



Phase 2 Guide

Pre-Development Design

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1. Introduction to Pre-Development Design

In Phase 2, you will bring the work completed in Phase 1 to life in schematic drawings (SDs). Generally, you will be laying groundwork and developing your overall approach to the project. This phase includes financial planning activities, obtaining initial approval of your building plans, and ongoing stakeholder relationship-building to create excitement and support for your project.

This phase starts with site control, then moves to a kickoff meeting led by the architect or construction manager to bring in the consultants who will provide information for the SDs. Working with the architect to create SDs is one of the most detailed tasks of the project, and this phase will likely be one of the longest in the project timeline. With the information from the SDs, you can create a realistic budget for the entire project that includes all costs for planning, designing, acquiring, managing, and building your facility.

Figure 1. Real Estate Development Process Overview



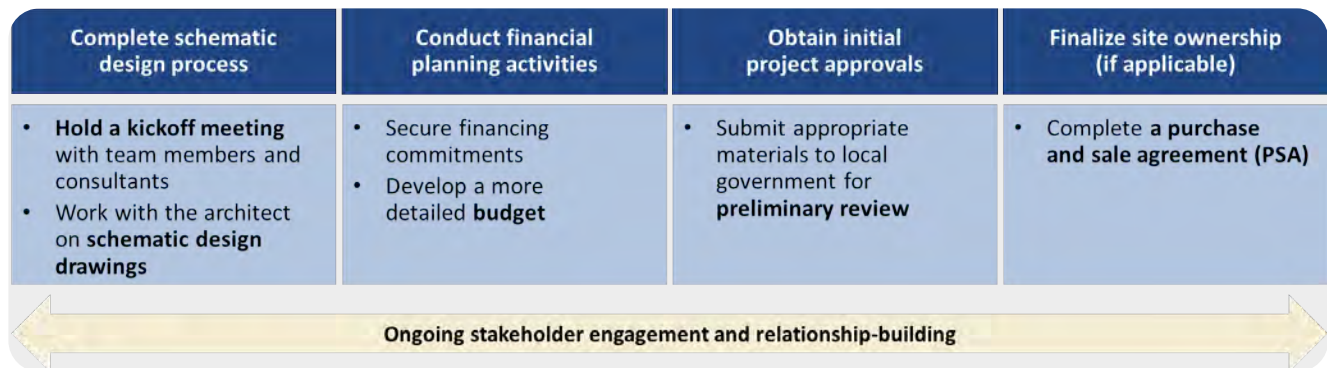
2. Objectives and Milestones

Objectives during the pre-development phase include

- Initiating and completing the schematic design process,
- Conducting financial planning activities,
- Obtaining initial project approvals, and
- Finalizing site ownership.

To complete the Phase 2 objectives, you will hold a kickoff meeting with your team, complete the SDs, develop a more detailed budget, complete the preliminary review, and complete a purchase and sale agreement if necessary.

Figure 2. Pre-Development Design Objectives and Activities



Working with the development team in Phase 2

You will work with a wider range of team members in Phase 2. Beyond your core development team, you will need several other consultants to provide information to help achieve your Phase 2 objectives.

Figure 3. Development Team Member Roles During Phase 2

	Schematic Design	Budget Development	Preliminary Review	Purchase Completion
Attorney		X		X
Architect	X	X	X	
Construction Manager	X	X	X	X
Civil Engineer	X		X	
Realtor				X
Other Consultants	X		X	

2.1. COMPLETE SCHEMATIC DESIGN DRAWINGS

During the kickoff meeting, civil engineers and other consultants will provide calculations and detailed design information for the SDs. Schematic design, sometimes called concept design (not to be confused with concept planning—that was Phase 1!), is the first step of architectural design. The outcome of schematic design is schematic drawings or SDs, that include sufficient detail and specifications to support development of a preliminary budget for potential funders and others with interest in the cost of the project.

What is schematic design?

To develop schematic design drawings, architects use rough sketches to produce more detailed drawings. They include type, quantity, and quality of materials; systems such as electrical, plumbing, heating, ventilation, and air conditioning (HVAC); stairways, roofs, foundation, walls, and doors; and landscaping, open space, parking, and traffic flow. These drawings show floor-by-floor and room-by-room dimensions, including common areas, hallways, entrances, and exits and should include internal and external views. Additionally, the architect will begin to develop more detailed specifications about major components of the project.

Figure 2. Schematic Design Components

	Description	Components of Drawings
Civil Engineering	Civil engineering is focused on the project site and bringing utilities to it.	<ul style="list-style-type: none"> • Site dimension control • Offsite utilities • Onsite utilities • Grading and drainage
Structural Engineering	Structural engineering refers to the supporting elements of the structure and its footprint.	<ul style="list-style-type: none"> • Foundation design • Garage design • Building frame
Architectural Interiors	Architectural/interior elements bring purpose to the space, establish traffic patterns, and add architectural interest.	<ul style="list-style-type: none"> • Building and site plan • Unit plans and finish program • Amenity space layout • Area tabulations • Roof design • Exterior elevations • Exterior materials • Elevator quality and speed
MEP Engineering	Mechanical, electrical, and plumbing (MEP) engineering includes the elements of those systems.	<ul style="list-style-type: none"> • HVAC systems • Electrical systems • Plumbing systems • Energy conservation concepts
Landscape Architecture	Landscape architecture includes everything that sits outside the building, from concrete and stone to plants and trees.	<ul style="list-style-type: none"> • Hardscape design • Softscape design • Landscape design concept
Development	Development views and summaries at this stage identify changes, refinements, and redesign of elements to be taken care of before construction begins so there is no loss of momentum or other problems that could hurt the project.	<ul style="list-style-type: none"> • Schedule summary • Soft cost summary • Consultant proposal summary • Building tabulations summary • Site and landscape design • Full review of the SD set
Construction		<ul style="list-style-type: none"> • Hard cost summary

What do I need to know about green building?

Green or sustainable building is not just a construction process; it is an overarching methodology and belief in the importance of a health-focused, high-quality, energy-efficient built space that begins in the conceptual phase and extends through to the maintenance and business operations of the building after completion.

Green building combines environmentally sustainable materials and processes (sourced prior to the construction phase) that, when assembled in a new building, create an overall effect of good planning and design that is readily apparent and signifies quality throughout the structure and in those who built it.

The World Green Building Council (worldgbc.org) classifies the benefits of green building as environmental, economic, and social. Meeting energy efficiency standards, lowering construction costs, raising property values, and creating new jobs on a massive scale and significant revenue growth at the local, regional, and global level are just a few examples of these benefits.

The United States Environmental Protection Agency (epa.gov) identifies seven components of green building:

- Energy efficiency and renewable energy
- Water efficiency
- Environmentally preferable building materials and specifications
- Waste reduction
- Toxics reduction
- Indoor air quality
- Smart growth and sustainable development

One reason to hire a local architect is that they will know if there are any mandatory regulations for green building in your location in addition to the California Green Building Standards Code, or CALGreen. These standards set requirements for water and energy efficiencies, indoor air quality, and the use of certain sustainable building materials. The CALGreen building code can be found at <https://www.hcd.ca.gov/building-standards/calgreen/index.shtml>.

See other links to sustainability and green building information in the Resources section.

2.2. DEVELOP YOUR BUDGET

Your project budget will be the total amount needed to plan, design, approve, construct, finance, and manage the building and move-in of your project.

The total amount can be defined as anything that costs money. All of it must be included in the budget, or you will have no way to pay for forgotten or overlooked materials, consultant bills, city fees, or other expenses. The key to ensuring you are including all possible line items is to consult closely with your architect, construction or project manager, and attorney. The guide for this task will be the completed schematic design and site programming from Phase 1.

Figure 5. Construction Costs Template

Make sure your budget is reasonable and accurate based on the scope, location, schedule, and complexity of your project. Labor costs must be based on the prevailing wages for your specific location in California. This can be found at <https://www.dir.ca.gov/public-works/prevailing-wage.html>.

2.3. COMPLETE PRELIMINARY PLAN REVIEW (PPR)

Your relationship with the planning department in your city is worth cultivating, as you want the city to look favorably on your project and see how it adds to the community. You may request a preliminary plan review (PPR) from your jurisdiction to identify potential code issues, obtain code interpretations, or seek a variance.

What is a preliminary plan review?

The PPR is an initial design review process of the SD documents that provides you with input on your project’s design before you make a formal application for a building permit. A PPR helps you obtain general information about the regulations that apply to your project, find out what permits you need, and gives a preview of how the city will apply code provisions to your situation. Although cities and counties throughout California organize their regulatory processes differently, building and planning departments typically enforce the California Building Standards Code (building, electrical, plumbing, mechanical, energy, green building, and so on) and will perform PPRs.

Figure 6. Preliminary Building Plan Development Steps



Typically, the preliminary building plans are developed in two distinct steps, referred to as schematic drawings (SDs) and design drawings (DDs). The two-step process allows the local planning department and architect/engineer to interact before the full construction drawings (CDs) are developed, helping to ensure a mutual understanding of the design objectives, limitations, and budget.

After you have a PPR and review the comments on your SDs, your team will push forward with the DDs. After your development team is satisfied with the completed DDs, your team will move on to the construction drawings (CDs). You will still need to formally submit a full set of construction documents for a complete building plan review and official stamped approval of your CDs to get your permits, but this early PPR of the SDs is helpful and worth the time and investment. Fees are usually less than \$4,000, which does not include meetings with the planning staff. The SDs may be uploaded online, or it may be possible to present them in person. You may request a meeting to go over your PPR once it is complete, either to discuss the whole plan or a single discipline. You, your architect, and your construction manager should all attend any scheduled meetings with the planning department.

Be sure to inform your local planning department of California state funding that has been awarded to your project, the legislative exemptions from California Environmental Quality Act (CEQA) and zoning requirements, and that you are exempt from discretionary reviews and entitlements.

Your local planning department is your ally, not your adversary. Make it clear that you are excited about the project and about becoming part of the community. Make your SDs consistent with the design guidelines for your area. Even though Community Care Expansion Program (CCE) and Behavioral Health Continuum Infrastructure Program (BHCIP) projects are exempt from zoning, best practice suggests that conformity with locally recommended building size, aesthetics, setbacks, parking, and landscaping will make your arrival in the community easier. If the planning department requests revisions, work with them to be accommodating and make changes within reason and budget.

Upon completion of the PPR, the architect will incorporate feedback into the SDs and DDs.

3. Resources and References

Resources

The California Environmental Quality Act (CEQA)

- Resources for understanding and implementing CEQA are available at the [Governor’s Office of Planning and Research website](#).

LEED Certification

Learn more about Leadership in Energy and Environmental Design (LEED), a voluntary national certification process that helps industry experts develop high-performance, sustainable residential and commercial buildings.

- [Green Building Solutions LEED Cost Analysis Study](#)
- [Regions | U.S. Green Building Council \(usgbc.org\)](#)

Prevailing Wages

The California Department of Industrial Relations publishes information on [prevailing wage requirements](#).

Schematic Design

- The [AIA Schematic Design Checklist](#) is produced by the American Institute of Architects (AIA).

Sustainability and Green Building

- Tools and resources related to California’s Green Building Standards Code—also referred to as CALGreen—are available on the California Department of Housing and Community Development [CALGreen website](#).
- CalRecycle publishes green building resources in California on its [website](#) with emphasis on recycling that includes toolkits, building manuals, and other related publications.
- The [Green Globes™ rating system](#) is a green building management tool that includes an assessment protocol, rating system, and guide for integrating environmentally friendly design into commercial buildings. Green Globes™ can also facilitate recognition of the building project through third-party verification. There are many rating systems and green building assessment tools. For further information, please refer to the links below.

References

California Department of Housing and Community Development. (n.d.). *California Green Building Standards Code — CALGreen*. <https://www.hcd.ca.gov/building-standards/calgreen/index.shtml>

California Department of Industrial Relations. (n.d.). *Prevailing wage requirements*. <https://www.dir.ca.gov/public-works/prevailing-wage.html>

United States Environmental Protection Agency. (n.d.). *Green building standards*. <https://www.epa.gov/smartgrowth/green-building-standards>

World Green Building Council. (n.d.). *About green building*. <https://www.worldgbc.org/benefits-green-buildings>