

## **California Architects Board - Supplemental Examination Test Plan**

The CAB is mandated to protect the public health, safety, and welfare. The California Supplemental Examination (CSE) assesses whether applicants for licensure demonstrate minimum standards of competency necessary to meet the requirements of current architectural practice in California.

The CSE Test Plan was developed using the results of the statewide survey of architectural practice in California conducted in 2007. The intent of the CSE Test Plan is not to duplicate coverage of general areas of practice already addressed by the national test, the Architectural Registration Examination (ARE). The intent of the CSE Test Plan is to focus on California-specific aspects of practice; it is therefore neither comprehensive nor representative of the full scope of architectural practice.

This test plan covers important knowledge and ability areas that are tested using oral questions and predefined grading criteria; some important areas are excluded because they cannot be adequately assessed in an oral format.

The Test Plan is organized into four primary knowledge categories as shown below. The “Weights” indicate the percentage of examination points that will be allocated to each category.

<b>Categories and Subcategories</b>	<b>Weights</b>
<b>I. Context &amp; Predesign</b>	<b>16%</b>
<b>II. Regulatory</b>	<b>42%</b>
A. California State Laws, Code, Regulations, and Standards (24%)	
B. Other Laws, Codes, Regulations, Standards, Agencies and Entitlements (18%)	
<b>III. Management &amp; Design</b>	<b>27%</b>
<b>IV. Construction</b>	<b><u>15%</u></b>
	<b>100%</b>

## **I. CONTEXT AND PREDESIGN (16%)**

This category encompasses the knowledge required to evaluate and respond to the physical and social context in California. This requires an understanding of natural and built conditions and their impact on design, including potential mitigations. Additional knowledge and abilities are those required to develop and utilize program information that addresses user characteristics and activities and performance objectives.

### **Knowledge and Ability Statements**

1. Knowledge of conditions of the natural environment regulated in California (e.g., wetlands, coastal regions, habitats of endangered species) as they relate to design and construction.
2. Knowledge of natural and human-caused hazardous conditions (e.g., seismic activity, fire, winds, flood zone, hazardous materials) and potential mitigations.
3. Knowledge of health issues related to buildings (e.g., offgassing, mold, adequate ventilation).
4. Knowledge of user characteristics (e.g., varying ages, cultures, abilities, activity requirements).
5. Knowledge of types of stakeholders (e.g., environmental groups, citizens' advisory committees, neighborhood and community organizations) concerned about design and construction.
6. Knowledge of project performance objectives (e.g., comfort control, safety and security, sustainability).
7. Ability to evaluate user activities to determine spatial requirements and adjacencies.
8. Ability to organize and evaluate relevant program information to prepare a final program document.

**II. REGULATORY (42%) - This category includes knowledge of the state, local, regional, and federal regulatory environments specific to the practice of architecture in California, and includes knowledge of agencies and entitlement processes.**

**A. California State Laws, Codes, Regulations, and Standards (24%)**

This subcategory encompasses the knowledge required to practice within the regulatory environment specific to California. This requires an understanding of the California-specific legal constraints upon design and construction, including a working knowledge of California building codes, environmental regulations, and lien laws. This also requires understanding of the requirements of the California Architects Practice Act, including but not limited to those regarding contracts, responsible control, standard of care, licensing, and instruments of service.

**Knowledge Statements**

9. Knowledge of California Environmental Quality Act (CEQA) as it relates to design and construction.
10. Knowledge of Essential Services Buildings Seismic Safety Act as it relates to design and construction.
11. Knowledge of what is encompassed by the California Building Standards Code (e.g., Building, Electrical, Mechanical, Plumbing, Energy, Historical) and how the CBSC is distinct from the model codes.
12. Knowledge of structural provisions of the California Building Code.
13. Knowledge of provisions of the California Building Code for anchoring and bracing nonstructural elements.
14. Knowledge of accessibility provisions of the California Building Code.
15. Knowledge of fire and life safety provisions of the California Building Code.
16. Knowledge of provisions of the California Energy Code.
17. Knowledge of California Health and Safety Code as it relates to design and construction.
18. Knowledge of the Design Professionals and Mechanic's Lien Laws.
19. Knowledge of other California special regulations relevant to design and construction (e.g., water regulations, California Coastal Act, California Clean Air Act, California Public Contract Code, Field Act, Hospital Facilities Seismic Safety Act).
20. Knowledge of the architect's responsibilities and requirements for practicing in California in accordance with the Practice Act (e.g., responsible control, standard of care, licensing requirements, signing and sealing of documents).
21. Knowledge of the elements of a legal contract as required by the Practice Act.
22. Knowledge of administration of the Practice Act (e.g., examination, licensing, and enforcement).
23. Knowledge of business and professional requirements of the Practice Act (e.g., architectural corporations, firm naming, associations, professional conduct).

## II. REGULATORY (42%) - Continued

**B. Other Laws, Codes, Regulations, Standards, Agencies and Entitlements (18%)** This subcategory encompasses the knowledge required to practice within the local, regional, and federal regulatory environments in California. This requires an understanding of the legal constraints upon design and construction, including a working knowledge of how General Plans inform planning and zoning issues and how the Americans with Disabilities Act may impact architectural practice. This subcategory also encompasses the knowledge required to interact with local, regional, and state governing agencies that may have jurisdiction. This requires an understanding of the jurisdictions, procedures, and approval processes of the agencies, as well as an awareness of the architect's responsibilities in obtaining approvals.

### Knowledge Statements

24. Knowledge of local or regional laws, codes, regulations, and standards (e.g., General Plan; planning and zoning ordinances; local building ordinances; design guidelines; Codes, Covenants, and Restrictions [CC&Rs]) relevant to design and construction.
25. Knowledge of the Americans with Disabilities Act (ADA) with regard to how it impacts architectural practice (e.g., client and architect responsibilities, design and construction).
26. Knowledge of federal laws, codes, and regulations other than ADA (e.g., Environmental Protection Agency Regulations, Federal Aviation Administration regulations, US Army Corps of Engineers regulations) relevant to design and construction.
27. Knowledge of national standards (e.g., UL, ANSI, ASTM, Factory Mutual) relevant to design and construction.
28. Knowledge of local community development agencies and other authorities that normally have jurisdiction over design and construction (e.g., building, planning, public works, police and fire departments).
29. Knowledge of local or regional agencies and other authorities that may have jurisdiction over design and construction (e.g., Design Review Boards, Air Quality Management District, County Flood Control District, airport authorities, Environmental Health Department).
30. Knowledge of California state agencies that have jurisdiction over design and construction (e.g., Coastal Commission, Water Resources Control Board, Department of Fish and Game, Air Resources Board, California Department of Transportation).
31. Knowledge of procedures for obtaining approvals from regulatory agencies.
32. Knowledge of interrelationships among various regulatory agencies (e.g., sequence of approvals, hierarchy of jurisdictions).
33. Knowledge of process for resolving conflicts between agencies or between codes, regulations, and standards.

### **III. MANAGEMENT & DESIGN (27%)**

This category encompasses the knowledge required to plan and manage project teams, including consultants, and to implement procedures for risk management and quality assurance. This requires an understanding of the architect's role and responsibilities for coordinating project teams, an understanding of consultants' services as they relate to systems and building design, obtaining agency approvals, and an understanding of how to limit professional liability exposure. This category also encompasses the knowledge and abilities required to develop design solutions and prepare design and construction drawings and documents. This requires an understanding of methods for developing design solutions collaboratively with clients, users, and stakeholders; an understanding of the drawings and documents needed for agency approvals; and an awareness of specific design concerns in California (e.g., nonstructural elements, special structural loading conditions, environmental control systems, material performance and testing standards). This category also encompasses knowledge of the bidding process.

#### **Knowledge and Ability Statements**

34. Knowledge of consultants' (e.g., civil, structural, mechanical, electrical, landscaping, acoustical, traffic) services.
35. Knowledge of architect's role and responsibilities in coordinating an entire project team.
36. Knowledge of architect's role and responsibilities in managing project teams to obtain necessary agency approvals at the appropriate time.
37. Knowledge of document checking and review procedures for quality assurance (in-house and external).
38. Knowledge of how practicing within the standard of care limits professional liability exposure.
39. Knowledge of methods for developing design solutions with involvement of client, users, consultants, and stakeholders.
40. Knowledge of contents of design drawings and related documents required for agency approvals.
41. Knowledge of nonstructural elements as defined by the California Building Code (e.g., fixtures and equipment items, nonbearing partitions, suspended ceilings).
42. Ability to identify implications of special structural loading conditions (e.g., heavy equipment, snow, library shelving).
43. Knowledge of environmental control systems (e.g., energy management, occupant comfort and control).
44. Knowledge of material characteristics, performance, and testing standards.
45. Ability to prepare construction documents appropriate to project type.
46. Knowledge of construction bidding and negotiation processes.

#### **IV. CONSTRUCTION (15%)**

This category encompasses the knowledge and abilities required to perform construction contract administration services. This requires an understanding of the architect's role and responsibilities during construction, including knowledge of procedures for resolving conflicts, implementing changes, managing construction costs and schedules, and including California-specific special inspections and testing. Also requires knowledge of performing project close-out procedures, including understanding of lien laws.

##### **Knowledge and Ability Statements**

47. Knowledge of interrelationships among owner, architect, and contractor during construction.
48. Knowledge of the limits of the architect's role and responsibilities during construction (e.g., directing subcontractors, means and methods).
49. Knowledge of construction conflict resolution strategies (e.g., mediation, arbitration, litigation).
50. Knowledge of procedures for implementing changes during construction (e.g., directives, supplemental instructions, change orders).
51. Knowledge of procedures for monitoring construction costs and schedules (e.g., reviewing and certifying payments to contractor, reviewing lien releases).
52. Knowledge of procedures for performing project close-out (e.g., Certificate of Substantial Completion, Notice of Completion, final lien releases).
53. Knowledge of elements of California construction laws (e.g., lien requirements, minimum warranty periods).
54. Knowledge of code-required special inspections and testing (e.g., field welding, high strength concrete).
55. Ability to provide construction contract administration services appropriate to project type.