

Paper, Pixels, Foam, etc.: *The building blocks of design*



Look at any building, and ask yourself what's the most important material in its design. Brick, wood, metal, glass, stone? One thing that most likely doesn't come to mind is *paper*. But that, along with a handful of other design materials and digital tools, is where an architectural project takes shape — moving from a need and a wish list to a real building that reflects an organization's mission, culture, and community.

How does a building come together on paper? You're probably familiar with sketches and floor plans. But there is a broad range of graphic tools architects use, from rough doodles to highly detailed 3-D animations, each with a specific role to play in the design process.

Some, for instance, are used for **exploration** of ideas and preferences in the early stages

of a project. Some are part of the design **development** process. And others facilitate **communication** with clients, community, and other stakeholders.

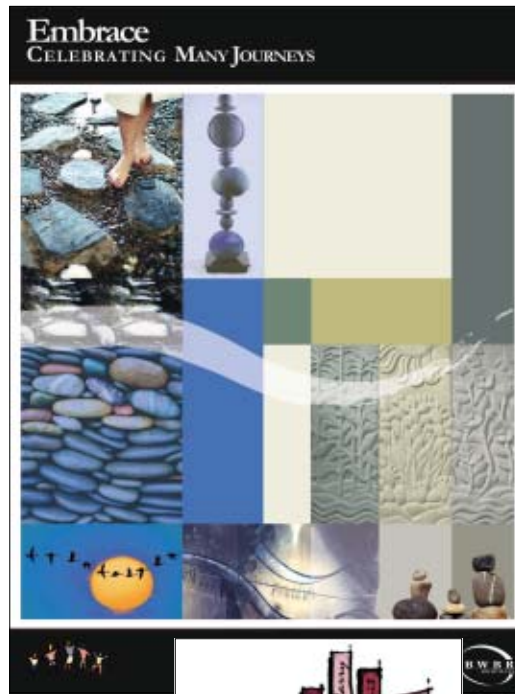
In this issue, we'll look at how these graphic building blocks come together, contributing to a rewarding design process and successful result.

Exploration

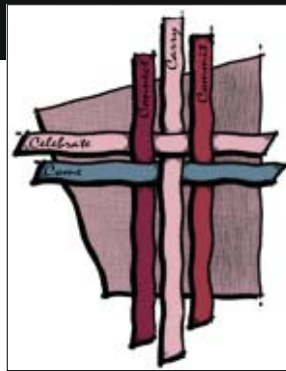
The first step in a design project — before thinking about how a building should look — is to understand how it should *feel*. What ideas should it express? What values should it reflect? How will it affect people who see it and use it, from employees, to visitors, to casual passersby?

And that brings up more questions: How does anyone know what “friendly” or “classic” or “informal” means to another person? How do such intangible, subjective concepts get translated into the brick and mortar of a real building?

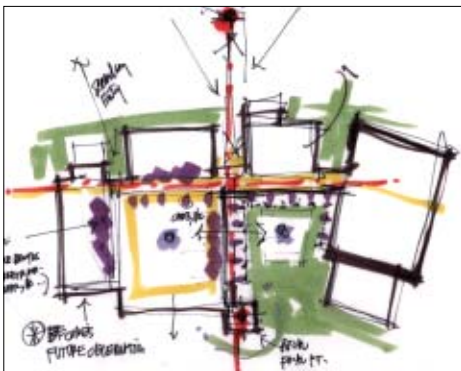
The short answer is that it helps if people have something to look at and respond to. That’s where the exploration toolset comes in. **Collages** of evocative images, words, colors, and textures can help clients



*Collage (top);
Icon (right)*



define preferences and articulate their vision. Creating a **visual icon** that distills the spirit of a project provides focus and aesthetic direction. Rough **conceptual drawings** help clients understand different approaches and ideas while a project is still in its very early stages.



Conceptual Drawings



GRAPHIC TOOLS OF THE TRADE

COLLAGE: Images, colors, textures, and words arranged together to suggest a mood, feeling, or aesthetic focus

ICON: A symbol that expresses the spirit and style of a project

DESIGN CHARENTE: An intensive, high-speed, hands-on design session with the client

PERSPECTIVE: A drawing or computer-generated rendering that shows how an interior or exterior will look from a particular point of view

FLOOR PLAN: Birds-eye view of a building with the roof removed

ELEVATION: An illustration that shows a precise, detailed, two-dimensional view of a building

PHYSICAL MODEL: A three-dimensional table-top model of a building, often showing surrounding landscape or streetscape, ranging from a basic foam-block “massing model” to polished, intricately detailed versions in wood

COMPUTER MODEL: A three-dimensional digital representation of a building’s interior or exterior

COMPUTER ANIMATION: Allows people to take a virtual tour of a building, using a computer model to move through the space, viewing interiors and exteriors from any angle

FINISH BOARD: Display showing actual samples of paint, fabric, flooring etc.

Development

A fashion designer drapes fabric on a dress form, and a graphic designer arranges pictures and



Perspective Drawing

type on a page. But when it comes to the design of a building, the scale, cost, and complexity of the project make the creative process more challenging.



Communication

Organizational leadership, employees, community members, donors, contractors — because so many people have an interest in any architectural project, communication plays a vital role in the design process.

Many of the same tools that are used to design a building also serve to keep the lines of communication open. **Perspective drawings** and **3-D renderings** bring a building to life for



Three-Dimensional Model and Rendering

Many people are involved, and often that includes a team from the client organization. When hands-on client participation is important, a **design charette** can be an effective approach. In a highly focused, high-energy workshop session, the design team and clients work on drawings together to generate ideas and reach consensus on a design direction. Back at the office, advanced computer technologies

enable architects to create **elevations** and **perspectives** far faster than they could by hand, making it possible to investigate more design options for a project, and explore different ideas more thoroughly.



a client; **plans** and **elevations** show contractors the details they need to bid on a project. Color-coded **floor plans** and **site plans** help people understand important features of a design, such as traffic flow, inside and out.



Design Charette (top right); Elevation (above); Floor Plan (left); and Site Plan (below)



One of the most familiar of the architect's tools is the **3-D model**. These can be very simple works in progress, using blocks of foam to show different options for a building's shape, or they can be beautifully crafted and detailed in wood. These **finish models** are often used for fundraising purposes. Sometimes it makes sense to create a

full-size model — of a hospital room, for instance — to test its functionality before committing to a design.

With the help of **3-D computer animations**, people can take a tour of a building with the click of a mouse, walking down hallways, into rooms, and viewing spaces from any perspective.

Kudos

Behind every successful architectural project is a team of experts whose work might not be known to the average person on the street. But it's thanks to their knowledge and skill that buildings go up and stay up — according to plan, to code, and on budget.



Sheldon Wolfe
RA, FCSI, CCS, CCCA

Recently, two BWBR employees were honored for their exceptional contributions in these behind-the-scenes disciplines.

Sheldon Wolfe, a specifier at BWBR, has been named as a Fellow in the Construction Specification Institute (CSI) in recognition of his work in the advancement of construction technology, improvement of construction specification practices, and education of construction industry practitioners. He also recently received the Ben John Small Memorial Award, presented annually to a CSI member who has attained special proficiency and stature as a practicing specifications writer.

Murray Schomburg received the Dale C. Moll Memorial Quality Management Award from CSI, in honor of his long-term commitment to improving and promoting quality management processes. A prominent figure in quality assurance for the construction industry, Schomburg coordinates the quality management process at BWBR, and is a highly regarded teacher and consultant in the field.



Murray Schomburg
AIA, CSI



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