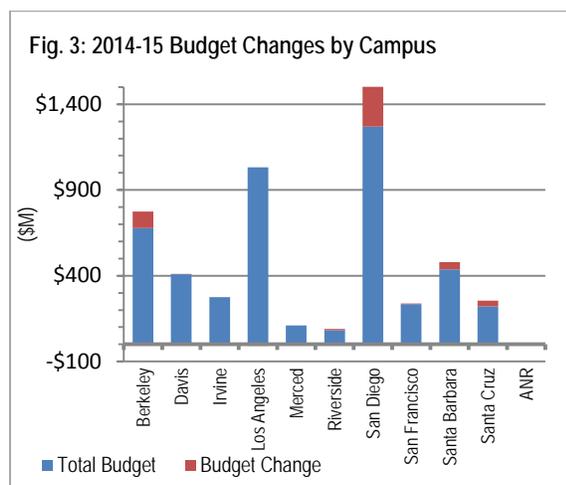
Budget Augmentations

Individual project budgets can be augmented to accommodate program changes, additional scope, or unforeseen conditions, to cover other unexpected events, or to take advantage of opportunities during design and construction. Budget decreases occur primarily when construction bids come in under

¹ See Attachment A for a summary of results by campus

² Senate Bill 1953 (SB 1953) requires seismic evaluations and compliance plans that will attain specified performance categories for structural and non-structural elements at all **acute care hospitals** within a specified timeframe.

budget. The net result of these increases and decreases is displayed in Figure 3 by campus.



There was a cumulative total of \$431 million in budget augmentation across all 248 active projects³. While 88 percent of active projects maintained their original budgets, the net increase was generated by changes to 38 project budgets.

For those projects that were augmented, unforeseen site conditions, market conditions, and design errors and omissions, and construction delays were typical contributing factors. A few augmentations were made to take advantage of program opportunities.⁴

Schedule Changes

A project is considered delayed if completion is extended more than ninety days beyond the completion date noted at the time of approval. Delays are caused by unforeseen conditions; protracted agency reviews, especially for hospitals; owner requested changes and contractor performance during construction. Some opportunities for added scope, including additional gift funds, also contributed to some delays.

Table 2 shows the number of active projects at each campus with either budget changes or schedule delays in FY 2014-15. The percentage of projects with schedule changes decreased significantly from 32 percent in FY 2013-14 to 20 percent this past year. It is typical for the development of a facility to span several years of reporting. Any augmentation or schedule delay incurred during the delivery cycle of the project, including those happening prior to FY 2014-15, are included in this report.

³ Aggregated cumulative augmentations over all currently active projects as of June 30, 2015

⁴ See Attachment B for details on Major Capital Projects (over \$10M)

Table 2: Active Projects with Budget & Schedule Changes

Campus	Active Projects	Budget Changes	Schedule Changes
ANR	2	0	0
Berkeley	38	6	11
Davis	29	2	6
Irvine	15	1	2
Los Angeles	58	8	12
Merced	3	0	0
Riverside	8	1	2
San Diego	35	6	4
San Francisco	29	1	5
Santa Barbara	15	7	5
Santa Cruz	16	6	3
TOTAL	248	38	50

Completed Projects

It is also of interest to examine the projects that completed during the fiscal year (i.e., no longer active at year-end) to discern trends related to change from original budgets and delays. Table 3 compares projects that completed in 2013-14 to projects completed in 2014-15.

Table 3: Completed Major Cap Projects at Year End

	2013-14	2014-15
Number of complete projects	111	98
Amount of original budgets	\$2,851M	\$1,239 M
Cumulative approved budget changes	(\$-287 M)	\$55 M
Year-end budgets (excludes Inflation)	\$2,564 M	\$1,294 M
Percent net change from original budgets	-10%	4%
Total year-end budgets (includes inflation/reversion)*	\$2,564 M	\$1,294 M
Number of completed projects within original schedule	84	42
Number of completed projects over original schedule**	27	56
Average number of days over original schedule***	511	415

Inflation/reversion refers to State inflation or reversion adjustments to project budgets

**over schedule* if over more than 90 days

***Average number of days exceeding the original schedule for the entire portfolio

There were 98 projects with budgets totaling \$1.29 million completed in FY 2014-15. Completed projects are those for which Notices of Completion were filed or a Notice of Substantial Completion was received and there are no major outstanding financial or contract issues.

The aggregate original budgets for projects completed in FY 2014-15 increased by four percent during the time they were active. This year more than half of the 98 completed projects were more than 90 days beyond their original schedule. This significant percentage of delayed projects was anticipated following two years of increased delays reported in the active portfolio. Projects were not able to recover any time that was lost at the outset of projects. Although some projects completed with project savings in the last fiscal year, the budget

reductions were not significant enough to influence the overall trends.

program updates that present opportunities; and coordination with other construction projects.

As noted earlier, some project changes can represent a benefit for the project, though they often extend the project schedule as well. These can be new funding opportunities, shifts in funding strategies;

IV. PILOT PHASE OF THE DELEGATED PROCESS FOR CAPITAL IMPROVEMENT PROJECTS

Table 4: 2009-15 Capital Project Approval Actions (\$M)

	2009-10		2010-11		2011-12		2012-13		2013-14		2014-15		Total	
	Budgets	Actions												
Regents	\$2,038	25	\$351	25	\$324	20	\$600	19	\$816	34	\$509	28	\$4,638	151
Delegated	\$302	17	\$378	30	\$375	32	\$291	23	\$345	26	\$663	40	\$2,354	168
Totals	\$2,354		\$554		\$795		\$762		\$1,335		\$1,172		\$7,328	

The Delegated Process for Capital Improvement Projects (Delegated Process) is an alternative to Regental approval for smaller projects. It is currently a pilot program. The Regents delegated authority for budget and design approvals for capital projects to the Chancellors, via the President, for the portfolio of projects in the \$10 million to \$70 million range that meet eligibility criteria. The Delegated Process is intended to streamline Regental actions and facilitate the Board's ability to focus on more strategic decisions. This optional approval process increases campus autonomy, and provides for campus accountability for capital project delivery, while adhering to protocols for compliance with statutory and policy requirements established for Regental approvals. Information on eligibility criteria, submittal requirements, and processes for securing delegated approvals is documented in the *Delegated Process User Guide*⁵.

The pilot phase is now scheduled to expire on March 31, 2017⁶. The budget limit for eligible projects was increased in March 2015 from \$60 million to \$70 million⁷. All ten campuses have utilized this delegated authority for eligible project approval. In FY 2014-15 there were forty actions reviewed and approved (fourteen more than last year) and more than in any preceding year (Table 4 above).

The Delegated Process has shown increased adoption of use by the campuses since the Implementing Guidelines were approved by the Regents in September 2008. Table 5 displays the number of projects and their budgets that have used the approval process after the Regents' acceptance of the campuses' *Physical Design Frameworks* and *Capital Financial Plans* in 2009. A total of 113 submittals, representing 168 actions for budget and/or design approval, on 102 projects, have been reviewed and approved via the Delegated Process by the end of fiscal year 2014-15. Budgets approved via the Delegated Process during this timeframe totaled \$2.35 billion. In that same time frame, the Regents approved ninety project budgets totaling \$4.64 billion. Campuses value the Delegated Process and are eager to use it for eligible projects.

Table 5: Delegated Project Reviews (\$M)

	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
Number of project reviews	12	23	20	14	17	27
Amount of original budgets	\$302	\$378	\$375	\$291	\$345	\$663

The level of budget and schedule changes on projects using the Delegated Process is similar to those projects approved by the Regents or the President ("Traditional method"). Table 6 compares the budget performance of projects that were approved by Chancellors under the Delegated Process to those projects approved under the Traditional method. Overall Delegated projects had fewer budget augmentations, more projects with savings, and fewer schedule changes for completed projects than

⁵ http://www.ucop.edu/capital-planning/_files/documents/delegated-process-guidelines.pdf

⁶ <http://regents.universityofcalifornia.edu/regmeet/jan15/gb3.pdf>

⁷ <http://regents.universityofcalifornia.edu/regmeet/jan15/g2.pdf>

Traditional projects, on a percentage basis. Delegated projects had a lower percentage of change from original budget when compared to Traditional projects.

Table 6: FY 2014-15 Active and Completed Projects*

	Delegated Projects	Traditional Projects
Number of projects	49	42
Amount of original budgets**	\$1,395,618,000	\$3,929,612,000
Cumulative approved budget changes	\$27,202,000	\$422,355,000
Year-end budget	\$1,422,820,000	\$4,351,967,000
Percent change from original budget	2%	11%
Projects with budget changes	14	20
Percent of projects with budget savings	8%	2%
Percent of projects with budget augmentation	20%	45%
Completed projects with schedule changes (over 90 days)	8	6

* Includes active and completed projects in FY 2014-15 with an initial budget greater than \$10 million

** Budgets include projects that received State funding but were eligible for Delegated Approval of Design/CEQA

Within this subset of all major projects, Medical Center related projects accounted for ten percent of the Delegated projects, and fourteen percent of Traditional projects. Although Medical Center projects are more complex, recent experience shows consistent performance with regard to budget and schedule. When adjusting for Medical Centers, Delegated projects had a three percent increase for budget augmentations and Traditional Projects a six percent change. Delegated projects also outperform Traditional projects by at least six percentage points in each of the other categories when adjusting for Medical Centers.

V. CONSTRUCTION MARKET CONDITIONS AND COST DRIVERS

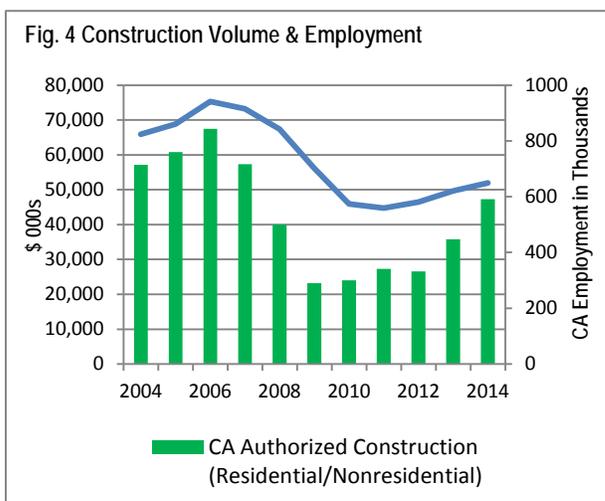
California is still recovering from the economic recession that began in 2008. This recession is ending with significant structural deficits in the construction industry that will continue to affect UC capital projects in the coming years. These deficits include ongoing financial instability in the construction industry, material price fluctuations, and an industry shortage of skilled labor. Many firms have gone out of business, or been bought out, (i.e. AECOM's acquisition of the URS Corporation, Tishman Construction, and Hunt Construction Group last year.)⁸ Although construction employment increased

⁸ <http://www.latimes.com/business/la-fi-aecom-urs-20141017-story.html>

more than seven percent in California during the last year, this only begins to close the gap resulting from the loss of one-third of construction jobs since 2007.⁹

Contractors continue to have difficulty regaining the bonding levels they had pre-recession, limiting both the number and the size of projects they can bid and perform. The reduced number of contractors and subcontractors results in higher bids, as well as material shortages and delays. Construction in urban areas, with high levels of construction activity, and in markets with *mega-projects* are expected to experience higher construction cost escalation¹⁰, while more remote areas will have difficulty attracting both general contractors and subcontractors.

Construction activity has increased by about eight percent in Southern California and ten percent in Northern California this year. This increase, combined with reduced capacity in the contracting workforce, results in fewer and higher bids on construction projects. Many UC campuses are located near *mega-projects* including the Apple and Google headquarters, local hospitals, large developments in the LA basin, new sports arenas, and statewide transportation and infrastructure projects.



The *Los Angeles Times* and *Engineering News Record* continue to comment on an unprecedented current and future construction labor shortage. A recent AGC (Associated General Contractors of America) article reports that construction unemployment is at

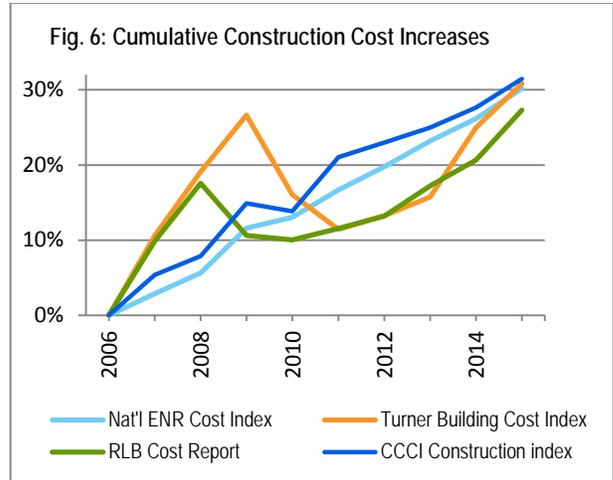
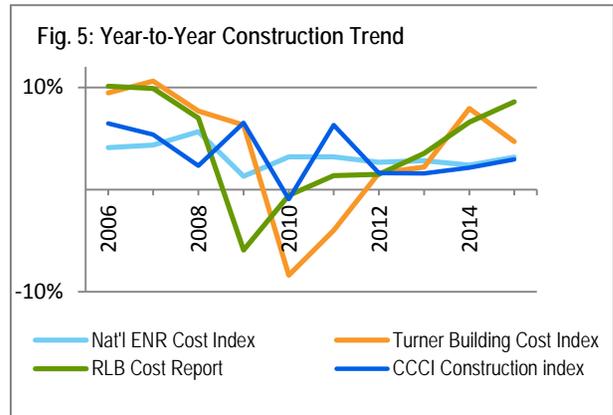
⁹ http://data.bls.gov/timeseries/SMS0600000200000001?data_tool=XGtable

¹⁰ <http://www.turnerconstruction.com/news/item/6604/The-Domestic-Non-Residential-Markets-Maintain-Growth-Trajectory-in-the-Second-Quarter>

its lowest level since 2001, reminiscent of the dire labor shortages faced in 2006.¹¹ Construction firms lost key staff members during the recession, many of whom are not returning to the construction industry because of career changes or attrition. This is also true for the design professions. In many cases the seasoned professionals, skilled workers, project architects, and construction managers are simply not available. As a result many new and inexperienced workers are entering the market and are causing a rise in jobsite accidents and insurance claims.¹²

Nationally, construction materials prices increased two percent from last year, with notable fluctuations in various material categories over the last few years.¹³ Lumber, after increasing forty percent since 2009, has dropped significantly (7.9 percent) since last year. Cement is up eight percent from last year and continues to impact associated materials such as ready-mix concrete and concrete block. While the price of aluminum declined last month, it still reflects a slight percent increase since this same time last year.¹⁴ There are additional sharp increases for specific materials based on regional issues. The *mega-projects* previously noted, coupled with the depleted labor force, result in fewer contractors and subcontractors bidding on campus projects, especially in outlying regions.

The major indices (ENR¹⁵, Rider Levett Bucknell¹⁶, and Turner¹⁷) report a relatively wide range of construction cost increases in the last year, from 2.3 percent (CCCI) to 4.69 percent (Turner)¹⁸ as shown in Figures 5 and 6. The indices do agree that, over the last ten years, construction costs have risen thirty percent.



UC Trends

The trend in the previous few years - with many projects receiving favorable bids below estimates - has ended. Most UC projects are now receiving bids that exceed project estimates. UC campus architects share bid results from capital projects each month. During 2014-15, although many bids exceeded construction estimates, they were generally within ten percent of the cost estimate. UC project managers, planners, and cost estimators are adjusting project estimates on upcoming projects to reflect these industry trends. Contractors remain wary of escalation, and reflect this caution with higher bids to mitigate their risk in delivery of a project that will complete two years or more after submittal of their bid. Campuses are preparing bid packages with additive and deductive alternates in response to bidding uncertainties.

Until recently, the University had experienced an increase in bid protests. In the three years from 2005-08, UC averaged six protests a year. These notices increased to 13 in FY 2010-11; 33 in FY 2011-12; 39 in FY 2012-13; and in FY 2013-14 there were 46 protests. Yet, there was a sharp decline in reported bid protests for 2014-15, only 22 protests. Of these, only three were appealed to the UC Construction Review Board (CRB). Of these three,

¹¹ <https://www.agc.org>

¹² www.rosenbaumandassociates.com

¹³ http://enr.construction.com/economics/historical_indices

¹⁴ <http://enr.construction.com/engineering/pdf/economics/2015>

¹⁵ http://enr.construction.com/economics/historical_indices

Retrieved 9/9/15

¹⁶ <http://rlb.com/wp-content/uploads/2015> Retrieved 9/9/15

¹⁷ <http://www.turnerconstruction.com/cost-index>, Retrieved

9/9/15

¹⁸ <http://www.turnerconstruction.com/news>

two were withdrawn by the protesting contractors and one was held. This indicates that, while contractors may still be seeking to win bids through protests, the University is able to resolve such issues in a way most contractors perceive as fair.

All UC campuses are expanding the range of project delivery methods to best match specific project needs. These include Design-Bid-Build, Design-Build, CMAR, and privatized development. Campuses employ additional strategies to add value to each of the delivery methods. These include Integrated Project Delivery (IPD); Building Information Modeling (BIM); a Best Value selection process (for contractors and/or subcontractors); and utilizing Design-Assist or Design-Build for specific trade packages within another overall delivery format. OP Capital Programs supports the various delivery methods and strategies with development of new contracts and provisions; training of campus staff; systemwide sharing of best practices; leveraging industry resources, and targeted training and assistance on request by campus.

Contractor and Market Capacity

As noted previously, there are fewer contractors and subcontractors in California since the recession and there are shortages of qualified trade contractors and skilled tradespeople across the industry. Many trade contractors are unable to post bid bonds on multiple projects at one time. They must select projects they can commit to and, generally, bid projects located near their home offices that are less complex, and with less perceived risk. More remote campuses, such as Riverside, Santa Barbara, Santa Cruz, and Merced, are experiencing difficulty in obtaining an adequate number of competitive bids, as contractors choose to bid local projects with less travel time for their staff, workers, and subcontractors. Campuses in or near large cities have difficulty in bid coverage on more complicated or custom projects and suffer from competition with regional *mega-projects*.

New California Energy Code Impacts

The California Building Code was updated on July 1, 2014, yet the California Energy Commission (CEC) delayed implementation of the Energy code for six months, until State-developed software was available to demonstrate code compliance. The new code significantly increases energy conservation requirements in new and renovated buildings, with a stated intent that all new buildings will be required to achieve zero net energy by 2020 (residential) and 2030 (commercial). This supports the University's climate action goals, including President Napolitano's initiative on Carbon Neutrality.

Design Services at OP commissioned a study on the costs and impacts of the energy code changes on UC capital projects. The consultant team studied numerous factors and challenges in achieving the 'twenty percent better-than-code' requirement of the University's Sustainable Practices Policy. They studied two UC completed buildings that were designed to exceed the 2010 Code by more than twenty percent. The analysis concluded that both buildings, as originally designed, would exceed the 2013 Energy Code by at least fourteen percent.

The team concluded that many UC capital projects may already meet and even exceed the 2014 energy code. They also estimated that the cost of exceeding the new energy code requirements adds between \$3 and \$16 per gross square foot to the cost of UC capital projects. The outcome of the study is a white paper titled "Impacts and Strategies for the 2013 California Energy Code Changes".¹⁹

The team noted that not all design professionals will be equally qualified to implement cost-effective designs in response to the new codes, and that several industries are lagging in developing products to meet the new requirements.

VI. UC CAPITAL PROGRAM INITIATIVES

There are a number of ongoing efforts and initiatives related to the University's capital program. In FY 2014-15, the University made continued progress in process improvement, cost control, and risk management. Specific gains were made in the following areas:

- Expanded Training and Best Practice Exchange Opportunities
- Legislative Activity
- Privatized Development
- University-Controlled Insurance Program (UCIP)

The progress over the last year is described below:

Expanded Training and Best Practices

The Capital Programs Institute (CPI) continues to provide a wide range of in-depth and meaningful sessions for Capital Programs staff. In FY 2014-15, CPI offered 28 training sessions, in collaboration with the Energy Efficiency Partnership, Design Services, Capital Planning, Physical and Environmental Planning, and Real Estate Services and Strategies.

¹⁹Detailed report can be requested from OP.

Sessions ranged from two-hour webinars to multiple day conferences, and more than 1,800 campus and OP staff participated in in-person training sessions and webinars.

CPI events are vehicles for interdepartmental and intercampus sharing of best practices. The training sessions attract a variety of campus and OP personnel including safety managers, energy professionals, project managers, environmental planners, capital planners, contract administrators, architects, engineers, building officials, and real estate officers. Some workshops have also attracted other state public agencies resulting in cross-agency sharing of best practices and program strategies.

These valuable sessions help ensure the communications and understanding of regulatory and policy requirements, as well as, consistent management procedures from project planning through design and construction. In addition, the sharing of best practices helps to mitigate considerable enterprise risk, and promotes accurate benchmarking.

CPI session topics are suggested by OP units (e.g., Office of General Counsel or Risk Management Services), and more often requested by campus professional personnel. OP Construction Services also continues to produce online training webinar sessions for focused discussions to deliver critical information quickly and efficiently.

Notable sessions in FY 2014-15 included:

- Understanding UC Contract Documents – a seven-part webinar series
- Storm Water Management Requirements for Operations and Maintenance and Capital Improvement Projects
- Selecting and Managing your Design Professional
- Multiple Repetitive Small Projects Management
- CM at Risk Project Delivery Method
- Essential Tools for UC Construction Professionals – Project Delivery and Contract Boot Camp
- Understanding and Implementing LEEDv4
- Design Strategies and Cost Impacts of the 2013 Energy Code

CPI leverages current technology for sharing information and training, yet meeting with colleagues still proves to be the best conduit for influencing and affecting improved performance. CPI facilitates roundtable meetings and conferences for the various campus capital program disciplines, and whenever feasible, conferences are scheduled with concurrent training sessions to maximize the

interaction between departments and minimize travel.

Legislative Activity

The Office of the President continues to monitor and influence legislation through its vigilance. In the legislative year 2015, Capital Programs monitored over 25 bills affecting UC's Capital Programs operations. The University actively worked with bill authors and sponsors to provide edits that avoided significant negative impacts to UC's operations, and at the same time addressed the authors' and sponsors' concerns. These proactive conversations are estimated to save the University millions of dollars annually.

Privatized Development

Since the mid-1980s, more than ninety²⁰ public-private partnerships (P3) using a variety of transaction structures have been developed, or are in planning to deliver facilities that meet campus needs. Projects include: instructional, office, research and clinical space; student housing, faculty for sale housing, hotels, recreational facilities, and parking structures.

Four key privatized project transaction structures (and the uses to which they are most applicable) have included:

- Ground Lease (applicable for uses that generate revenue from third party tenants/buyers);
- Ground Lease/Leaseback (applicable for uses in furtherance of the University's mission);
- Donor Development (donor controls project delivery); and
- Developer Build-to-Suit for purchase by UC on completion (also known as turnkey projects—typically for programmatic use not on UC land).

Given the University's success in executing privatized projects, privatized capital project delivery is often evaluated alongside traditional delivery methods, particularly for auxiliary uses. The privatized model has the potential to deliver facility design and construction quickly; however, the time to complete team selection and negotiate arrangements can offset some or all of these time savings. The privatized approach may allow the University to augment its capital delivery system and take advantage of benefits that may include shifting project construction and operating risks to P3 partners, thus enhancing long term flexibility for the developments. The main trade-off for these benefits is yielding a certain amount of control, including

²⁰Excluding most projects under \$1.0 million, and counting multiple-use or phased projects by use or phase.

control of real property, to a P3 partner. However, there are situations where yielding such control is appropriate in light of the benefits gained.

Donor development projects, where a donor assumes complete financial responsibility for funding and constructing a project, have now been employed at six UC campuses, at two agricultural field stations, and one natural reserve.

The Merced campus is currently soliciting proposals to enter into a public-private partnership to design, build, finance, operate and maintain (DBFOM) the upcoming *Merced 2020 Project*. The project intends to expand the campus by adding one million square feet of academic, administrative, research, recreational, student residence, and student services buildings to support enrollment growth from 6,600 students to 10,000 students by the year 2020. This DBFOM or “concessionaire” approach is new to UC and represents a potential P3 delivery model for other campus projects. The selected concessionaire will act as the design and construction developer, provide debt and equity financing and maintain the project for 35+ years.

University Controlled Insurance Program

The University Controlled Insurance Program (UCIP) provides general liability, excess liability, and workers’ compensation for all enrolled projects with construction budgets of over \$25 million. This insurance covers all enrolled contractors and sub-contractors. This Working Smarter Initiative began in January 2010. While this program is intended to provide some cost and risk avoidance and potential savings that can reduce the cost of construction; greater benefits are likely to be gained from higher insurance limits; dedicated per-project limits; ten year completed operations coverage for construction defects, and generally speaking, broader and more uniform coverage for the project. The program includes a safety component that provides enhanced and coordinated safety requirements on the project site.

UCIP Status as of June 30, 2015:

- 40 enrolled projects with a combined construction value of \$2.65 billion
- 19 completed projects
- 9 projects scheduled to complete in FY 2015-16
- 6 projects scheduled to start (add \$731 million construction value)
- 21 active projects currently enrolled in UCIP (scheduled for completion 2-3 years)

Of the nineteen projects that have completed construction, seven projects have been finalized with independent audits performed to determine cost avoidance, with the balance awaiting final UCIP close-out and audit. On the completed projects, total construction value of \$189 million, audits indicate a combined total cost avoidance or savings of \$2.8 million. Cost avoidance reflects the cost differential between UCIP and contractor-provided insurance. The independent audits indicated that the cost avoidance for an individual project ranged from .36 percent to 2.35 percent of construction value.

In addition to the projects enrolled in the UCIP, the UCSF Mission Bay Medical Center project is covered by a stand-alone UCIP that was placed separately in 2010. An additional \$30 million in work is being scheduled for this project in the next year bringing the UCIP total construction value to \$822 million. Preliminary close-out information on this project indicates a potential to achieve 1.5 percent of construction value cost avoidance.

VII. CONCLUSION

The 2015-25 *Capital Financial Plan* proposes approximately \$2.6 billion worth of new capital projects for funding in 2015-16.²¹ Over this current year and the next five years, the University has identified the need for \$13.3 billion in capital investment. The need for funding for State-eligible capital improvements, including seismic and life-safety projects and deferred maintenance, is likely to far outstrip the available resources.

At the same time, project costs currently are rising: the California construction market suffered long-term decrease in capacity in the recession, and now is expanding at an annual rate of 8 to 10 percent. The effect of inadequate capacity in a growing market has decreased bid competition and increased bid prices. The University continues to implement new or improved capital processes and practices to attract high-performing contractors and to help ensure quality construction at a fair price.

Through these efforts to maximize all available resources the University has been able to consistently invest in capital projects servicing our core mission. In FY 2014-15 fifty-two percent of the projects were dedicated to Education and General uses (Figure 1), for a total cost of \$2.5 billion, a six

²¹ See Attachment C for detail on projects proposed for 2015-16 and 2016-17

percent increase over the prior year. These are projects that include core instruction space, research space, academic and student support functions, infrastructure, and seismic/life safety are utilized by some of the world's best researchers and students in all of the disciplines at the campuses, national laboratories, medical centers and other research facilities around California. OP expects to continue to facilitate cross-campus collaboration through CPI trainings, and providing direct guidance to campus units involved in capital projects. It is within this expectation that we continue to support the mission of the University to provide the space to expand knowledge and promote research, while managing ways to do more with limited resources.

ALL ACTIVE MAJOR CAPITAL PROJECTS AT FY END - 2014 - 15

Cumulative Changes to Budget (dollars) and Schedule Subsequent to Project Approval

	Active Projects	Original Budget	Budget at End of 14 - 15	Inflation Adjusted Budget 14 - 15	Total # with Budget Changes	Changes to Original Budget	% Change from Original Budget	# with Schedule Changes	% with Schedule Changes	
ANR	2	\$3,936,000	\$3,936,000	\$3,936,000	0	\$0	0.0%	0	0.0%	
UC Berkeley	38	\$677,309,388	\$773,965,388	\$773,965,388	6	\$96,656,000	14.3%	11	28.9%	
UC Davis	29	\$407,614,663	\$409,601,663	\$409,601,663	2	\$1,987,000	0.1%	6	20.7%	
UC Irvine	15	\$276,042,200	\$278,318,200	\$278,318,200	1	\$2,276,000	0.8%	2	13.3%	
UC Los Angeles	58	\$1,032,567,000	\$1,023,649,000	\$1,023,649,000	8	(\$8,918,000)	(0.9%)	12	20.7%	
UC Merced	3	\$110,556,000	\$110,556,000	\$110,556,000	0	\$0	0.0%	0	0.0%	
UC Riverside	8	\$81,561,000	\$88,067,000	\$88,067,000	1	\$6,506,000	8.0%	2	25.0%	
UC San Diego	35	\$1,268,832,000	\$1,519,423,000	\$1,519,423,000	6	\$250,591,000	19.7%	4	11.4%	
UC San Francisco	29	\$234,781,000	\$239,125,000	\$239,125,000	1	\$4,344,000	1.9%	5	17.2%	
UC Santa Barbara	15	\$435,894,627	\$479,878,700	\$479,878,700	7	\$43,984,073	10.1%	5	33.3%	
UC Santa Cruz	16	\$220,088,000	\$253,793,000	\$253,793,000	6	\$33,705,000	15.3%	3	18.8%	
TOTALS	248	\$4,749,181,878	\$5,180,312,951	\$5,180,312,951	38	\$431,131,073	9.1%	50	20.2%	
<i>Inflation Adjustments:</i>				\$0						
BUDGET CHANGES										
Reduced	4									
Increased	34									
SCHEDULE										
On Schedule	198									
Schedule Changed	50									
	State	26	\$878,211,000	\$950,450,000	\$950,450,000					
	Non-State	222	\$3,870,970,878	\$4,229,862,951	\$4,229,862,951					
TOTALS		248	\$4,749,181,878	\$5,180,312,951	\$5,180,312,951	38	\$431,131,073	9.1%	50	20.2%

PROJECT			FUND		TYPE and USE		BUDGET			SCHEDULE			COMMENTS
Campus	PAN	PROJECT NAME	State	Non-State	Primary Use	Type	Total Original Budget	Cumulative Augments or Savings	Total with Adjustments	Approved Substantial Completion	Schedule Delays Over 90 Days	Project reviewed via Delegated Process	
BERKELEY													
BK	912259	Berkeley Art Museum and Pacific Film Archive Seismic Replacement		X	Cultural	Reno	\$95,000,000	\$17,000,000	\$112,000,000	3/11/15	10/30/15	143	Sub-contractor delays on critical systems
BK	912629	Berkeley Way West (Tolman Seismic Replacement)	X		Classroom/Office	Infra	\$185,000,000		\$185,000,000	10/31/17	10/31/17		
BK	912605	Jacobs Hall (Soda Addition)		X	Laboratory/Hospital	New	\$23,994,000		\$23,994,000	8/27/15	5/1/16	158	No delays in 14/15
BK	912314	LBL-Computational Research & Theory		X	Laboratory/Hospital	New	\$90,444,000	\$43,219,000	\$133,663,000	5/31/11	12/2/15	1556	\$18M budget augmentation and 150 days additional delay in 14/15 to meet DOE needs for High Performance Computing, and new Federal electrical safety standards
BK	912562	Lower Sproul Improvements		X	Student Life	Reno	\$30,000,000		\$30,000,000	6/10/15	10/10/15	32	Initial demolition and construction delayed at students' request
BK	912520	Lower Sproul Projects		X	Student Life	New	\$193,000,000		\$193,000,000	11/30/14	8/5/15	158	No delays in 14/15
BK	912643	Moffitt Library 4th and 5th Floor Renovation		X	Classroom/Office	Reno	\$14,400,000		\$14,400,000	8/1/16	8/1/16		
DAVIS													
DV	952310	Chemistry Seismic and Life Safety Corrections	X		Laboratory/Hospital	Reno	\$33,900,000		\$33,900,000	3/1/17	12/1/17	185	Construction was paused to coordinate with other work occurring in the building
DV	9559040	Hospital Seismic Upgrade Stair Tower & Exit		X	Laboratory/Hospital	Infra	\$12,945,000		\$12,945,000	7/1/18	7/1/18		
DV	952270	International Complex Phase 1		X	Classroom/Office	New	\$28,521,000	\$1,287,000	\$29,808,000	7/1/16	7/1/16		Augment resulted from higher D/B proposals
DV	952110	Jan Shrem and Maria Manetti Shrem Museum of Art		X	Cultural	New	\$30,000,000		\$30,000,000	9/1/16	9/1/16		
DV	952410	Large Lecture Hall		X	Classroom/Office	New	\$22,000,000		\$22,000,000	12/1/17	12/1/17		
DV	9559400	Main Hospital Seismic Compliance University Tower 1		X	Laboratory/Hospital	Infra	\$13,603,000		\$13,603,000	4/1/17	10/10/15		
DV	952120	Memorial Union Renewal		X	Student Life	Reno	\$23,446,000		\$23,446,000	7/1/16	7/1/16		
DV	9559910	MHSC - 2nd Floor Hospitalists		X	Laboratory/Hospital	Combo	\$10,779,000		\$10,779,000	4/1/17	4/1/17		
DV	9559000	MHSC - Children's Surgery 3rd Floor		X	Laboratory/Hospital	Combo	\$28,400,000		\$28,400,000	8/1/17	8/1/17		
DV	932160	Music Instruction & Recital Building (Pitzer Center)	X		Cultural	New	\$14,264,000		\$14,264,000	9/15/15	5/1/17	504	Design/Build team did not meet contractual deadline
DV	952300	Tercero Student Housing Phase 4		X	Housing/Dining	New	\$59,120,000		\$59,120,000	5/1/17	5/1/17		
DV	952290	Veterinary Medicine Student Services and Administration Center		X	Laboratory/Hospital	New	\$27,933,000		\$27,933,000	11/1/16	9/1/16		
DV	951860	Walker Hall Renewal and Seismic Corrections	X		Classroom/Office	Reno	\$31,157,000		\$31,157,000	8/1/17	1/1/18		

PROJECT			FUND	TYPE and USE		BUDGET			SCHEDULE			COMMENTS	
Campus	PAN	PROJECT NAME	State	Non-State	Primary Use	Type	Total Original Budget	Cumulative Augments or Savings	Total with Adjustments	Approved Substantial Completion	Schedule Delays Over 90 Days	Project reviewed via Delegated Process	
												<input type="checkbox"/>	
IRVINE													
IR	994014	Chao Comprehensive Digestive Disease Center Expansion		X	Laboratory/Hospital	Combo	\$17,500,000	\$2,276,000	\$19,776,000	7/31/14	6/30/17	975	Building occupants could not be relocated, and work had to be rescheduled around existing operations, resulting in augments and delays
IR	998611	Fire and Life Safety Improvements	X		Life Safety	Infra	\$34,290,000		\$34,290,000	6/30/19	6/30/19		
IR	996296	Mesa Court Expansion		X	Housing/Dining		\$133,757,000		\$133,757,000	8/31/16	8/31/16		
IR	990513	Primary Electrical Improvements Step 4	X		Infrastructure	Infra	\$19,462,000		\$19,462,000	8/10/17	8/10/17		
IR	990003	University Extension Classroom Building		X	Classroom/Office	New	\$52,253,000		\$52,253,000	11/1/16	11/1/16		
LOS ANGELES													
LA	947285	Basketball Practice Facility		X	Athletics	New	\$35,000,000		\$35,000,000	12/31/17	12/31/17		
LA	948909	CHS - SOM West Seismic Renovation	X		Life Safety	Reno	\$40,000,000		\$40,000,000	9/30/17	9/30/17		
LA	948943	CHS Seismic Correction and Fire Safety	X		Life Safety	Infra	\$52,155,000		\$52,155,000	11/30/16	12/31/16		
LA	945920	CHS South Tower Seismic Renovation		X	Life Safety	Reno	\$219,902,000	(\$16,612,000)	\$203,290,000	12/31/14	6/12/15	73	Original budget includes a standard cost rise increase (CCCI) of \$9.5M from FY10/11.
LA	940250	Engineering VI - Phase 1		X	Laboratory/Hospital	New	\$53,000,000	\$1,359,000	\$54,359,000	9/30/14	6/12/15	165	Delays from initial budget augmentation/scope adjustment after receipt of high bids, 13/14 augmentation reduced from \$4.5M to \$1.359M
LA	940252	Engineering VI - Phase 2		X	Laboratory/Hospital	New	\$72,700,000		\$72,700,000	9/30/17	9/30/17		
LA	943971	Football Performance Center		X	Athletics	New	\$50,000,000	\$6,000,000	\$56,000,000	11/30/17	11/30/17		Scope enhancements associated with additional donor gifts
LA	945905	Jules Stein Seismic Correction and Program Improvements	X		Laboratory/Hospital	Reno	\$57,000,000		\$57,000,000	9/30/16	9/30/16		
LA	946375	Luskin Conference and Guest Center		X	Housing/Dining	New	\$162,425,000		\$162,425,000	6/30/16	6/30/16		
LA	948532	Saxon Suites Renovation		X	Housing/Dining	Combo	\$31,970,000		\$31,970,000	9/30/15	9/30/15		
LA	948224	SMUMC MNP A-Level Medical Surgical Unit Renovation	X		Laboratory/Hospital	Reno	\$15,942,000		\$15,942,000	10/31/16	10/31/16		
LA	944020	Teaching and Learning Center for Health Sciences		X	Classroom/Office	New	\$104,700,000		\$104,700,000	8/31/16	8/31/16		
LA	944036	Telemedicine and PRIME Facilities Phase 2	X		Laboratory/Hospital	Reno	\$25,300,000		\$25,300,000	12/31/11	3/30/16	1461	Construction completed 6/1/15. Equipment phase still in progress so project remains 'active'

PROJECT			FUND		TYPE and USE		BUDGET			SCHEDULE			COMMENTS
Campus	PAN	PROJECT NAME	State	Non-State	Primary Use	Type	Total Original Budget	Cumulative Augments or Savings	Total with Adjustments	Approved Substantial Completion		Schedule Delays Over 90 Days	Project reviewed via Delegated Process
													<input type="checkbox"/>
MERCED													
MC	900310	Central Plant Completion/Telecom Reliability Upgrade		X	Infrastructure	Reno	\$16,583,000		\$16,583,000	2/28/16	4/30/16		
MC	900290	Classroom and Academic Office Building	X		Classroom/Office	New	\$53,973,000		\$53,973,000	4/30/16	7/31/16		
MC	900320	Downtown Center		X	Classroom/Office	New	\$40,000,000		\$40,000,000	9/1/17	9/1/17		
RIVERSIDE													
RV	950534	BCOE Wet Labs	X		Laboratory/Hospital	Reno	\$10,000,000		\$10,000,000	12/31/16	12/31/16		
RV	950456	Environmental Health & Safety Expansion	X		Corp Yard	New	\$11,964,000	\$6,506,000	\$18,470,000	2/28/11	2/28/16	1736	No delays or augments in 14/15
RV	956366	Lothian Seismic Upgrades		X	Life Safety	Reno	\$11,630,000		\$11,630,000	9/5/16	9/1/16		
RV	950511	Pierce Hall Infrastructure Improvements	X		Infrastructure	Reno	\$34,680,000		\$34,680,000	8/31/18	8/31/18		
SAN DIEGO													
SD	966176	Campus Life Safety Improvements	X		Life Safety	Infra	\$51,055,000		\$51,055,000	3/1/18	3/1/18		
SD	964710	Clinical and Translational Research Institute Building		X	Laboratory/Hospital	New	\$269,000,000	\$5,188,000	\$274,188,000	7/31/15	1/31/16	94	No delays or augments in 14/15
SD	966619	East Campus Parking Structure 2		X	Parking	New	\$29,000,000		\$29,000,000	3/29/16	12/31/15		
SD	963990	Nimitz Marine Facility Pier Replacement	X		Infrastructure	New	\$25,053,000		\$25,053,000	12/31/15	1/31/16		
SD	964840	Outpatient Pavilion		X	Laboratory/Hospital	New	\$140,000,000		\$140,000,000	4/30/17	4/30/17		
SD	964580	UCSD Medical Center East Campus Bed Tower		X	Laboratory/Hospital	Combo	\$663,800,000	\$241,660,000	\$905,460,000	12/31/16	7/31/18	487	Campus added scope to better meet regional needs including Anatomic Pathology Lab; Cardiac Rehab; centralization of Nursing Admin space; renovation of pharmacy space and additional renovations in (e) hospital. Schedule extended to accomplish added
SD	966176	Campus Life Safety Improvements	X		Life Safety	Infra	\$51,055,000		\$51,055,000	3/1/18	3/1/18		
SD	966248	UCSDMC Hillcrest Main Operating Rooms HVAC Upgrade		X	Laboratory/Hospital	Infra	\$11,500,000		\$11,500,000	4/30/17	4/30/17		
SAN FRANCISCO													
SF	9002027	Clinical Sciences Building (CSB) Seismic Building	X		Laboratory/Hospital	Infra	\$91,468,000	\$4,344,000	\$95,812,000	7/31/17	7/31/17		Scope moved from future Univ Hall project into CSB project for construction efficiencies
SF	12560004	MB 4th Street Public Plaza		X	Infrastructure	Infra	\$13,645,000		\$13,645,000	6/2/14	6/12/14		
SF	12520408	MC M,L 7, 11, 12, 15 Nursing Unit Renovations		X	Laboratory/Hospital	Reno	\$32,317,000		\$32,317,000	12/31/16	12/31/16		

PROJECT			FUND		TYPE and USE		BUDGET			SCHEDULE			COMMENTS
Campus	PAN	PROJECT NAME	State	Non-State	Primary Use	Type	Total Original Budget	Cumulative Augments or Savings	Total with Adjustments	Approved Substantial Completion	Schedule Delays Over 90 Days	Project reviewed via Delegated Process	
SANTA BARBARA													
SB	981650A	Academic Support Facility	X		Classroom/Office	New	\$33,757,000		\$33,757,000	12/31/16	12/31/16		
SB	981650	Bioengineering Building		X	Laboratory/Hospital	New	\$47,884,000	\$10,601,000	\$58,485,000	2/30/17	5/1/17		
SB	981230	Davidson Library Addition and Renewal	X		Classroom/Office	Combo	\$59,600,000	\$18,343,000	\$77,943,000	1/30/15	11/1/15	185	No augment in 14/15. Completion was extended to include seismic retrofit of 8-story tower. Bidding was protracted by need to rebid multiple trades
SB	981740	Faculty Club Renovation and Guest House Addition		X	Housing/Dining	Combo	\$17,480,000		\$17,480,000	12/17/14	12/3/15	261	The project was delayed by incomplete drawings.
SB	986470	San Joaquin Apartments		X	Housing/Dining	New	\$175,000,000	\$7,544,000	\$182,544,000	8/30/16	12/29/16	31	Late construction start waiting for Coastal Commission approval. Augment added to include dining commons.
SB	986265	Sierra Madre Apartments		X	Housing/Dining	New	\$80,000,000	\$7,480,000	\$87,480,000	3/31/15	12/1/15	155	Campus estimating new completion date resulting from arson and fire delays
SANTA CRUZ													
SC	973395	Alterations for Academic Programs Phase 1		X	Laboratory/Hospital	Reno	\$25,988,000		\$25,988,000	7/31/17	7/31/17		
SC	970250	Coastal Biology Building	X		Laboratory/Hospital	New	\$72,742,000	\$6,580,000	\$79,322,000	8/1/16	4/30/17	182	Campus funds augmented project to cover high bids in competitive local market
SC	976120	Cogeneration Plant Replacement Phase 1		X	Infrastructure	New	\$26,046,000	\$11,054,000	\$37,100,000	4/30/14	7/7/15	343	During construction, PG&E(local utility) requested additional system modifications to prevent the campus from exporting power to the public utility.
SC	976401	Infill Apartments Repairs		X	Housing/Dining	Reno	\$32,982,000	\$10,458,000	\$43,440,000	5/15/15	7/24/15		
SC	970070	Life Safety Upgrades	X		Life Safety	Reno	\$10,201,000		\$10,201,000	1/31/18	1/31/18		
SC	973820	Telecommunications Infrastructure Improvements Phase A		X	Infrastructure	Infra	\$16,374,000		\$16,374,000	5/31/15	10/31/15		4 of 6 bid packages completed by 5/31/15. Unknown field conditions of 2 bid packages caused delays

Campus	Project	Program Category	Type	2015-16		2016-17		Total Project Budget (\$000s)
				CFP (\$000s)	Fund Source	CFP (\$000s)	Fund Source	
BERKELEY								
BK	2111 Bancroft Seismic Demolition	E&G	Infra			2,500	CF	2,500
BK	2223 Fulton Seismic Demolition	E&G	Infra	3,000	CF			3,000
BK	Aquatics Phase 2 New Construction	AUXIL	New			8,000	GF	8,000
BK	Architecture and Engineering Building Seismic Demolition	E&G	Infra			750	CF	750
BK	Southside Student Residences	AUXIL	New		PR			PR
BK	Wheeler Hall: Capital Renewal	E&G	Infra	19,400	SG			20,500
DAVIS								
DV	2015 Critical Infrastructure Projects	E&G	Infra	14,000	EF			14,000
DV	225 Hopkins Road	E&G	Reno		PR			PR
DV	Activities and Recreation Center Expansion	AUXIL	Reno	5,000	AR			15,000
				10,000	EF			
DV	Administrative Support Building 2nd Floor Renovations (Sacramento Campus)	E&G	Reno	5,075	HR			9,150
				3,275	CF			
DV	Cage Wash Facility	E&G	New	15,000	EF			15,000
DV	Central Plant Boiler Replacement	E&G	Infra	14,000	EF			14,000
DV	Chemistry Seismic and Life Safety Improvements	E&G	Reno	31,076	SG			34,558
DV	Cruess Hall Pilot Plant Expansion	E&G	Reno	17,000	EF			17,000
DV	Deferred Maintenance	E&G	Reno	15,000	EF	15,000	EF	90,000
DV	Emergency Power Upgrade Phase 2	MC	Infra			12,500	EF	12,500
DV	Engineering Student Design Center	E&G	Combo	15,000	GF			15,000
DV	Facility for Distilled Beverage Science	E&G	New	7,600	GF			7,600
DV	Freeborn Hall Renewal	AUXIL	New	18,000	EF			25,000
				7,000	AR			
DV	Haring Hall Safety Improvements and Building Renewal Phase 1	E&G	Reno			50,000	EF	50,000
DV	Health Sciences Education Expansion Phase 1 (Betty Irene Moore Hall) (Sacramento Campus)	E&G	New	12,300	GF			51,584
				35,184	EF			
				4,100	CF			
DV	Hospital East 7 Reactivation Project	MC	Combo	8,000	HR			8,000
DV	Intercollegiate Athletics Initiatives	AUXIL	Combo	4,500	AR	1,500	GF	37,000
				5,000	GF			
DV	La Rue Bridge Renewal	E&G	Infra	1,500	CF			6,700
				5,200	FG			
DV	Large Lecture Hall	E&G	New	19,745	EF	259	EF	22,000
DV	Main Hospital East 2 and 3 Pulmonary and GI Remodel	MC	Reno	7,200	HR			7,200
DV	Natural History Museum	E&G	New	32,000	GF			37,000
				5,000	EF			
DV	North Addition Office Building	MC	New	87,500	EF			87,500
DV	Orchard Park Renewal or Redevelopment	AUXIL	New	48,450	EF			57,000
				8,550	AR			
DV	Pavilion 1st Floor 3T MRI Installation	MC	Reno	6,600	EF			6,600
DV	Pavilion 1st Floor Intra-operative MRI Installation	MC	Combo			20,000	EF	20,000
DV	Physical, Medicine & Rehabilitation Project	MC	Reno			15,000	HR	15,000
DV	Recreation Pool Renovation	AUXIL	Reno			10,000	AR	10,000
DV	Seismic Corrections	E&G	Infra	20,000	EF			20,000
DV	Silo North Phase 2	AUXIL	Reno			10,000	EF	10,000
DV	Skills Lab (Sacramento Campus)	E&G	Combo			5,000	CF	5,000
DV	Steam Distribution Improvements Phase 1	E&G	Infra	15,000	EF			15,000
DV	UC Davis Institute for Regenerative Cures Phase 5 (Sacramento Campus)	E&G	Reno	5,000	CF			5,000
DV	UCDMC Bed Tower	MC	New			12,000	HR	750,000
DV	University Tower 2nd Floor Operating Rooms Remodel	MC	Reno	19,900	EF			19,900
DV	University Tower Basement Central Processing Unit	MC	Reno	5,000	HR			5,000
DV	Veterinary Medical Center	E&G	Combo	11,600	GF	198,000	GF	445,600
						25,000	CF	
DV	Webster Hall Replacement	AUXIL	New			40,000	EF	50,000
						10,000	AR	
DV	West Village Phase 1B Infrastructure	AUXIL	New	1,000	EF			1,000
DV	West Village Phase 1B Student Housing	AUXIL	New				PR	-
DV	West Village Phase 1B Faculty/Staff For-Rent Homes	AUXIL	New	27,000	EF			27,000
DV	West Village Phase 1B Faculty/Staff For-Sale Homes	AUXIL	New	9,500	EF			78,000
				68,500	CF			

2015-17 CAPITAL PROJECTS LOOK-AHEAD LIST

ATTACHMENT C

Campus	Project	Program Category	Type	2015-16		2016-17		Total Project Budget (\$000s)
				CFP (\$000s)	Fund Source	CFP (\$000s)	Fund Source	
IRVINE								
IR	Beall Center Expansion and Renovation	E&G	Combo			6,000	GF	6,000
IR	Beckman Laser Expansion and Renovation	E&G	Combo	25,000	GF			25,000
IR	Biological Sciences 3 1st Floor Renovation	E&G	Reno			10,000	GF	10,000
IR	Capital Renewal and Infrastructure Improvements Program Phase 2	E&G	Infra	32,000	EF			32,000
IR	Child Development Center	E&G	New			13,000	GF	13,000
IR	Classroom/Office Building	E&G	New	60,000	EF			65,000
				5,000	CF			
IR	Convergence Science Building	E&G	New			225,000	GF	225,000
IR	Douglas Hospital 3rd Floor Inpatient Bed Expansion & Morgue to Basement	MC	Reno			27,560	EF	27,560
IR	Douglas Hospital 4th Floor Inpatient Bed Expansion	MC	Reno	15,000	HR			15,000
IR	Electrical Plant and Substation B81A Replacement	MC	Infra			33,200	HR	33,200
IR	Facilities Management/Campus Services Relocation	E&G	New				PR	PR
IR	Fire and Life Safety Improvements Phase 1	E&G	Infra	34,290	SG			34,290
IR	Gavin Herbert Eye Institute Surgery Expansion	MC	Reno	5,300	HR			5,300
IR	Health Sciences Parking Lot Expansion	AUXIL	Infra	5,400	EF			5,400
IR	Law Building	E&G	New			155,000	GF	200,000
						45,000	EF	
IR	Neuroimaging Facilities Improvements	E&G	Reno	15,000	EF			20,000
				5,000	CF			
IR	North Campus Redevelopment	AUXIL	New				PR	PR
IR	Nursing/Allied Health Building	E&G	New	40,000	GF			60,000
				20,000	EF			
IR	On-Campus Hotel	AUXIL	New		PR			PR
IR	Outpatient Clinical Center	MC	New			51,500	GF	51,500
IR	Sciences Instruction & Research Building 1	E&G	New	125,000	EF			125,000
IR	Statewide Energy Partnership (SEP) Program	E&G	Infra	10,000	EF			10,000
IR	Student Center Expansion	AUXIL	Combo			25,000	EF	25,000
IR	Student Wellness Services Building	E&G	New	40,000	EF			65,000
				25,000	GF			
IR	TEM Facility Engineering Hall Renovation	E&G	Reno	15,000	EF			16,430
				1,430	CF			
IR	UCI Center for Living Peace	E&G	New		DD			DD
IR	UCIMC Building Demolition & Site Preparation	MC	Infra			8,000	HR	8,000
IR	UCIMC Cancer Center 4th Floor Clinic Remodel	MC	Reno			5,200	HR	5,200
IR	UCIMC Chiller Plant Expansion	MC	Infra	33,708	EF			33,708
IR	UCIMC Emergency Power Upgrades	MC	Infra	8,000	HR			8,000
IR	UCIMC Facilities Building	MC	New	8,400	HR			8,400
IR	UCIMC Medical Center Drive/Dawn Way Improvements	MC	Infra			8,000	HR	8,000
IR	UCIMC Office Building	MC	New			62,158	EF	69,158
						7,000	GF	
LOS ANGELES								
LA	Anderson School of Management Expansion	E&G	Combo	70,000	GF			70,000
LA	Capital Equipment Replacement Lease Funding	MC	New	75,000	HR	75,000	HR	550,000
LA	CHS - NPI Seismic Renovation (Planning & Working Drawings in 2015-16)	E&G	Reno	3,000	CF			53,000
LA	CHS Emergency Generator Replacement	E&G	Infra	10,000	EF			10,000
LA	CHS South Tower Post-Occupancy Improvements (Levels 2-10)	E&G	Reno	70,000	EF			70,000
LA	CHS South Tower Post-Occupancy Improvements (Levels A&B)	MC	Reno	70,000	EF			70,000
LA	Electrical Distribution System Expansion Step 6C	E&G	Infra	4,500	SG			9,000
		E&G	Infra	4,500	CF			
LA	Franz Tower Seismic Correction (Planning & Working Drawings in 2015-16)	E&G	Reno	3,000	CF			53,000
LA	Margan Apartments Redevelopment	AUXIL	New	39,000	EF			39,000
LA	North Campus Infrastructure Improvements	E&G	Infra	20,000	EF			20,000
LA	Real Estate Acquisition No. 1 (undergraduate student apartments)	AUXIL	New	5,000	AR			25,000
				20,000	EF			
LA	Real Estate Acquisition No. 2 (undergraduate student apartments)	AUXIL	New			5,000	AR	25,000
						20,000	EF	
LA	RRUMC 5th Floor NICU Expansion	MC	Reno	14,200	EF			14,200
LA	RRUMC Bed Tower	MC	Reno			500,000	EF	500,000
LA	SMH Office Building	MC	New			70,000	EF	70,000
LA	UCLA Extension Seismic Renovation	E&G	Reno	30,000	CF			59,675
				29,675	EF			

Campus	Project	Program Category	Type	2015-16		2016-17		Total Project Budget (\$000s)
				CFP (\$000s)	Fund Source	CFP (\$000s)	Fund Source	
MERCED (exclusive of 2020 Project)								
MC	Classroom and Academic Office Building <i>(Equipment in 2015-16)</i>	E&G	New	4,805	SG			54,469
MC	Downtown Center	E&G	New	41,998	EF			45,116
				3,118	CF			
MC	IT Next Generation Network (Phases 1-4)	E&G	New	3,000	EF	3,000	EF	10,000
MC	Science and Engineering Building 1 Space Renovations	E&G	Reno			2,000	EF	2,000
RIVERSIDE								
RV	Barn Expansion	AUXIL	Reno	1,490	AR			28,720
				26,123	EF			
				1,000	CF			
RV	Batchelor Hall Building Systems Renewal	E&G	Infra	17,777	SG			18,179
RV	Batchelor Hall Interior Improvements	E&G	Reno	1,500	EF	13,500	EF	15,000
RV	Campus Events Center	AUXIL	New		PR			PR
RV	Deferred Maintenance	E&G	New	15,000	EF	15,000	EF	60,000
RV	Engineering Building Unit 3 <i>(Planning in 2016-17)</i>	AUXIL	New			3,700	CF	86,000
RV	Environmental Health and Safety Expansion <i>(Equipment in 2015-16)</i>	E&G	New	369	SG			21,051
RV	Fawcett Laboratory Project <i>(Design in 2015-16 & 2016-17)</i>	E&G	New	2,980	CF	3,650	CF	66,300
RV	Highlander Hall Replacement	E&G	New			40,000	EF	40,000
							PR	PR
RV	Multidisciplinary Research Building 1	E&G	New	6,890	EF	143,110	EF	150,000
RV	Pierce Hall Improvements	E&G	Reno	34,680	SG			34,680
RV	Pierce Hall Interior Improvements	E&G	Reno	1,500	EF	13,500	EF	15,000
RV	School of Business Administration	E&G	New			38,850	GF	38,850
RV	School of Medicine Research Building First Floor Fit Out	E&G	Reno	9,400	EF			9,400
RV	Transit Center	AUXIL	Infra	300	CF	5,800	CF	6,100
SAN DIEGO								
SD	Alumni Building	E&G	New			45,000	EF	65,000
						20,000	GF	
SD	Biological and Physical Sciences Building	E&G	New	55,800	SG			115,500
				50,600	EF			
				4,600	CF			
SD	East Campus Chilled Water Improvements	E&G	Infra	7,000	CF			7,000
SD	East Campus Housing Redevelopment	AUXIL	New			420,000	EF	445,000
						25,000	AR	
SD	East Campus Main 69kV/12kV Transformers 31 and 32 Replacement	E&G	Infra	11,000	CF			11,000
SD	East Campus Parking Structure 2 <i>(Equipment in 2015-16)</i>	AUXIL	New	3,516	CF			32,516
SD	Engineering Interdisciplinary Facility 1	E&G	New			37,000	EF	75,000
						38,000	GF	
SD	Fire Station	E&G	New	15,000	CF			15,000
SD	Hubbs Hall Renewal <i>(Design in 2015-16)</i>	E&G	Reno	8,000	CF			8,000
SD	Land Acquisition A	E&G	Infra			25,000	CF	25,000
SD	Land Acquisition B	E&G	Infra			5,000	CF	5,000
SD	Osler Parking Structure	AUXIL	New	50,000	EF			50,000
SD	Projects Related to San Diego Transportation Projects	E&G	Infra		PR		PR	PR
SD	Residential Facility for Patients and Families	MC	New				PR	PR
SD	Single Undergraduate Housing	AUXIL	New			150,400	EF	160,400
						10,000	AR	
SD	SIO Building D Renovations	E&G	Reno	20,000	EF			25,000
				5,000	GF			
SD	SIO Emergency Power Upgrades	E&G	Infra	10,500	CF			10,500
SD	SIO Seawater System Replacement	E&G	Infra	25,000	EF			25,000
SD	Social Sciences Replacement Building	E&G	New			40,000	EF	60,000
						20,000	GF	
SD	Thornton Renovations 1	MC	Reno	35,000	HR			35,000
SD	Thornton Renovations 2	MC	Reno			10,000	HR	20,000
						10,000	GF	
SD	Tuolumne Apartments Renewal	AUXIL	Reno	30,000	AR			30,000
SD	West Campus Chilled Water Improvements	E&G	Infra	9,000	CF			9,000

Campus	Project	Program Category	Type	2015-16		2016-17		Total Project Budget (\$000s)
				CFP (\$000s)	Fund Source	CFP (\$000s)	Fund Source	
SAN FRANCISCO								
SF	ACC 7 Transplant Remodel	MC	Reno	6,350	HR			12,700
				6,350	GF			
SF	Clinical Sciences Building (CSB) Seismic Retrofit and Renovation	E&G	Infra	21,735	SG			95,812
			Infra	57,752	EF			
			Infra	8,309	CF			
SF	Long 6 - 32 Bed Acute Care Unit	MC	Reno			29,200	HR	29,200
SF	Long Hospital 4th Floor Hybrid Operating Room	MC	Reno	15,119	HR			15,119
SF	Mission Bay East Campus Phase 1 (Block 33)	E&G	New	12,300	CF	159,130	EF	237,130
						5,700	CF	
						60,000	GF	
SF	Mission Bay Housing	AUXIL	New			227,000	EF	227,000
SF	Mission Bay North Campus Surface Parking	AUXIL	New			6,500	EF	6,500
SF	Mission Bay Northwest Campus Infrastructure	E&G	New	10,000	CF			10,000
SF	Mission Bay Research Building (Block 23A)	E&G	New			160,700	EF	335,700
			New			175,000	GF	
SF	Moffitt / Long 3 Radiology Imaging, IR, Waiting & Patient Holding Remodel	MC	Reno	18,700	HR			18,700
SF	Moffitt / Long 3 Radiology XMR MRI & Intervention	MC	Reno			7,783	HR	7,783
SF	Moffitt / Long 4 Operating Room Upgrade	MC	Reno	13,000	HR			13,000
SF	Mount Zion Hellman Decant	MC	Reno			8,500	HR	8,500
SF	Parnassus Library Renewal	E&G	Infra			33,700	CF	33,700
SF	Parnassus Streetscape Phase 1	E&G	New			7,400	CF	7,400
SF	Parnassus Utility Relocation Phase 1	E&G	Infra	7,050	CF			7,050
SF	Parnassus Utility Relocation Phase 2	E&G	Infra	8,500	CF			8,500
SF	Precision Cancer Medicine Building at Mission Bay	MC	New	16,600	CF	75,000	GF	250,000
						158,400	CF	
SF	Psychiatry Building	E&G	New				PR	PR
SF	SFGH Academic Building Seismic Program	E&G	New	11,430	CF	176,173	EF	187,603
SF	UC Hall Seismic Program	E&G	Infra	11,000	CF	21,183	CF	182,983
						150,800	EF	
SANTA BARBARA								
SB	Aquatics Center	AUXIL	New	18,000	GF			18,000
SB	Bioengineering Building (Equipment in 2016-17)	E&G	New			830	CF	58,485
						800	EF	
SB	Campbell Hall Replacement Building	E&G	New	15,787	SG			31,574
				15,787	CF			
SB	Jeff and Judy Henley Hall -Institute for Energy Efficiency Building	E&G	New	50,000	GF			51,500
				1,500	CF			
SB	North Campus Faculty Housing Phase IV	AUXIL	New			16,000	EF	16,000
SB	North Campus Open Space	E&G	Reno	10,000	OG			10,000
SB	Ocean Science Education Building (OSEB) Phase 2	E&G	Combo	20,000	GF			20,000

Campus	Project	Program Category	Type	2015-16		2016-17		Total Project Budget (\$000s)
				CFP (\$000s)	Fund Source	CFP (\$000s)	Fund Source	
SANTA CRUZ								
SC	Active Learning Classroom	E&G	Combo	6,600	CF			6,600
SC	Alterations for Academic Programs Phase 2	E&G	Reno			1,000	CF	21,000
SC	Chinquapin Road Parking Phase 1	AUXIL	Infra			100	AR	1,961
SC	Circulation and Infrastructure Extensions Phase 1	E&G	Infra			1,260	CF	21,000
SC	Coastal Biology Building (<i>Equipment in 2015-16</i>)	E&G	New	2,000	SG			80,222
SC	College 8 and Porter College Dining Expansion (<i>Design in 2016-17</i>)	AUXIL	Combo			3,000	AR	37,000
SC	Core East Electrical Infrastructure Improvements	E&G	Combo	224	CF	5,776	CF	6,000
SC	Crown College Residence Halls Major Maintenance	AUXIL	Reno	22,150	AR			44,300
				22,150	EF			
SC	Environmental Health and Safety Facility	E&G	New	19,437	SG			19,437
SC	Family Student Housing Major Maintenance	AUXIL	Reno			20,000	AR	20,000
SC	Instructional Facilities Code and Safety Upgrades	E&G	Reno	6,000	CF			6,000
SC	Off-Campus SV 1 & UNEX Relocation (Acquisition)	E&G	New		PR			PR
SC	Social Sciences 3	E&G	New			3,300	CF	59,000
SC	Statewide Energy Partnership (SEP) Program	E&G	Reno	1,000	CF			12,000
				3,000	EF			
SC	Student Housing Telecommunications Infrastructure Upgrades Phase 1	AUXIL	Infra	8,700	AR			8,700
SC	Student Housing Telecommunications Infrastructure Upgrades Phase 2	AUXIL	Infra			7,000	AR	7,000
SC	Student Housing West Phase 1	AUXIL	New			19,750	AR	154,500
						134,750	EF	
SC	Student Life Seismic Corrections Phase 2B	AUXIL	Infra	2,114	UR			6,351
			Infra	4,237	CF			
SC	Telecommunications Infrastructure Improvements Phase B	E&G	Infra	12,623	SG			14,600
				263	AR			
				150	UR			
SC	Telecommunications Infrastructure Improvements Phase C	E&G	Infra	391	CF	409	CF	9,401
				71	AR	59	AR	
SC	Telecommunications Infrastructure Improvements Phase D	E&G	Infra			27	AR	7,128
						132	UR	
						403	CF	
AGRICULTURE & NATURAL RESOURCES, DIVISION								
ANR	Intermountain REC Field Laboratory and Multipurpose Facility	E&G	New	1,786	SG			2,086
				100	GF			
ANR	REC Facilities Renewal and Improvements	E&G	Reno	200	GF			200

ABBREVIATIONS			
AR	Auxiliary Reserves	GF	Gift Funds
AUXIL	Auxiliary (Program Category)	HR	Hospital Reserves
CF	Campus Funds	MC	Medical Center (Program Category)
Combo	Combination of New Construction and Renovation (Type)	New	New Construction (Type)
DD	Donor Development	OG	Other Grant
E&G	Education & General (Program Category)	PR	Privatized Development (<i>see note below</i>)
EF	External Finance	Reno	Renovation (Type)
FG	Federal Grant	SG	General Funds (State)
Infra	Infrastructure (Type)	UR	University Fee Reserves

Note Some projects have prior funding, or future funding beyond 2015/16. The total project budget reflects the complete project budget at this time.
 PR Any programmatic or auxiliary project constructed on or off campus to directly or indirectly support UC's mission where UC contracts with and relies on another entity to act as the developer of the project. Costs are paid out of operating budget.