

# VOLUME 3, PART I

## CHAPTER 1

### PROJECT DESIGN PHASES

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#### INTRODUCTION

This chapter summarizes the design phases of a project, references the applicable sections in the Executive Design Professional Agreement to be used during the design phases of a project, the environmental requirements during schematic design, the value engineering requirements, and the process to establish a project's effective code date upon completing design development. Refer to [II:3](#) and the contracts in [Part II](#) when hiring design professionals. Some projects may be designed by in-house staff (see [FM1](#)).

#### 1.1 PREDESIGN PHASES

##### 1.1.1 Design Professional Services

In the early project development phases, a Facility may need the services of a design professional for project analyses and feasibility. The [Professional Services Agreement](#) is used for these services (see Part II).

If the same design professional is commissioned for project design, then the advertising, screening, and selection procedures must be followed (see [Chapter 2](#)) and an [Executive Design Professional Agreement](#) must be executed prior to beginning of Construction Documents Phase.

##### 1.1.2 Project Program

A project program is developed which defines the scope and budget of the project, i.e., the needs and functions of the user (see [FM2](#)), and the assignable square footage.

##### 1.1.3 Review of Conceptual Design

After the project program is complete, it is recommended that a predesign conference be held to confirm that all issues have been addressed in the program. All interested parties should participate in the predesign conference.

##### 1.1.4 Preliminary Evaluation

The design professional hired for project analyses and feasibility writes a preliminary evaluation of the project program and the construction budget, each in terms of the other.

## 1.2 SCHEMATIC DESIGN

### References:

- **Executive Design Professional Agreement between The Regents of the University of California and the Executive Design Professional ([Executive Design Professional Agreement](#))**, Article 2.2, Schematic Design Phase (see Part II).
- **Executive Design Professional Agreement between The Regents of the University of California and the Executive Design Professional (Executive Design Professional Agreement)**, [Exhibit C, Supplementary Requirements](#), Section 2.1 (see Part II).

Schematic design is the first phase of basic services for project design. At this stage in a project, the design professional describes the project three-dimensionally. A range of alternative design concepts are explored to define the character of the completed project and an optimum realization of the project program.

### 1.2.1 Environmental Documents

#### References:

- **Amended University Procedures for Implementation of the California Environmental Quality Act (CEQA), The Regents of the University of California, March 17, 1989, Appendix A of the UC Handbook.**
- **UC CEQA Handbook, Procedural Handbook and Model Approach for Implementing the California Environmental Quality Act (CEQA), University of California, Office of Long- Range Planning, Office of the President, May 1991, revised February 1994.**

As part of the schematic design phase, applicable environmental documents must be completed. (See [II:5.2](#) and [FM2:3](#).)

### 1.2.2 Value Engineering

It is recommended that value engineering begin early, preferably in the program phase of a project. If the total project cost is \$5 million or greater, the project must undergo a value engineering review at the end of schematic design phase.

Modifications or changes resulting from value engineering and design review sessions must be incorporated into schematic design documents before University approval is given to proceed to design development phase.

## 1.3 DESIGN DEVELOPMENT

### References:

**- Executive Design Professional Agreement between The Regents of the University of California and the Executive Design Professional ([Executive Design Professional Agreement](#)), Article 2.3, Design Development Phase (see Part II).**

**- Executive Design Professional Agreement between The Regents of the University of California and the Executive Design Professional (Executive Design Professional Agreement), [Exhibit C, Supplementary Requirements](#), Section 2.1 (see Part II).**

During the design development phase, the project design is further refined. Plan arrangements, specific space accommodations, equipment and furnishings, building design, materials and colors, and complete definitions of all systems serving the project are developed. All design decisions are completed during this phase in order to prepare the subsequent construction documents.

### **1.3.1 Value Engineering**

If the total project cost is \$5 million or greater, the project must undergo a value engineering review at the end of design development phase.

Modifications or changes resulting from value engineering and design review sessions must be incorporated into schematic design documents before University approval is given to proceed to construction documents phase.

### **1.3.2 Design Development Documents and the Effective Code Date**

For non-hospital and non-health care facility projects, a Facility submits completed design development documents for plan review to the Designated Campus Fire Marshal. This first submittal is the official "date of record" for a project. The edition of CCR, Title 24, California Building Standards Code, in effect on that date will be applied for the duration of a project (see [II4.1](#) and RD6.4).

## **1.4 CONSTRUCTION DOCUMENTS**

### **References:**

**- Executive Design Professional Agreement between The Regents of the University of California and the Executive Design Professional ([Executive Design Professional Agreement](#)), Article 2.4 Construction Documents Phase (see Part II).**

**- Executive Design Professional Agreement between The Regents of the University of California and the Executive Design Professional (Executive Design Professional Agreement), [Exhibit C, Supplementary Requirements](#), Section 2.3 (see Part II).**

Construction document phase consists of preparation of drawings and specifications establishing the requirements for the construction of the project. The construction documents describe the quality, configuration, size, and relationship of all components to be incorporated into the project. Construction documents must be consistent with the project program, the construction budget, and the project schedule.

Design Professional submits construction documents for review by University and others as deemed necessary by University, at 50% completion, 100% completion (as determined by design professional), and for final backcheck after all corrections are made.

If constructability analysis is required, it is performed on the 100% set of documents. Design professional must incorporate all resulting changes into the 100% documents prior to submitting the final backcheck set.

The construction documents serve as a basis for obtaining bids from contractors and are used by contractors to obtain price quotes from subcontractors. (The preparation of University construction documents is discussed in detail in *Facilities Manual, [Volume 4](#)*.) The construction documents are bid in accordance with the procedures in *Facilities Manual, [Volume 5](#)*.

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Rev. November 30, 2007 (Change No.07-091-P)



Back to Table of Contents



Go to Next Chapter