

COMPANY

ESG Architecture and Design

LOCATION

Minneapolis, Minnesota

PRODUCT

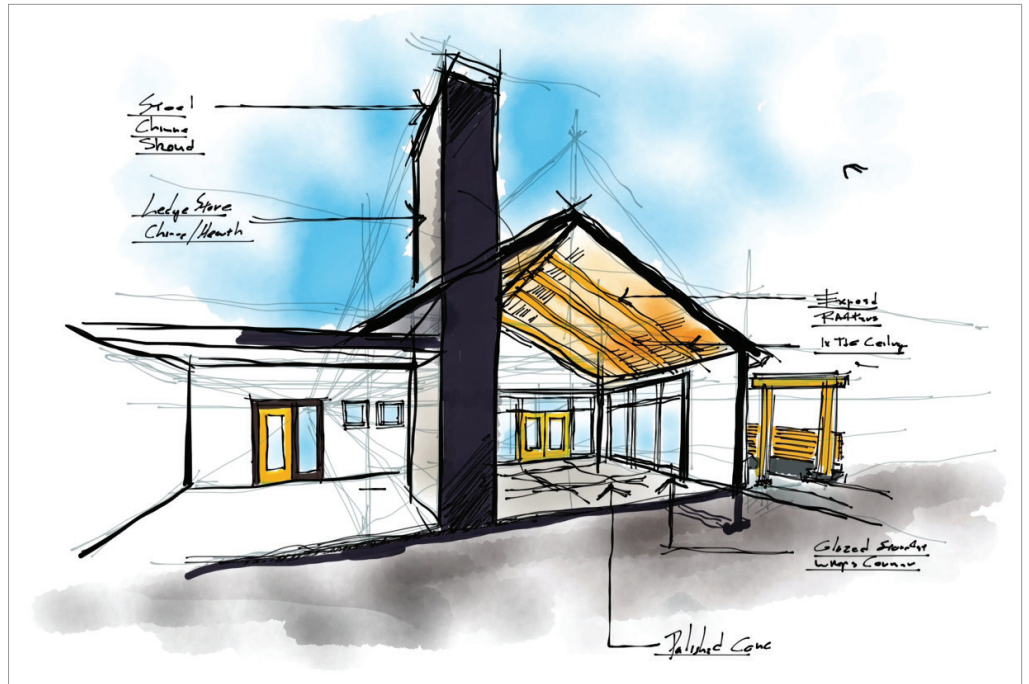
Autodesk SketchBook

Drawing out ideas

ESG Architecture and Design accelerates projects by sketching concepts in SketchBook

SketchBook delivers the freedom of free-form drawing. We have a few clients who really love the warmth that comes from a hand-drawn sketch, even if it's digital. They might be surprised to learn how efficient the human touch of drawing can be with a tool like SketchBook.

— **Mike Engel**
Designer and Design Technologist
ESG Architecture and Design



Tactile meets digital

Free-form sketching has long played a role in the design process for architects. This is true even in an era when intelligent, 3D models have taken center stage in design, and architects are more likely to carry a smart mobile device everywhere than they are a sketch pad. The architects at ESG Architecture and Design, a Minneapolis-based firm, show how sketching still thrives as a way to quickly explore, capture, and convey ideas. They rely on a Building Information Modeling (BIM) process to deliver projects, and Autodesk® SketchBook® software brings drawing into the way they work within that process.

“Free-form drawing has always been part of the creative process, and it always will be,” says Mike Engel, a designer and design technologist at ESG. “Today’s model-based design tools bring power and intelligence to the design process. But they are data based and can’t keep pace with what’s in the mind.

The only limit to the sketch process is the imagination. SketchBook brings the natural feel of drawing into our workflow.”

The challenge: Liberating and efficient drawing

When architects have ideas, they could reach for their paper sketch pads to capture them. But sharing those drawn ideas broadly requires scanning, and exploring different options often necessitates the creation of multiple drawings. There has been a surge of digital sketch tools that let anyone draw using a desktop computer or smart mobile device. Architects and other design professionals, such as product designers and animators, have embraced these tools.

“Paper-based sketches present a few disadvantages as compared to a digital sketch process,” says Engel. “It’s just so much more practical to use a digital tool to draw. You want something that really feels

Architects bring free-form drawing into the BIM process

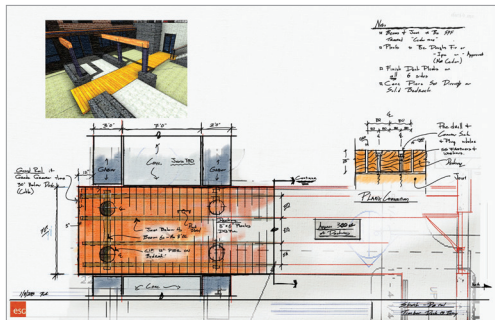
like the simple act of drawing, but that also includes tools that make drawing part of a professional creative process.”

He adds, “ESG uses SketchBook. It offers the simplicity we want with the professional features we need. For instance, the perspective tool delivers the same look you’d get using a large drafting board and finding your vanishing points. The straightedge tool is like always having a ruler. You can sketch freely without worrying too much about rules of drafting. It’s a liberating path to a polished drawing.”

The solution: Bringing warmth to concepts

With dedicated study areas, furnished rooms, printers, smart TVs, and more, the Bøden apartments at the University of North Dakota provides students with a comfortable, feature-rich living option. ESG’s architects made student needs central to their design efforts on the project, including many student-friendly touches like indoor bike parking.

As the concepts for the Bøden evolved, ESG’s designers used SketchBook software to capture and convey their ideas. The team sketched initial options, using the layer tool to show alternatives for items like windows, roofs, and entries. Layers let the team copy the core design and quickly draw the alternatives on the layer. In reviews, the team could quickly “flip” through the layers and show how changes impacted the overall look. The team also used the layer tool to bring photographs and maps into drawings to show existing conditions.



“We get flexibility with SketchBook,” says Engel. “You can turn layers on and off to add speed to the iterative aspects of concept design. The client made informed choices based on sketches and models. On the Bøden, we were able to shift between drawing and the design model easily. When you compare what was built with the early sketches, the relationship is clear.”

From sketch to model

As the design evolved, the team used the drawings as underlays in their Autodesk® Revit® building design software to guide and speed the development of design models. The team could also bring renderings from the BIM design process into SketchBook and draw on top of them. This proved to be a quick way of exploring detail options with the client later in the design process, with the client able to choose a few options for more-detailed reviews as 3D models.

“A sketch is not necessarily as rich as a 3D model, but can be a quick way to identify the options the clients would like refined,” says Engel. “In the time it might take to model 2 options, you can sketch 5 or 6 in SketchBook. You help the client find the most effective and efficient solution, faster. It’s easy to then use the drawing as an underlay in Revit and start refining and modeling the idea.”

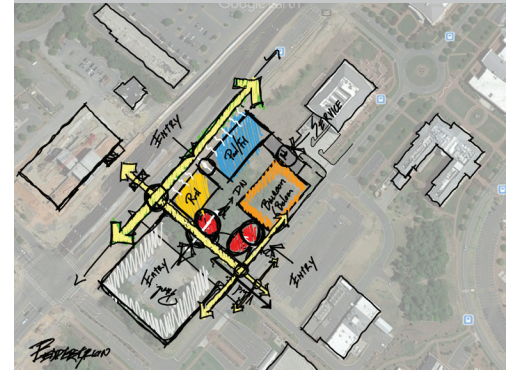
Go anywhere

Like a paper sketch pad, the architects at ESG can take SketchBook with them anywhere. That’s because SketchBook is available on their mobile devices. They simply log in from their device and start drawing as they would with a sketch pad. But unlike with pencil and paper, they always have all of their sketching tools—colors, pens, pencils, rulers, and erasers—with them.

Engel explains: “The mobile version of SketchBook is like having a sketch pad in my pocket, but with access to any color or drawing tool. I can sketch freely wherever I am. When I get back to the office, I can bring the drawing I’m working on into my desktop version of SketchBook. It’s easy to move between the two.”

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The result: Handmade and advanced

Technology has made the architectural design process more efficient, more intelligent, and faster than ever before. And the ESG architects are glad that SketchBook helps them include drawing in that process. As Engel explains, “SketchBook delivers the freedom of free-form drawing. We have a few clients who really love the warmth that comes from a hand-drawn sketch, even if it’s digital. They might be surprised to learn how efficient the human touch of drawing can be with a tool like SketchBook. It’s helping us save time and explore more options on just about every project. Plus, it brings the pleasure of drawing by hand into today’s digital and mobile ways of working.”

Images courtesy of ESG Architecture and Design; images created by Mike Engel.

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