

Step 3. Understand where design fits in the development timeline

Why is this step important?

Timing is everything. As a developer you are responsible for every aspect of an affordable housing project, from financing and regulatory approval to construction and occupancy. Design quality is only one of your concerns - an important one, but one that is often overwhelmed by more pressing issues. To make sure that design quality is not lost over the course of a project, it is necessary to understand:

- how the design process unfolds,
- where specific design phases fit in the overall development timeline, and
- when specific steps should be taken to ensure that design quality is “built in” to the project.

When should this be done?

During the Concept phase of development. (See the **Design Development Matrix**.)

Who should do this?

The owner/developer.

What should be done?

- Review the **Design/Development Matrix** for a summary of how the basic phases of affordable housing development relate to the basic phases of architectural design.
- Pay special attention to the specific steps that are recommended at each phase and when they should occur to have the most impact on design quality.
- Review the definitions used for the various design and development phases listed on the matrix. (See **Design Phase Definitions**.)
- Refer back to the individual descriptions of the **20 Steps to Design Quality** listed on the Matrix.
- Recognize that the development process will vary from project to project and the sequence of design and development activities may also vary. However, the basic ideas and terminology you find here will most likely be the same. The matrix is a typical example of the process, based on standard architectural language and experiences from a wide range of developments.

How can doing this help me move a project forward?

- A clear understanding of the phases and the “language” of design will foster better communication between all members of the design and development team.
- An understanding of how the phases of design relate to the overall development timeline will help optimize overall project scheduling and avoid duplication and overlap.

- Finally, an understanding of when the Design Advisor’s 20 Steps to Design Quality should occur will ensure that these steps are indeed taken and not overlooked as the design/development process proceeds.

Additional resources available from the Affordable Housing Design Advisor CD-ROM.

Excerpts from the Architect’s Handbook of Professional Practice, produced by the American Institute of Architects, presents a detailed discussion of the design process, primarily from the architect’s point of view.

You and Your Architect, also produced by the American Institute of Architects, provides an overview of the owner/architect relationship.

Excerpts from Managing the Development Process, produced by the Pratt Institute Center for Community and Environmental Development, provides an overview of the design/development process from the standpoint of community housing development organizations.

Design Development Matrix

Development	Design	20 Steps to Design Quality
CONCEPT PHASE		
<i>What goes on in the development process</i>	<i>What goes on in the design process</i>	<i>What to do to ensure a well designed project</i>
<ul style="list-style-type: none"> • Establish organizational goals for the project. • Determine type of project, Potential location and target occupants. • Consider sources of financing and how the project might be managed. • Develop an understanding of community and local government support/opposition, concerns/needs. • Evaluate site: cost and availability, technical and environmental issues. • Visit and evaluate similar projects. • Develop project vision and concept. • Decide whether to explore the concept further. ➤ Outcome: specific use of a designated site for an identified market by a specific development team with a defined financial program. 	<ul style="list-style-type: none"> • Pre-Design Phase - Activities May Include: <ul style="list-style-type: none"> ➤ Programming ➤ Space Schematics/Flow Diagrams • Site Analysis Phase – Activities May Include: <ul style="list-style-type: none"> ➤ Site analysis and selection 	<ol style="list-style-type: none"> 1. Start Project Book 2. Review the Design Considerations Checklist and continue to refer to it throughout the development process. 3. Understand where design fits in the development timeline 4. Obtain Professional Design Assistance at the Very Beginning 5. Analyze target occupants and establish resident-related design goals for the project 6. Analyze neighborhood context and establish community-related design goals for the project 7. Analyze the site to make sure it can physically accommodate the proposed project and provide easy access to the amenities and services its residents will need. 8. Begin Cost Analyses - Continue to Conduct Them Early and Often

Development	Design	20 Steps to Design Quality
PREDEVELOPMENT PHASE		
<i>What goes on in the development process</i>	<i>What goes on in the design process</i>	<i>What to do to ensure a well designed project</i>
<ul style="list-style-type: none"> • Apply for predevelopment funds. • Conduct market study. • Identify governmental/regulatory requirements. • Select project team and define scope of work for each member. • Review development concept with potential occupants, community groups, maintenance personnel, and other stakeholders and modify as appropriate. • Identify sources of financing. • Negotiate tentative or conditional financing commitments. • Test cost assumptions. • Obtain site control. • Develop feasibility study. <ul style="list-style-type: none"> ➢ Outcome: analysis of all assumptions regarding market, site, operation pro forma, development pro forma, financial requirements, financing, team and roles, including suggested modifications for the concept to be feasible. 	<ul style="list-style-type: none"> • Pre-Design Phase - Activities May Include: <ul style="list-style-type: none"> ➢ Existing Facilities Surveys • Site Analysis Phase - Activities May Include: <ul style="list-style-type: none"> ➢ Site Development Planning ➢ Detailed Site Utilization Studies ➢ On-Site Utility Studies ➢ Zoning Processing Assistance • Early Schematic Design Phase - Activities May Include <ul style="list-style-type: none"> ➢ Architectural Design ➢ Landscape Design 	<p>9. Assemble the right project design team</p> <p>10. Develop a minimum of 3 alternative site plan concepts for the project.</p> <p>11. Use the Design Considerations Checklist to guide the design process.</p> <p>12. Use the Operations & Maintenance Considerations Checklist to reality check the design process.</p>

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DEVELOPMENT PHASE		
<i>What goes on in the development process</i>	<i>What goes on in the design process</i>	<i>What to do to ensure a well designed project</i>
<ul style="list-style-type: none"> • Ongoing consultation between project team and the community. • Prepare and submit financing/loan application. • Secure permanent financing. • Acquire property. • Secure construction financing. • Solicit and review construction bids. • Obtain planning approvals, environmental approvals, if required. • Obtain building and other permits as required. <ul style="list-style-type: none"> ➢ Outcome: all elements of project made definite. Letters of commitment, contracts and loan documents binding all participants to the specific elements of the deal are put in place. 	<ul style="list-style-type: none"> • Later Schematic Design Phase - Activities May Include: <ul style="list-style-type: none"> ➢ Architectural Design ➢ Structural Design ➢ Mechanical Design ➢ Electrical Design ➢ Civil Design ➢ Landscape Design ➢ Interior Design ➢ Materials Research • Design Development Phase – Activities May Include <ul style="list-style-type: none"> ➢ Architectural Design ➢ Structural Design ➢ Mechanical Design ➢ Electrical Design ➢ Civil Design ➢ Landscape Design ➢ Interior Design ➢ Materials Research • Contract Documents Phase - Activities May Include <ul style="list-style-type: none"> ➢ Architectural Design ➢ Structural Design ➢ Mechanical Design ➢ Electrical Design ➢ Civil Design ➢ Landscape Design ➢ Interior Design ➢ Materials Research • Bidding or Negotiations Phase - Activities May Include <ul style="list-style-type: none"> ➢ Bidding Materials ➢ Bidding/Negotiation ➢ Analysis of Alternates/Substitutions ➢ Bid Evaluation ➢ Contract Award 	<p>13. Identify and prioritize the key design components of the project - those that will do the most to meet user needs, respond to the context and enhance the neighborhood.</p> <p>14. Stress the project's design quality in all funding applications.</p> <p>15. Identify and prioritize the key construction materials and systems for the project – those which are most critical to making the project "built to last."</p> <p>16. Identify and prioritize the key finishes and hardware for the project - those which are most critical to making the project "built to last."</p> <p>17. Monitor bids and review any material, system, finish or hardware substitutions to ensure that design objectives, especially the "built to last" goal, are not compromised.</p>

Development	Design	20 Steps to Design Quality
CONSTRUCTION PHASE		
<i>What goes on in the development process</i>	<i>What goes on in the design process</i>	<i>What to do to ensure a well designed project</i>
<ul style="list-style-type: none"> • Award construction contract(s). • Initiate construction. • Manage change orders. • Negotiate certificate of substantial completion. • Initiate marketing and lease-up, including outreach within the community. • Manage construction close out. • Conduct open house for community participants, press, etc.. <ul style="list-style-type: none"> ➤ Outcome: completely built, leased/sold building, passing all inspections. 	<ul style="list-style-type: none"> • Contract administration Phase <ul style="list-style-type: none"> ➤ Submittal services ➤ Observation services ➤ Project Representation ➤ Testing and Inspection ➤ Administration ➤ Supplemental ➤ Documentation ➤ Quotation ➤ Requests/Change Orders ➤ Contract Cost Accounting ➤ Project Closeout 	<p>18. Monitor construction to ensure that all key design, construction and finish goals are being met.</p>

Development	Design	20 Steps to Design Quality
OPERATION PHASE		
<i>What goes on in the development process</i>	<i>What goes on in the design process</i>	<i>What to do to ensure a well designed project</i>
<ul style="list-style-type: none"> • Staff up. • Occupy. • Provide services. • Operate. • Continue communication with community. ➤ Outcome: effectively rented/sold project meeting financial and other project goals. 	<ul style="list-style-type: none"> • Post Contract Phase - Activities May Include <ul style="list-style-type: none"> ➤ Maintenance and operational programming ➤ Start-up assistance ➤ Record drawing ➤ Warranty review ➤ Post occupancy evaluation 	<ul style="list-style-type: none"> 19. Create an operation and maintenance manual for the project. 20. Complete Project Book