

Chapter 4 – Submission Phase Guidelines

4.3.1 SCHEMATIC DESIGN PHASE

A. GENERAL INFORMATION

1. The primary objective of Schematic Design Phase (SD's) is to arrive at a clearly defined, feasible concept and to present it in a form that achieves Client understanding and acceptance. Although the design is not entirely represented, the schematic drawings can demonstrate basic spaces, scale and relationship of components.
2. The secondary objective is to clarify the project Program, explore the most promising alternative design solutions, and provide a reliable basis for analyzing the cost of the project.
3. Due to elemental aspects of graphic illustration, the Designer also needs to explain in writing what scope is not apparent to the Client. The drawings and scope provide the estimator with the basic scope for formulating the cost estimate.

B. TASKS

1. **Project Administration and Management**
 - a. Project administration
Tasks include the following: consultation, research, conferences, communications, meeting minutes, travel, progress reports, and direction of the work of project team.
 - b. Disciplines coordination / document checking
Tasks include the following: coordination between the architectural work and the engineering work and other involved disciplines for the project. Review and checking of documents prepared the project.
 - c. Agency consulting / review / approval
Tasks include the following: agency consultations, research applicable regulations, appearance on Client's behalf at agency and community meetings.
 - d. Applicable building code analysis.
 - e. Client-supplied data coordination
Tasks include the following: review and coordination of data furnished by OGS and the Client, assistance in establishing criteria, assistance in obtaining data.
 - f. Schedule monitoring.
 - g. Presentations to Client, OGS, building committee, staff committee, user groups, board of directors, OGS's and/or Client's consultants.
 - h. Coordination with the preparation of Basis of Design (BOD) Document which includes details of Client requirements from every involved trade.
 - i. Coordinate request for Hazardous Material Testing with all trades as required.
 - j. Incorporate comments from previous phase.

2. Architectural Design / Documentation

Services during this phase responding to program requirements and consisting of preparation of:

- a. conceptual site and building plans
- b. preliminary sections and elevations
- c. preliminary selection of building systems, materials and equipment
- d. development of approximate dimensions, areas and volumes
- e. study model (s)
- f. Request Hazardous Materials Testing if required. (This should be included for all the trades)

3. Structural Design / Documentation

Services during this phase consisting of recommendations for basic structural materials and systems, analyses, development of conceptual design solutions for:

- a. predetermined structural system
- b. alternate structural systems

4. Mechanical Design / Documentation

Services during this phase consisting of alternate materials, systems and equipment, and development of conceptual design solutions for:

- a. energy source (s)
- b. energy conservation
- c. heating and ventilation
- d. air conditioning
- e. plumbing
- f. fire protection
- g. special mechanical systems
- h. process systems
- i. general space requirements

5. Electrical Design / Documentation

Services during this phase consisting of consideration of alternate systems, recommendations regarding basic electrical materials, systems, and equipment, analyses, and development of conceptual design solutions for:

- a. power service and distribution
- b. lighting
- c. telephones
- d. fire detection and alarms
- e. security systems
- f. electronic communications
- g. special electrical systems
- h. general space requirements

6. Civil and Landscape Design / Documentation

Services during this phase consisting of soils testing, consideration of alternate materials and systems and development of conceptual design solutions for:

- a. on-site utility systems
- b. off-site utilities work
- c. fire protection systems

- d. drainage systems
- e. paving
- f. land forms
- g. lawns and planting
- h. storm water management

7. Interior Design / Documentation

Services during this phase consisting of space allocation and utilization plans based on functional relationships, consideration of alternate materials, systems and equipment and development of conceptual design solutions for architectural, mechanical, electrical and equipment requirements in order to establish:

- a. Partition locations
- b. Furniture and equipment

8. Materials Research/Specifications

Services during this phase consisting of:

- a. Identification of potential architectural materials, systems and equipment and their criteria and quality standards consistent with the conceptual design
- b. Investigate the availability and suitability of alternative architectural materials, systems and equipment
- c. Coordination of similar activities of other disciplines.
- d. Possible Hazardous Materials identification and testing.

9. Project Scheduling

- a. Review and update previously established project schedules or initial development of project schedules (if not previously established) for decision making, design, documentation, contracting and construction.

10. Project Estimate

- a. Review and update project costs.

C. DELIVERABLES

1. Basis of Design (BOD) Document

- a. Illustrate the general form, scale, and relationship of the major project components, type of construction proposed and the building systems and equipment recommended.
- b. This is a general description of the work indicating the major systems and materials choices for the project, but usually providing little detailed product information.
- c. Details of Client project requirements. Include materials and equipment requested to be utilized by Client.

2. Drawings

- a. Typically presented at the smallest scale that can clearly illustrate the concept (perhaps 1/16" = 1'-0" for larger buildings and 1/8" = 1'-0" for smaller buildings). The Designer and the OGS Team Leader need to concur on drawing scale for the submission.

3. Code Compliance

- a. Copy of the completed BDC 402. Provide code compliance diagrams on the drawings. Code issues and solutions should be identified and resolved at this stage of the project development.

4. Sustainability:

- a. **Executive Order 88 Compliance:** Determine if the project needs to comply with Executive Order 88 for energy efficiency. (Refer to [FlowchartExisting.pdf](#) and [FlowchartNewConst.pdf](#)) If the project needs to comply, determine who will be the commissioning agent and how the energy efficiency analysis will be performed.
- b. **LEED:** If the project is pursuing LEED certification, determine who will be the commissioning agent, and perform a LEED charrette to determine which prerequisites and credits are to be attempted for certification.

5. Project Estimate

- a. The estimate is usually broken down into major trades or systems (for example, foundations, structure, exterior closure, interior partitions, finishes, plumbing, mechanical, electrical, site, and equipment).
- b. The estimate may include a preliminary analysis of the Client's budget, with recommendations for changes based on site, marketplace, or other unusual conditions encountered in the schematic design.
- c. Include contingencies for further design development, market contingencies, and changes during construction.

6. Project Schedules**7. Distribution**

- a. The Designer and the OGS Team Leader should determine formats, number of copies and distribution of submission documents required for this phase.

D. OPTIONAL SERVICES

1. Life-Cycle Cost Analysis
2. Special Renderings
3. 3D Modeling
4. Energy Analysis and Design
5. Value Analysis / Value Engineering

E. FINAL STEPS

1. The final step in the Schematic Design Phase is for the Designer to obtain formal OGS Team Leader and Client approval before proceeding to the Design Development Phase or the next designated phase. Present the BOD to the Client for input and acceptance.



- 2. All phase comments shall be reviewed and responded to within 15 business days from approval.

Revision History:

<i>Rev</i>	<i>Date</i>	<i>Description</i>	<i>Reviewed by:</i>	<i>Approved by:</i>
0	11/02/09	Last revised date		
1	06/01/13	Minor changes to section E and added Revision History	Parnett	Larkin
2	09/04/13	Minor change to code compliance.	Parnett	Parnett
3	7/8/14	Section C 4	Campas	Parnett