

# The Definition of an Architect

He looked at the granite. To be cut, he thought, and made into walls. He looked at a tree. To be split and made into rafters. He looked at a streak of rust on the stone and thought of iron ore under the ground. To be melted and to emerge as girders against the sky. These rocks, he thought, are here for me; waiting for the drill, the dynamite and my voice; waiting to be split, ripped, pounded, reborn, waiting for the shape of my hands will give to them.

AYN RAND, *THE FOUNTAINHEAD*<sup>1</sup>

After reading the preceding text from *The Fountainhead* by Ayn Rand, what are your thoughts and feelings? Can you relate with the main character, Howard Roark, in this passage? Are you overcome with the possibilities of creating with the materials around you?

Do you want to be an architect? Do you wish to study architecture? If your answer is yes to any of these questions, this book is for you.

What is the definition of an architect? *The American Heritage Dictionary*<sup>2</sup> defines *architect* as:

1. One who designs and supervises the construction of buildings or other structures.

*är-kĭ-tĕkt*, n. [MF *architecte*, fr. L *architectus*, fr. Gk *architekton* master builder, fr. *Archi-* + *tektion* builder]

Of course, this definition simply scratches the surface. Becoming and being an architect is much more. It is not the intent of this book to provide a complete overview of architecture or a full career profile; here, however, is a brief introduction to what architects do.

## What Do Architects Do?

People need places in which to live, work, play, learn, worship, meet, govern, shop, eat — private and public spaces, indoors and out; rooms, buildings, and complexes; neighborhoods and towns, suburbs and cities. Architects, professionals trained in the art and science of building design and licensed



An Architect at Work.



Parthenon, Athens, Greece. Photographer: R. Lindley Vann.

to protect public health, safety, and welfare, transform these needs into concepts and then develop the concepts into building images that can be constructed by others.

In designing buildings, architects communicate between and assist those who have needs — clients, users, the public as a whole — and those who will make the spaces that satisfy those needs — builders and contractors, plumbers and painters, carpenters, and air conditioning mechanics.

Whether the project is a room or a city, a new building or the renovation of an old one, architects provide the professional services — ideas and insights, design and technical knowledge, drawings and specifications, administration, coordination, and informed decision making — whereby an

extraordinary range of functional, aesthetic, technological economic, human, environmental, and safety factors is melded into a coherent and appropriate solution for the problems at hand.

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This is what architects are, conceivers of buildings. What they do is to design, that is, supply concrete images for a new structure so that it can be put up. The primary task of the architect, then as now, is to communicate what proposed buildings should be and look like. . . . The architect's role is that of mediator between the client or patron, that is, the person who decides to build, and the work force with its overseers, which we might collectively refer to as the builder.

— SPIRO KOSTOF<sup>3</sup>

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## Why Architecture?

Why do you desire to become an architect? Have you been building with Legos since you were two? Did a counselor suggest it to you because of a strong interest and skill in mathematics and art? Or are there other reasons? Aspiring architects cite love of drawing, creating, and designing, desire to make a difference in the community, aptitude for mathematics and science, or a connection to a family member in the profession. Whatever your reason, are you suited to become an architect?

## Is Architecture for You?

How do you know if the pursuit of architecture is right for you? Those within the profession suggest that if you are creative or artistic and good in mathematics and science, you may have what it takes to be a successful architect. However, Dana Cuff, author of *Architecture: The Story of Practice*, suggests it takes more:

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There are two qualities that neither employers nor educators can instill and without which, it is assumed, one cannot become a “good” architect: dedication and talent.

— DANA CUFF<sup>4</sup>

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Because of the breadth of skills and talents necessary to be an architect, you may be able to find your niche within the profession regardless. It takes three attributes to



Architect Working.

be a successful architecture student — intelligence, creativity, and dedication — and you need any two of the three. Also, your education will develop your knowledge base and design talents.

Unfortunately, there is no magic test to determine if becoming an architect is for you. Perhaps, the most effective way to determine if you should consider becoming an architect is to experience the profession firsthand. Ask lots of questions and recognize that many related career fields might also work for you.

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For the architect must, on the one hand, be a person who is fascinated by how things work and how he can make them work, not in the sense of inventing or repairing machinery, but rather in the organization of time-space elements to produce the desired results; on the other hand, he must have an above average feeling for aesthetics and quite some ability at drawing, painting, and the visual arts in general.

— EUGENE RASKIN<sup>5</sup>

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# What Is Architecture?

**Architecture is** the built environment, and what architects do is design the environment.

**Carol Ross Barney, FAIA**  
Principal, Ross Barney +  
Jankowski, Inc.

**Architecture is** the physical and spiritual transformation of chaos into order, darkness into light, and space into place.

**Nathan Kipnis, AIA**  
Principal, Nathan Kipnis  
Architects, Inc.

**As a creative science,** architecture is the marriage of art and science.

**Lisa Van Veen, Associate AIA**  
Architectural Designer, Design  
Forward

**Architecture is** a dream fulfilled. Designing and creating the built environment is an opportunity to express not only hopes and dreams but also the hopes and dreams of our entire society and culture. Architecture is foremost an artistic expression. The result is an environment that provides fulfillment, blessing, and peace, the things that compose the dreams of all peoples.

**Jack Kremers, AIA**  
Professor, Judson College

**To me, architecture is** anything that can be designed — a chair, a light fixture, a website, a logo, a

building, or a city.

**William Carpenter, Ph.D., FAIA**  
Associate Professor, Southern  
Polytechnic State University  
President, Lightroom

**Here is** a socially responsive definition of architecture: the making of safe, healthful, sustainable places for human use and inhabitation.

**W. Cecil Steward, FAIA, APA**  
Dean Emeritus, University of  
Nebraska — Lincoln  
President/CEO, Josyln Castle  
Institute for Sustainable  
Communities

**Architecture is** an attempt to consciously control the built environment through the balanced application of art and science. Those of us who practice architecture orchestrate economics, politics, art, and technology exclusively to create objects that impact the physical world we inhabit.

**W. Stephen Saunders, AIA**  
Principal, Eckenhoff Saunders  
Architects

**Architecture is** the design and construction of forms to create space.

**Margaret DeLeeuw**  
Graduate, University of  
Maryland

**Architecture is** the result of all that is conceived, planned, and

created by an architect. It involves taking leadership in the process of working with a client, societal, or business challenge, identifying and defining the specific problems and opportunities for that challenge, and then synthesizing them into the most basic components and developing solution alternatives. Architecture is the result of using this process under the direction of a technically knowledgeable professional.

**Randy Tharp, RA**  
Senior Vice President, A.  
Epstein and Sons International,  
Inc.

**Architecture is** the built environments that shape the daily lives of people.

**Grace Kim, AIA**  
Principal, Schemata Workshop,  
Inc.

**Architecture is** the special place, the extraordinary space that enriches our lives.

**Dianne Blair Black, AIA**  
Vice President, RTKL  
Associates, Inc.

**Architecture is** the forming of space and program into an aesthetic system.

**Doug Garofalo, FAIA**  
Professor, University of Illinois  
at Chicago  
President, Garofalo Architects

## QUESTION: WHAT IS ARCHITECTURE?

**Architecture is** a collaborative process, the result of which is a building, a series of buildings, or interventions in the landscape that enrich the environment.

**Lynsey Gemmell**  
Architect II, Holabird & Root

**Architecture is** construction that embraces the aesthetic, symbolic, tectonic, and cultural characteristic that best describe a particular place, people, and epoch.

**Robert M. Beckley, FAIA**  
Professor and Dean Emeritus,  
University of Michigan

**Architecture is** the shelter for human existence. The process of architecture is the blend of art and science.

**Patricia Saldana Natke, AIA**  
Principal and President, Urban  
Works, Ltd.

**Architecture is** the art of designing buildings and spaces within a given set of parameters. Those parameters may include the programmatic needs of the project, the client's budget, building code regulations, and the inherent properties of the materials being used. Great architecture finds the best

solution to a design problem by using both creativity and practicality. Part sculpture, part environmental psychology, part construction technology, architecture is the combination of many separate forces into a harmonic whole.

**Carolyn Jones, AIA**  
Associate Principal, Callison  
Architecture, Inc.

**Architecture is** a blend of art and science for the creation of spaces and places that elevate the human spirit.

**Kathryn Anthony, Ph.D.**  
Professor, University of Illinois  
at Urbana-Champaign

**Architecture is** the synthesis of art and science utilized to develop a solution to a challenge in the built environment.

**Elizabeth Kalin**  
Architectural Intern, Studio  
Gang Architecture

**Architecture is** creating an environment within a site that composes space and creates an interesting, functional space for the user.

**Brad Zuger**  
Student, University of  
Nebraska — Lincoln

New York City — View from Empire State Building. Photographer: Michael R. Mariano, AIA.



**More than a building,** architecture is beauty and function in form.

**Christopher J. Gibbs,**  
Associate AIA  
Senior Director, The American  
Institute of Architects

**Architecture is** everything. It is the house in which one lives; it is the office in which one works. Architecture is the hospital in which one watches loved ones die or recover. It is the church in which people marry the people they love. Architecture is the movie theater where you had your first date. Architecture is the room you grew up in, on that quiet street in the country. It is the apartment building you lived in with your first college roommate. It is the playground where you first encountered the merry-go-round.

Architecture is in every memory you will ever have, because it is everything and everywhere. One might dare to ask, "What is *not* architecture?" At its purest, architecture is the form that follows the function.

**Ahkilah Johnson**  
Senior Analyst, Cherokee  
Northeast, LLC

**Architecture is,** formally, the design of our built environment. Informally, it is everything else.

**Monica Pascatore,** LEED  
Freelance Designer, P Inc.

**Architecture is** that form of building and place-making that elevates and illuminates the meaning of being human.

**Joseph Bilello, Ph.D., AIA**  
Dean, Ball State University

**Architecture is** the thoughtful and expert integration of aesthetics, function, and usability in buildings and facilities.

**Lois Thibault, RA**  
Coordinator of Research, U.S.  
Architectural and Transportation  
Barriers Compliance Board  
(Access Board)

**Architecture is** the art and science of planning and designing structures and environments to house the activities of humans.

**H. Alan Brangman, AIA**  
University Architect,  
Georgetown University

**Grounded by** a broad understanding, architecture is the conscious shaping of the mental and physical forces and relations within a specific environment to sustain and celebrate life. When entering an exemplary piece of architecture, our senses are heightened, we slow, pause, and upon reflection we are fundamentally changed.

**Max Underwood, AIA**  
Professor, Arizona State  
University  
Architect and Principal,  
Underwood + Crisp

**Architecture is** the design of the built environment through the programming of needs, three-dimensional design, and the application of appropriate building technologies.

**Eric Taylor, Associate AIA**  
Photographer, Taylor Design &  
Photography, Inc.

**Architecture is** the art of building. Simply put, architecture is those buildings or places that inspire us. Architecture is also about the act of place-making, or making one feel comfortable. Architecture is not a slave to fads or trends. It is timeless and ages gracefully. God created a beautiful earth. Man has been charged with the stewardship of the earth. Good architecture enhances God's creation.

**Edward Shannon, AIA**  
Assistant Professor, Judson  
College

**Architecture is** the creation of habitable space where social interactions and individual functions can take place.

**Michelle Hunter**  
Lead Designer, Garage  
Takeover, Discovery Channel

## QUESTION: WHAT IS ARCHITECTURE?



Interior, Johnson Wax Building, Racine, Wisconsin. Architect: Frank Lloyd Wright. Photographer: R. Lindley Vann.

Exterior, Johnson Wax Building, Racine, Wisconsin. Architect: Frank Lloyd Wright. Photographer: R. Lindley Vann.



**Architecture is** about the creative process of making and involves the many disciplines of craft and design. It touches all of us, informing and shaping the experiences of our lives in rich and meaningful ways. We cannot underestimate the human experience as part of the designed world we live in.

**Barbi Crisp**  
Principal, Underwood + Crisp

**Architecture is** problem solving at its highest level. It is the provision of the space, the light, the shelter, and the inspiration to allow a human to grow, create, and prosper.

**Katherine S. Proctor, FCSI, CDT, AIA**  
Director of Facilities, Jewelry Television



**Architecture is** the result of the configuration and enclosure of space, primarily for human habitation. Good architecture is that which accomplishes this result while incorporating elements of design that favorably appeal to all of the human senses and satisfies all of the needs for which the design was created.

**Gaines Hall, FAIA**

**Vice President, Kirkegaard & Associates**

**Architecture is** the combination of art and science to design spaces, whether enclosed or open to the elements, for the protection, use, and enjoyment of others.

**F. Michael Ayles, AIA**

**Director of Operations,  
Antinozzi Associates**

**Architecture is** the conceptual, cultural, and physical manifestation of space and time. We, as a culture, will be measured by our creativity or lack thereof, and architecture is one of the lasting measures of culture and civilization.

**Roy Abernathy, AIA**

**President, Jova/Daniels/Busby**

**Architecture is** the creation of place. Place is defined by the inherent qualities of our environment that are necessary for our individual and social well-being. More specifically, people,

as the inhabitants of architecture, must feel a sense of belonging, not isolation — identity, not ambiguity.

**Joseph Nickol**

**Graduate, University of Notre Dame**

**Beyond buildings, architecture is** about the relationships between materials and among things more than it is about the things themselves. As such, architecture is primarily about prepositions: above, below, between, within, among, through, under, etc. This is partly why Renaissance painters made such good architects, but it is also what I think the contemporary painter/architect Sam Mockbee was talking about when he said, “Architecture has to be about more than just architecture.” Being based on relationships, architecture is also fundamentally about human interaction.

**Casius Pealer, J.D.**

**Associate, Reno & Cavanaugh,  
PLLC**

**Co-founder, ARCHVoices**

**Architecture is** the design and building of instruments for living at the scale of a building and, at other times, the scale of a doorstep or letter opener.

**Richard A. Eribes, Ph.D., AIA**

**Professor and Dean Emeritus,  
University of Arizona**

**From my perspective,** the process of creating architecture is puzzle-solving on a majestic scale. This translates into the critical thinking and problem-solving aspects of the profession that architecture programs are so good at teaching and that our clients rely on us for as we help them accomplish their goals.

The architecture project/puzzle contains an infinite number of variables. Some are static; some are dynamic. The attributes of some are known and universally understood; for others, the attributes are unique to the person investigating them or experiencing them. The puzzle is constantly evolving, and no one has control over it! Most interesting of all, the result of the architecture project/puzzle is never complete, and no one ever sees it the same as someone else or even experiences it themselves in the same way.

**Kathryn T. Prigmore, FAIA**

**Project Manager, HDR  
Architecture, Inc.**

**Architecture is** the process of creating useful, efficient, and attractive structures.

**David Groff**

**Intern Architect, Dalgliesh,  
Gilpin, and Paxton Architects**

## QUESTION: WHAT IS ARCHITECTURE?



Stonehenge, England.  
Photographer: Karl  
DuPuy.

**Architecture** is the shaping of environments, real or imagined, that affect the way people think, feel, act, or respond to their surroundings. In this context, architecture can be both a noun and a verb; in other words, it can be the painting itself, or the act of painting.

Architecture appeals to the senses. It can comfort us or intimidate us. It can make us feel welcome and home, or alone and cold. Architecture can be

as much about the intended desires of the designer's imagination or the unintended consequences delivered when architecture is not considered more fully in its proper context. Real or imagined, the environment we live, work, and play in is directly influenced by the architecture that surrounds us. In essence, architecture is humanity.

**Shannon Kraus, AIA**  
Associate Architect, HKS

**The development** of architecture is as much a design process as it is a simulation of inhabitable space(s) and building vocabularies. I will go as far to say that architecture is not architecture unless it was developed by means of an analytical process.

**Thomas Fowler IV**  
Associate Professor and  
Associate Head, California  
Polytechnic State University—  
San Luis Obispo

# Sustainable Place-Making

## **W. CECIL STEWARD, FAIA, APA**

Dean Emeritus  
University of Nebraska — Lincoln

President/CEO, Joslyn Castle Institute for Sustainable  
Communities  
Omaha and Lincoln, Nebraska

### **Why and how did you become an architect?**

As a freshman in high school, I became acquainted with a teaching mentor who helped me discover a fascination and a modest talent for drawing, design, and the craft of making structures from pieces of material and technologies. In college, I had a mentor who awakened me to the breadth and human/community connections of the profession. This same mentor, who was an academic descendent of Walter Gropius, guided me into a personal set of standards and principles by which to distinguish excellence from the common, and the means to evaluate the context for architecture.

### **Why and how did you choose which school to attend for your architecture degree? What degree(s) do you possess?**

In 1952, from my home in Pampa, Texas, my choices were limited to the three accredited public institutions in the state of Texas due to limited family financial resources. After a thorough investigation of each, I determined that the all-male military environment of Texas A&M University would best suit my financial needs and interests. I graduated in 1957 with the five-year bachelor of architecture.

Thanks to scholarships and outside financial aid, I accepted an invitation to three months of study at the École des Beaux-Arts in Fontainebleau, France, between my fourth and fifth years. I received a certificate in architecture and planning, but, more importantly, I received my first bit of education in an unending quest to know and understand cultures and places foreign to my own native experiences.

After completing my postgraduate obligation of three years active duty in the military service, I felt a deep need to reconnect myself to the professional world and elected to apply to graduate school. I received the master of science in architecture with a major emphasis in architecture for educational facilities in 1961 from Columbia University in New York. In 1991, I was awarded the honorary doctorate in humane letters (Hon. DHL) from Drury College, Springfield, Missouri, for contributions to the profession.

**What has been your greatest challenge as an architect/faculty?**

My greatest challenge as a twenty-nine-year-old faculty member in 1963 was to practice what I taught and to teach what I practiced — with integrity, passion, and the highest of standards for both the academic and professional outcomes. A second part of the challenge was to find new mediations or paradigms to celebrate through architecture.

**What were your primary responsibilities as dean? Why did you choose this career? What are you doing now?**

The principal reason I moved from practice into full-time education was to maximize the opportunity to continue learning through teaching while concurrently learning and experimenting through secondary roles in practice. The principal reason I sought the dean's position in 1973 at age thirty-nine was to be able to influence the innovations in both education and practice that I believed were becoming necessary for a more influential profession.

My principal responsibility as dean had four parts:

First, I felt accountable to every class of students at the University of Nebraska (1973–2000) to assess their distinctive needs and expectations, as they may have differed from the preceding class, and to aggregate the culture of the school across the disciplines (architecture, planning, and interior design), the age groups, and the cultural backgrounds of the student body.

Second, in keeping with the mission of the University of Nebraska, I felt obliged to create and manage a significant public service and creation-of-new-knowledge profile for the college.

Third, I advocated for the faculty and their needs and desires, both as individuals and collectively, with the university administration, state government, the public, and the professional bodies. This effort was central to the quality of classroom and life experiences for the students.

Fourth, I worked to steadily enhance and increase the value of a degree from the University of Nebraska for each alumnus.

In 1996, with assistance from the University of Nebraska, I formed a nonprofit organization in Omaha and named it the Joslyn Castle Institute for Sustainable Communities (JCI). Today, I serve, pro bono, as its president and CEO.

**In 1991, you served as the sixty-eighth president of The American Institute of Architects (AIA), the first career educator to have been elected. Can you provide details of that professional experience?**

In the late 1970s and mid-1980s, I served on a number of profession-wide committees and boards with both professional and educational missions. Through these experiences and networks of educators and professionals I gained a broad understanding of the missions and relationships of the national organizations that establish and oversee the policies and standards for the education and practice of architecture in the United States.

By the mid-1980s, I had determined that the board of directors of the AIA was the body politic through which the greatest change in both education and practice might occur. Accordingly, I initiated efforts to be elected to the AIA board for a three-year term in 1988, as one of the two directors representing the Central States Region. In the meantime, I was a member of the board of directors of the Association of Collegiate Schools of Architecture (ACSA) and was appointed through the ACSA to the National Architectural Accrediting Board (NAAB); I was elected NAAB president in 1989.

By the end of my AIA board term in 1990, I was more convinced than ever that an architect who happened to be a career educator had as much right to and opportunity for leadership in the profession's largest organization as had the previous sixty-seven presidents from practice backgrounds, and that it might be possible, and useful, to bring certain educational and collaborative strategies to the table of policy discussions about the future of the profession.

I campaigned for first vice president/president-elect and was elected to the position for service during the two-year period of 1991–1992. In retrospect, the years of service through the AIA committee structure, the regional engagement, and the national board and presidency positions were the most gratifying and productive experiences of my professional life.

Optimism abounds. The first female career educator in the position, Professor Kate Schwennsen, FAIA of Iowa State University, will serve as the 2005 AIA first vice president/president-elect and 2006 Institute president.

**Reflecting on your professional career in architecture, was it a good career choice? Would you do it again if given the opportunity?**

During my fifty-plus years of education for practice, practice for education, education for learning, and continuing education, I have never experienced a single day when I wondered whether I would have been happier in another career, another job, or among other people. The opportunities and the support that have accrued to my path—for engagement, for creativity, for discovery, for learning, for trial and error—have been nothing short of fortuitous and miraculous. I hope I have not squandered much of the opportunity, and, especially, I hope I have not shunned or disappointed the support that has been so generously offered, by so many, to my efforts.

**Who, or what experiences, have been a major influence on your career?**

I am always mindful that no accomplishment is made in today's world without the preceding work, sacrifices, and contributions of others. It is a truism that we all drink from wells we did not personally dig. I owe everything to my associates, friends, colleagues, and family.

Mentors have been especially influential in my career development and in my career choices. One in particular, professor and former dean of the College of Architecture and Environmental Design at Texas A&M University, Edward J. Romieniec, FAIA, gave me the confidence as a student to reach for more than I thought I could, to have larger visions as a faculty member and junior administrator than I thought worthy of my place and background, to strive to always learn through teaching, and to value the community context for all architecture. These values continue to guide my work for education and practice in sustainable place making.

# Daring to Lead

**SHANNON KRAUS, AIA**

Associate Architect  
HKS Architects  
Dallas



Hadassah Medical Center Bed Tower, Jerusalem, Israel. Architect: HKS.

## **Why and how did you become an architect?**

I became an architect simply because it was a lifelong goal. A life's goal achieved. A passion delivered. I set my mind on architecture when I was in fourth grade, when the only class I had true interest in was art; my mother had the vision to open my mind to architecture as an occupation that would fit my interests.

I was able to express myself through art and imagination — through the pictures I drew, the models I built, and the forts I enlisted the neighborhood kids to help construct. Becoming an architect simply felt right.

However, in the end, I became an architect to make a difference. While I pursued architecture because that is where I could express myself, I find that what I enjoy most about this amazing profession is the ability to work with diverse groups of people to solve complex problems so that others can fulfill their dreams — thus making a difference by turning vision to reality.

From my first day on campus at Southern Illinois University to gaining registration as an architect in the state of Texas, my journey took approximately twelve years — four years of undergraduate work, one year as American Institute of Architecture Students (AIAS) vice president, three years in graduate school for the MBA and Master of Architecture, and four years of internship at RTKL, finished concurrently with nine exams spread over eighteen months.

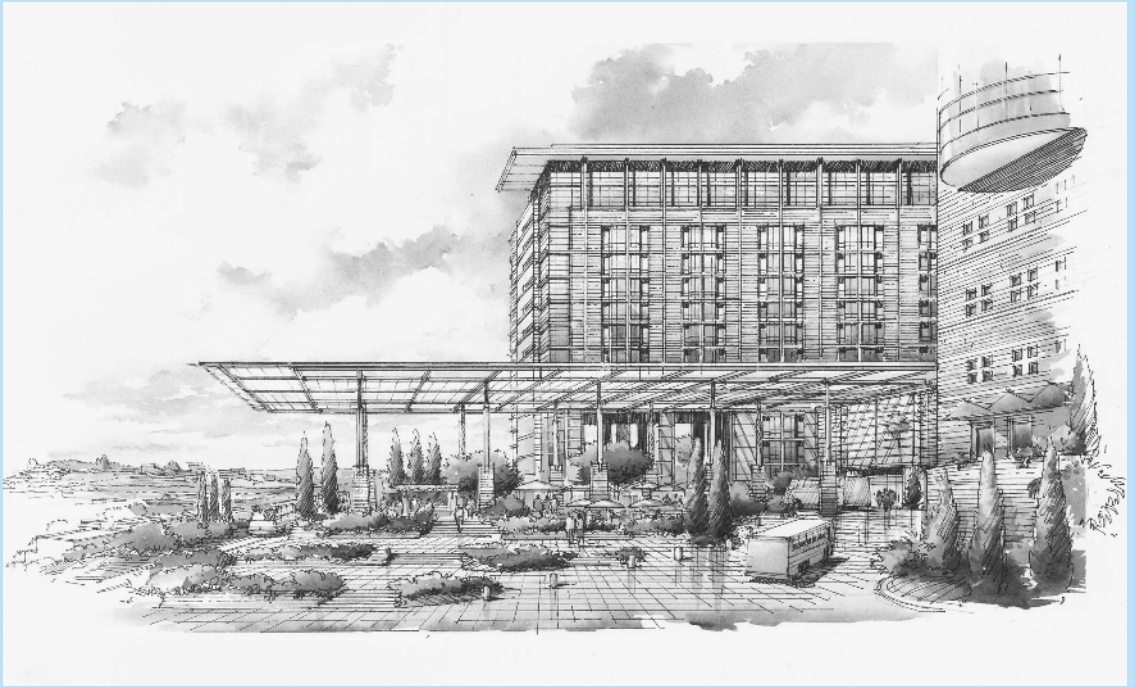
**Why and how did you choose which school to attend for your architecture degree? What degree(s) do you possess?**

Coming out of McArthur High School in the central Illinois town of Decatur, with the ambition to pursue architecture, I found myself at a small but terrific undergraduate program at Southern Illinois University (SIU) at Carbondale. I ended up there primarily due to economics and a lack of information. The school had a four-year architecture program, and it was less expensive than any other school in the area. I did not know that it was less expensive because the architecture program was not accredited. In the end, this turned out to be a blessing — SIU was one of the best, if not luckiest, decisions I made.

Through SIU, I learned the art of architecture. I learned to think, draw, paint, sketch, and resolve complex variables into rational solutions. While not known for design, the school was heavily based in the fundamentals, including learning how buildings go together — more so than most schools cover. My education at SIU provided me with the best foundation for becoming an architect I could have asked for.

For graduate school, I chose the University of Illinois at Urbana-Champaign. Having just completed my term as national vice president of the AIAS, a full-time position in Washington, D.C., following my undergraduate studies, I came to realize that business skills are the single biggest thing missing in the amazingly rich and diverse education that architecture provides. Thus, I applied to universities where I could also go to business school — a decision that ultimately led to my acceptance into the schools of architecture and business at the University of Illinois, where I graduated summa cum laude with a master of business administra-





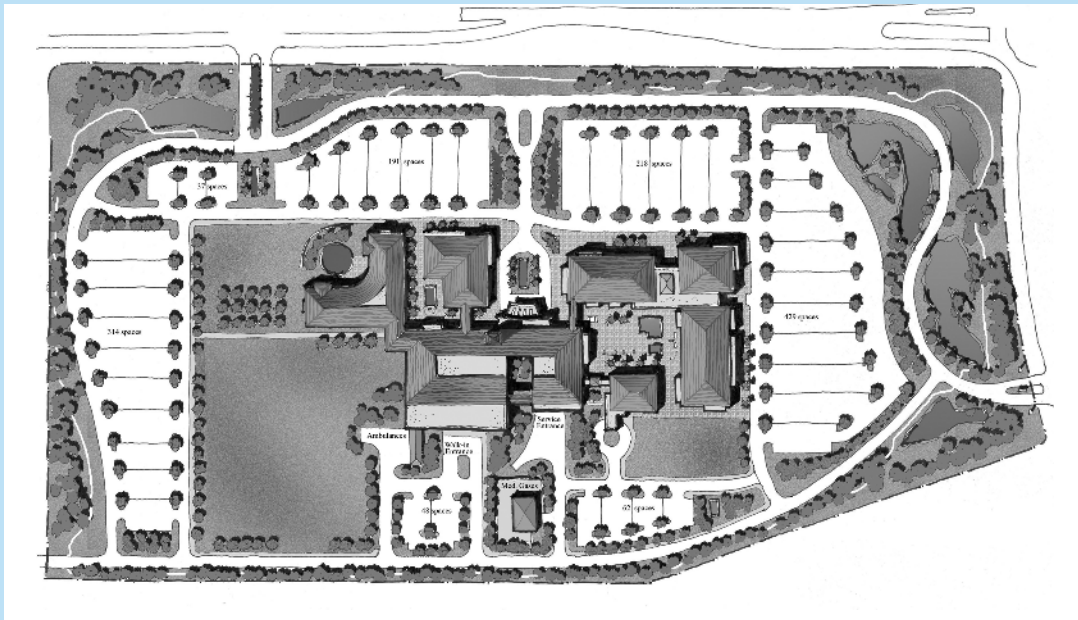
Hadassah Medical Center Bed Tower, Jerusalem, Israel.  
Architect: HKS. Artist: Michael Lungren.

tion (MBA) and a master of architecture (M.Arch.). The MBA equipped me to think holistically about business and refined my communications skills; the M.Arch. filled in the gaps with a curriculum focused on design and design theory.

I believe the profession does not have an adequate guidance system for assisting students interested in architecture. I say this because in many ways your choice of school goes a long way toward determining the type of professional you become.

#### **What has been your greatest challenge as an architect?**

My greatest challenge as an architect is one of my current projects for Hadassah in Jerusalem, Israel. Not only is it a challenging project in terms of health care planning, it is also a challenging design problem due to the numerous site variables (it is located at the top of a mountain in Ein Karem, overlooking the birth site of John the Baptist), the diverse culture, and the rich context. Our goal is to provide a modern, state-of-the-art facility that can respond to the needs of the region while embracing the historical significance of the surrounding area. Like most projects, this is a collaborative effort where we draw from the combined strength of the design team and our consultants to deliver a project that exceeds the client's needs.



Viera Health Park, Viera, Florida. Architect: HKS.

**Why did you pursue two graduate degrees — master of architecture and master of business administration — during your graduate studies?**

I believe that an architect is a generalist. Architectural education is comprehensive and provides the foundation suitable for many careers; however, business seemed to be the one missing ingredient.

As AIAS national vice president, I quickly came to realize that architecture is a business and that I had much more to learn, so I decided to round out my education by earning an MBA in addition to the M.Arch. After speaking with others, I knew that was the right time to pursue the MBA, as I had no guarantee that such an opportunity would be available later in life.

Ultimately, I felt the MBA would help me simply by providing additional tools for me to draw on. However, in addition to business skills, the MBA conferred many benefits I did not anticipate. My program helped me hone my communication skills, problem-solving ability, and leadership skills. In many ways, the business degree was not as much about accounting or finance as it was about maximizing resources and leadership.

**As an incoming vice president of the AIA in 2005, what are your goals?**

My role will be to facilitate the continued growth and development of the AIA's transformation into a knowledge-based organization. My goal as vice president is simply to make a difference — to have a positive impact, no matter how small, on the evolution of the institute. I hope that others as passionate about the profession as I am will be similarly encouraged to get engaged and get involved.

**How has your involvement with the AIA assisted you in your professional career?**

I owe much of my growth and professional development to my experiences in the AIA and AIAS. During my ten years of active involvement, I have had the opportunity to plan and lead numerous committees and convention seminars, organize speakers, lead workshops, author articles, and network with many incredible people who I otherwise would not have known. In many ways, my involvement has supplemented my career by providing a way to gain experience and pursue interests where my work does not always allow. For interns, I can say there is no better way to enhance your growth than by being involved in a professional organization.

While organizations have their critics—and I have, at times, been among them—we can effect change in them only by getting involved. In fact, the ability to change the profession lies in the hands of people who choose to be involved. For me, being involved is not only an extension of my job but also a professional obligation. Whether you join AIA, AIAS, or a community organization like Habitat, you should become involved whenever or however you can.

**What are your primary responsibilities and duties?**

My primary role as an architect is that of health care designer and planner. My projects range from domestic to international and vary in scope from small additions to multimillion-dollar master plans and green field replacement facilities. I often work directly with clients on the front end of projects through programming, utilization, master planning, and design.

My recent projects include the programming and master planning for Viera Health Park in Florida, master plan validation and concept design for a new bed tower in Jerusalem, health care medical planning for a new hospital addition in Stoke, England, and a multimillion-dollar phased replacement master plan for Parkland Hospital in Dallas. In all of these projects, my goal is to understand the clients' needs, listen to their dreams, and work with them to identify innovative solutions they can implement on time and on budget.

**What is the most satisfying part of your job?**

The most satisfying thing is knowing that architecture is not just a job but also a career. I say this because I am pursuing something I love and look forward to. I enjoy the firm I work for and the people I work with. I love exceeding client expectations with innovative solutions and accurate results. I love that I cannot do this on my own; we can meet or exceed client expectations only by means of a team effort to bring clarity to the building process and put the client first.

**What is the most important quality or skill of a health care designer?**

Patience, communication, and knowledge are the most important skills a designer in health care—or any area, for that matter—must have. As a programmer and designer in health care, I work directly with clients, physicians, nurses, equipment specialists, contractors, builders, project managers, and business leaders. In each case, I must know enough of the subject matter being programmed to communicate in the language of each user I meet. Most issues and challenges are the result of poor communication, so the patience to work through misconceptions and differences of opinions is key to resolving problems as I develop a program or a project design solution. I learned about health care facilities through trial and error on the job rather than in school. Architects in this field must be “heads-up” in the office and seek every opportunity to participate in meetings or go on tours.

**Who has been a major influence on your career?**

I have had many great influences on my career, but none greater than my parents and my wife. While I have benefited from many great mentors and try to learn from everyone around me, my parents helped shape me into the man I am today, teaching me to believe I can do anything I put my mind to. My wife helps keep me focused, motivated, and on track; she has an even-keeled perspective that brings with it humility and grace. Without a doubt, I am blessed to have them as positive influences in my life. I would not be where I am today if not for them.

**What has been your most rewarding endeavor as a professional?**

Without hesitation, I can say my most rewarding professional job was the planning, design, and construction of a clubhouse for a Make-a-Wish child named Giovanna. At the age of thirteen, Giovanna, who was challenged with a potentially life-threatening illness, was given the opportunity by the Make-a-Wish Foundation of North Texas to have one of her wishes come true. Her wish was to have a clubhouse—a place she could have as her own and a place she could have friends over for a slumber party.

The result was a 400-square-foot clubhouse with a loft, fire pole, and screen porch, inspired by Giovanna’s own vision. Interns designed the project with Giovanna as the client. She was given schematic designs, models, and material boards. Knowing we were able to utilize our design skills to make her vision—her wish—a reality was enormously rewarding.

# Architecture as a New Media

## WILLIAM J. CARPENTER, PH.D., FAIA

Professor

School of Architecture, Civil Engineering Technology and  
Construction

Southern Polytechnic State University  
Marietta, Georgia

President, Lightroom  
Decatur, Georgia

### **Why and how did you become an architect?**

I became an architect because of a teacher I had in sixth grade; his name was Robert Fisher. I was his first student to go to architecture school, and I could not have done it without him. He invented classes for me, such as eco-tecture, that emphasized sustainable design before it was in vogue. He collected donations from many of the businesses in our town to create a scholarship for me that he gave me at high school graduation.

### **Why and how did you choose which school to attend for your architecture degree?**

#### **What degree(s) do you possess?**

B.Arch., M.Arch., and Ph.D. in architecture. I went to Mississippi State for my undergraduate studies because I asked Richard Meier at a career day what school he would attend, and he said he had just returned from there and something interesting was happening there. At seventeen, I packed my bags and arrived from New York. He was so right—I



The Breen Residence, Atlanta. Architect: William Carpenter. Photographer: Kevin Bryd.

Decatur Arts Festival Poster  
Design, Decatur, Georgia.  
Graphic Designers: Kevin and  
Aaron Byrd.



was able to study with Samuel Mockbee, Christopher Risher, and Merrill Elam.

I chose Virginia Tech for graduate studies because of its emphasis on urbanism and tectonics. No school in the world offers a better balance of these pedagogical intents — of course, I *am* an alumnus. Jaan Holt and Gregory Hunt were amazing professors and left an indelible imprint on me.

For my doctorate, I wanted to go to England. There I was able to study with Professor Thomas Muir before he retired. I studied at the University of Central England at Birmingham Polytechnic, which is one of the oldest programs in the United Kingdom. Muir, Alan Green, and Denys Hinton gave me an appreciation for Europe, how to live, and where to find the best pubs. I have never met anyone with a deeper commitment to architectural education and learning.

#### **What has been your greatest challenge as an architect?**

The greatest challenge I have is balancing my time. I have two wonderful daughters and want to be an integral part of their lives. I have amazing students to teach, and I work for great clients on architectural commissions. I have been blessed. The biggest challenge is getting all of it done well.



Lightcatcher, Decatur, Georgia. Architect: William  
Carpenter. Photographer: Kevin Bryd.

#### **How does your work as a faculty member inform your architectural practice, and vice versa?**

My students constantly inspire me and help me see things in new ways. I always invite them to my studio and to see new projects. I try to be involved in their lives during and after school. They are why I teach, and I owe them a lot.

#### **What are your primary responsibilities and duties as an architect and a faculty member?**

I am president of Lightroom, an architecture and new media firm in Decatur, Georgia. One of my former students, Kevin Byrd, is now my colleague and business partner. He was one of my best students, and now we work together. I am also director of the evening professional program in architecture, where I teach the thesis studio, which I enjoy very much. I like teaching at the fifth-year level.

# Pursuit of Design Excellence

## CAROL ROSS BARNEY, FAIA

Founder and President  
Ross Barney + Jankowski, Inc.  
Chicago

### Why and how did you become an architect?

I thought, growing up, that I would be an artist, an illustrator or a painter most likely, but I always felt an obligation to help improve the world and society. When I was in high school, it occurred to me that I could do those things as an architect. I went to my guidance counselor at my Catholic, all-girls school and told her I wanted to be an architect. To her credit, Sister Catherine Patrick did not even flinch or tell me architecture was only for boys; instead, she cheerfully looked up architecture schools.

### Why and how did you choose which school to attend for your architecture degree? What degree(s) do you possess?

I was fortunate that my state university, the University of Illinois at Urbana-Champaign (UIUC), had and still has a distinguished school of architecture. I applied to other schools, but UIUC fitted me best. I earned a bachelor of architecture in 1971.



Barrington Area Library Addition, Barrington, Illinois. Architect: Ross Barney + Jankowski. Photographer: Steve Hall, Hedrich Blessing.

**What has been your greatest challenge as an architect/principal?**

Finding work.

**What are your primary responsibilities and duties?**

Finding work.

**What is the least satisfying part of your job?**

Not finding work.

**One of your responsibilities is for the design excellence of all projects undertaken by the firm. How do you accomplish design excellence?**

Projects are excellent when the solutions embody the senses of inquiry, innovation, and optimism. Design is a search for answers, multiple answers that can be distilled into a single holistic entity. My job is simple; first, I need to make sure we are considering the true question and not being distracted by noise and fashion; analysis, or programming, is key at this stage. Second, I need to make sure that a diverse and expansive set of possible solutions is considered. Never, or at least rarely, should you build your first idea.

Little Village Academy, Chicago. Architect: Ross Barney + Jankowski. Photographer: Steve Hall, Hedrich Blessing.

To accomplish this, my studio is pretty free-flowing. People who work with us do not need a lot of structure, are not too concerned about the ownership of ideas, and definitely are not happy on the sidelines.



**Clearly, you are successful, given the numerous awards you have received. How do you feel when one of your projects is so recognized?**

Outside of making us feel great, awards are important because they represent the evaluation of your peers, the people who know how difficult it is to design good buildings. Another important aspect of award programs is educating the public about the quality of their environment — helping people imagine a better world. That being said, we have never had winning design awards as a project goal.





**One of your recent commissions is the new United States Federal Campus in Oklahoma City. Given the charged circumstances, how did you approach the design of this project?**

Oklahoma City was a watershed for me, at the same time strengthening and renewing my basic ideas about design. Many concerned stakeholders were involved, from survivors of the Murrah Building bombing to the U.S. Congress. We were developing new security design standards as we worked. Finally, I had not worked outside of Illinois before.

So we started the design process with an intense research phase, something I may have short-circuited in the past because I was at home in Chicago working for people with life experiences like my own. We learned as much as we could about Oklahoma history, geology, and culture, and that information served as a starting point for our design discussions. The approach worked so well that we have made research the first phase of nearly every project we do, especially the Chicago projects. We have even extended the practice of thorough investigation through the entire design process. The process is revealing, even inspiring, especially with respect to material investigations.

Oklahoma City Federal Building, Oklahoma City, Oklahoma. Architect: Ross Barney + Jankowski. Photographer: Steve Hall, Hedrich Blessing.



James Swenson Science Building, University of Minnesota — Duluth. Architect: Ross Barney + Jankowski. Rendering: Ross Barney + Jankowski, Inc.

**Following graduation, you served as a Peace Corps volunteer in Costa Rica. Can you describe this experience and how it contributed to your professional career?**

My job in el Cuerpo de Paz was for the National Parks of Costa Rica. In 1971, the Costa Rican government had just established the ecological reserves for which the country is renowned. I was part of a multidisciplinary team of scientists and designers that did the initial planning for the park system. The projects I worked on included the restoration of a historic ranch house, designing worker housing on a volcano, and assessing visitor impact on a fragile reef environment. This was my first experience working on a truly multidisciplinary team. The experience made me aware of the fragile balance in nature and provided me with a value system for the sustainability of built environments.

**Who or what experience has been a major influence on your career?**

I was fortunate to find two architects in the early part of my career who have been my mentors. John Holabird Jr., for whom I worked at Holabird and Root, my first real job after my Peace Corps service, gave me confidence in my own architectural skills as well as an appreciation for the timelessness of architecture. I think our bond was due, in part, to his being a fourth-generation architect in his family firm and the father of seven daughters.

At about the same time, I met Natalie de Blois, who was with Skidmore, Owings and Merrill (SOM) and later a professor of architecture at the University of Texas. We have been friends ever since. She is my confidante and role model. I see her often and still seek her counsel.

# A Teacher's View

## THOMAS FOWLER IV

Associate Professor and Associate Head  
California Polytechnic State University — San Luis Obispo



### Why and how did you become an architect?

My primary motivation for pursuing architecture began at a very young age with a desire to understand how everything worked. I took things apart and sometimes got them back together. At the time, I did not know of another profession that would give me a global sense of how things worked and allow me to document discoveries I made through drawings. I had naïve but romantic notions of what architects did. These notions were the vehicle that propelled me into going to school to learn about architecture.

Immersive View of Housing Project by Deric Mizokami in Third-year Design Studio at California Polytechnic State University — San Luis Obispo. Faculty: Thomas Fowler IV.

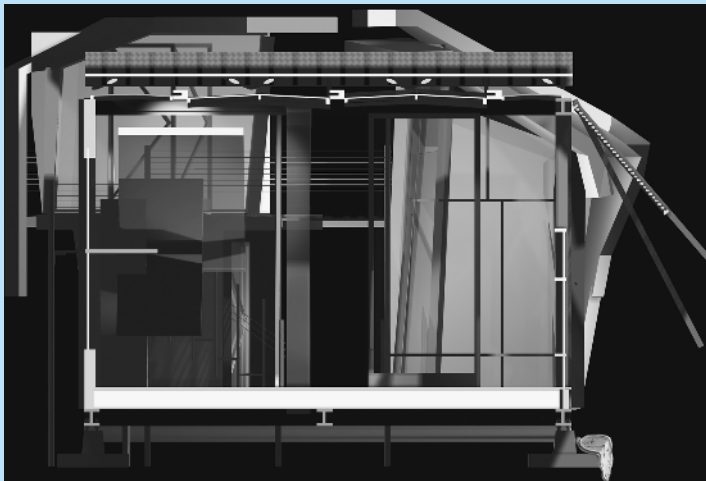
**Why and how did you choose which school to attend for your architecture degree? What degree(s) do you possess?**

I possess a B.Arch. from New York Institute of Technology at Old Westbury and an M.Arch. from Cornell University. I chose my undergraduate institution based on what I could afford to pay, the location, and admission. I selected the graduate program because it offered an opportunity to work as an administrator and do graduate work at the same time. I pursued graduate work to learn additional design theory and to explore the possibilities of teaching.

**What is the greatest challenge facing the future of the profession?**

The greatest challenge is the lack of accessible and visible role models in the profession and in the academic environment for aspiring ethnic minority and women students. I was fortunate to have a cousin practicing architecture in New York City who allowed me to work in his office from high school on through my undergraduate studies. This was the component of my education that actually kept me in school, as I was challenged to see the relevance of my schooling to the practice of architecture. For all students, a link to a role model is always helpful when things get tough to sort out.

From my undergraduate years and beyond, I have always been fortunate to find role models to keep me on track and to expose me to opportunities I would not have known about otherwise. I think it is important to have a strong sense of your destination but also to be flexible about the path to this goal. Ultimately, you should stay agile in your ability to modify your goals with respect to experiences acquired on your path of learning.



Solar Decathlon House by Hugo Martinez in Third-year Design Studio at California Polytechnic State University — San Luis Obispo. Faculty: Thomas Fowler IV.

**How does your work as a faculty member inform your architectural practice, and vice versa?**

Being constantly surrounded by bright minds — always a diverse range of individuals able to collectively generate a range of ways of seeing a problem — is a valuable learning experience for the teacher. Teachers learn at an accelerated rate from their students. Students always challenge the conventions of how things go together.

I am an academic whose practice of architecture is embedded in working with students in the design and construction of building mockups and prototypical structures. This form of practice has helped me acquire small-scale examples of the inti-

mate process of design and construction. The academic involved in practice always has a voice in the back of his or her mind asking the question, “How can I capture this process and explain it to students so they can learn from it?”

**What are your primary responsibilities and duties as an architect and as a faculty member?**

I think some practitioners want to see faculty as practicing architects first and as academicians second, as this seems a logical way to ensure that students will learn the skills they need to become architects. From my experience, being a practitioner first does *not* ensure this; success depends more on teaching strategies that provide students with the tools for understanding these connections.

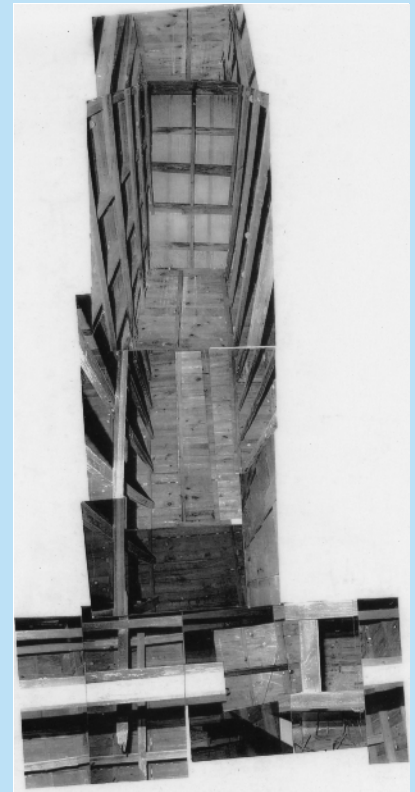
Practitioners must understand that they play an important role in the education of architects too. Some feel students need to deal with more complex design issues in school, but I think issues must be simplified so students can develop ideas beyond the planning stages of a project into constructible architectural vocabularies. Acceptable levels of design development are lacking in many studios, as students spend too much time thinking about complexities.

**How does teaching architecture differ from practicing it?**

What a teacher does is a mystery to those who do not teach. I think universities must work to decode what academics do. I often hear that the role of an architecture professor is to teach students the skills to build buildings, but I think the role of an architecture professor is far greater. Teaching is a modeling of future citizens who will make great contributions to society as upstanding citizens in addition to having the knowledge needed to create architecture. Good teaching is where both the student and teacher learn from the interaction. This is why people are attracted to teaching—because it provides a continuous learning mechanism.

**You have been a member of more than one of the national boards of the collateral organizations. What has that involvement meant for your career?**

People often think that individuals who volunteer with associations have limited interest in the broader issues that affect the profession—that is, design. I have the opposite view: Active involvement with the collaterals gives a broader view and appreciation for the profession. Navigating association work is the ultimate design problem for consensus, as you must move through a bureaucracy. I served as national president of the AIAS in 1984–1985 and as secretary for the ACSA in 2004–2006. Association work allows you to establish a macro view of the profession through networks that, over time, disperse and expand.



Tobacco Barn Collage, Horry County, South Carolina. Architect: Thomas Fowler IV.

# Accessible Architecture

## SCOTT WINDLEY

Accessibility Specialist  
U.S. Architectural and Transportation Barriers Compliance  
Board (Access Board)  
Washington, D.C.

### **What has been your greatest challenge as an architect?**

Getting other architects to recognize the need for their work to account for persons with disabilities; getting them to realize that accessible design is the right thing to do.

### **You work for the United States Architectural and Transportation Barriers Compliance Board, more commonly known as the Access Board, as an accessibility specialist. What are your primary responsibilities and duties?**

I answer calls from architects, designers, and others who are trying to implement the guidelines of the Americans with Disabilities Act (ADA). I also write some of those guidelines. And I travel around the country training on the guidelines.

### **You have cerebral palsy, a birth condition, and have used a wheelchair since you were five years old. What impact has this disability had on your career as an architect?**

It has caused me to be more aware of accessibility. I think some instructors assumed I would not be able to be an architect. I suppose I have proven that assumption wrong.

### **What would you say to people with a disability who desire to become an architect?**

Be prepared to work hard, and don't take no for an answer!

### **What are the most and least satisfying parts of your career as an architect?**

Dealing with architects who are unwilling to make their building accessible and who try to find loopholes to use to avoid it.

### **Who or what experience has been a major influence on your career?**

Two people come to mind: my high school drafting instructor, who always challenged and pushed me to do my best, and my friend and boss from 1995 to 1997, Ron Mace, who was the biggest person in the universal design movement.

## Profile of the Profession

According to the Bureau of Labor Statistics, U.S. Department of Labor,<sup>6</sup> 113,200 architects were practicing in the United States in 2002, the last year for which statistics are available. Employment projections for the occupation of architect are expected to grow by 19,500 (17 percent) between 2002 and 2012. The employment of architects is projected to grow about as fast as the average for all occupations through 2012, and additional job openings will stem from the need to replace architects who retire, transfer to new occupations, or leave the labor force permanently for other reasons. Growth in construction, particularly of non-residential structures such as office buildings, shopping centers, schools, and health care facilities, is expected to spur employment.

With this projected growth of the profession, should you consider architecture? Before you answer, consider the following. According to the National Architectural Accrediting Board (NAAB),<sup>7</sup> 38,599 students were studying architecture in the pre-professional (15,822) and professional (22,777) degree programs in the United States during the 2003–2004 academic year. Further, 8,139 students graduated from the degree programs in the same year, 5,422 with the NAAB-accredited degree. If you assume that the number of graduates with the accredited degree remains the same for 2002–2012, the projected time frame, 54,220 individuals with an accredited

degree may be competing for the 19,500 openings. Clearly, based on employment projections, the competition for architectural positions will be keen over the next decade. Take solace, though, because graduates with an architectural education can enter many career fields other than architecture.

In its 2004 survey of registered architects, the National Council of Architectural Registration Boards<sup>8</sup> (NCARB) reports 101,179 architects living in the fifty-five reporting jurisdictions, including all fifty states, the District of Columbia, Guam, the Northern Mariana Islands, Puerto Rico, and the Virgin Islands. This total is an approximate 4 percent increase from the 1999 survey, the year the annual survey began.

According to the Bureau of Labor Statistics, U.S. Department of Labor,<sup>9</sup> the 2002 median annual earnings of wage and salary architects were \$56,620. The middle 50 percent earned between \$44,030 and \$74,460. The lowest 10 percent earned less than \$36,280, and the highest 10 percent earned more than \$92,350. Salaries fluctuate depending on the region of the country, the amount of experience an individual has, or even the type of employer.

While the AIA<sup>10</sup> does not represent the entire profession, its membership does constitute a majority. As such, it is worth reporting their facts and figures. Of the nearly 75,000 members of the AIA, 80 percent (60,000) are licensed architects. The remaining are associate or allied members. Of all AIA architect members, 83 percent practice in architecture firms, 8 percent practice in the commercial/industrial/institutional sector, 3 percent practice in government, while

the remaining practice in design firms, universities or schools, contractors or builder firms, and engineering firms.

## **DIVERSITY**

What is diversity, and why is it important? The following answer is from *Designing for Diversity*, by Kathryn Anthony, Ph.D.:

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Diversity is a set of human traits that have an impact on individuals' values, opportunities, and perceptions of self and others at work. At minimum, it includes six core dimensions: age, ethnicity, gender, mental or physical abilities, race, and sexual orientation.<sup>11</sup>

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In the context of the architectural profession, diversity is extremely important because for many years, the profession has been known as a white man's profession. This label is no longer appropriate, as the profession is beginning to make strides, but consider the representation of women and individuals of color. Again, the AIA is the most reliable source for estimates.

According to the AIA, 10 percent (about 7,500) of full members are women, and 8 percent (about 6,000) are individuals of color. Within the schools, the numbers are dramatically better. According to NAAB, the percent of female students pursuing architecture is 41 percent, or approximately 16,200. Twenty-eight percent of students, or about 11,000, are individuals of color.



# What Are the Most Important Skills an Architect Needs to Be Successful?

**Hands down**, the most important skill is problem solving, with the ability to see the not obvious solution. Being able to think in three dimensions is a close second.

**Carol Ross Barney, FAIA**  
Principal, Ross Barney +  
Jankowski, Inc.

**To be successful**, you must be able to adapt to your surroundings. You must be a good communicator and, more importantly, a good listener. You must be open to taking risks and looking at things in a different way.

**H. Alan Brangman, AIA**  
University Architect,  
Georgetown University

**To be successful** professionally and personally as an architect, passion, the courage to create, the ability to listen, communication, collaborative spirit, and perseverance are all essential.

**Dianne Blair Black, AIA**  
Vice President,  
RTKL Associates, Inc.

**Architects must** have the following skills (the order depends on the individual): (a) excellent communication skills (e.g., writing, speaking, and traditional

and digital drawing ability); (b) tolerance for ambiguity; (c) agility; (d) an analytical mind; (e) attention to both the macro and the micro; (f) humility; and (g) graphical diagramming.

**Thomas Fowler IV**  
Associate Professor and  
Associate Head  
California Polytechnic State  
University — San Luis Obispo

**The most important skill** an architect can acquire is communication. Computers, technology, materials, and styles will all change, but written, spoken, and graphic communication will always be required to successfully compete in architecture.

**Roy Abernathy, AIA**  
President, Jova/Daniels/Busby

**Learning to communicate** both visually and verbally is critical. Design work must be able to speak for itself, with no verbal explanation. In addition, however, architects must learn effective oral communication skills. They must practice their presentations over and over again, and they must learn from their mistakes. They also must learn how to be attentive listen-

ers, as understanding the needs of clients and users is critical to a successful practice with repeat clients.

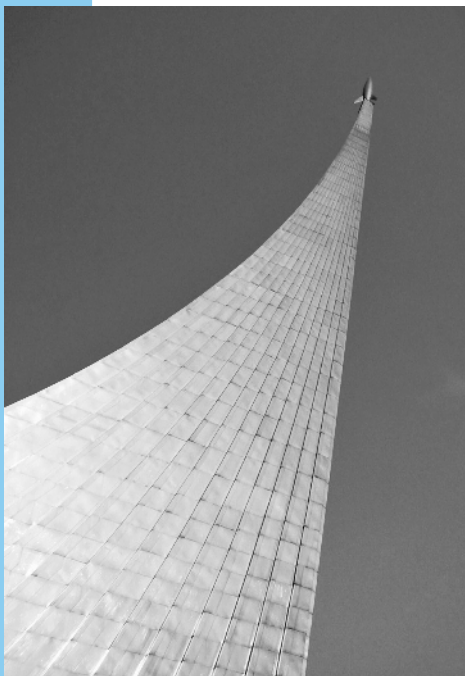
**Kathryn Anthony, Ph.D.**  
Professor, University of Illinois  
at Urbana-Champaign

**Communication is** the most important skill. An architect must be able to communicate with clients differently than with contractors. An architect must be able to present in front of a twelve-person board of directors or a married couple. An architect must create written proposals and reports in the morning, then must turn around and create a massing diagram sketch or stair detail later in the day. An architect must be able to explain a technical aspect of a project in a project meeting just as well as attempt to convince a client of an aesthetic idea in a design.

**F. Michael Ayles, AIA**  
Director of Operations,  
Antinozzi Associates

# QUESTION: WHAT ARE THE MOST IMPORTANT SKILLS AN ARCHITECT NEEDS TO BE SUCCESSFUL?

**Every architect** must have two attributes. First is the ability to deal with ambiguous problems. Architectural problems, while often complex, cannot, for the most part, be reduced to a single optimized answer. Typically, architectural problems have many possible solutions. The answer often lies not in finding the *right* solution but in finding the *best* solution. Le Corbusier, one of the twentieth century's greatest architects, described finding architectural solutions "as a patient search."



Cosmonaut Museum, Moscow, Russia.  
Photographer: Ted Shelton, AIA.

The second attribute is curiosity. Architecture is not a static profession. What you learn in a formal education is just the beginning. To be a successful architect, especially in this age of rapid change, you must acquire new knowledge and skills nearly every day. To do this, you need insatiable curiosity that drives you to know more and to continue a process of lifelong learning.

Notice I have talked about attributes rather than skills. I believe these personal attributes are more important than learned skills. I do not mean to skip the skills issue. The necessary skills are basic — reading, writing, and arithmetic in all their current manifestations — plus communication skills, leadership skills, cognitive skills, and — I think the most important skill of all — the skill to imagine unbuilt worlds.

**Robert M. Beckley, FAIA**  
Professor and Dean Emeritus,  
University of Michigan

**Self-knowledge.** Exercise your capacity for self-learning as soon as you can — understand how deeply you want to be an architect and reflect on it throughout your decision making. For some, the want is a passion or obsession; for others, it is a curiosity that grows over time. These people require alternate paths.

Travel. Observe and talk to people. Travel may be the greatest teacher.

Don't worry about failure. Follow the maxim of IBM's Thomas Watson Jr.: "Want to succeed faster? Accelerate your rate of failure!" Have the courage to take that risk!

**Joseph Bilello, Ph.D., AIA**  
Dean, Ball State University

**The most important skill** is listening. I find that too many architects do not listen well; it takes practice.

**William Carpenter, Ph.D., FAIA**  
Associate Professor, Southern  
Polytechnic State University  
President, Lightroom

**To observe** and to listen, and translate the information gained into a meaningful medium that can be understood by clients. Architecture is not about you and what you want; it is about your clients and working as a team to achieve their goals. You can educate them, which is critical, but you must step back from your own ego-based agenda and serve them. This does not mean the design is compromised; it just means you know and honor the constraints.

**Barbara Crisp**  
Principal, Underwood + Crisp

# QUESTION: WHAT ARE THE MOST IMPORTANT SKILLS AN ARCHITECT NEEDS TO BE SUCCESSFUL?

**Architecture requires** imagination, compassion, and the capacity to lead. Imagination is the unmistakable tool of the designer. Compassion serves any architect well in understanding the fears, concerns, and hopes of those for whom they design. Leadership carries architects beyond the expectations of a drafting room or a construction site to the dreams of a visionary.

**Jacob Day**  
President (2004–2005),  
American Institute of  
Architecture Students

**The two most important** skills for success in architecture are critical thinking and problem solving. I used to think creativity was the most vital skill for an architect to possess; however, I have come to realize that creativity alone does not produce substance. A rational thinker who knows architectural history and has a strong design process will make good architecture.

**Margaret DeLeeuw**  
Graduate, University of  
Maryland

**Passion, persistence,** and three-dimensional spatial skills.

**Richard A. Eribes, Ph.D., AIA**  
Professor and Dean Emeritus,  
University of Arizona

**A creative sensibility,** the ability to solve complex issues without precedents to follow, and a commitment to the discipline.

**Doug Garofalo, FAIA**  
Professor, University of Illinois  
at Chicago  
President, Garofalo Architects,  
Inc.

**Good communication skills.**

Architecture is a collaborative process and requires that architects be good team players as well as leaders.

**Lynsey Gemmell**  
Architect II, Holabird & Root

**Drawing is** the most important skill; the second is the ability to research and understand history. One more vital skill, especially today, is the ability to work in a team. Nearly all buildings are complex machines, and no one person can do it all. In summary, you must be a well-rounded, competent individual.

**Christopher Glapinski**  
Student, University of Miami

**Be both** patient and persistent. Often the work of the architect is a series of compromises.

**Christopher J. Gribbs,**  
ASSOCIATE AIA  
Senior Director, American  
Institute of Architects

**An architect** must be open-minded and able to constantly evaluate and reevaluate every decision. Also — this isn't really a skill — an architect must realize you don't need to reinvent the wheel with every design; they don't teach you this in school. So many beautiful and efficient structures already exist; we need not create something unique every day. We can be creative, but we must learn from the past and try to make it better.

**David Groff**  
Intern Architect, Dalglish,  
Gilpin, and Paxton Architects

**A parallel** and equal emphasis on communication abilities — oral, written, and graphic — is essential to being a successful architect, regardless of talent.

**Gaines Hall, FAIA**  
Vice President, Kirkegaard &  
Associates

**Patience, diligence** — because architectural education is so rigorous, diligence is a must — attention to detail, and passion. I know I still want to be an architect because my passion for creating is undiminished.

**Michelle Hunter**  
Lead Designer, Garage  
Takeover, Discovery Channel

# QUESTION: WHAT ARE THE MOST IMPORTANT SKILLS AN ARCHITECT NEEDS TO BE SUCCESSFUL?

**Sensitivity.** Architects must understand what the environment and the end user need and want. Architects cannot properly respond to the needs of the end user if they are not sensitive to the need. The need may be structural, environmental, aesthetic, climatic, religious, or a combination of these elements — or others.

**Ahkilah Johnson**  
Senior Analyst, Cherokee  
Northeast, LLC

**Collaboration, teamwork,** and people skills are probably the most important and most undervalued skills an architect needs in today's professional practice. But perhaps most importantly, the ability to work collaboratively with clients, to lead them

through the project process, can make the difference between a good project and a great one.

**Carolyn Jones, AIA**  
Associate Principal, Callison  
Architecture, Inc.

**Having a good eye** is one of the most important attributes of a successful architect, but “a good eye” is difficult to describe in words. It affects your projects, your presentations to clients, your marketing efforts to obtain new projects — everything.

**Being good** with your hands is important, especially in building models but also to get a tactile feel for materials and how they are put together in the field.

Strong writing is also important for architects. Writing is

critical to obtaining jobs or awards, preparing contracts, and developing complete and accurate specifications for a particular project.

Enjoying the social aspects and challenges of working with people is very important. Every real-world project involves teamwork. Often, multiple consultants are involved, sometimes multiple clients, always many people who do not always naturally communicate well with each other! It is always the architect's job to keep the lines of communication open via drawings, meetings, conference calls, and so on.

**Elizabeth Kalin**  
Architectural Intern, Studio  
Gang Architecture



Chicago Townhomes,  
Chicago. Photographer:  
Isabelle Gournay.

## QUESTION: WHAT ARE THE MOST IMPORTANT SKILLS AN ARCHITECT NEEDS TO BE SUCCESSFUL?

**Leadership** is the most important skill an architect can possess. As the client's advocate and the head of the consultant team, the architect must maintain an overview of the project and provide consistent guidance to ensure its success as well as the long-lasting relationships developed during its course. A great leader is skilled at listening, showing empathy, and creating a vision.

**Grace Kim, AIA**

**Principal, Schemata Workshop, Inc.**

**I have found** that people who like to solve puzzles can do well in architecture. Getting a building designed and through construction takes a tremendous amount of patience and keeping your eye on the big picture. The design of the building, in my opinion, is the easy part. Turning that design into something the owner approves, figuring out the detailing, coming in on budget, getting approved by the local community, and working within applicable building and zoning codes requires tremendous focus.

Playing psychiatrist to clients is another critical quality. Balancing various client representatives' demands, whether for a couple or a board of directors, requires listening carefully

to them and coming up with solutions that satisfy all of their important criteria. They may have other agendas in getting design solutions to go their way, so I find I have to handle their requests carefully.

Excellent design skills are a given to being an architectural designer. However, being an architect does not necessarily mean being a great designer. Few people involved in the profession of architecture are designers. Many are office managers, specification writers, marketing personnel, architectural critics who write for newspapers or magazines, people who work at banks and for developers to review projects, and so on.

**Nathan Kipnis, AIA**

**Principal, Nathan Kipnis Architects, Inc.**

**The most important skills** are communication, imagination, communication, problem solving, and communication. Architects must have the imagination to dream up the vision of clients, the communication skills to articulate that vision so the client can understand it, and the ability to resolve complex variables in order to make that vision a reality. The fundamentals of math, science, and art are relevant, but they are tools that support imagination,

communication, and problem solving.

**Shannon Kraus, AIA**

**Associate Architect, HKS**

**An architect** must be intelligent but more so, he or she must be wise or possess a great deal of common sense. A strong moral code is important in order to balance all of the issues that must be addressed. Further, an architect must be able to see or imagine big ideas, to create concepts that tie everything together. An architect deals with a great amount of information and criteria.

An architect does not have to be a great artist as far as drawing is concerned, but he or she must be able to document and communicate three-dimensional and spatial ideas. I have observed many good architects whose drawing skills are not great. Anyone can learn the technique of sketching. Computer drafting skills are essential today for new graduates. The architect must be able to use the computer for communications, presentation, and research as well as drafting.

The architect must be able to work with and to enjoy working with people, including clients and coworkers. Clients are the reason to practice architecture. An architect must be

# QUESTION: WHAT ARE THE MOST IMPORTANT SKILLS AN ARCHITECT NEEDS TO BE SUCCESSFUL?

able to understand and decipher their needs and goals. The program that emerges is the basis of the concepts and architecture that result.

An architect must be able to understand and communicate with consultants and experts in a variety of disciplines. Architecture is far too broad today for one individual to comprehend and be expert in all its aspects. It is a team effort. Leadership calls for the concept of service and the recognition of others' expertise and insights. This can be a humbling role. At the same time, the architect must understand the place of all the systems and interests that combine to make an architectural product.

The architect must be a leader in bringing science to the built environment. The vital interest of our society and world in conservation and stewardship of our natural resources will only increase. The architect is the natural leader in this effort.

**Jack Kremers, AIA**  
Professor, Judson College

**Communication** is the most important of all skills. Without the ability to communicate orally, in writing, and through graphics, one probably cannot be a successful architect. Through communications one interacts with clients, the com-

munity, and the people with whom one learns and works. Though an architect may have outstanding strengths in one area of communication, few are successful without being professionally competent in all three.

**Clark Llewellyn, AIA**  
Director, Montana State University

**Architecture requires** the most diverse training of any professional field. To be successful architects, we must understand a wide spectrum of knowledge. We must combine a profound appreciation of tradition and history with an artful eye. As creators of human environments, we must understand society at both the macro and micro levels. We must also balance our progressive desire to incorporate the latest technologies, materials, and design trends with constraint and adherence to what is tried and true.

**Joseph Nickol**  
Graduate, University of Notre Dame

**A positive attitude** — anything is possible! In addition, architects need the ability to communicate well, to convey their ideas, and to acknowledge the ideas of others.

**Monica Pascatore**  
Freelance Designer, P Inc.

**Architects must** have the ability to be creative (which includes the creative use of precedents). They must be able to think at different scales (simultaneously). They must have the ability to inspire confidence (which is conveyed largely by listening). They must have the ability to communicate ideas (either orally or in writing, as well as through drawing). Finally, they must have the ability to be able to tell good stories.

**Casius Pealer, J.D.**  
Associate, Reno & Cavanaugh, PLLC  
Co-founder, ARCHVoices

**All architects** must be able to communicate well in a variety of media. Other important skills include speaking, writing, critical thinking, and problem solving. Also, an understanding of business finance is important, as the measure of a successful project is more than aesthetics and function. My personal goal on every project is to learn at least one item that will enable me to increase my creativity or productivity.

**Kathryn T. Prigmore, FAIA**  
Project Manager, HDR Architecture, Inc.

**I believe** the most useful skill or quality to ensure success is perseverance. Architects are

## QUESTION: WHAT ARE THE MOST IMPORTANT SKILLS AN ARCHITECT NEEDS TO BE SUCCESSFUL?



Rotunda — University of Virginia, Charlottesville. Architect: Thomas Jefferson. Photographer: R. Lindley Vann.

always trying to solve complex issues while balancing the demands of finance, site, owner, and self. They must be able to work through issues when the solution seems impossible. They must have faith in themselves and the peace within to press onward until the solution becomes evident. The design process is not linear but rather cyclical. Many times, architects find themselves back at the beginning and questioning whether they have moved forward in solving the problem. But good solutions do not come quickly. They need polish to make them shine.

**Katherine S. Proctor, FCSI, CDT, AIA**  
**Director of Facilities, Jewelry Television**

**Architects must** have communication skills (both oral and written), flexibility, patience, the ability to work well under the stress of deadlines, the ability to work with many types of people, organization, a willingness to continue to learn, and a sense of humor.

**Tamara Redburn, ASSOCIATE AIA**  
**Intern Architect,**  
**Fanning/Howey Associates, Inc.**

**Architects require** collaboration, visionary ideas, persistence, optimism, and the scale of pragmatism and idealism, tipping more toward idealism.

**Patricia Saldana Natke, AIA**  
**Principal and President, Urban Works Ltd.**

**As cliché** as it sounds, communication is the most important skill an architect uses. The language we use when we talk among ourselves is unintelligible to most clients. Even our visual expressions are often misinterpreted or misunderstood. The sophisticated computer programs we employ are no substitute for confident and articulate face-to-face communication.

**W. Stephen Saunders, AIA**  
**Principal, Eckenhoff Saunders Architects**

# QUESTION: WHAT ARE THE MOST IMPORTANT SKILLS AN ARCHITECT NEEDS TO BE SUCCESSFUL?

**The workplace** and the field are multifaceted, far more so than most outsiders appreciate. With the diversity of needs and opportunities within the profession and allied areas of design and construction, one can become a successful architect in a variety of career paths. So it is difficult to identify specific, critical skills relevant throughout this breadth of alternatives. Of course, individuals have different perceptions of success in professional as well as personal life.

Most professional skills can be taught and developed, and no one can possibly possess them all. But it is difficult to make someone intelligent — and without that capability, and without passion, perseverance, good judgment, and high ethical standards, all of which are difficult to teach, success may be elusive.

Following graduation, if a person excels at even one thing and wishes to specialize, a lack of finely honed skills in other areas is probably not detrimental in becoming successful.

**Roger Schluntz, FAIA**  
**Dean, University of New Mexico**

**The future** of architecture depends on the attainment of *all* architects, regardless of special expertise and focus in practice settings, of these knowledge areas and practice skills:

## **Knowledge Areas**

- Design: aesthetics, synthesis, analysis, implementation planning, outcomes evaluations; holistic process, team-based methods
- Sustainability domains: materials, natural resources, human-invented systems
- Leadership: ideas, organizations, communities

## **Practice Skills**

- Digital, electronic technologies: data, information, images
- Modeling and image making: virtual objects, spaces, and places
- Management systems/business practices
- Group dynamics and decision theories
- Effective communications
- Community visions facilitation
- Cultural reading and interpretation
- International development and economies
- Public regulations and governance
- Materials: content, manufacture and applications
- Continuous professional development

**W. Cecil Steward, FAIA**  
**Dean Emeritus, University of Nebraska — Lincoln**  
**President/CEO, Joslyn Castle Institute for Sustainable Communities**

**Architects must** be able to communicate visually and verbally; visualize three-dimensionally; distill a set of requirements to their essence; arrive at solutions that answer these requirements; and entertain many ways of looking at a problem/solution.

**Eric Taylor, ASSOCIATE AIA**  
**Photographer, Taylor Design & Photography, Inc.**

**Architects must** have communication and team skills. While architecture school emphasizes drawing, model building, and other visual communication skill for presenting designs, in the real world I spend much more time interviewing my clients in order to understand their needs, goals, and objectives. I do spend time talking, but I spend much more listening. I also spend much more of my time writing than drawing or designing. Often that writing is to clients for proposals or project communications or internally to communicate with project teams I work with in our organization. These days, few architects work alone. Teamwork skills are critical to success. Architects must be able to work with not only other architects but also engineers, construction managers, owners' representatives, municipal officials, real estate professionals, and so on toward the successful comple-



## QUESTION: WHAT ARE THE MOST IMPORTANT SKILLS AN ARCHITECT NEEDS TO BE SUCCESSFUL?

tion of projects. Often they are called on to lead these teams as well.

**Randall J. Tharp, RA**  
**Senior Vice President, A.**  
**Epstein and Sons**  
**International, Inc.**

**Without any doubt,** the discipline of architecture is becoming more and more complex. As Mark C. Taylor has commented, “We are living within a moment of unprecedented complexity, when things around us are changing faster than our ability to comprehend them.” Architects today must develop a well-constructed mind and become fully conscious of themselves and their changing world. They must possess a high degree of intelligence, the mental flexibility and agility to tackle uncer-

tainty, and must discover new ways to operate beyond a fixed system of values and conventions.

In addition, architects must embrace transdisciplinary collaboration and learn to collaborate effectively. They must develop the ability to plug into any project that presents itself and add value. This means not only possessing excellent communication and visualization skills but also possessing a fertility of ideas, a richness of imagination, and adaptive awareness. “Education is the ability to perceive the hidden connections between phenomena,” as Vaclav Havel observed.

**Max Underwood, AIA**  
**Professor, Arizona State**  
**University**  
**Architect and Principal,**  
**Underwood + Crisp**

**Being an architect** takes an innate understanding of people and the way they use space. If you cannot understand people, then you cannot be an architect.

**Lisa Van Veen, Associate AIA**  
**Architectural Designer, Design**  
**Forward**

**Problem-solving skills** are very important. You must teach yourself to see things in ways uncommon to most people. Dedication and eagerness to learn are also important traits. Seek out ways to learn and get the most out of school. Also, develop some interest or background in art, drawing, sculpture, and so on.

**Brad Zuger**  
**Student, University of**  
**Nebraska — Lincoln**

# From Verbal Concept to Fabrication

## **DOUG GAROFALO, FAIA**

Professor, School of Architecture  
University of Illinois at Chicago

President  
Garofalo Architects, Inc.  
Chicago

### **Why and how did you become an architect?**

Initially, I wanted to become an architect because the field seemed to combine my interests in making, building, and the arts. I became an architect by attending a five-year bachelor of architecture degree program, working a few years in an office, studying for and passing the Architect Registration Exam (ARE), and then going to graduate school. I consider all four of these steps equally important.



Nothstine Residence, Green Bay, Wisconsin. Architect: Garofalo Architects.  
Photographer: Garofalo Architects.

### **Why and how did you choose which school to attend for your architecture degree? What degree(s) do you possess?**

I decided on Notre Dame for undergraduate school because it had one year entirely in Rome, Italy. I went to Yale for graduate school based on the strength of both the art and architecture schools.

### **What has been your greatest challenge as an architect?**

Perhaps it is the necessity of protecting design concepts throughout the life of a project. That this integrity is maintained is not a given — quite the opposite, in many cases.

**How do you balance the challenging demands of both an architectural practice and teaching in a program in architecture?**

I would not refer to this situation as a balance but as a competition for time; it is something that continues to evolve as the work in the office changes.

**You were involved with the award-winning Korean Presbyterian Church of New York, the first building truly conceived and executed with digital media. Please provide insight on the experience of designing by digital media.**

We were able to exploit these relatively new digital tools, from email file transfer to complex manipulations of form and program over the Internet, to form a truly unique collaboration. Also, and perhaps more relevant to our current work, the use of multiple software programs (as opposed to one or two) enhances our interests in program over time, complex geometries, patterned space and surface, repetitive structure, and many other concepts. Increasingly, digital technology allows us to be more involved in fabrication and building.

**What are your primary responsibilities and duties as an architect?**

My office is run as a studio in the truest sense of the word, or at least my definition of it; everyone does everything insofar as possible, meaning everyone acts as a designer, and everyone runs projects. This makes me a sort of director, overseeing and collaborating.

**What is the most satisfying part of your job?**

It may sound simple, but the seemingly simple banter and exchanges in the office results in some very interesting concepts. We then develop these in a sophisticated way. The act of making, from verbal concept all the way through to fabrication, is most satisfying thing.



Hyde Park Art Center, Chicago. Architect: Garofalo Architects.



Spring Prairie Residence, Spring Prairie, Wisconsin. Architect: Garofalo Architects. Photographer: Nathan Kirkman.

**What is the least satisfying part of your job?**

The amount of so-called justification needed to complete a building is astounding; most of it is necessary and good, but some of it is absurd. A good example of this is how hard it is to obtain a building permit.

**Another unique project during your career was the full-scale prototype newsstand at the Museum of Contemporary Art Chicago. Please describe this project.**

The IN.FOrmant.system was a built response to a set of questions raised by the Museum of Contemporary Art Chicago for the exhibit “Material Evidence: Chicago Architecture @ 2000.” We were asked to consider issues of materiality in relation to the program of a newsstand, which was constructed full-scale and installed at the museum. The IN.FOrmant.system refers to a future micro-urbanism of many structures in the city dispensing information in variable ways.



IN.FOrmant.system — Museum of Contemporary Art, Chicago. Architect: Garofalo Architects. Photographer: Garofalo Architects.

The prototype as constructed at the museum demonstrated three ideas relative to materiality: first, that the interaction of even a small palette of materials, both conventional and new, can be treated as a flow of matter; second, that this performance is conceived and constructed using parametric modeling techniques inherent to animation software; and, finally, that the material and spatial effects produced by these two ideas may collaborate with and expand the given program of a newsstand.

**Who or what experience has been a major influence on your career?**

I have had the benefit of many amazing teachers, so it is hard to single out even a few. Other influences include the opportunity to travel as a student in Italy and as an Skidmore, Owings & Merrill Traveling Fellowship recipient through India and Asia.

# Teaches About People and Places

## **KATHRYN H. ANTHONY, PH.D.**

Professor  
School of Architecture  
Department of Landscape Architecture  
Gender and Women's Studies Program  
University of Illinois at Urbana-Champaign  
Champaign, Illinois

### **Why and how did you become an architecture professor?**

I have had a lifelong fascination with architecture, especially the social and psychological relationships among people, places, and spaces. My father is a retired professor of city planning and also has a degree in architecture. I have early memories of visits to my father's office at Columbia University's Avery Hall, where I was intrigued by all the architectural drawings and models displayed throughout the corridors. I was also fortunate to travel with my family throughout Europe. Several visits were to contemporary urban design projects as well as new towns, topics of my father's university lectures.

### **Why and how did you choose which school to attend for your architecture degree? What degree(s) do you possess?**

I was an undergraduate student in psychology at the University of California, Berkeley. During my final year, I discovered the new field of environmental psychology and enrolled in a course on this subject. After purchasing all three textbooks required for the course, I could not put them down. I read them all during the first week of the term. This had never happened before, and I realized I had found my niche. After I received my B.A. in psychology, I remained at Berkeley to complete my Ph.D. in architecture with a specialty in social and behavioral factors in design.

### **Why is the topic of diversity important for architects?**

Diversity is one of the most important issues for today's architects. The built environment reflects our culture, and vice versa. If our buildings, spaces, and places continue to be designed by a relatively homogeneous group of people, what message does that send about our culture? The lack of diversity in the architectural profession impedes progress not only in that field but also in American society at large.

Discrimination in the architectural profession can lead to discrimination in how we all use the built environment, and it has done so for years. Architects must pay greater attention to the needs of women, persons of color, gays and lesbians, and persons with physical disabilities, all of whom — until recently — have been treated as second-class citizens in the built environment. So-called minorities have already become the majority in many American cities, and that trend will only increase.

**You are a faculty member in architecture, landscape architecture, and gender and women's studies. Can you describe the differences among these three disciplines?**

I enjoy having academic appointments in all three disciplines, although architecture is my primary affiliation. Architecture has traditionally been a male-oriented model of education; however, that is gradually changing as more women students and faculty enter the field. By comparison, landscape architecture has historically provided greater opportunities for women. Gender and women's studies, a much newer discipline, examines issues that the architecture profession until recently has ignored. Students in all three disciplines differ greatly. While design students excel visually and are attentive to their physical surroundings, gender and women's studies tend to be talented verbally and more widely read.

**What do you like about research, teaching, and writing?**

By far the most appealing aspect of research, teaching, and writing is creativity. Research and writing offer the opportunity to examine issues previously unexplored. One has a chance to carve out new ground, and this is exciting. For example, while *Design Juries on Trial* is by no means the final word on this topic, the fact that it is one of the first examples of empirical research on design juries is significant. This is also true for my second book, *Designing for Diversity*, one of the first books to address how women and persons of color fare in the architectural profession compared to their white male counterparts. It is also based on empirical research.

As a female scholar in architectural education, my writings have a special slant, and I believe I have made a mark in the field. My aim in both books has been to create a more humane environment in both architectural education and practice.

Teaching is another creative endeavor. One of my favorite aspects of teaching is seeing a student flourish outside the university. An idea that started as a casual discussion during office hours germinates into a significant body of work presented at a national venue. It is an amazing metamorphosis, and it is gratifying to watch students discuss their work with leading scholars from around the world. Similarly, I appreciate hearing from alumni long after they graduate and learning about their accomplishments, both professional and personal. It underscores how fortunate we are as educators to cross paths with these individuals in their formative years.

# Architecture = Connectivity + Community

**PATRICIA SALDANA NATKE, AIA**

Principal and President  
Urban Works Ltd.  
Chicago

**Why and how did you become an architect?**

I grew up on the south side of Chicago, in an area called Back of the Yards—the famed stockyards of Chicago. I am a first-generation Mexican American; both of my parents are from Zacatecas, Mexico. One day, my parents needed to go to downtown Chicago to address passport issues. We took a long bus ride (or what appeared to be long for an eight-year-old). When we arrived in the center of the Chicago Loop area, I was mesmerized by the skyscrapers, the expanse of the green space in Grant Park, the reflectiveness of the windows and metal on the building skins. I recall being breathless as I entered the Federal Building (Mies)—the expanse of the lobby and the simplicity of the materials. I wanted to know why there were no majestic places and green spaces where I lived. I did not know what an architect did, but I knew I wanted to change my neighborhood for the better. Therefore, I became an architect at a very early age.

**Why and how did you choose which school to attend for your architecture degree? What degree(s) do you possess?**

I wanted to attend a school somewhat close to home. My choice was based on a limited knowledge of schools that had an architecture curriculum and a narrow view of the options available to me. Because I lived in Chicago, I applied to the Illinois Institute of Technology (IIT) and the University of Illinois at Urbana-Champaign (UIUC). I was accepted at both and chose UIUC after a visit to the campus and a minority recruitment event where my mother and I spent the weekend on the UIUC campus. I hold a bachelor of science in architectural studies.



Westhaven Development—Mixed Income Housing, Chicago. Architect: Urban Works Ltd. Photographer: Anthony May Photography.

**What has been your greatest challenge as an architect/principal?**

Time! I need time for design excellence, maintaining and running an office of ten, and searching for the next project. My greatest challenge right now is time management and prioritization. I own a firm while balancing a family and being mother to two young daughters.

My other great challenge is the education of clients. I find this one exhilarating. I enjoy inspiring clients to take risks, to think outside of the box, to visualize (although technology has finally made a leap), and to put full trust in us as designers.

**How did you name your firm Urban Works Ltd.? Why *urban* and not *architecture*?**

We work in the urban realm. By works, we mean all aspects of the city, although we focus heavily on architecture. We also do a lot of urban planning work, interiors, and assistance in grant applications and funding. The name Urban Works denotes our unique capacity to convey the shifting conditions of a modern urban city.

**Why has the architectural profession been unable to attract more minorities, particularly Hispanics, to its ranks?**

I believe the reason may be socioeconomic conditions as well as cultural issues. Few role models exist in schools, universities, and the workforce. I have always followed my career path with a mindset of overcoming all obstacles—and yes, the obstacles are greater and more regular than anticipated—but I never expected prescriptive solutions.

**You are a past National Diversity Chair of the American Institute of Architects (AIA), and your firm profile states “celebrate diversity.” Why is diversity important in the architectural profession?**

The profession has an obligation to the public, and the public is diverse. The AIA has finally implemented the funded 2020 Vision for Architecture, which is developing a cohesive system for collecting demographic data on the profession and a methodology for analyzing and publishing the information.

**You have been involved with a number of community service projects, including professional associations, neighborhoods groups, and area schools. Why is it important for you to be involved with this community service?**

Local communities are underrepresented in architecture; I merely want to assist in giving a voice to people who may not be able to express their opinion. In addition, diverse architects bring valuable perspective to the design and definition of livable communities. Build-



Benito Juarez High School Performing Art Center, Chicago. Architect: Urban Works Ltd.





ings become a part of history; they should reflect their time, place, and inhabitants. Currently, a large segment of society has little influence on becoming part of architectural history. It is a crisis!

Benito Juarez High School Performing Art Center, Chicago. Architect: Urban Works Ltd.

### **What are your primary responsibilities and duties?**

I am the principal in charge of design. I provide the design direction on key projects in the office. In addition, I handle the marketing and business development for my office.

### **What is the most/least satisfying part of your job?**

Truly, the most satisfying moment is the completion of a space or building. I like to think back to its genesis and to the human thought and labor involved in making it into a physical object. The least satisfying part is negotiating contracts. Each time we must negotiate a contract fee, I am reminded that society views our work with a finite value.

### **Who or what experience has been a major influence on your career?**

Quite a few inspirational architects/individuals have influenced my career. It is an honor to name them:

Carol Ross Barney, FAIA, Ross Barney + Jankowski, Inc. — I was employed at her firm in the 1990s. I am grateful for her vision and persistence.

Dan Wheeler, FAIA, Wheeler Kearns — I taught with him at the University of Illinois at Chicago (UIC) (2000–2001), and I value his brilliance and optimistic quest for excellence.

Rafael Hernandez — He was the executive director of the Hispanic American Construction Industry Association (and winner of the 2003 AIA Whitney Young Award). I appreciate his endless support and confidence in the potential success of my firm.

Stanley Tigerman and Eva Maddox, Archeworks (2002–present) — I taught with them at Archeworks, and I value their tireless commitment to socially responsible design.

Bradley Lynch, Brininstool + Lynch (2004–present) — I taught with him at Archeworks, where he taught me of the poetics of elegant minimalism.

# Architect of Change

**ROY ABERNATHY, AIA, IDSA, LEED AP**

President  
Jova/Daniels/Busby  
Atlanta

## **Why and how did you become an architect?**

To be honest, I tried medicine first. I come from a large family that was always involved in the community, and once I realized that a career in medicine involved listening to people complain about problems, I wanted a more creative career. Near the end of my first undergraduate degree, I went looking for a more creative way to work with people and use creativity to solve problems, and I found architecture. I began the traditional undergraduate degree in architecture the next semester.

## **Why and how did you choose which school to attend for your architecture degree? What degree(s) do you possess?**

I entered the first year of an undergraduate program in architecture at North Carolina State University when I was a senior pursuing a bachelor of science degree in animal science. I chose the undergraduate and graduate program in architecture based on geography and the depth of the program. I have two bachelor degrees, one in environmental design and one in animal science. I also have a master of architecture, also from the same school. The combination seems odd, but today I am leading the team to design the new Randall B. Terry, Jr. Companion Animal Veterinary Medical Center at North Carolina State University, where I attended school, and have won awards for the design of spaces shared by animals and people.

## **What has been your greatest challenge as an architect?**

The greatest challenge of my career thus far has been navigating the line between traditional practice and the fringes of design, creativity, and what those outside the profession expect from architects. I have found a position that allows me to work in the markets and with the people who see architecture as broader than the simple design and construction of buildings.



### **What exactly does a principal do on a day-to-day basis?**

I act as the managing principal within the firm, handling the day-to-day management tasks like payroll, financial management, and staffing and human relations. I also lead projects, sell work, and lead our strategic and master planning practices.

Randall B. Terry, Jr. Companion  
Animal Veterinary Medical Center,  
Raleigh, North Carolina.  
Architect: Jova/Daniels/Busby.

### **What are your primary responsibilities and duties?**

*Management:* I am responsible for the management leadership for the corporation. The controller, vice president of marketing, and directors of architecture, technology, and interiors all report directly to me.

*Design:* I am responsible for the design leadership of the firm, including marketing strategy, implementation, and staffing.

*Strategic and Master Planning:* I serve as the principal in charge of the planning group. Our focus is on pre-design and planning for projects, from macro regional to micro space initiatives. This group's goal is to advise the client whether or not an architecture project is on the horizon.

*Research:* I lead our research and development team. Over the past two years, since the group was created, we have worked on product development with a major furniture manufacturer and provided research support for the internal strategic and master planning studio.

**What is the most satisfying part of your job?**

The reason I love what I do is the chance to work with designers and clients who get it. By getting it I mean understanding that design and the products of design are tools, just like a hammer and nails. The way we use the tools takes design from just another project or space to a level of project collaboration that you cherish. Architecture is about people and how space supports who they are and what they do; when it's just about you, the designer, it's sculpture, and I don't want to do sculpture.

**What is the least satisfying part of your job?**

Working with people inserted into the process just to monitor it, not add to it. Because architects have traditionally not taken the responsibility, a wide range of other professions have developed to monitor the design and implementation process without adding any value to the process or the product. Architects should focus on managing the process, project, and expectations so the client has confidence in the delivery process.

**Previously, you were the director of facilities and manager of geographic services at Accenture. How did your background as an architect prepare you for such a position?**

Another amazing experience in my career, my time at Accenture showed me that my training as an architect was more marketable to clients than to other architects. At Accenture, my combined roles all related to the way Accenture used, built, and managed space internally and externally. At this point in my career I realized the strategic planning process was tailored to the skills inherent in archi-

Randall B. Terry, Jr. Companion Animal Veterinary Medical Center, Raleigh, North Carolina. Architect: Jova/Daniels/Busby.



ecture. The ability to work at the highest conceptual level and define a way to move from that concept to reality is the core of strategic planning. Our ability to communicate those macro concepts in a way that is both real and tangible makes us unique as a profession. Accenture understands that aspect of what architects can do and used it to expand from a consulting company to an international partnership that defines and creates its own markets.

**In the past, you have been involved with various civic organizations. Why are you involved with these organizations, and how do you connect this involvement with your career?**

I like to become involved and am always amazed at how much an active community can accomplish. I connect my involvement with my career through networking and social responsibility. Our firm allocates a portion of our fees and time to give back to the community and has as part of its mission doing architecture that improves the community.

On a recent project to renovate and add to the largest Jewish temple in Atlanta, the project scope displaced a number of community organizations, including a women/children's shelter and an organization that coordinates more than 25,000 volunteers annually. We helped both organizations relocate and donated a significant portion of our fees to help make it happen. I served on the capital campaign committee for Hands on Atlanta while leading the team to design their new space. They needed their space to be a tool to help them recruit, educate, and coordinate the volunteers, who are important to the local community, while giving them an identity in the city. The project and my experience with it have resulted in lifelong friendships and memories, all supporting a project that helps Hands on Atlanta do what they do better.

**Who or what experience has been a major influence on your career?**

The experience with the most persistent influence was the year I spent working for a combined architecture firm and sculpture studio, Clearscapes, which integrates real art into architecture. During that year, a large-scale project for a corporate headquarters included a number of artists who worked collaboratively on one large piece. As a production assistant, I had a chance to see more of what went into the collaborative and creative process than anyone else. The sculptor, Thomas Sayre, developed the concept, which centered on the history and future mission of the corporation, and he involved others in his vision, including other artists, the architecture team, the client, and those of us in the sculpture studio.

As a sculptor, Thomas described for me a connection between the senses and the brain that showed me how architecture, sculpture, space, and culture all influence perception. The experience helped me develop a perceptive nature whereby I look at things differently than many other people do.

# Retail Design: Managing Change

**CAROLYN G. JONES, AIA**

Associate Principal  
Callison Architecture, Inc.  
Seattle

## **Why and how did you become an architect?**

After I took a miniature Introduction of Architecture class at a summer camp program in junior high, architectural design became one of my favorite hobbies. I spent summers at my table designing floor plans and building foam core models of houses. Despite my interest in architecture, I never thought of it as a career I wanted to pursue. I went to college as an international studies major without giving architecture a thought. During the second semester of my freshman year, I had one elective class open, and my mom talked me into taking Intro to Architecture. Three weeks later I was an architecture major.

## **Why and how did you choose which school to attend for your architecture degree? What degree(s) do you possess?**

Because I did not originally go to college to study architecture, it was pure luck that I ended up at the only school I applied to that even had an architecture program. I chose the University of Notre Dame for its well-rounded liberal arts undergraduate program, its size, the campus atmosphere, and the student life it provided. I was interested in schools that were a great overall fit for me personally, whether or not they had the best program in my field of study.

In the end, I believe the Notre Dame program provided me with a strong background and foundation for the study and practice of architecture. However, I truly believe that the most important part of my education was based on my entire Notre Dame experience.

## **What has been your greatest challenge as an architect?**

My greatest challenge as an architect has been learning the skills necessary for my job that were not taught in school, mainly management and leadership. One of the main challenges has been learning to set individualism aside and make teamwork a priority.

Right after leaving school, I had a tough time learning humility and recognizing how much I did not know. With ten years of experience, I now find it tough to have that earlier confidence in myself as I become more and more aware of what I do not know. I try to remember that experience has given me good judgment and decision-making capabilities and that these are the most valuable skills of all.

### **What is retail design, and how is it different from architecture design?**

Retail design is focused on the interior architectural design as well as visual merchandising. The design of the entire environment, down to the smallest detail of a merchandise fixture, is part of what makes the space unique.

I have never felt that interiors and architecture are distinct fields, and in retail design, they are inseparable. Interior design *does* have an additional layer in the traditional sense of color and materials, which are also critical to retail design, but from the architectural standpoint, retail design must form a seamless connection between interior and exterior spaces and forms.

The key is remembering that in retail, the architecture serves as a backdrop for displaying the merchandise. You have to understand how product is displayed, how it best sells, how the customer interacts in or shops the space, the impact of lighting, and the importance of setting a certain atmosphere through a combination of built environment, furniture, fixtures, and finishes.

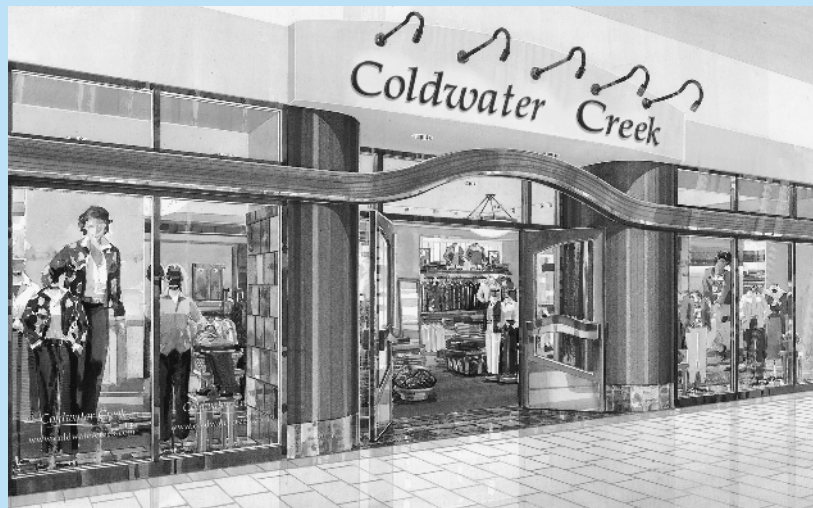
### **How have you been involved with the AIA at the local and national levels? Why are you involved with the AIA?**

I began my involvement with the AIA as a way to network in my local architecture community. The AIA provided me with a way to meet other architects at all career levels and to find out about firms in town.

Although I initially got involved to give back to the profession, I stayed involved in an effort to help create the future of the profession, especially within the Institute. I also enjoyed the opportunity to meet and work with young professionals like myself and to develop a peer group to look to for support and guidance as I made my way into my career.

The AIA, and the Young Architects Forum (YAF) in particular, have given me a place to learn and grow with others, to see that I am not alone in my struggles, and to give support and a voice to young professionals. My involvement at the local and national levels has been my attempt to further that cause both for my generation and those to come.

Coldwater Creek International Plaza Retail Store, Tampa, Florida. Architect: Callison Architecture. Rendering: Brian Fisher, Presentation Arts.



Nordstrom, Canoga Park, California. Architect: Callison Architecture. Rendering: Amy DiMarco, AIA.



### **What are your primary responsibilities and duties?**

As a project manager, my primary responsibilities are general oversight of the design and construction of a project from start to finish. I work with the client, my internal team, and the consultants to set the schedule for project documentation.

From there, we set the budget for the design and documentation services, which I monitor for the duration of the project, including working with our accounting department during the monthly invoice process. Internally, I work with my project team to keep to our schedule, help coordinate with our consultants, and review documents and design for quality assurance, coordination, and consistency.

I am primarily responsible for communication with the client's project manager, getting information we need to proceed, reviewing design decisions, and working through developer or landlord coordination issues.

### **What is the most/least satisfying part of your job?**

The least satisfying part of my job is probably office politics. This has been an issue for me in five-person firms as well as 500-person firms.

The most satisfying part of my job is being in the field and solving problems with the client and contractors. I learn so much every day that I am on a job site, and being knowledgeable and creative in solving problems as they arise is very satisfying. It is a great feeling to be part of a team working together to make a project happen, and the reward is actually seeing something built and watching people use it.

A less measurable but still satisfying part of my job is being a role model for younger architects, especially women. I am honored to be one of the young leaders in my firm; it is important for the next generation to see that career growth and success are perhaps not as far off as they imagine.

### **Who or what experience has been a major influence on your career?**

By far the greatest influences on my career are my two mentors. Both were extremely supportive of my career growth and champions for me within the firm. As a result, I have enjoyed rapid career development and a chance to expand my skill set and knowledge base. I am certain these would help fuel my success in other firms or with other project types.

One word of advice: Finding a great mentor is a two-way process. The more interest, initiative, drive, and enthusiasm you show in your career, the more likely you are to attract the attention of a mentor who can support you along the way.



# Educator and Architect

## **ROGER SCHLUNTZ, FAIA**

Dean and Professor  
School of Architecture and Planning  
University of New Mexico  
Albuquerque

### **Why and how did you become an architect?**

As a youth, I always enjoyed building things, both literally and in my imagination. In high school I showed a strong aptitude for math and science and a fairly accomplished skill in art. I had never met an architect before enrolling in the academic architecture program at college, so I knew very little of the reality of the profession or practice. My career choice was almost as much a process of elimination—that is, of what I knew did not interest me—as it was a declaration of what I wanted to be.

In the old days of the lockstep, five-year bachelor of architecture professional programs, once you embarked on that path it was difficult to turn and proceed in another academic direction. I was probably motivated as much by fear of failure as desire to succeed. Fortunately, and with a bit of luck, I think I chose wisely.

### **Why and how did you choose which school to attend for your architecture degree? What degree(s) do you possess?**

I grew up on a farm in Nebraska, a son of Depression-era parents. Going to a college out of state was never a consideration, and I wanted to be at the University of Nebraska anyway. I expect I would have enrolled in engineering if Nebraska had not had an architecture program. I remember working construction one summer and observing the architect's visit to the building site. That's when I decided that, as much as I liked working with my hands, his position and situation was undoubtedly preferable.

I received the professional degree of bachelor of architecture at Nebraska in 1967 and completed the structural engineering specialization in the process. The only graduate program I applied to was the University of California, Berkeley, partly because of its fantastic reputation and partly because of its diverse

and exceptional faculty. I visited the Berkeley campus and fell in love with San Francisco and the splendid geographic setting of the Bay Area on first sight.

I received my master of architecture degree from Berkeley in 1968, with an emphasis (if one might call it that) in urban design. I had the wonderful mentorship of the late Joseph Esherick, FAIA, while studying there, and the opportunity to work part-time in the Sausalito office of Sasaki Walker Associates. I was tempted to pursue a graduate degree in landscape architecture and might have chosen that career path were it not for the circumstances of the time. I have some regret, even today, that I did not pursue landscape architecture as a career. Perhaps it's not too late.

**What has been your greatest challenge as an architect/faculty?**

I have faced many challenges—that is, opportunities—and on any given day I would probably answer this question differently!

**What is your primary responsibility as a dean? Why did you make this professional career choice?**

Every day seems to bring a different primary responsibility. Being a dean is not unlike being an architect in that one is constantly required to seek the means and methods to optimize limited resources in managing and direction of professional design programs.

In most institutions, the dean is responsible for managing the programs and curriculum, overseeing almost every function within the college or school, and the school's budget. We are typically heavily engaged in outreach activities and fundraising. Collectively, the deans also play an important function as an advisory group to the provost or president of the university on broader institutional issues and directions.

Helping others (students, faculty, and staff) achieve their goals and objectives within the context, and certainly limitations, of the institutional setting is always challenging. But I find that being able to effect change and make good things happen is extremely rewarding.

I did not consciously choose academic administration as my professional career, but up to this point it seems to have turned out that way. Notwithstanding, I think most of us in higher education administration still consider ourselves, first and foremost, educators and architects. Although the hours are long and the problems and frustrations never cease, the job is certainly a challenge and, for the most part, intellectually stimulating. I might also note that the workday is seldom, if ever, boring.

**You have served as director at Arizona State University and dean at both University of Miami and University of New Mexico. How has serving these three institutions shaped your professional career?**

Prior to accepting the position with Arizona State University, I taught for a year at California Polytechnic at San Luis Obispo, then for eight years at the University of Nebraska, where I first received tenure. I have always enjoyed teaching and expect to return to the academic faculty on a full- or part-time basis after I stop being a dean.

I left the University of Nebraska faculty to become the executive director of the Association of Collegiate Schools of Architecture (ACSA) in Washington, D.C. This three-year assignment probably focused my interest in program administration and leadership, and the position offered at Arizona State University seemed a logical progression in my academic career.

The university setting provides considerable opportunity for creative work and sponsored research activities. For example, a colleague and I received an Honor Award in Urban Design from *Progressive Architecture* magazine for our efforts in developing the Nebraska State Capitol and Environs Plan. At Arizona State University, I was able to institute the Joint ASU/City of Phoenix Urban Design Program, and a similar initiative at the University of Miami resulted in the school's Center for Urban and Community Design.

Having the opportunity to live in many parts of the country (as well as overseas, briefly) most certainly broadened my experiences and perceptions of society as well as my understanding of the architecture profession. Throughout my career(s), I have learned from my students and have had the good fortune of meeting and often working with incredibly interesting and talented individuals in architecture, related fields, and other disciplines. All of this has provided me a wonderful feast, and each experience has uniquely contributed to my career and development.

**One part of your professional career was serving as the professional adviser for number of major design competitions. What does that entail? What do design competitions bring to a project?**

I found it extremely difficult to balance the demanding and sometimes competing needs and expectations of academia and a private practice. So I could focus on my university assignments, I decided some time ago to engage in limited consulting and forgo the attempt to develop and run a small firm. In working with public agencies in developing design review procedures, urban design guidelines, and procurement processes for professional design services, almost inadvertently I became involved in serving as the professional adviser to what has now become a fairly extensive list of major design competitions throughout the United States.

The primary purpose of a professional design competition is to increase the probability of the completed project achieving design excellence. With that in mind, and acting as the agent for the competition sponsor (client), the professional adviser must ensure the fairness of the process and safeguard the interests of the competing architects and the profession. Being able to organize, direct, and observe the competition process as well as the work of inspired architects engaged in the competition is a marvelous experience. And it is really great to be paid to do something I would probably be willing to do for nothing.

As a professional adviser for a design competition, my specific role might include some of the standard preliminary design services that are part of any architectural project—for example, programming, site selection, scheduling, and review of owner-architect contract forms. In organizing a design competition, a major and critical task is the development of the competition rules—essentially the contract between the sponsor and the participants that details the process, schedule, submission requirements, and evaluation criteria. I am usually very much involved in the selection of jurors and other advisers. I often assist with post-competition publicity, exhibitions, and publication of the submitted entries.

**Who or what experience has been a major influence on your career?**

An astonishing number of individuals and experiences have directly impacted my career as well as how I view the world and the profession. If I had to select the one person who has had the most lasting impression and impact, I would probably choose Joseph Esherick, FAIA. He was an exceptional architect, extremely thoughtful, and very patient. He was probably not the most gifted teacher in the traditional sense, but knowing him and seeing how he thought, worked, and lived his life was extremely enlightening for me.

# Teaching Architect

## **MAX UNDERWOOD, AIA**

Professor of Architecture  
School of Architecture and Landscape Architecture  
College of Architecture and Environmental Design  
Arizona State University  
Tempe, Arizona

Architect and Principal  
Underwood + Crisp  
Tempe, Arizona

### **Why and how did you become an architect?**

Because my father was involved in construction as a high-voltage electrician, I grew up within the building industry and became an architect primarily by osmosis. Some of my fondest childhood memories are of accompanying my father to his construction sites at Disneyland, Kaiser Steel, MGM studios, and the Huntington Library Gardens.

In addition, I spent many hours of my youth working with my hands, building custom furniture and rebuilding my 1955 Oldsmobile, in our well-equipped shop in the family garage. In high school, I excelled in chemistry and physics. Because I love conceptual thinking, open-ended discovery, plus art and drafting, I worked summers for several local architects and contractors.

### **Why and how did you choose which school to attend for your architecture degree? What degree(s) do you possess?**

During my senior year of high school, I was recruited in physics by Caltech and the University of Southern California (USC). After attending their respective open houses, I decided to enroll in a dual physics and architecture major at USC.

In the mid-1970s, the architecture program at USC had a wonderful mix of European and Southern California professionals who had commissions throughout Los Angeles. In addition, the larger university offered exciting classes in film, urban geography, computer science, and, of course, physics, taught by leading physicists of the NASA Jet Propulsion Lab in Pasadena.



Spaces of Silence, Kyoto, Japan. Architect: Soami. Photographer: Marc Monty.

The larger architectural and physics cultures of Los Angeles were exhilarating at the time, with Aldo Rossi visiting at the University of California at Los Angeles (UCLA), the newly formed energy of Southern California Institute of Architecture (SCI-ARC), and Richard Feynman lecturing at Caltech. During my junior year of the bachelor of science in architecture program, I worked in the office of Charles and Ray Eames. This was a life-altering and formative experience that affected my subsequent career as both an architect and an educator.

I attended Princeton University and received my master of architecture degree within its small, intimate program. Princeton is close enough to New York City so I could be part of its vital energy and still get my work done.

**What are your primary responsibilities and duties as a teaching architect, an architect, and a faculty member?**

True education is not only imparting a body of professional knowledge but also questioning and advancing it through a collaborative investigation of the discipline by both student and teacher, whether in school or in a professional office.

Education is a forum where the distinctions between teacher and student are replaced with the notion of collective inquiry and discourse. The condition is not one of students in competition with one another but rather one where everyone is discovering something that was unfamiliar a moment before and where everyone is willing to help one other clarify ideas, methods, and work.

Education begins with a response to each student's individuality and talent. The student and teacher must first jointly find out where the student is relative to his personal growth and then establish how to develop his self-discipline, motivation, expertise, and individuality. Education, like design, is an act of faith and discipline where the limits are not clearly defined and the student must discover, define, and act on them. Outstanding students constantly reach beyond themselves to develop new ideas, cherishing the difficulties of work that asks hard questions and forces them to experience the world differently and to change. The pleasure of teaching comes from firsthand participation in a student's discovery of the previously unrealized power of his innate ability to form his own ideas, investigations, and self-criticism.

Next, education should focus on the development of each individual's processes of inquiry, invention, and making, grounded by an emphasis on making connections between cross-cultural references, other disciplines, and architecture. Therein lies a concern with integrating interdisciplinary knowledge and critical inquiry from the arts, humanities, and sciences alike, but in ways that suit the problems and purposes of the present.

Students should develop a personal attitude and vision in their inquiry of architecture, test it, and realize it through their critically made work. They must be encouraged to doubt, question givens, and generate acute alternatives to what architecture is today. Familiarity with that evolving body of knowledge we call *tradition* and its progression of ideas helps students obtain a critical breadth of personal vision and understand why certain questions being explored by other disciplines are essential to their evolving body of work. Students must develop representational media and notational devices that capture the spirit of their design inquiry and allow them to visualize, refine, and communicate its qualities to other people. They must remember that the most challenging professional and intellectual problems of contemporary architecture require the integration of several disciplines into broader understanding, insight, and action.

#### **Who or what experiences have been major influences on your career?**

Working for Charles and Ray Eames in the mid-1970s was one of the most profound and life-altering experiences of my career. Their office allowed me to experience firsthand exemplary professional practice and what happens if you "make design your life, and life your design." It was a rich and provocative environment for celebrating the inquiry into the unknown. Everyone in the office was personally engaged in thinking deeply and differently, going beyond the point where others had stopped, satisfied. I saw endless speculation, prototyping, and, when a promising revelation was arrived at, the celebration of its beauty through film so anyone, even a child, could share in the enjoyment of the discovery. Charles always asked one question at a desk critique: "What is interesting?"

# A Privilege and Blessing

## **JACK A. KREMERS, AIA**

Professor of Architecture  
Judson College  
Elgin, Illinois

### **Why and how did you become an architect?**

My father was small homebuilder. I never thought in terms of becoming an architect but was aware at a very early age of the processes and technologies of wood frame construction. My father gave the designers sketches that he envisioned and asked them to provide a buildable design. The transition from Dad's sketches to the final drawings made me aware that with experience, education, and skill, one could greatly impact the creation of building forms and physical environments.

I was the first in my family to go to college. I decided I enjoyed math and did not want to take any foreign language courses. The engineering program was the only one that focused on math *and* did not require foreign language courses. Thus began my college career.

However, I soon realized that something was missing. Engineering did not address all of my interests and how I hoped to spend my career in a productive and fulfilling way. A student in the architecture program at the University of Michigan explained how architecture integrated engineering ideas with the fulfillment of real human needs and expressions. The idea excited me immediately, and I began to explore my chances of entering the University of Michigan architecture program. I was accepted.

Although I found the architecture program tough, I discovered that I thoroughly enjoyed bringing together technology, function, and aesthetics. As I progressed in the curriculum, I found my strengths in the technology areas and the then emerging subdisciplines of lighting design and acoustics. I also enjoyed presenting my ideas. Organizing the ideas and then formally presenting a project for review was exciting and motivating.

### **Why and how did you choose which school to attend for your architecture degree? What degree(s) do you possess?**

I attended the University of Michigan because it was the best architecture program near my home in Grand Rapids. I considered Michigan the ideal; they were



the Wolverines. I grew up listening to their football games on the radio, and that excited me. The color and pageantry of the whole university probably played a bigger role in my choice of school than the content of the curriculum or program.

In 1974 I received the bachelor of architecture degree, the accredited degree at that time. Upon graduation, I began working at an office in Ann Arbor, but I found the office experience boring after the academic environment. After a year, I returned for the master of architecture at Michigan. My interest was in exploring architectural technology. While in graduate school, I had the opportunity to teach as a teaching assistant. At the time, teaching was only a way to help pay the bills, but I found I enjoyed the classroom. I always enjoyed academic life, and teaching provided a splendid opportunity to combine my interests in architectural technology, the academy, and the practice of architecture. I determined that I would at some point seek an academic position.

### **What has been your greatest challenge as an architect?**

The biggest challenge I have faced was the opportunity to create an accredited program in architecture at Judson College, a small evangelical Christian college in Elgin, Illinois. The forty-year-old college was built as a liberal arts college. In 1997, the college determined to create a program in architecture. Judson was a most unlikely place to establish a new architecture program, and even its biggest supporters were not convinced it could be done.

I arrived at Judson in the fall of 1998, when the program was in its second year. Shortly thereafter, I was asked to chair the new program.

The college made its commitment clear through the provision of adequate resources and the encouragement and support of upper administration, but it was difficult to satisfy the Judson academic community. An architecture program is unique in that the National Architectural Accrediting Board (NAAB) establishes the content and standards. One of the issues was that this new accredited degree would have to be a master's degree. Judson College had no previous graduate programs.

The difficult steps in the accreditation process were convincing the academic community, steeped in the tradition of a liberal arts environment and the Judson College image of what an academic environment and standards should be, to support and approve the content of the program. It was also a challenge to bring together a diverse new architecture faculty with great skills and credentials but little teaching experience in higher education.

The goal was achieved in summer 2004, when NAAB awarded the program full accreditation at the first opportunity. I am proud that the program is not only accredited but also a superior program, as demonstrated by our first graduates working and fulfilling their dreams and the dreams of all the people at Judson College.

My first year teaching (1969–1970) at Kent State University was also a large challenge. The infamous shootings by the National Guard occurred on May 4, 1970, immediately outside of the architecture building. Somehow we survived it, but the challenge included completing classes for the second half of the spring quarter when the campus was locked to all and returning to classes for the next several years in an environment that had lost confidence in its purpose, let alone the achievement of excellence. That experience pretty well prepared me for the next thirty years of teaching in higher education. I learned to not give up but to remain faithful to the challenges that always develop.

**What are your primary responsibilities and duties as an architect and a faculty member?**

My primary responsibility as a combined architect and faculty member is to understand and know the material I teach as well as I possibly can and then to make it understandable and appealing to the beginning architect in a way that fits in the context of the total discipline. I need to truly know, and I need to be able to communicate effectively. John Flynn, my mentor when I began to teach at Kent State, told me that a teacher could never make an idea or concept too simple. That has stuck with me over the past thirty-five years.

The details and conventions of the building industry can be confusing to someone new to the field. The theory or basis behind many applications can be lost or undecipherable. A good architecture teacher makes the theory understandable and connects it to the culture of the built environment and culture as a whole.

**How does teaching architecture differ than practicing architecture?**

Teaching requires patience. Ideas that seem obvious to me are not always obvious to students. In architectural practice, one grows and becomes the leader, and others follow because of one's experience. In teaching, the student body is new each year. Each class has different experiences and background. The culture changes rapidly. A teacher must first understand where the students are at and then provide the leadership in their education. The students are refreshing and raise questions and issues that people of my age and background do not consider.

Teaching is concerned with theory and ideas. Practice is concerned with application and client needs. Both roles contain all aspects, but to differing degrees.

**After a substantial teaching career at Kent State, you chose to change to Judson College, a new program. Why did you make that change?**

After initially considering me for the Advisory Council, Judson College invited me to become a faculty member. I was completing my thirtieth year of teaching at Kent State.

Judson is an evangelical Christian college and probably the only other program I would have considered teaching in. I am an evangelical Christian. It had become increasingly clear to me over the thirty years at Kent State that political correctness was less and less tolerant of a commitment to Christian faith in the secular classroom.

**Who or what experience has been a major influence on your career?**

Faculty members who have influenced me are John Flynn, Willard Oberdick, Peters Oppermann, Robert Darvas, and Gunnar Birkerts, FAIA. Jerry Cain, the president of Judson College, has been a great encouragement and leader in bringing the Judson Architecture Program to accreditation.

The opportunity to teach environmental technology at Kent State, in courses created by John Flynn, allowed me to research lighting, acoustics, alternative energy sources, and resource conservation.

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## Notes

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