

CAPITAL PLANNING, DESIGN & CONSTRUCTION
SECTION XI - PROJECT PLAN DEVELOPMENT FOR MAJOR CAPITAL CONSTRUCTION PROJECTS
SECTIONS 9230-9237

TABLE OF CONTENTS

	SECTION	PAGE
Project Plan Development for Major Construction Projects.....	9230	1
Definitions.....	9231	1
Building Code Enforcement.....	9232	1
Schematic Design Phase of Project Plan Development	9233	3
Responsibilities of Project Administrator Before and During Schematic Design Phase.....	9233.01	3
Responsibilities of Campus Consulting Master Plan Architect During Schematic Design Phase.....	9233.02	5
Responsibilities of Project Architect/Engineer During Schematic Design Phase.....	9233.03	6
Preliminary Design Phase of Project Plan Development	9234	7
Responsibilities of Project Administrator During Preliminary Design Phase.....	9234.01	7
Responsibilities of Campus Consulting Master Plan Architect During Preliminary Design Phase.....	9234.02	8
Responsibilities of Project Architect/Engineer During Preliminary Design Phase.....	9234.03	8
Construction Document Phase of Project Plan Development	9235	9
Responsibilities of Project Administrator During Construction Document Phase.....	9235.01	9
Building Code Compliance and Plan Check Review.....	9235.02	10
Responsibilities of Campus Consulting Master Plan Architect During Construction Document Phase.....	9235.03	11
Responsibilities of Project Architect/Engineer During Construction Phase.....	9235.04	11
Liability of Design Professionals for Errors and Omissions.....	9236	13
Campus Service Provider Ratings and Effect on Service Provider Prequalification.....	9237	14
Modifications to Procedures for Project Plan Development	9238	14

CAPITAL PLANNING, DESIGN & CONSTRUCTION
SECTION XI - PROJECT PLAN DEVELOPMENT FOR MAJOR CAPITAL CONSTRUCTION PROJECTS
SECTIONS 9230-9237

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9230 PROJECT PLAN DEVELOPMENT FOR MAJOR CAPITAL CONSTRUCTION PROJECTS

A capital outlay budget change proposal (COBCP) is required for all new state-funded major capital construction and renovation projects (SUAM Section VIII 9131 et seq.). The project scope and budget become fixed once a COBCP is approved by the legislature. A similar document should be prepared for non state-funded major capital outlay programs.

Program specifications shall be developed from the project scope and budget to translate the proposed program into project development specifications to be used by the architect/engineer as the basis of design for the project (SUAM Section VII 9033 et seq.). Program specifications shall be in accordance with the (COBCP) approved by the Legislature.

The development of a project occurs over of a series of distinct phases. They are:

- Pre-schematic programming
- Schematic design
- Preliminary design (design development)
- Construction documents
- Bidding
- Project construction (construction administration)
- Project close-out and acceptance of building from contractor (record drawings)
- Post-construction furnishing and campus occupancy (by campus)

A standard form Project Architect/Engineer Agreement shall be used for all major capital construction projects. This agreement describes in detail the services and deliverables for each phase. (Reference: SUAM Section X, 9208, General Requirements for Agreements.)

The campus *may* adjust requirements within the standard form Project Architect/Engineer Agreement to respond to special individual project needs and/or local conditions. Such changes to the contract shall be listed within the Scope of Work (Exhibit A) under a heading ‘Modifications to Agreement’.

Modifications may include, but are not limited to:

- Change in frequency of required project architect/engineer site visits
- Change to allow travel reimbursement for project architect/engineer site visits
- Change to identify alternate deliverable print quantities
- Change to identify scope duration of project (i.e.: starting at construction document phase or ending at completion of preliminary phase)
- Change to identify a non-standard project architect/engineer fee

9231 DEFINITIONS

Definitions applicable to this section are listed in SUAM Appendix A.

9232 BUILDING CODE ENFORCEMENT

All code enforcement agencies, including the CSU, shall be under the direct administrative and operational control of a building official. The designated building official for the CSU shall be the senior building official in the Office of the Chancellor.

CAPITAL PLANNING, DESIGN & CONSTRUCTION
SECTION XI - PROJECT PLAN DEVELOPMENT FOR MAJOR CAPITAL CONSTRUCTION PROJECTS
SECTIONS 9230-9237

Each campus shall appoint a deputy building official responsible for campus-specific administrative and operational control. The campus deputy building official acting on behalf of the trustees, and under the authority of the chancellor or campus president, should possess a current California architect or engineer license. In the event no university official has a license as stated above, the campus president may designate a university employee as the campus deputy building official where that employee possesses substantial knowledge of the design and construction of university facilities and the relevant codes. In the absence of a designated campus deputy building official on a campus, the campus building official shall be the senior building official in the Office of the Chancellor.

Under the Building Code (CBC Section 106.1), no building or structure shall be erected, constructed, enlarged, repaired, moved, improved, removed, converted or demolished without a building permit [written validation] except those projects exempted by code (CBC, Section 106.2); I.e., fences not over 6 feet, cases, counters and partitions not over 5'-9" high, painting, on-grade walks, drives, and platforms."

The responsible building official for each campus shall issue a **written validation certificate** for *each project* and each respective campus shall maintain a record of all **validations**.

The following specific plan review and approvals are required for all projects (state, non-state, new, remodel, renovation, alteration):

- 1. State Fire Marshal (SFM):** University projects are required to be reviewed by the California State Fire Marshall (*Health & Safety Code § 13108(c)*) (*Health and Safety Code, Section 13143; Title 19, California Code of Regulations, Section 3.28(b).*) Typically a SFM submittal is required. At their discretion, on small minor projects, deputy SFM inspectors may review and issue field plan approvals.
- 2. Access Compliance (ADA):** Access compliance for university projects must be certified by the State of California Department of General Services, Division of the State Architect (DSA) (*Government Code Section 4450 et. seq.*). A direct submittal can be made to either DSA, and on small projects DSA has committed to providing an informal and expedited review or, more typically, concurrent with a building code plan check to one of the pre-qualified building code plan check firms. The pre-qualified plan check firms are currently authorized by DSA to provide a certified access compliance review in lieu of a direct review by DSA.
- 3. Building Code Plan Check:**

The CSU is responsible for the enforcement of building codes as approved by the California Building Commission. (*Ref. Health and Safety Code Section 18901 - 18949.6 and California Building Code Section 101.17*).

The responsible building official for each campus shall issue a **written validation certificate** for *each project* and each respective campus shall maintain a record of all **validations**.

The responsible building official for each campus may elect to review and certify code compliance directly through his own personal review of the construction documents or alternatively retain the services of one of several systemwide pre-qualified plan check firms to perform this review.

Where an outside firm is retained to perform a building code plan review the review agency acts as the agent for the campus building official. It remains the responsibility of the campus building official to accept (by written validation) the recommendations of the plan review agency.

The appropriate regulatory authority, e.g. State Fire Marshal or Division of the State Architect Access Compliance Unit, shall take precedence over building code plan check review comments should there be a conflict.

CAPITAL PLANNING, DESIGN & CONSTRUCTION
SECTION XI - PROJECT PLAN DEVELOPMENT FOR MAJOR CAPITAL CONSTRUCTION PROJECTS
SECTIONS 9230-9237

- 4. Seismic Safety Structural Peer Review (SPR):** Per trustee's policy on seismic safety (RCPB&G 05-93-13) university projects require seismic peer review. A member of the CSU Seismic Review Board shall perform the seismic peer review.

In the event of disputes over interpretation of the trustee's seismic safety policy, the full CSU Seismic Review Board shall make a final determination under the authority of the university building official.

- 5. Local Health Department Review:** Local county health department review is required for food service and aquatic facilities. (Reference: SUAM Section X, 9203, Codes and Regulations.)

9233 SCHEMATIC DESIGN PHASE OF PROJECT PLAN DEVELOPMENT

Schematic design documents include drawings, outline specifications, and cost estimates developed in sufficient detail to present the following information:

1. The relationship of the facility to the site, to other buildings, and to the campus as a whole
2. The exterior design of the facility
3. The functional relationships of all interior areas
4. The materials to be used in construction
5. The types of structural, mechanical, electrical, and telecommunication systems to be utilized
6. The construction cost of each portion of the work
7. Life cycle cost analysis

9233.01 RESPONSIBILITIES OF PROJECT ADMINISTRATOR BEFORE AND DURING SCHEMATIC DESIGN PHASE

The project administrator shall:

1. Transmit and confirm the understanding of the following information to the project architect/engineer:
 - a. An executed standard form agreement for professional services (Reference SUAM, Section 9208, et seq.)
 - b. Written approval/acceptance of the consultants proposed by the project architect/engineer
 - c. Written authorization to proceed with professional services (Reference SUAM, Section 9210)
 - d. The approved project Program Specifications
 - e. The initial construction project cost (included in agreement for professional services and authorization letter)
 - f. Time limits for development of plans (included in agreement for professional services and authorization letter)
 - g. General instructions on procedures and the CSU design guidelines (identified in the Submittal Requirements and Procedure Guide for CSU Capital Projects and the CSU CAD Standards.)
 - h. A geotechnical survey (soils report)
 - i. A topographic/boundary survey of the site including easements or other restrictions
 - j. CEQA documents

CAPITAL PLANNING, DESIGN & CONSTRUCTION
SECTION XI - PROJECT PLAN DEVELOPMENT FOR MAJOR CAPITAL CONSTRUCTION PROJECTS
SECTIONS 9230-9237

- k. Hazardous materials report. Based on initial hazardous material report findings and the subsequent particulars of the design developed by the architect/engineer, abatement documents shall be prepared by the hazardous materials abatement designer
 - l. Campus standards that pertain
 - m. The Physical Campus Master Plan, showing the project location and boundaries
 - n. As-built plans and information regarding utilities, including telecommunications, for both above and below grade conditions
 - o. As-built plans and information on existing structures and improvements
 - p. Information regarding campus and/or project specific procedures and policies
 - q. Information to the project architect/engineer related to contracts and approvals by major utility companies that may or may not be on campus plus coordination with adjacent cities/counties regarding sewer connections or impact
2. Execute an agreement with the campus consulting master plan architect as needed to provide necessary internal design review assistance to the campus.
 3. Execute an agreement with the seismic safety structural peer reviewer assigned to the campus by the CSU Seismic Review Board and verify the peer reviewer's concurrence with the structural design.
 4. Execute separate standard form agreements with appropriate service providers for supporting project services as may be required. These services may include, but are not limited to the following:
 - Geotechnical investigations,
 - Hazardous materials survey investigation, and abatement documents for known and suspected conditions (i.e. piping or other below grade features)
 - CEQA and other similar environmental documentation
 - Topographical/boundary survey information
 - As-built investigations to further define above and below-grade features
 5. Schedule and conduct a project start meeting.
 6. Interpret written instructions and program specifications to the project architect/engineer.
 7. During the development of each phase, review and evaluate proposed building design schemes and alternative solutions as developed by the project architect/engineer relative to program needs and functional relationships and request design or program changes when required. If knowledge developed during the planning phase indicates that modifying the program specifications are necessary, a request for program change must be submitted in writing to CPDC.
 8. Review and coordinate the project timeline schedules for all phases of all projects and adjust them as necessary. This includes checking the progress reports prepared by the project architect/engineer and evaluating the time schedules. Should adjustments be required or significant problems develop because of scheduling, the project administrator shall work with the project architect/engineer to develop appropriate corrective action. This shall be an ongoing process repeated throughout the project.
 9. Schedule and conduct project design review meetings. Obtain written approval of the schematic design documents from the campus building committee and interested campus user groups.
 10. Review the schematic design documents for compliance with budget and scope.
 11. Review the schematic design documents submitted for compliance with the CSU Telecommunications Infrastructure Model (TIP) Guidelines.

CAPITAL PLANNING, DESIGN & CONSTRUCTION
SECTION XI - PROJECT PLAN DEVELOPMENT FOR MAJOR CAPITAL CONSTRUCTION PROJECTS
SECTIONS 9230-9237

12. Direct the project architect/engineer to initiate revisions to the schematic design package to address/resolve all comments.
13. Schedule an initial schematic design presentation with CPDC. This presentation shall be made as early as possible in the schematic development where schematic cost information is available. A determination by the assistant vice-chancellor of CPDC to either complete or revise the presentation will be made at this initial meeting.
14. Ensure preparation of the appropriate documentation to comply with the California Environmental Quality Act prior to schematic design presentation to the Board of Trustees.
15. Submit presentation materials and one (1) full set of the schematic documents to the CPDC campus planner. Include a transmittal letter identifying the documents delivered.
16. Provide a letter to CPDC certifying that:
 - a. The proposed plan is in conformance with the approved campus master plan.
 - b. The campus has reviewed and accepted the design documents and that they comply with the specifications of the approved program. Material program deviations shall be identified and explained by the campus.
17. Completed schematic documents and schematic design presentation materials shall be submitted to CPDC a minimum of two full weeks prior to the scheduled date of presentation of the design to the Board of Trustees.
18. Submit a written certification to CPDC warranting that the campus organization representing persons with disabilities had the opportunity to review the plans for compliance with accessibility standards.
19. Notify the project architect/engineer, in writing, of the approval of the schematic design (after BOT approval when applicable). The approval letter may be conditional with required corrections noted.

9233.02 RESPONSIBILITIES OF CAMPUS CONSULTING MASTER PLAN ARCHITECT DURING SCHEMATIC DESIGN PHASE

The campus consulting master plan architect shall:

1. Attend planning conferences as required.
2. Review with the project architect/engineer the planned location of the project, its relationship to the Physical Master Plan, and the campus design vocabulary.
3. Assist the campus in coordinating the current project with existing and planned future campus development.
4. Consult periodically with the project architect/engineer to ensure conformance with the campus design vocabulary.
5. Consult with the project administrator regarding the design of the project, when requested.
6. Review the schematic design documents for design quality, conformance, and consistency with the campus design vocabulary and recommend changes to the campus, when appropriate.
7. Review and recommend approval, conditional approval, or rejection of the schematic design documents as presented.
8. Provide design critique of the schematic documents to the campus planning committee, when requested.
9. Prepare and maintain Physical Master Plan graphics of the campus and have same available for distribution in electronic format.

CAPITAL PLANNING, DESIGN & CONSTRUCTION
SECTION XI - PROJECT PLAN DEVELOPMENT FOR MAJOR CAPITAL CONSTRUCTION PROJECTS
SECTIONS 9230-9237

9233.03 RESPONSIBILITIES OF PROJECT ARCHITECT/ENGINEER DURING SCHEMATIC DESIGN PHASE

The project architect/engineer shall:

1. Review the program specifications upon receipt of the authorization to begin work
2. Attend the planning conferences to receive instruction from the campus and their designated representatives
3. Secure planning data from the campus
4. Request any additional data needed from the campus
5. Submit to the campus a listing of the proposed consultants planned for the project
6. Coordinate the project with existing and future planned campus development
7. Consult with the campus and their designated representatives during the design process
8. Design the facility in accordance with codes and standards including, but not limited to:
 - a. **The California Building Code** in Title 24 of the California Code of Regulations which includes the Uniform Building Code modified with California supplemental sections, Uniform Mechanical Code, Uniform Plumbing Code, National Electric Code, Energy Conservation Code, and Accessibility Standards as adopted by the California Building Standards Commission.
 - b. Public Contract Code, Sections 10700 et seq. (**CSU Contract Law**)
 - c. The California Code of Regulations, Title 8 (**CAL/OSHA Standards**)
 - d. The California Code of Regulations, Title 17 (**Public Health**)
 - e. The California Code of Regulations, Title 19 (**Industrial Relations, Public Safety**)
 - f. The California Environmental Quality Act (**CEQA**)
 - g. Federal Environmental Protection Agency (**EPA**) requirements
 - h. Regional Water Quality Board requirements
 - i. Local county health department requirements (relative to plan review and approval of food service and aquatic facilities)
9. Seek early consultation as may be necessary to confirm design assumptions with the CSU-designated outside plan review agency on issues of building code interpretation, State Fire Marshal on issues of exiting, fire and life safety, and the Division of State Architect for interpretation of access compliance.
10. Obtain concurrence of the structural design approach from the CSU Seismic Review Board peer reviewer.
11. Prepare for CPDC review and presentation the following schematic documents:
 - a.
 - (1). The current approved Campus Physical Master Plan
 - (2). A colored site plan, showing the shape and location of adjacent improvements
 - (3). A plan of each floor
 - (4). All elevations
 - (5). Sections as necessary to show basic structural and vertical space organization
 - (6). A colored rendering
 - (7). A photograph of the project site (taken from the same direction and vantage point as the rendering)

CAPITAL PLANNING, DESIGN & CONSTRUCTION
SECTION XI - PROJECT PLAN DEVELOPMENT FOR MAJOR CAPITAL CONSTRUCTION PROJECTS
SECTIONS 9230-9237

- (8). Provide electronic files of items 1-7 on CD-ROM Coordinate file format requirements with the project administrator.
 - b. A colored, rendered perspective shall be provided for presentation to the Board of Trustees. Rendering shall be provided 14 days in advance of scheduled board meeting. Presentation board shall be rigidly mounted.
 - c. Outline specifications.
 - d. An estimate of the total construction cost of the project on a standard format (See Form CPDC 2-7, Appendix B) along with the project architect/engineer's detailed estimate. Construction cost estimates shall be indexed to the single ENR CCCI value defined in the Project Architect/Engineer Agreement.
 - e. A statement explaining in detail deviation from the initial project budget.
 - f. A summary comparing the area allocation in the Program Specifications presented in the capital outlay request with the area allocations in the schematic documents. The summary shall include the total assignable area and the resulting percentage efficiency of the design. (See Project Area Summary, CPDC Form 31, Appendix B). A guide to the computation of the assignable and gross areas for buildings given in SECTION V, 9050 et seq.,
 - g. A thorough explanation of material deviations from the area allocations in the Program Specifications presented in the capital outlay request.
- 12. Submit schematic design materials (as described above), to the campus. This submittal must include at least five complete sets of the schematic design documents.
 - 13. Meet with the campus and obtain campus approval regarding the project and presentation materials prior to scheduled presentation of the schematic design to CPDC.
 - 14. Modify or redesign the project, if necessary, to secure acceptance by the campus, validation by CPDC and approval by the Board of Trustees as per the architectural agreement.
 - 15. Request and obtain approval from the project administrator before initiating extra service work.
 - 16. Request and obtain written approval from the project administrator prior to proceeding with preliminary phase work.

9234 PRELIMINARY DESIGN PHASE OF PROJECT PLAN DEVELOPMENT

Preliminary design documents are plans, outline specifications, and cost estimates developed in further detail than the schematic documents. They confirm or adjust, as required, all aspects of the schematic plans (exterior design, mechanical and electrical systems, telecommunications system, structural systems, area arrangements, foundation plans, etc.) and revise cost information to reflect the more detailed development.

9234.01 RESPONSIBILITIES OF PROJECT ADMINISTRATOR DURING PRELIMINARY DESIGN PHASE

The project administrator shall:

- 1. Authorize the project architect/engineer in writing, to prepare the preliminary design documents based on schematic design documents validated by CPDC and approved by the Board of Trustees(See SUAM 9210.02).
- 2. Review the preliminary design documents for compliance with:
 - a. Approved program
 - b. Approved budget
 - c. Approved schematic design scheme

CAPITAL PLANNING, DESIGN & CONSTRUCTION
SECTION XI - PROJECT PLAN DEVELOPMENT FOR MAJOR CAPITAL CONSTRUCTION PROJECTS
SECTIONS 9230-9237

- d. Contract design requirements as set forth in the Submittal Requirements and Procedure Guide for CSU Capital Projects

As necessary, direct the project architect/engineer to make revisions to achieve compliance.

3. Review the preliminary design documents for compliance with the CSU Telecommunication Infrastructure Planning Guidelines.
4. Notify the project architect/engineer, in writing, of changes to be made during the preliminary design phase from the initial schematic design or in the initial Program Specifications presented in the capital outlay request.
5. Assist project architect/engineer in their coordination with utility companies and public agencies providing services to project.
6. Obtain and provide additional supporting information required for the development of the preliminary plans package.
7. Guide the project architect/engineer on program specification details and interpretation.
8. Coordinate project progress.
9. Obtain approval of the preliminary design documents by campus building committee and interested campus user groups.
10. Submit two (2) copies of the preliminary documents to CPDC for review and validation. A transmittal letter identifying the documents and certifying that the campus has checked and approved the documents and that they comply with the approved program and the schematic documents. Material deviations must be clearly identified and explained.
11. Submit a written certification that the campus disabled students had the opportunity to review the plans for compliance with California Code of Regulations, Title 24, Part 2, as it applies to accessibility by persons with disabilities.
12. Schedule for review and validation of the preliminary design documents by CPDC. Non-streamlined projects to be reviewed must be submitted to the Department of Finance (via CPDC) approximately one month prior to the time they are to be considered by the Public Works Board (PWB).
13. Notify the project architect/engineer, in writing of the approval of the preliminary design documents. The written approval may be conditional with required corrections noted.

9234.02 RESPONSIBILITIES OF CAMPUS CONSULTING MASTER PLAN ARCHITECT DURING PRELIMINARY DESIGN PHASE

The campus consulting master plan architect shall:

1. Provide internal design review assistance to the campus.
2. Consult periodically with the project architect/engineer to ensure conformance with the campus design vocabulary.
3. Review the preliminary documents for design quality and for conformance with the campus design vocabulary. The campus' consulting architect shall issue a letter of review findings to the campus.

9234.03 RESPONSIBILITIES OF PROJECT ARCHITECT/ENGINEER DURING PRELIMINARY DESIGN PHASE

The project architect/engineer shall:

1. Initiate work on the preliminary design phase upon receipt of written authorization from the project administrator.

CAPITAL PLANNING, DESIGN & CONSTRUCTION
SECTION XI - PROJECT PLAN DEVELOPMENT FOR MAJOR CAPITAL CONSTRUCTION PROJECTS
SECTIONS 9230-9237

2. Consult with the campus and their designated representatives as necessary for preparation of the project design documents.
3. Prepare the following preliminary documents for new buildings, new structures, major additions, and renovation projects (preliminary documents must comply with the approved project program specifications and the approved schematic plans):
 - a. Site plan
 - b. A plan of each floor
 - c. All elevations
 - d. Architectural sections showing vertical space organization
 - e. Plans, sections, and diagrams of structural, mechanical, electrical, and telecommunications systems, as necessary to show the basic design, clearly defining the types of materials to be used
 - f. Outline specifications
 - g. An estimate of the total construction cost of the project. Estimates shall be submitted in Unifomat format (a building systems organization format) detailed to at least level 2. This cost information shall also be summarized in a 2-7 format. Construction cost estimates shall be indexed to the single ENR CCCI value defined in the Architect/Engineer Agreement
 - h. A statement explaining in detail deviation from the approved estimated construction cost of the project during the schematic design phase. Where deviations occur, provide an action plan to bring project costs into alignment with approved budget.
 - i. A summary comparing the approved area allocations in the schematic documents with the area allocations in the preliminary documents. The summary shall include the total assignable area and the resulting percentage efficiency of the design. (See Project Area Summary, Form CPDC 3-1, Appendix B)
 - j. A thorough explanation of material deviations from the area allocations in the project specifications presented in the capital outlay request
4. Submit five (5) copies of preliminary design materials to the campus.
5. Request and obtain approval from the project administrator before initiating extra service work.

9235 CONSTRUCTION DOCUMENT PHASE OF PROJECT PLAN DEVELOPMENT

After the preliminary design documents have been approved, construction documents shall be developed to set forth in detail all aspects of project design, function, and construction. These are used for estimating the cost of the project, securing bids for its construction, and directing the contractor during the construction period.

9235.01 RESPONSIBILITIES OF PROJECT ADMINISTRATOR DURING CONSTRUCTION DOCUMENT PHASE

The project administrator shall:

1. Authorize the project architect/engineer, in writing, to proceed with the construction document phase, based on the approved preliminary design documents. This authorization shall identify the approved budget amount.
2. Advise the project architect/engineer, on campus-specific information to be included in the specifications.
3. Advise the project architect/engineer, concerning program details, coordination with site conditions/utilities, special conditions appropriate during construction, phasing requirements of construction (if any), and priority of bid alternatives (if any).

CAPITAL PLANNING, DESIGN & CONSTRUCTION
SECTION XI - PROJECT PLAN DEVELOPMENT FOR MAJOR CAPITAL CONSTRUCTION PROJECTS
SECTIONS 9230-9237

4. Ensure that supporting project information (soils reports, hazardous material abatement documents, as-built information (utilities *and* vertical construction), CEQA requirements (SWPP's, et al), etc., are appropriately referenced or appended to the main document set.
5. Interpret the project program specifications.
6. Review the construction documents at 50% completion for conformance with the approved preliminary design.
7. Review the construction document submittals for compliance with:
 - a. Budget
 - b. Scope
 - c. Conformance with approved preliminary design scheme
 - d. Contract design requirements as set forth in the *Submittal Requirements and Procedure Guide for CSU Capital Projects*

Direct the architect/engineer to make changes and corrections to the documents, when necessary.

8. Initiate and coordinate any constructability reviews.

Note: While the performance of constructability reviews is not a formal requirement of the trustees, such reviews have historically been useful in improving the quality of the construction documents and commonly more than pay for themselves in reducing construction change orders. When the university initiates reviews of this type, they are considered part of the owners review under the terms of the project architect/engineer agreements. Accordingly, these reviews should be accomplished within the time frame of other owner reviews and before further authorizations to proceed are provided to the project architect/engineer.

9. Obtain approval of the construction documents from the campus building committee and interested campus user groups.
10. Submit a written certification of campus approval of the completed construction documents (including updated construction cost) to CPDC.
11. Submit two (2) copies of the construction documents to CPDC. A transmittal letter identifying the documents and certifying that the campus has checked and approved the documents and that they comply with the approved program and schematic documents. Material deviations shall be clearly identified and explained.
12. Submit a written certification that the campus' disabled students have had the opportunity to review and provide comment to the plans as they apply to accessibility by physically disabled persons.

9235.02 BUILDING CODE COMPLIANCE AND PLAN CHECK REVIEW

(Reference: SUAM 9203.01 Required Plan Reviews and Code Certifications)

The following specific plan review and approvals are required for all projects (state, non-state, new, remodel, renovation, alteration):

State Fire Marshal (SFM)

Access Compliance (ADA)

Building Code Plan Check (Building Code Plan Check)

Seismic Safety Structural Peer Review (SPR)

County Health Department Review (for food service and aquatic facilities)

CAPITAL PLANNING, DESIGN & CONSTRUCTION
SECTION XI - PROJECT PLAN DEVELOPMENT FOR MAJOR CAPITAL CONSTRUCTION PROJECTS
SECTIONS 9230-9237

The project administrator shall oversee and manage the plan check review process.

The project administrator shall:

1. Authorize outside code review agency and seismic peer reviewer to proceed with its project review. The project administrator shall arrange for payment by the university for all plan review fees. (See SUAM Section 9212, Payments for Plan Review Services).
2. Direct the project architect/engineer to submit an appropriate number of copies of the construction documents to the various review agencies for plan review (See SUAM Section 9235.04.4).
3. Monitor and keep all parties informed of anticipated plan check review timelines. Follow up with agencies and/or architect/engineer to ensure timely processing of submittals, back-check submittals and plan reviews. Design modifications required to obtain certification/approval shall be provided as a part of basic services and at *no* additional expense to the trustees.
4. Coordinate resolution of disputed code interpretation items in accordance with the following:
 - a. Final determination on fire and life safety and egress issues is made by the State Fire Marshal
 - b. Final determination on [handicap] access compliance issues is made by the Division of the State Architect, Access Compliance
 - c. Final determination on the trustee's seismic safety policy is made by the CSU Seismic Review Board
 - d. Final determination on all other code issues is made by the university building official
5. Verify approval by the California State Fire Marshal (via stamped/signed plans)
6. Verify approval by the seismic safety structural peer reviewer (via approval letters).
7. Verify project architect's/engineer's compliance with all plan check comments (via review stamped plans and approval letter).
8. Maintain a permanent record noting the dates the above approvals were obtained (Model forms available from CPDC) and retain copies of all approval notifications.
9. Obtain code review validation certificate from the campus deputy building official.

9235.03 RESPONSIBILITIES OF CAMPUS CONSULTING MASTER PLAN ARCHITECT DURING CONSTRUCTION DOCUMENT PHASE

The campus consulting master plan architect shall review and provide a written assessment of the construction documents for design quality, conformance, and consistency with the campus design vocabulary.

9235.04 RESPONSIBILITIES OF PROJECT ARCHITECT/ENGINEER, DURING CONSTRUCTION DOCUMENT PHASE

The project architect/engineer shall:

1. Initiate work on the construction documents upon receipt of written authorization from the project administrator.
2. Prepare the following construction documents, based on the approved preliminary design documents.

CAPITAL PLANNING, DESIGN & CONSTRUCTION
SECTION XI - PROJECT PLAN DEVELOPMENT FOR MAJOR CAPITAL CONSTRUCTION PROJECTS
SECTIONS 9230-9237

- a. Working drawings and specifications (prepared in a format conforming to recommendations of the Construction Specifications Institute) setting forth and describing in detail the work to be done and the materials, workmanship, finishes, and equipment required for the architectural, structural, electrical, telecommunications, mechanical, site work, and the installation of equipment
 - b. A summary of the estimate of the construction cost of the project on standard format (see Form CPDC 2-7, Appendix B) and project architect/engineer's detailed estimate (construction cost index to be as stated in Agreement)
 - c. A statement explaining in detail deviations from the approved estimated total construction costs of the project in the preliminary design phase. Where deviations occur provide an action plan to bring estimated project costs into alignment with authorized budget amount.
 - d. An area summary comparing the area allocations in the approved program and approved schematic and preliminary plans. The summary should include the total assignable area, the total gross area, and the resulting building efficiency.
3. Submit two sets of progress prints of the full construction document package (with all disciplines) to the campus at 50% completion. The specifications and estimate need not be submitted at this time, since normally these documents are prepared late in the development of the working drawings.
 4. Submit documents in appropriate quantities for plan review at 95% CD completion. Revise documents to respond to back-check comments and provide information as needed to obtain approval of the construction documents from the required plan review groups.
 - a. **State Fire Marshal (SFM):**
Submit one (1) complete print set of working drawings and specifications for initial review. Upon approval by the SFM, provide one (1) reproducible vellum copy of the approvable set, stamped and wet signed, for approval stamping by the SFM.
 - b. **CSU Seismic Peer Review Board (SPR):**
Submit one (1) set of documents and structural calculations for final review and approval. Throughout the design process the architect/engineer shall be in communication with and provide progress submittals to the peer reviewer.
 - c. **Code Review and Access Compliance:**
Submit two (2) sets of working drawings, specifications, structural calculations, energy calculations and soils report to the plan review agency designated by the university for a concurrent building code and access compliance review.

In cases where access compliance review is to be performed directly by DSA (rather than the designated plan review agency) provide two (2) sets of working drawings and specifications to the project administrator for filing with the Division of the State Architect, Access Compliance Unit.
 - d. **Other Approvals:**
Obtain other approvals from outside agencies (i.e., local health authorities) when applicable. Application fees paid by Architect/Engineer shall be considered a reimbursable expense.
 5. Certify, by a signed statement on the drawings and by provision of required calculations that the construction documents comply with the energy conservation standards set forth in Title 24.
 6. Route the approved stamped and wet signed SFM document set for code review agency approval stamping.
 7. Submit five (5) sets of completed, stamped and signed construction documents to the campus to the project administrator.
 8. Request and obtain approval from the project administrator before initiating extra service work.
 9. Produce copies of bid documents as directed by the university project administrator. Competitive proposals for bid set printing shall be obtained. The project administrator shall evaluate proposals and select the most

CAPITAL PLANNING, DESIGN & CONSTRUCTION
SECTION XI - PROJECT PLAN DEVELOPMENT FOR MAJOR CAPITAL CONSTRUCTION PROJECTS
SECTIONS 9230-9237

responsive printing firm based on a balanced assessment of lowest cost, highest quality and availability of supporting services that may be required.

9236 LIABILITY OF DESIGN PROFESSIONALS FOR ERRORS AND OMISSIONS

A change order resulting from the error or omission of a design professional does not necessarily give rise to liability for the design professional. The law governing professional liability does not require perfection in the professions. Liability attaches only when the act or failure to act falls below a standard of due care applicable to design professionals in the same or similar circumstances. Thus, if a reasonably prudent design professional would have made the same error or omission given the complexity of the design, that error or omission would not fall below the standard of due care and thus would not create liability in the design professional.

The law does require performance at or above a standard of due care applicable to design professionals under the same or similar circumstances. Since the "standard of care" is not simply defined, whenever a claim is made against a professional designer (architect, engineer, etc.) a competent professional of like classification must assert that the individual or firm failed to meet the standard of care practices in the respective discipline. Thus the design professional will not be held liable for errors or omissions that do not fall below the standard of care.

An evaluation of the "standard of care" could be made at the level of a single egregious failure, and/or at the level of aggregate performance for the project. On an aggregate level, the CSU has historically recognized up to a three percent (3%) E&O rate as normal. Results materially above this range shall cause the Trustees to progressively consider actions to recover damages.

It must be recognized that "errors" and "omissions" are often different in application.

- 1) "Omissions" often result in paying the contractor to provide some element that it did not bid, because that element was missing in the documents. This results in getting some additional work (not included in the base bid) for the change order dollars expended. The problem is sole source bidding, excessive use of the contingency funds, and an overhead and profit mark-up (15%) which may be higher than if it were competitively bid or included in the base bid scope of work. Some have suggested that this may equate to a 20% higher cost by change order compared to base bid.
- 2) "Errors" often result in paying the contractor to provide a changed element of work due to the timing that the error was discovered. This may result in replacing new work with changed work with potentially no increase in net value. An example is discovering inadequate head clearance on a stairway after it is framed. The conflicting header may be removed and replaced with a thinner structural member. It results in extra cost with no increase in value. Additionally, delay claims, which result in costly settlements, are sometimes the result of slow process of submittal review or change order design, and again payment of any delay is usually devoid of value to the University. Therefore, such A/E caused delays shall be considered error related—in this case an error for non-timely performance.

The value contributed by "errors" and "omissions" shall be evaluated with errors given potentially full value and omissions given a potential 20% of full value consideration.

A decision to seek reimbursement for excessive E&O's from the architect/engineer is a judgment call that shall be reviewed with CPDC and General Counsel. The facts associated with the E&O—their magnitude, causes and impacts—should be carefully reviewed and an informed decision made. The Trustees have sought recovery of excessive cost overruns due to excessive E&O on limited occasions. Unless the design professional acknowledges its liability an expensive litigation process to obtain recovery will likely be required. In many cases E&O insurance providers require a legal ruling as a condition of E&O settlement payment.

CAPITAL PLANNING, DESIGN & CONSTRUCTION
SECTION XI - PROJECT PLAN DEVELOPMENT FOR MAJOR CAPITAL CONSTRUCTION PROJECTS
SECTIONS 9230-9237

Pursuit of settlement shall be noted in API project reporting comments and considered in making appropriate API service provider and/or sub-consultant performance evaluations.

**9237 CAMPUS SERVICE PROVIDER RATINGS AND EFFECT ON SERVICE PROVIDER
PREQUALIFICATION**

Architect/Engineer performance shall be evaluated on a per-project basis (API Reporting SUAM 9204.01.III.B). Evaluations are shared systemwide and shall be considered in the award of future commissions and in the renewal of Architectural Prequalification.

A campus rating of a Service Provider of 2.5 or less (on a 1 to 5 scale with 5 being best) once confirmed by CPDC, shall result in a flag being placed by the service provider's name 'to contact CPDC for additional information'. Calls by other campuses to the CPDC A/E unit shall prompt CPDC to relay the particular campus concerns expressed that generated the low rating. If the campus in further consultation with the service provider is satisfied that the condition that prompted the low rating has been corrected, then the campus may consider that firm for a commission of work.

A campus rating of a Service Provider of less than 2 (on a 1 to 5 scale with 5 being best) along with the recommendation not to renew architectural prequalification shall be closely reviewed by CPDC, and used as the basis to revoke or not renew prequalification. CPDC shall take this step only in cases where in CPDC's assessment the conditions that prompted the recommendation remain uncorrected by the Service Provider in question.

Flagged ratings or suspensions/revocations shall remain in place for a two-year period. Compelling information presented to CPDC may result in a flag or suspension being removed early or retained longer than this period.

It is important to understand that the campus must remain open to reconsidering assessments of Professional Service Provider performance. Staffing and management changes/assignments can dramatically affect a Service Provider's performance. It is the campus responsibility to confirm to their satisfaction that Service Provider considered for work assignments are able to present a compelling argument of likely future performance.

9238 MODIFICATIONS TO PROCEDURES FOR PROJECT PLAN DEVELOPMENT

For special or unusual projects, the procedures for project plan development may be modified upon acceptance by CPDC. If a campus determines that modifications to the procedures are advisable, it shall submit a written request for such modifications for that specific project to CPDC. The reasons for the requested modifications must be indicated. The procedures are considered modified for that specific project upon written notice of acceptance from CPDC.

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