

# RESIDENTIAL road map

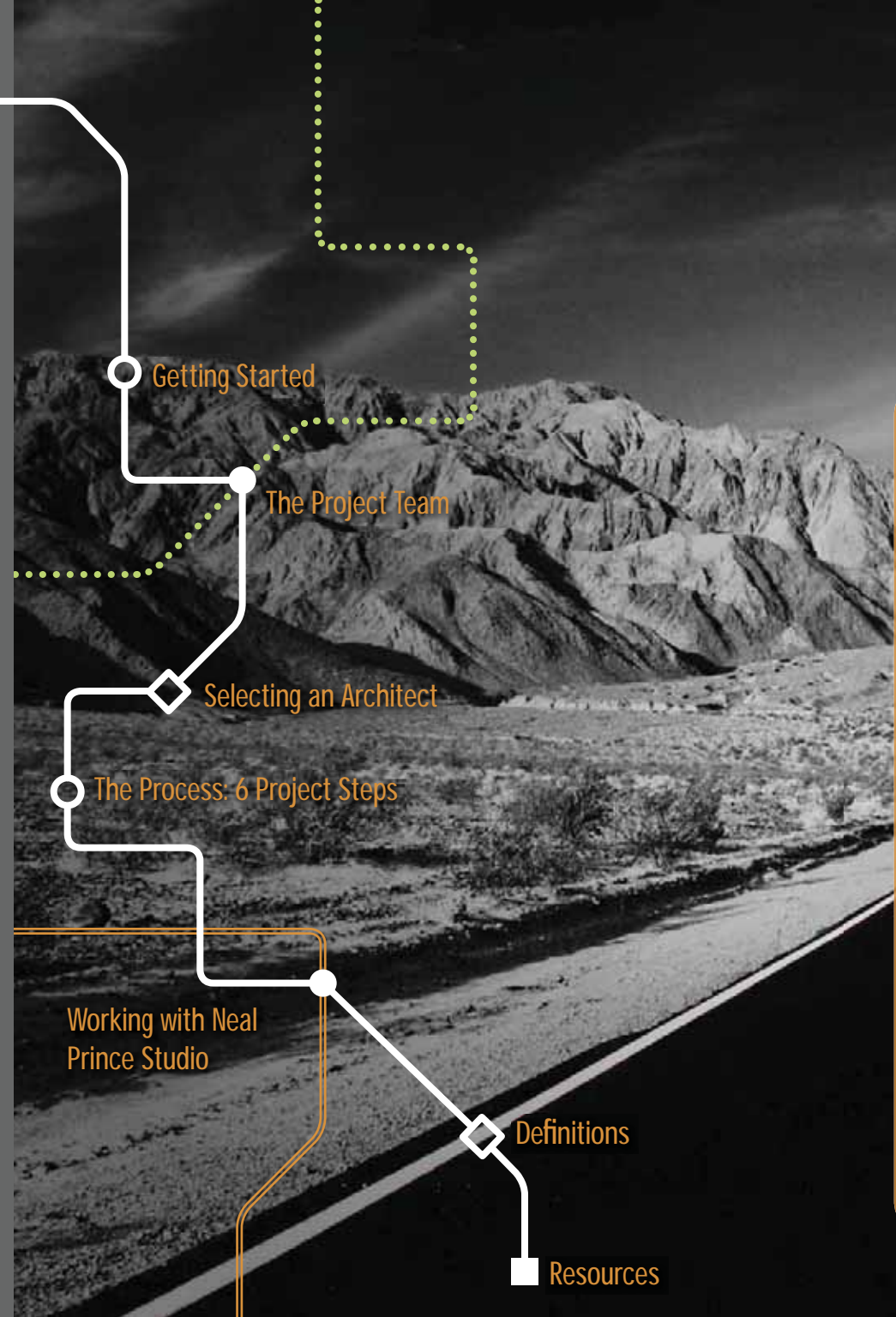


# Getting Started

**Home** is perhaps the most personal environment that you experience in your daily life. Your home should reflect your unique interests, needs, and desires. Designing your home just might be the most interesting, complex, and expensive project that you will ever undertake. Large or small, every building project involves many complicated and challenging decisions, and as a homeowner, it's easy to get overwhelmed. Establishing a relationship with an architect can save time and money, while making your new environment more functional, comfortable, and sustainable.

An architect adds value at every stage of the project, from initial conceptual design through construction completion. As your advocate throughout the project, the architect functions as a planner, designer, mediator and project coordinator. While there are many other participants in the design and construction process, the architect is the only professional trained to provide overall coordination between the various participants.

Neal Prince Studio has specialized in residential architecture for over forty years. We provide architectural design for residential projects of all types and sizes, including custom homes, additions, and renovations. We listen closely to you, help solidify your goals, and translate those goals into innovative solutions. Neal Prince is about the making of good architecture.



Getting Started

The Project Team

Selecting an Architect

The Process: 6 Project Steps

Working with Neal Prince Studio

Definitions

Resources

**[YOUR TRIP STARTS HERE]**  
After many years of working with residential clients we have discovered something about architects in general...they tend to speak their own language. This is certainly not intentional. At Neal Prince Studio we feel that communication is the foundation of our relationship with our clients.

For those who are building for the first time, the design and construction process is unfamiliar territory and can seem very overwhelming. We think it is essential that architects provide the resources necessary for you to participate meaningfully in the process **[and your participation is the real key to a successful project]**. Not only do you need to feel comfortable around your architect, you need to understand them... literally! This road map is our way of engaging you in the process; to help you navigate through all of the complex language, steps, and decisions involved throughout the design and construction of your home. Design is an exciting, creative challenge, but it is also hard work. We are here to help make your journey easier and more rewarding.

Neal Prince Studio / LS3P



# Getting Started

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Getting

Select

The Process

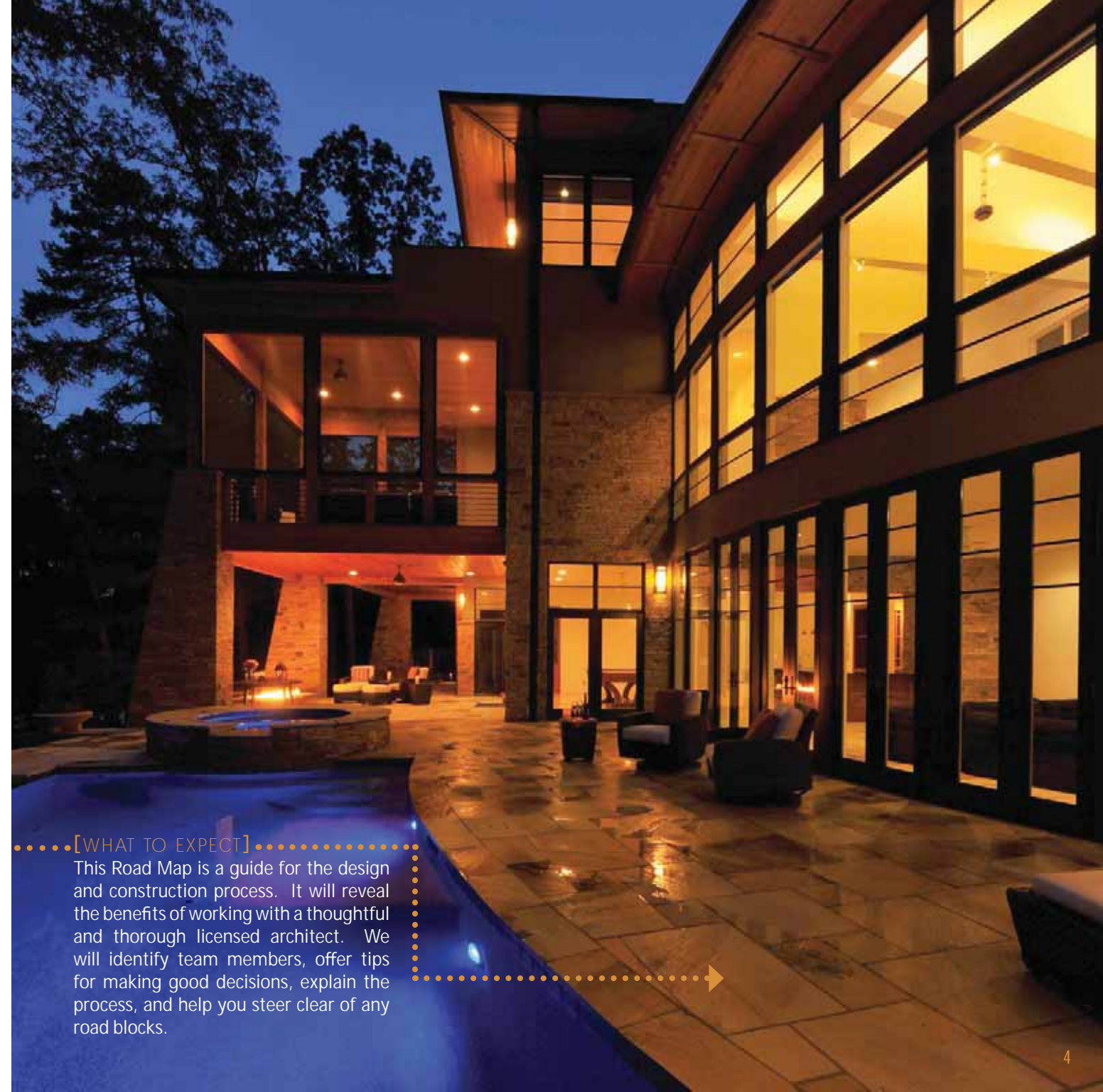
Working with Neal Prince Studio

## Selecting an Architect

**[WHY AN ARCHITECT?]**  
An architect is a licensed professional who is trained to design the places in which people live and work. Licensure is the result of an extensive educational process, years of internship, and the completion of a series of difficult state exams. We are trained to see the “big picture” and tailor the design to suit your personality, needs, budget, and lifestyle. Good design is much more than a subjective compilation of pieces. Today's homes can be very complicated, requiring expertise in building systems, sustainable materials, new technologies, and good construction practices. Architects know how to manage all of this information and provide a comprehensive solution specific to each project.

**[FINDING THE RIGHT ARCHITECT]**  
The right architect will be the one who can provide the judgment, technical expertise, and creative skills to help you realize a project that fits your practical needs as well as your dreams. Look for a good listener, and you'll find a good architect. Remember, you will be working with the architect for a long time. Choose someone with whom you feel comfortable. Here are a few other considerations:

- *Ask friends and relatives for recommendations.*
- *Check to see if the architect is a member of The American Institute of Architects [AIA].*
- *Conduct interviews and ask to see information that outlines the firm's qualifications and experience.*
- *Ask to meet with the individual who will actually be helping you design your home.*
- *Ask questions about the firm's approach, interest and availability, range of fees, and for references.*
- *Ask to visit a complete or substantially complete project.*



**[WHAT TO EXPECT]**  
This Road Map is a guide for the design and construction process. It will reveal the benefits of working with a thoughtful and thorough licensed architect. We will identify team members, offer tips for making good decisions, explain the process, and help you steer clear of any road blocks.

## .....The Project Team .....

### [THE OWNER]

You are the most vital member of a successful design team because only you know the details about your daily life. By vocalizing your unique interests, needs, and future desires, you [and your architect] will be able to craft a home that is specifically tailored for you.

### [THE ARCHITECT]

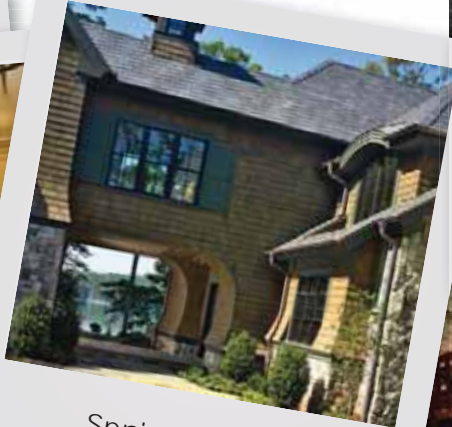
Architects are professionals who will help you define what you want to build, present options you might never have considered, and help you get the most for your valuable investment. As creative individuals, we design for clients who are distinctively different from each other, whose requirements are varied, and whose sites are unique. We don't just draw plans; we create memorable places, both interior and exterior, that are functional and exciting places in which to work and live.

### [THE CONTRACTOR]

This person, or company, will build your home. A good contractor will closely follow the construction documents created by your architect. Your contractor should share your desire for craftsmanship, technical competence, aesthetic quality, and cost.



Summer 2008



Spring 2009



At Neal Prince Studio, we offer services designed around you. The final drawings are simply one of the many tools we provide to help you build your dream home. We are committed to being your guide throughout the entire process, from initial planning through construction. We are here to help you make good decisions and offer ideas that **stretch beyond the everyday solution.**

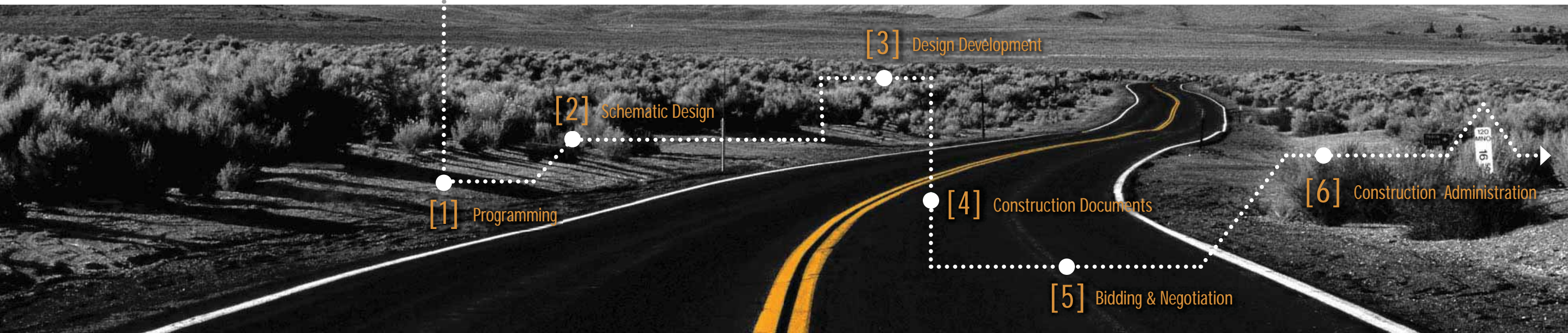


### [ROAD TIP: HOW TO BE AN EFFECTIVE CLIENT]

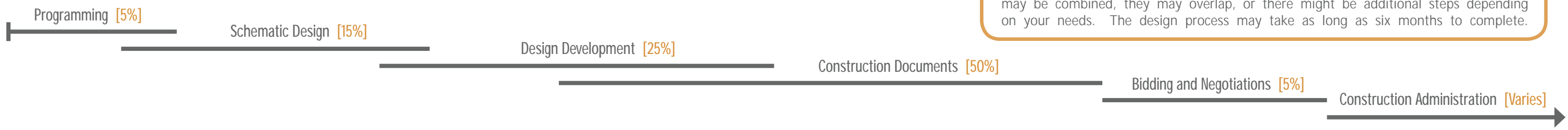
The most thoughtful architects are as careful in selecting their clients as owners are in selecting architects. Be prepared to answer questions about your project's purpose, budget, time frame, site, and the team of players you anticipate being involved with the project.

And don't be afraid to be frank. Tell the architect what you know and what you expect. Ask for an explanation of anything you do not understand. The more you put on the table at the outset, the better the chances are for a successful project. There is no substitute for the intensive dialogue and inquiry that characterize the design process.

.....The Process: 6 Project Steps.....



Timeline Diagram [% of overall project time]



**[WHAT TO EXPECT]**  
 The design and construction process typically includes the following steps. These steps may be combined, they may overlap, or there might be additional steps depending on your needs. The design process may take as long as six months to complete.

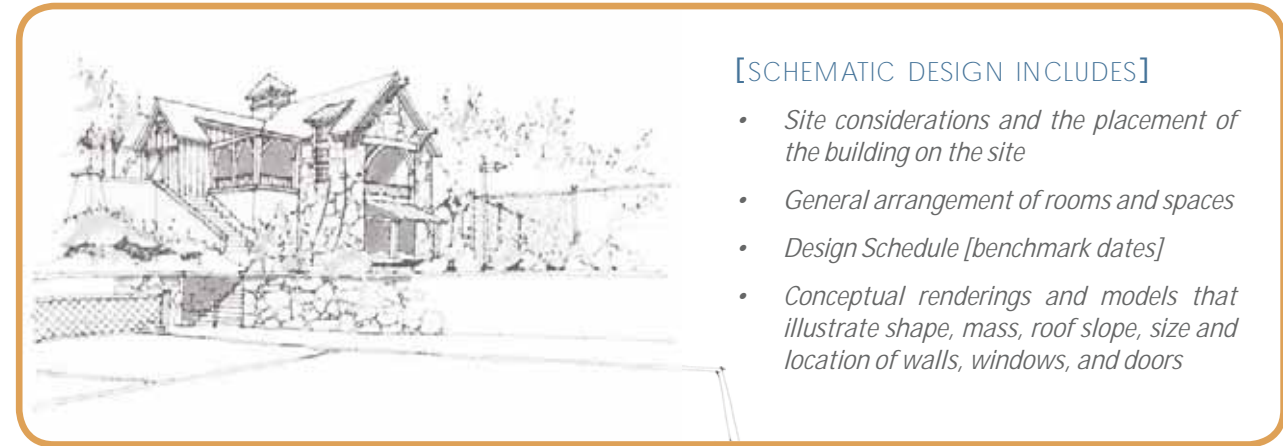
# [1] Programming

## [DECIDING WHAT TO BUILD]

Programming is a time for information gathering; it is the time for us to listen to you, ask questions, and explore possibilities. This is your opportunity to indulge in a little creative daydreaming. The goal isn't simply to list elements or features that you find appealing, but to convey the reasons behind your choices. It is vital for us to understand not only what you like and why, but also what you don't like. Realize that the more you can tell us about wants and needs, the closer we can come to designing a home that will exceed your expectations. This process allows us to outline the scope of your project in detail [a program] and will set the stage for building cost efficiency early in the project.

## [STEPS TO TAKE]

- Write out the activities that take place in your home.
- Make a list of likes and dislikes of your existing home.
- Gather images from books and magazines.
- Make both a 'wish' list and a 'reality' list.
- Provide the architect with information about your site.



## [SCHEMATIC DESIGN INCLUDES]

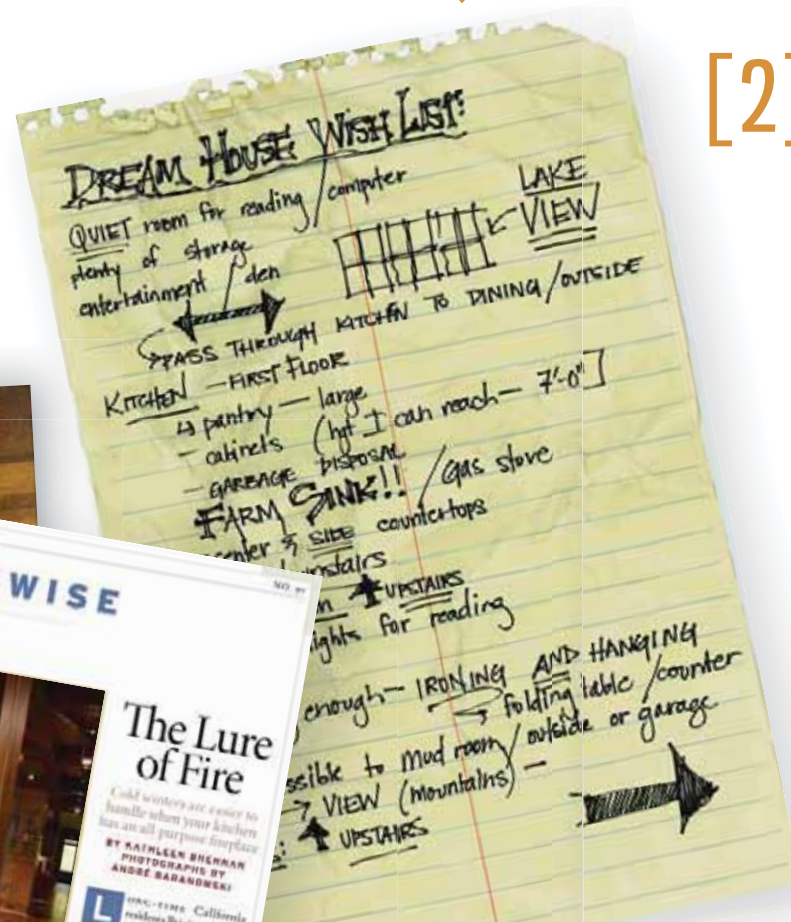
- Site considerations and the placement of the building on the site
- General arrangement of rooms and spaces
- Design Schedule [benchmark dates]
- Conceptual renderings and models that illustrate shape, mass, roof slope, size and location of walls, windows, and doors

# [2] Schematic Design

## [ASKING 'WHAT IF']

As you graduate from the programming phase, decisions will begin to telescope from broader, 'big picture' concerns to smaller, more specific ones. Once we've established the program, the actual design begins to take shape with a series of rough sketches and conceptual ideas referred to as schematic design.

It is crucial that these schematic designs capture the essence of your project and that everyone is in agreement about the design direction. It is much easier to make changes at this early stage than later down the road. Once the design has reached the construction document phase or after foundations have been poured, major adjustments are costly. Be thoughtful and mindful that decisiveness during schematic design helps to move the process along at an efficient pace.





### ..... [3] Design Development .....

#### [REFINING THE DESIGN]

In Design Development we prepare more detailed floor plans, elevations, and building sections which illustrate aspects of the design that require certain technical decisions. This is also the time when the selection of major systems and materials are being considered.



#### [DESIGN DEVELOPMENT INCLUDES]

- Exterior materials and finishes
- Interior materials and finishes
- Window selection and design
- Structural system
- Electrical and mechanical components
- Type and placement of insulation
- Consideration of sustainable materials and systems

### [4] Construction Documents .....

#### CONSTRUCTION DRAWINGS:

*A set of drawings that are highly detailed and illustrate the quantities and relationships of all work required to build the project. These drawings are the vehicle through which all information is communicated to others.*



#### SPECIFICATIONS:

*The project specifications are a set of written, comprehensive documents outlining the levels of quality to be met for all the materials, products, and workmanship required for a complete project.*

#### [THE DESIGN RECORDED]

All the decisions and details made to this point are documented so the contractor [builder] can establish the cost for construction and build the home. These working documents, often referred to as blueprints, consist of both drawings and specifications. While a considerable investment, a complete, concise set of construction documents saves time, money, and frustration during construction.

Construction documents become a part of your contract with the contractor [builder] and establish their contractual obligations. Any information not contained in the documents is left to the contractor's discretion and may potentially lead to additional charges for you during construction. For this reason, thorough documentation means that there will be fewer problems, fewer hidden costs, and reduces the likelihood of costly delays during construction.

Each decision impacts another.



The depth and location of a structural beam can affect the thickness of the floor system, ceiling height in a room, light fixture location, type of insulation, mechanical system layouts, and many other considerations.

## [5] Bidding & Negotiation

### [FINDING THE RIGHT CONTRACTOR]

When the time comes to hire a contractor [builder], we assist you in evaluating their qualifications, reviewing their bids, and in negotiating a contract for construction. The most common method of delivery is to invite two or three general contractors to bid on your project based on the completed set of construction documents.

However, we generally recommend that you pre-select and hire the contractor early in the design process to obtain valuable input as your project develops. Based on the completed construction documents, your contractor will obtain competitive pricing from subcontractors. A good design-build partnership will help clarify the design intent, develop a solid approach to construction, establish good details, reduce redundancy, and help reduce overall costs. You and your architect can benefit from their resources and construction knowledge.

As architects, we add peace of mind by helping you obtain an accurately estimated bid contract. While we provide valuable assistance in the selection process, remember, the final choice is up to you. You will be working with the selected contractor for a long time, and a comfortable relationship with the contractor is very important.

### [WHAT YOUR ARCHITECT CAN DO FOR YOU]

As your architect, we are best suited to coordinate the bidding process by:

- Answering bidders' questions
- Evaluating requests for substitutions of materials or equipment
- Providing updated information to all bidders
- Establishing an 'apples to apples' format for the receiving of bids
- Analyzing the often confusing bid packages
- Preparing an AIA standard contract between you and the contractor



## [6] Construction Administration

### [BUILDING THE DESIGN]

The architect's involvement cannot stop with the preparation of construction documents. We will act as your representative by monitoring the contractor's work for conformance with the working drawings and contract. Even the best two-dimensional documents cannot fully convey all aspects of a three-dimensional building without being open to interpretation. Knowing the design intent of the drawings is crucial to proper interpretation on the site. As the preparer of the construction documents, your architect is best qualified to provide assistance to ensure that decisions made during construction are consistent with decisions made during design. This may consist of the following:

- Answer questions by phone and e-mail
- Provide regular site visits to observe the work-in-progress
- Provide supplemental drawings as requested by the contractor
- Review shop drawings, materials, and product samples
- Review requests for change orders
- Certify the contractor's application for payment

While the contractor has sole responsibility for construction methods, schedules and procedures, our involvement ensures a smooth transition from the documents to the completed home. Your architect is your best advocate during construction. Our presence helps you to avoid wrong turns while offering innovative solutions that might not be considered otherwise.

## What Can Neal Prince Studio Do for You?

We at Neal Prince hope to have the opportunity to assist you in turning your vision into a reality. Our project architects have an extensive knowledge of this process and understand the importance of good communication. Neal Prince can provide the education, experience, and vision necessary to guide you through your project successfully.

### [SERVICES BEYOND THE DESIGN PROCESS]

- *Analyzing your options to renovate or build new*
- *Site selection*
- *Community Planning*
- *LEED Documentation*
- *Presentation Materials*

## Working with Neal Prince Studio

### [PROJECT BUDGETING]

It is critical to have a realistic understanding of the potential and limitations of your project's budget. Neal Prince can propose ways of altering square footage or the materials to be used in order to keep your project within your budget and allocate your project money wisely. While we cannot guarantee construction costs, we will work with you and the contractor to help you avoid any surprises. However, surprises are sometimes part of the process. These hidden conditions (particularly with renovation projects) might include such things as poor soils, underground tanks or piping, asbestos, structural deficiencies, or insect damage. We recommend that you allow for a contingency between 10%-15% in your budget to cover the cost of such problems.

### [LEVELS OF SERVICE]

When you hire an architect, you're hiring a professional to help you define your requirements, to create construction documents to address them, and to coordinate with the contractor to make sure that your home is built as intended. Neal Prince will be your advocate in the exciting, yet complex process of turning dreams into reality. We understand that each project and each client is unique, and we will help to define the levels of service that is right for you. Several factors will impact the decision regarding the appropriate levels of service for your project:

- *The size and complexity of the project*
- *Project location*
- *Project budget*
- *Method of delivery*
- *The client's own experience and involvement*



## [ARCHITECTURAL COMPENSATION]

Our compensation depends on the scope of the project, the level of the architect's involvement throughout the various phases, and the intended method of delivery. Each project is unique and there are a number of ways to determine the fee for your project. For instance, if you intend to put the project out for competitive bids, then it is necessary to include a greater amount of information in the construction documents in order to reliably obtain 'apples to apples' bids. On the other hand, a 'team' approach may reduce the amount of documentary information required because critical decisions and selections have been recorded by the pre-selected contractor during the design process.

New custom home project designs are typically based on a percentage of the construction cost, usually 5-10%. Fees for addition and renovation projects are typically based on hourly compensation for actual time spent on the project. It is also possible to create a combination of approaches to the fee, such as hourly charges through schematic design followed by a percentage of the construction cost for the remainder of the project. Because of the relative complexity of small projects, fees for smaller projects can sometimes be proportionally higher than for projects that are of larger scale. **We will be happy to discuss various options and help determine what will be most appropriate for your project.** We generally use standard American Institute of Architects contract forms. The AIA does a good job of defining the responsibilities of the architect, the owner, and the contractor, and of setting out the agreement regarding the scope of services and the fees associated with those services.

## Building Green

At Neal Prince, we understand the need for safeguarding natural resources for future generations. This is by far the most important responsibility we have as design professionals. We will evaluate environmental performance from a 'whole building' perspective for your home's life cycle. This includes as a minimum, design with environmental emphasis on the following features:

- *Site design analysis*
- *Controlled water usage*
- *Passive solar and day lighting techniques*
- *Waste minimization both during construction and after the home is occupied*
- *Recycled materials and finishes*
- *High performance windows and doors*
- *Mechanical and insulation systems*
- *Controlled VOC levels*

We believe that sustainable design must be flexible to changing circumstances, consume fewer resources, and reinforce the fabric of the community. To us, sustainable design is a logical expression of our mandate to protect the health, safety, and welfare of our clients.

## [PERSPECTIVE]

We are asked quite often to justify our fees...

Architectural fees are actually a relatively small part of the cost of the entire building project, including the land purchase (and associated real estate & legal fees), the construction cost, the furnishings and equipment, any landscaping, taxes, and the interest paid on the mortgage. Over a twenty-five-year period, the architect's fee is actually less than 2-3% of the cost of your home. Consider also, the value relative to the services of other professionals in the housing industry:

- The typical fee to hire a realtor to sell your home or property often exceeds 6%.
- In our experience, the fee for a contractor under a cost-plus agreement typically falls in a range between 15% to 20%.

BEGIN J[OUR]NEY HERE...

# Architectural Definitions

## AIA

The American Institute of Architects. A professional organization that helps architects serve the public's needs and builds awareness of the role of architects and architecture in society. AIA members adhere to a code of ethics and professional conduct that assures clients and the public of their dedication to high standards in professional practice.



## AIA DOCUMENTS

A comprehensive suite of contractual documents that address the full spectrum of design and construction projects, large and small. These documents can help save time and money, and features a fair and balanced agreement between both architect and owner and contractor and owner.

## ARCHITECT

A skilled professional, licensed by the state, who listens to you, interprets your wishes, and helps to realize your goals. The architect serves as counselor, planner, designer, mediator, project coordinator, and business administrator. The architect is responsible for preparing the drawings and specifications that will be used to construct the project.

## APPROVED EQUAL

Material, equipment, or methods proposed by the contractor and approved by the architect for incorporation in or use in the work as equivalent in essential attributes to the material, equipment, or methods specified in the contract documents.

## BIDDING

This is when the drawings and specifications, prepared by the architect, are issued to multiple contractors for the purpose of selecting a contractor. Contractors will submit a bid for the project and be selected by the Owner. Complete construction drawings are key to obtaining bids that are a comparable and accurate reflection of the project's construction cost.

## BUILDING CODES

Regulations, ordinances, or statutory requirements of a government unit that establish minimum standards to which any building must apply. 'Codes' are generally adopted and administered for the protection of public health, safety, and welfare.

## PROJECT BUDGET

The amount of money allocated for the entire project, including the construction budget, the cost of land, the cost of furniture, furnishings, and equipment, financing costs, architect's compensation, contingency allowance, etc.

## CHANGE ORDER

An amendment to the construction contract signed by the owner, architect, and contractor that authorizes a change in the work or an adjustment in the contract sum or the contract time or both.

## CHARRETTE

A collaborative design session in which the architect(s) and client draft a solution to a design problem. Charrettes serve as a way of quickly exploring opportunities and generating a design solution.

## CONSTRUCTION BUDGET

The sum established by the owner as available for construction of the project, including contingencies for bidding to contractors and for changes during construction.

## CONSTRUCTION DOCUMENTS

Drawings and specifications created by an architect that set forth in detail the requirements for the construction of the project. The construction documents are intended to be a guide for the selected contractor, and not an instruction manual. Commonly referred to as 'blueprints', these documents serve as a record of all the decisions made regarding the project.

## CONTINGENCY

A monetary provision for unforeseen project circumstances such as poor soils or asbestos. Every project budget should allow for some contingency.

## CONTRACTOR

Sometimes referred to as the builder, this person, or company, will use the construction documents to construct the project.

## DESIGN/BUILD

A method of project delivery in which the owner contracts directly with a single entity that is responsible for both design and construction services for a construction project.

## CONSTRUCTION ADMINISTRATION

Provided by the architect during construction, these services may include assisting in hiring the contractor, making site visits, reviewing and approving the contractor's applications for payment, and keeping the client informed of the project's progress. As the person who has prepared the construction documents, the architect can be invaluable at this stage by helping the client decide what to do when questions arise during the construction phase.

## DESIGN DEVELOPMENT

The phase in which the schematic design is refined. Plans will show correct sizes and shapes for rooms. Also included is an outline of the construction specifications, listing materials and finishes to be used.

## ELEVATION

A two-dimensional representation of the project's exterior (and sometimes interior) faces. A building elevation includes exterior materials, windows, doors, roof shapes, etc.

## LIFE CYCLE COST ANALYSIS

A calculation of expected future operating, maintenance, and replacement costs of desired designs and features to assist owners in developing a realistic design and budget estimate.

## PARTI

From the French verb for departure, a parti is the starting point for the design. A graphic representation of the central design theme, or 'the big idea'.

## PAY APPLICATION

A document submitted by the contractor to the owner or owner's representative requesting a payment for construction services completed and for materials acquired and stored.

## PLAN

Often referred to as a 'floor plan', a two-dimensional representation of the project's horizontal plane. The plan shows spatial relationships and circulation patterns. Also indicated are doors, windows, walls, cabinetry, furniture, equipment, etc. Plans are useful for determining how one moves about a space or series of spaces or how one can use a space.

## PROGRAMMING

A wish list. The phase of the project when the client and the architect establish needs, dreams, goals, expectations, and available budget. The architect prepares a written statement setting forth design objectives, constraints, and criteria for a project, including spatial requirements and systems, and site requirements.

## RESIDENTIAL DESIGNER

An unlicensed individual with limited training and skills who provides limited design services and construction drawings.

## SCHEMATIC DESIGN

Studies consisting of drawings and other documents illustrating the scale and relationships of the project components for approval by the owner. At this stage, a preliminary estimate of construction cost is developed.



# .....Architectural Definitions.....

## SECTION [BUILDING AND DETAIL]

A two dimensional representation of the projects vertical plane from a vantage point inside the project. The section view shows floor levels, ceiling heights and profiles, and other information the describes the overall character of the space.

## SHOP DRAWINGS

A set of drawings provided by the contractor to the architect for review. These drawings are more detailed than the information shown in the construction documents to give the architect and/or engineer the opportunity to review the fabricator's version of the product, prior to fabrication.

## SKETCHUP

A 3-D sketching software that aids in the design and presentation of ideas during the schematic and design development phases. A Sketchup model is a tool to help clients visualize mass, scale, materials, colors, and any other visual elements of the design.

## SPECIFICATIONS

A part of the construction documents contained in the project manual consisting of written requirements for materials, equipment, construction systems, standards and workmanship.

## SUSTAINABILITY

Environmentally-conscious design techniques in the field of architecture. Sustainable architecture seeks to minimize the negative environmental impact of buildings by enhancing efficiency and moderation in the use of materials, energy, and space.

## SUPPLEMENTAL DRAWINGS

Drawings issued during construction, typically requested by the contractor, intended to clarify some aspect of the design intent. Supplemental drawings may also be issued at the request of the Owner to illustrate a design change during construction.

## Resources

### [BOOKS]

- *The Distinctive Home* by Jeremiah Eck, AIA (The Taunton Press)
- *The Not So Big House* by Sarah Susanka, AIA (The Taunton Press)
- *Patterns of a Home* by Max Jacobson, Murray Silverstein, and Barbara Winslow (The Taunton Press)
- *The Fountainhead* by Ayn Rand, (Bobbs Merrill)

### [WEBSITES]

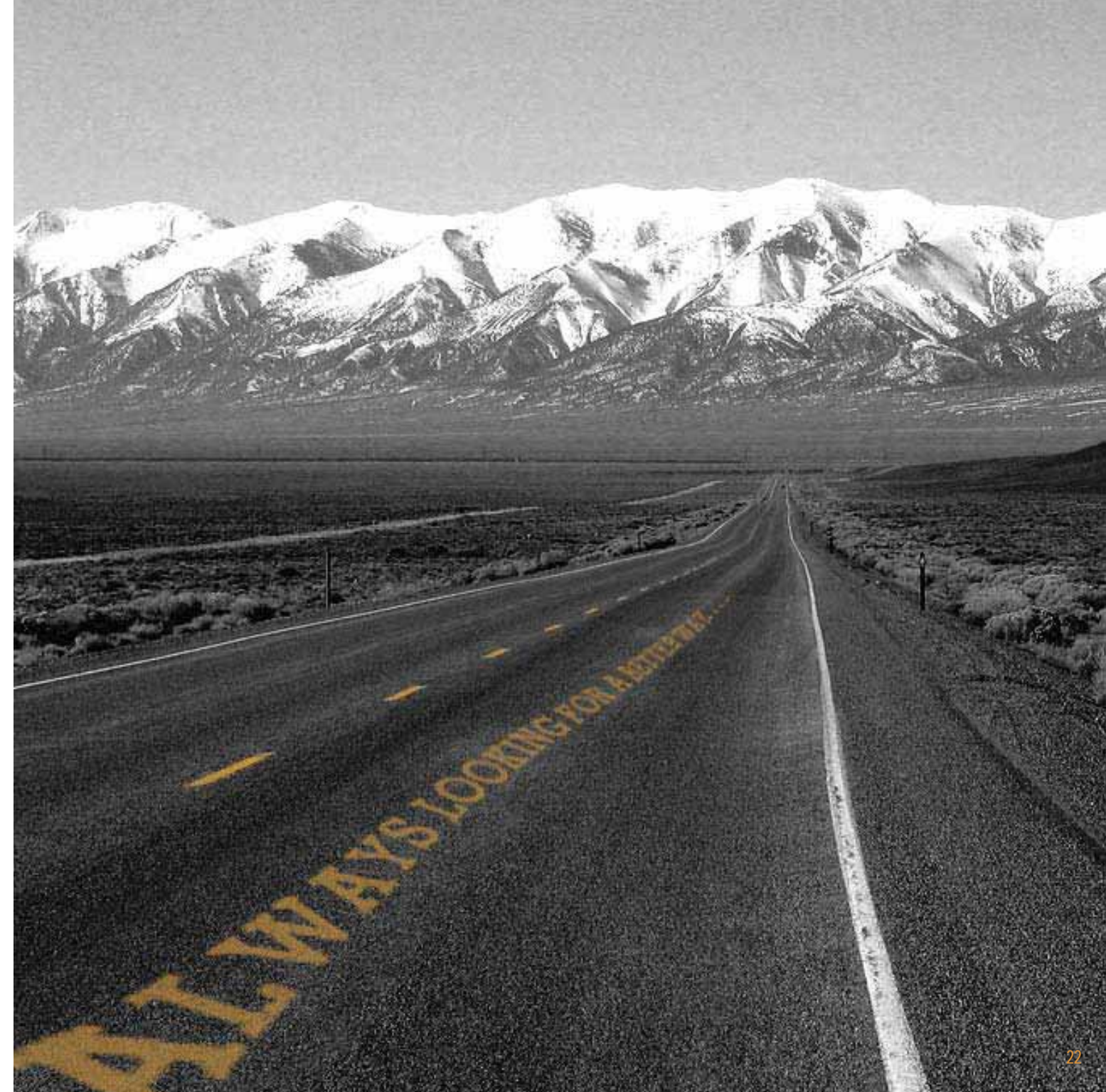
- Neal Prince Studio ([www.nealprincestudio.com](http://www.nealprincestudio.com))
- American Institute of Architects ([www.aia.org](http://www.aia.org))
- AIA Greenville ([www.aiagreenville.org](http://www.aiagreenville.org))
- US Green Building Council - SC ([www.usgbcsc.org](http://www.usgbcsc.org))
- LEED for Homes ([www.usgbc.org](http://www.usgbc.org))
- Southface Energy Institute ([www.southface.org](http://www.southface.org))
- NC Healthy Build Homes Program ([www.ncgreenbuilding.org](http://www.ncgreenbuilding.org))
- Home Builder Association of South Carolina ([www.hbaofsc.com](http://www.hbaofsc.com))

### [MAGAZINES]

- *Architectural Digest*
- *Custom Home*
- *Residential Design & Build*
- *Veranda*
- *This Old House*
- *Dwell*

### [MOVIES]

- *My Architect: A Son's Journey* by Edmund Bacon
- *Mr. Blandings Builds His Dream House*



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