



CAPITAL PROJECTS PROCESS

CAPITAL PROJECTS - DEFINITION

Capital Outlay Projects include new construction, alterations, additions, and improvements to existing structures or infrastructure.

CATEGORIES

Capital Outlay Projects are categorized along three dimensions: funding source, size (dollar amount), and whether or not they accommodate planned student capacity. These are explained further below.

Funding. Projects that are funded by appropriations of state tax revenues or other special legislative appropriations are "State funded." Projects that are funded with private donations, state enterprise funds (e.g. housing, parking, student union fees, etc.), auxiliary funds or other such sources are "Non-state funded." Although there is a distinction based on funding sources, all capital projects on state property are subject to state public works requirements.

Size/Cost. Projects that are estimated to cost less than \$400,000 are "Minor." Larger, more costly projects are "Major."

Student capacity. Each CSU campus has a planned number of Full Time Equivalent Students (FTES) that are projected to be accommodated there pursuant to a multi-year schedule. Capital projects that provide academic lecture and laboratory spaces for the planned FTES are considered "Capacity space." Capacity space can not exceed the campus planned FTES, and must be distributed among disciplines in accordance with campus academic projections. Space that does not directly accommodate the campus capacity for students (e.g. lab prep space, student activity facilities, offices, certain library functions and administrative space) are considered "Non-capacity."

The distinction between capacity and non-capacity spaces applies only to State-funded capital projects.

ADMINISTRATION

All Capital Projects fall under the general direction of the Vice President of Administration and Finance. Facilities Planning and Capital Projects (FPCP) has responsibility for administering all campus *major* capital outlay projects on behalf of the CSU Trustees and the State of California. Facility Services has responsibility for administering all campus *minor* capital outlay projects on behalf of the CSU Trustees and the State of California.

All capital outlay projects, regardless of size, require Chancellor's Office and/or CSU Board of Trustees review and approval.

Note: Projects that involve the painting or repair of existing structures or roads, regardless of cost, are classified as Special Repair projects and are managed by Facility Services and must adhere to state procurement requirements.

CONSISTENCY WITH THE CAMPUS MASTER PLAN

The Board of Trustees requires that each campus develop a physical Master Plan that shows existing and anticipated facilities needed to accommodate a specified enrollment at an estimated target date.

In accordance with the State University Administrative Manual (SUAM), each campus's master plan must reflect the space and infrastructure requirements not only of its academic programs, but also various non-academic auxiliary functions, whether state funded or not.

The Master Plan is the overarching planning guide for campus development, describing the general size, function and location of future projects. The Board of Trustees also requires each campus to develop and maintain a five-year Capital Improvement Program (CIP) that implements the Master Plan; the CIP must be updated annually.

Cal Poly's current Master Plan, approved by the Board of Trustees in 2001, set the course for construction over the next 20 years. The approved Master Plan was developed utilizing several other campus plans and reports that had implications on enrollment growth and on setting priorities among state funded space. These included the following:

- The Academic Senate Long-Range Planning Committee Report (1988)
- The University Strategic Plan
- The Cal Poly Plan
- College and unit strategic plans
- Dean's Enrollment Planning Advisory Committee (DEPAC) Report

The Master Plan includes long range enrollment predictions and assigns growth among the different colleges. In accordance with the University Strategic Plan, a significant portion of the growth is slated for professional and technical programs because of the polytechnic emphasis of this campus.

WORKING WITH PROJECT SPONSORS: EXPECTATIONS AND COORDINATION

The initiation of a capital outlay project requires the University to commit considerable resources to develop the project from concept to occupancy. Ideas are honed into actual projects with the expertise of FPCP staff who have experience with campus site constraints, building restrictions, realistic timelines, resource requirements, and the CSU approval process. Designing and building a capital project can be exciting albeit challenging. Development is a complex enterprise that rarely proceeds in linear fashion and that involves coordinating several dynamic variables. Thus, to be successful, this type of work requires significant discipline by all parties involved to help ensure that the project proceeds on schedule and within budget; delays in time and changes in scope almost inevitably translate into cost increases.

The Assistant Vice President for Administration and Finance together with the Associate Director of Facility Planning and Capital Projects and the Associate Vice President for Finance, participate in the initial planning stages on new projects to provide guidance and establish expectations and responsibilities of all parties with regard to time commitments, scheduling, scope, budget, fiscal resources, and approvals.

Over the course of the development process (outlined in more detail in the following sections), project scope and budget must be regularly reconciled with the funding that is actually available before the project can proceed to the next step. This information is documented and acknowledged in a "Letter of Understanding" (LOU) by both the project sponsor (the originating department, college or school) and the project manager assigned to the project by the FPCP. Changes in scope, budget, funding sources and schedule are also subject to review and approval by the Vice President for Administration and Finance or his/her designee. This maintains a common understanding and ensures the accountability of everyone involved. The Assistant Vice President for Administration and Finance must be continually apprised of significant issues that arise regarding scope, cost, funding and schedule, and is responsible for ensuring that the appropriate individuals have been

notified of the issues and any pending resolutions. This documentation and approval process serves to keep everyone informed.

PLANNING, DESIGNING AND BUDGETING FOR CAPITAL PROJECTS

The following describes the typical steps from initial planning to completion of the preliminary design for a capital project.

1. **Initial Planning.** The project sponsor (the originating department, college or school) requests an initial planning meeting with the Assistant Vice-President for Administration and Finance and the Associate Director of FPCP. The project sponsor must also notify the dean of the relevant college, the Vice-President of Administration and Finance, and the Provost, and obtain their concurrence to initiate the process.
 - a. The Assistant Vice-President for Administration and Finance and the Associate Director of FPCP provide guidance at that meeting and establish project expectations and follow-up responsibilities among the various parties. FPCP staff will be assigned to work with the project sponsor to help develop an initial project description and scope.
 - b. Depending on the scope and size of project, Administration and Finance (AFD) refers the proposed project to President's Executive Staff for consistency with the University's mission, and then, if approved, to the Master Plan Committee for compliance with the Campus Master Plan or to the Campus Planning Committee if it is not consistent with the Campus Master Plan.
 - c. The project sponsor works with AFD to develop a funding mechanism and business plan. Non-state funded projects may be funded as follows:
 - i. Cash on deposit
 - ii. Auxiliary or state auxiliary enterprise systemwide revenue bond funding
 - iii. Donor Funding
 - iv. Grant Funding
 - d. FPCP develops an initial project timeline identifying the project's critical path including required submission dates for CSU and Board of Trustees approvals.
2. **Preliminary Budget.** AFD works with the sponsoring department to develop a preliminary budget estimate. Project costs must be complete and realistic.

Project costs are made up of two primary components, soft costs and construction costs. Additionally, most major capital outlay projects will have a Group II equipment component. These are described further below.

Soft Costs

Soft costs include, but are not limited to, architectural and other design services; other professional services such as soils testing, environmental studies, plan check, peer review of plans and budgets; fire marshal review; the costs associated with on-campus project management services provided by FCPC, Facilities Services; Chancellor's office processing costs; and project construction management.

Sponsoring departments should be aware of the CSU and Cal Poly policy that costs for managing and processing capital projects incurred by FPCP and Facility Services, the costs of other campus administrative services, and those of the Chancellor's Office related to processing the project must all be covered by the project's funding.

For example, the CSU is the regulatory agency responsible for project permitting and building code compliance, and has delegated that responsibility to the campus building official. Cal Poly's campus building official is the Director of FCPC. The capital project budget, therefore, must include professional services costs associated with ensuring state regulations. Thus, the CSU approach to support these mandatory services is through "contract management fees" charged to each project.

Each project is assigned a Project Manager (FCPC staff for major projects; Facilities Services staff for minor projects; in some instance, however, contracts with outside consulting firms are used) who serves as the point of contact for the duration of the project and who works to keep the project within specifications, on schedule, and within budget. The Project Manager also keeps the sponsoring department apprised of the project's status. Project management responsibilities also include coordination with the CSU in acquiring necessary project approvals, project contracting, coordination with on-site contractors and service providers, and obtaining and overseeing quality assurance and building code inspection services.

Construction Costs

The construction cost component includes grading and site preparation, utility modifications or extensions, the building itself, and the installation of equipment integral to the building, such as air handling systems.

Group II Equipment (if applicable)

Group II equipment includes the detached equipment needed to ready the facility for occupancy, e.g. desks, chairs, work stations, lab equipment, ITS equipment, etc.

3. Preliminary Design phase funding and MOU with the Auxiliary. The sponsoring department next identifies the specific funds to be used for the Preliminary Design phase. If funds identified are held by the Auxiliary (which they often are for many large and complex projects), AFD will initiate a MOU with the Auxiliary for the funding of the Preliminary Design phase. The MOU describes the project, the scope of the work to be undertaken, its cost and specific source of funds.

Note: Projects that utilize both state and non-state funding are required to provide non-state funds for the design work related to the non-state portion of the building.

4. Preliminary Design. After the initial budget is developed and the specific funds identified and made available, FPCP begins the Preliminary Design phase of the project.
 - a. FPCP enters into a service agreement with consultants to complete a *Project Program* (usually 4-6 months). Programming typically includes a clarification of project goals; a site analysis considering topography, solar and wind orientations soils conditions, drainage, and other variables; basic design parameters and building dimensions; estimates of utility, mechanical and related systems needs; an initial site plan for the building, parking (if necessary), access and associated open spaces; 3-D massing studies; and an updated budget.
 - b. After completion of the Program Document, FPCP enters in a service agreement with an architect to complete the *Schematic Design* (usually 4-6 months). The Schematic Design includes a more refined site plan, floor plans and elevations; architectural renderings, and a more detailed cost estimate.
 - c. As soon as the project's scope and size is reasonably established, usually at the end of the program phase or early in the schematic design phase, FPCP enters into a service agreement for completion of the required California Environmental Quality

Act (CEQA) document (3-12 months depending on the CEQA requirement, and can be conducted simultaneously with the schematic design). Project sponsors must recognize that the environmental review may require specialized analyses not previously anticipated (e.g. traffic, archaeological, biological or geologic hazard assessments) and may result in “mitigation measures” that are intended to reduce environmental impacts but that can also change the scope, and cost, of the project. Furthermore, the CEQA process involves the general public and, if a project is perceived as controversial by the community, can result in delays due to public meetings and plan revisions, and even, in some cases, litigation.

- d. After the Schematic Design phase updated cost estimate is available, the project budget is adjusted and funding changes are identified, as necessary.
- e. The Schematic Design and CEQA document is presented to the Master Plan Committee, and other campus advisory groups as relevant to the project.
- f. The Master Plan Committee and other advisory groups forward their recommendations to the President and Campus Planning Committee, to endorse the schematic design and approve the CEQA document.
- g. If funds identified are held by the Auxiliary, or guaranteed by the Auxiliary as approved by the President, AFD will initiate a second MOU with the Auxiliary to fund the balance of the Project, including the working drawings and construction phases. The Guarantee becomes an obligation of the Auxiliary.
- h. FPCP works with the Chancellor’s Office to develop the CSU Board of Trustees agenda item for approval of the schematic design (3-4 months) and CEQA document.

Note: FPCP is responsible for initiating all project contracts, including professional services contracts, e.g. architects, design consultants, etc. Until such contracts have been executed, sponsoring departments may not contact service providers.

HOW A MAJOR CAPITAL PROJECT PROPOSAL GETS APPROVED

Master Plan. The proposed project must be included in the approved campus Master Plan. If it is not consistent with the Master Plan, the Master Plan must be revised before the project can be approved. Master Plan revisions can be considered “major” (for example, a wholly new project not shown on the current plan) or “minor” (for example, a change in location of a project that was anticipated in the current plan but at a different part of campus). Minor revisions are generally handled administratively at the staff level in the Chancellor’s Office.

Capital Improvement Program. As noted earlier, each year, Cal Poly submits a five-year CIP to the Board of Trustees. A proposed project must be listed in the current CIP for it to be approved.

COBCP. For each project in its CIP, Cal Poly prepares a Capital Outlay Budget Change Proposal (COBCP). The COBCP consists of projections of space needs and FTE generation, illustrated on forms provided by the Chancellor’s office and based on CSU-approved plans and formulas. Additionally, the campus completes a project “program” for the building that includes room types and configurations, square footage and cost estimates. Programs must comply with standards set by the CSU; for example, faculty offices are currently prescribed at a maximum of 110 square feet; lecture space can not exceed 15 square feet per student; etc.

State funded projects. CIPs and COBCPs for State funded projects that are approved by the CSU are submitted to the Department of Finance and the to the Legislative Analyst’s Office for review and approval. Thus, it is usually about 18 months before funds are actually available for an approved project. Typically a major capital project is funded every other year for each campus.

The Budget Act establishes time periods in which project funding must be encumbered and ultimately spent otherwise the funds revert to the State of California. Given this critical path, all participants in the process whether individuals or building advisory committees must devote adequate time and other resources to ensure the project spending schedule is met.

Non-State projects. Non-state funded projects must also be included in the Five-Year CIP submitted to the CSU. A Non-State funded project has much more flexibility in the final space configuration and use than a State Funded project however all capital outlay projects are governed by state laws and CSU policies. Perhaps the most critical component for a non-state project is the securing of adequate and timely funding. The following explains some of the key funding guidelines and constraints:

Funding for non-state projects must be identified before approvals can be given to proceed with the project. The Associate Vice President for Finance, under the direction of the Vice President for Administration and Finance is contacted early in the process to assist in determining funding options. Below are some of the constraints under which the University must work.

The University does not have the authority to borrow funds on the general credit of the state of California.

The University may not use Support appropriations (General Fund operating budget) to pay for Major Capital Outlay projects.

The only long term borrowing vehicle available to the University for capital projects is through the System-wide Revenue Bond Program (SRB) which utilizes auxiliary and state auxiliary enterprise revenue streams to finance construction of revenue generating self support projects. Capital projects for student housing, parking, student unions, etc. may be financed using the SRBP. Financing plans utilizing this program are developed by the Associate Vice President for Finance, approved by the Vice President for Administration and Finance, and forwarded to the Chancellor's Office for approval by the CSU Board of Trustees.

The University's Auxiliaries may loan or provide guarantees of funding; however, their capacity to do so is limited. This includes the Auxiliary's ability to provide cash flow for projects in advance of receipt of donor pledges. Given these limitations the President will determine the priority for use of Auxiliary resources based on recommendations from the Vice President for Administration and Finance in consultation with the Provost and the Auxiliary's Executive Director.

If a project utilizes both state appropriated capital outlay funds and non-state funds, all non-state funding must be in place at the time the state appropriates its portion of the project funding (typically at the beginning of the fiscal year). This ensures that the project can be completed within the State's prescribed timeframe.

If a capital project is fully donor funded, funding must be in place prior to submission to the Board of Trustees for Schematic Design approval.

For projects utilizing the SRB program, the Associate Vice President for Finance will develop a financing package for submission to the CSU Board of Trustees for approval.

Permits and CEQA. Depending on the nature of the project, its size and location, permits from various external agencies may be required. For example, in the Coastal Zone, Cal Poly must obtain a Coastal Development Permit from the Coastal Commission as part of the approval process. A more

common example on the main campus is approval from the US Army Corps of Engineers and related resource agencies for work that might affect streams or wetlands.

In addition to formal permits, most Capital Projects are subject to the California Environmental Quality Act. As noted earlier, under CEQA, the potential environmental impacts from development must be assessed. The type, size and location of the project will largely affect its environmental issues, which in turn determine the type of assessment required by the law. The CEQA assessment can take at least one year for complex or controversial projects. Thus, the CEQA process should be started as soon as the type, size, location and basic form of the project are known.

Working drawings, plan checks and construction. After funding is identified and made available, and the schematic design is approved, “working drawings” are developed. The working drawings are the plans upon which the actual construction will be based. The plans are checked by an outside entity (usually a firm under contract with the CSU for this purpose); in addition the plans are reviewed for compliance with the Americans with Disabilities Act, seismic safety, and fire safety requirements.

This phase of the design work, the follow up checks and revisions, along with the actual construction, takes approximately three to four years depending on project size.

Non State Capital Projects Process

	Item	Description
1	Project kick off meeting	<ul style="list-style-type: none"> ▪ Establish expectations ▪ Orientation to the process ▪ Identify project team
2	Initial Planning	<ul style="list-style-type: none"> ▪ Develop project description & scope ▪ Project Delivery method ▪ Budget or scope driven project ▪ Fiscal Feasibility incl. funding plan ▪ Schedule
3	Executive Approval	<ul style="list-style-type: none"> ▪ Consistent with the mission ▪ Consistent with Master Plan
4	Letter of Understanding (LOU)	<ul style="list-style-type: none"> ▪ Document the project as approved incl. budget, scope, and schedule. ▪ Designate project funds as agreed, i.e. restrict use for project purposes only
5	Programming and Conceptual Design	<ul style="list-style-type: none"> ▪ Determine programming scope ▪ Select a programming consultant ▪ Determine cost for services ▪ Project sponsor identifies funding source ▪ FPCP enters into service agreement for programming ▪ Project cost estimate based on program and conceptual design.
6	Validate Funding Plan, Project Scope, and Schedule	<ul style="list-style-type: none"> ▪ Compare initial plan with program phase results ▪ Reconcile before moving to schematic design ▪ Update LOU
7	Preliminary Design – Funding	<ul style="list-style-type: none"> ▪ Project sponsor identifies funding for the preliminary design phase tasks. ▪ Update LOU
8	Preliminary Design – Schematics	<ul style="list-style-type: none"> ▪ Determine preliminary design service cost estimate ▪ Selection of a design consultant ▪ FPCP enters into service agreement for design service
9	Preliminary Design - CEQA	<ul style="list-style-type: none"> ▪ Selection of CEQA consultant ▪ Determine cost for services ▪ FPCP enters into service agreement for CEQA doc.
10	Preliminary Design – Cost Estimate	<ul style="list-style-type: none"> ▪ Project cost estimate based on schematic design ▪ Compare initial plan with schematic design results, incl. budget, scope, and schedule. ▪ Reconcile before moving forward (adjust scope or funding, if necessary) ▪ Update LOU

11	Review Schematic Design & Environmental Assessment	<ul style="list-style-type: none"> ▪ Campus committees, as appropriate
12	Endorsement of Schematic Design & Environmental Assessment	<ul style="list-style-type: none"> ▪ Campus Planning Committee and President
13	Approval of Schematic Design & CEQA	<ul style="list-style-type: none"> ▪ CSU Board of Trustees ▪ Validate project funding plan and availability of funds
14	Working Drawings – Funding	<ul style="list-style-type: none"> ▪ Project sponsor identifies funding for working drawing phase tasks. ▪ Update LOU
15	Working Drawings – Cost Estimate 50% complete	<ul style="list-style-type: none"> ▪ Project cost estimate at 50% complete drawings ▪ Validate against funding plan ▪ Reconcile before moving forward (adjust scope or funding, if necessary) ▪ Update LOU
16	Working Drawings – Cost Estimate 100% complete	<ul style="list-style-type: none"> ▪ Project cost estimate at 100% complete drawings ▪ Validate against funding plan ▪ Reconcile before moving forward (adjust scope or funding, if necessary) ▪ Update LOU
17	Second Cost Estimate	<ul style="list-style-type: none"> ▪ Provide a second cost estimate for comparison ▪ Reconcile the two cost estimates ▪ Validate funding plan against reconciled estimate ▪ Update LOU, if necessary
18	Approval of Financing	<ul style="list-style-type: none"> ▪ CSU Board of Trustees approval of financing plan, if applicable. ▪ Sponsor funds identified for construction, if applicable, are available.
19	Construction Bidding (assume Design/Bid/Build)	<ul style="list-style-type: none"> ▪ Prepare documents for bid ▪ Bid project ▪ Validate funds available against bid. ▪
20	Construction Contract	<ul style="list-style-type: none"> ▪ Award contract