

Case Studies in Workflow & Visualization by Sam Shahsavani

My name is Sam Shahsavani. This presentation showcases my hands-on case studies integrating advanced AI workflows into the architectural design process. I'll demonstrate how I leverage these tools—not as a replacement for design—but as a powerful partner to complement our process , expand creativity , and deliver high-fidelity visualizations with greater efficiency.

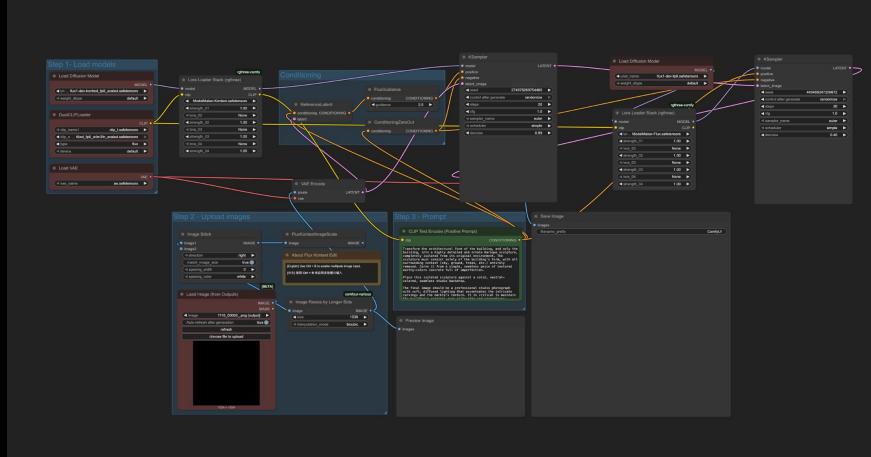


Entertainment Facility



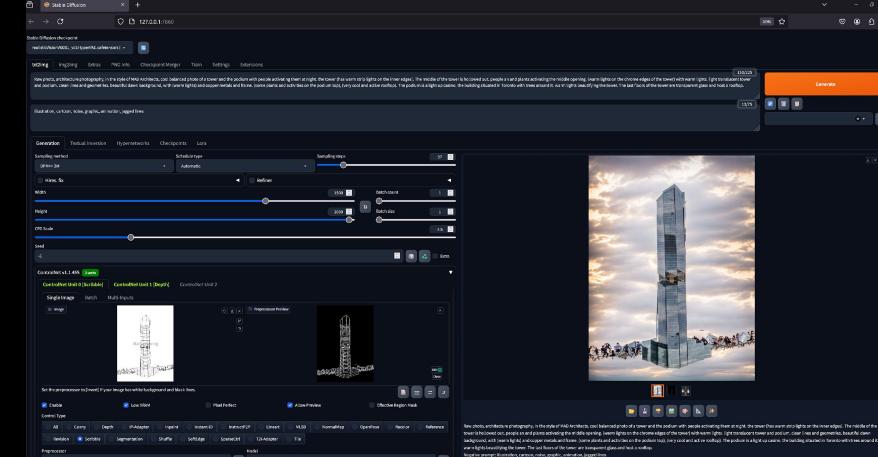
High-Rise Hotel

My AI Design Stack



ComfyUI

I leverage ComfyUI for its unmatched flexibility. Its node-based system is my choice for building complex, custom pipelines and ensuring perfect reproducibility for advanced concepts.

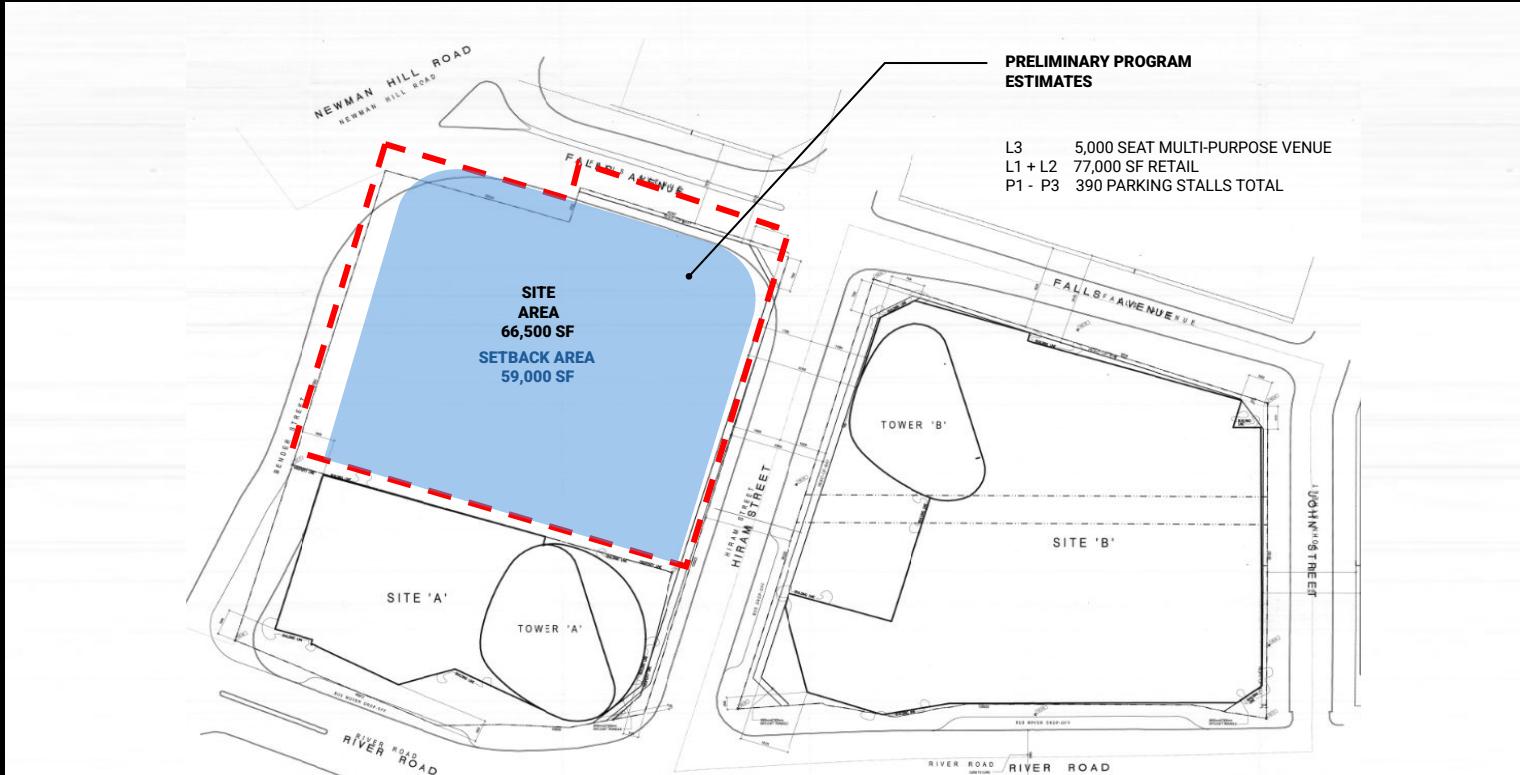


Automatic1111

I use A1111 for its powerful and mature ecosystem. It is my go-to tool for rapid iteration, inpainting, and leveraging a vast library of extensions for high-fidelity refinement.

Case Study 01: Entertainment Facility

The Challenge: To rapidly visualize a large-scale, multi-purpose entertainment venue on a complex urban site. The design needed to integrate a 5,000-seat venue , 77,000 SF of retail , and connect to existing tower structures.



Potential Property Addition



2012 ZBA

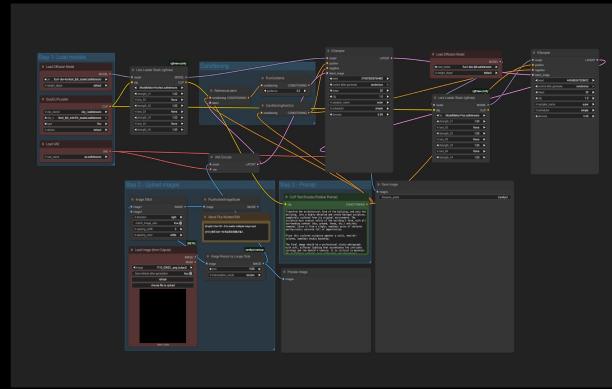
Conceptual Ideation (ComfyUI)

I developed a custom ComfyUI workflow (left) to translate the site program into diverse, high-quality design concepts. This allowed for rapid, parallel exploration of massing, lighting, and atmospheric options.

ComfyUI Result



Editing in
Photoshop



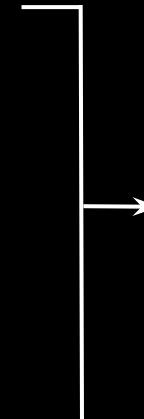
Iterative Refinement (A1111)

The selected concept from ComfyUI was brought into Automatic1111. I then used its powerful inpainting and ControlNet tools to refine facade details, adjust the podium, and iterate on human-scale elements, giving me precise control over the final look.

Perspectiv



Massin



A screenshot of the Automatic1111 web interface. The main window shows two versions of the architectural rendering side-by-side. The left version is darker and less refined, while the right version is bright and detailed. A white hand-drawn style annotation highlights specific areas of the building's facade and roofline. Below the images, the software's control panel is visible, showing various settings like 'Sampling method' (DPM++ 2M), 'Schedule type' (Automatic), and 'Sampling steps' (30). The URL bar indicates the session is running on '127.0.0.1:7860'. The overall interface is dark-themed with orange and white accents.

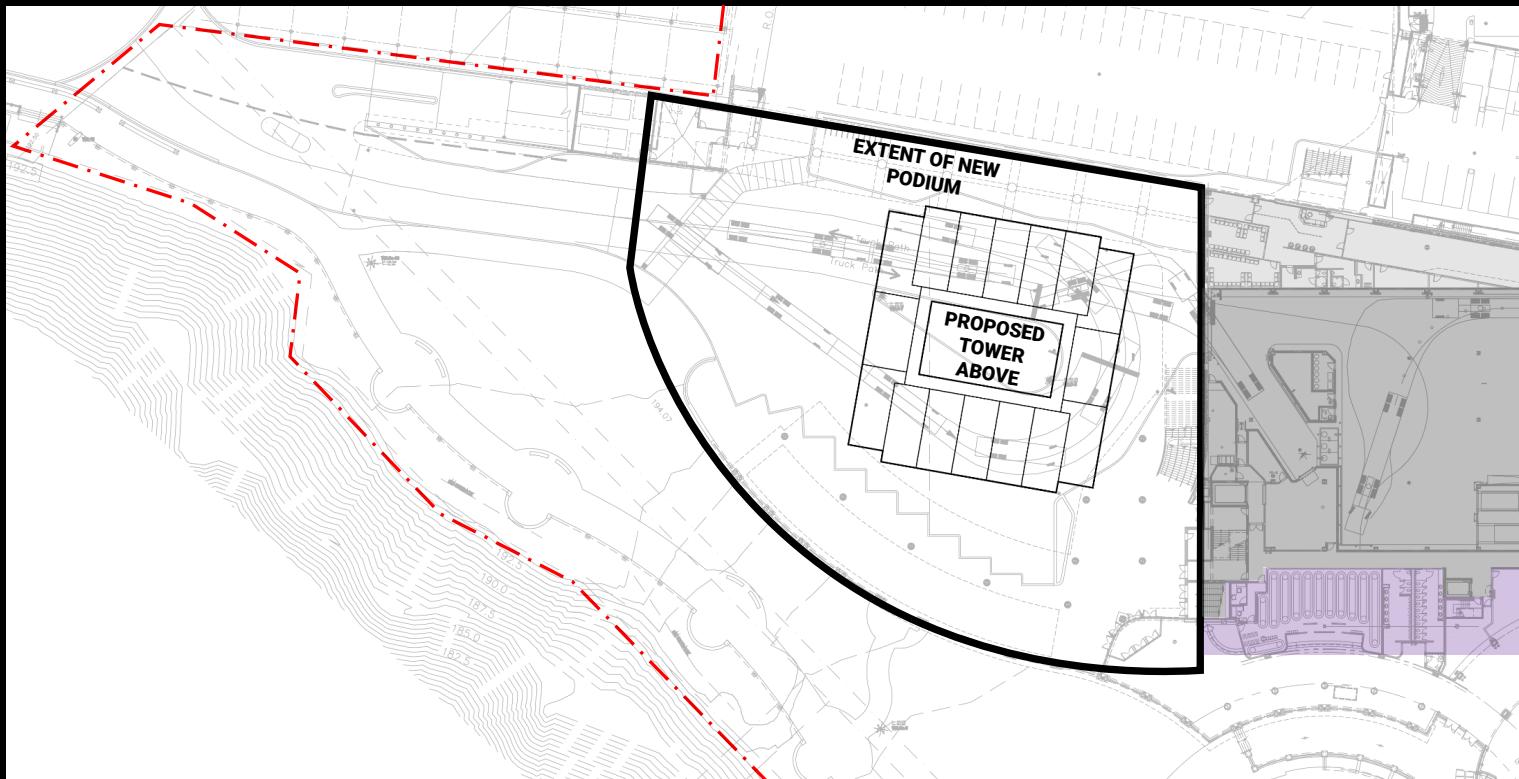
Case Study 01: Final Concept Render

The final AI-assisted visualization, post-processed in Photoshop. This hybrid workflow (ComfyUI + A1111) delivered a client-ready image that is both conceptually strong and technically refined.

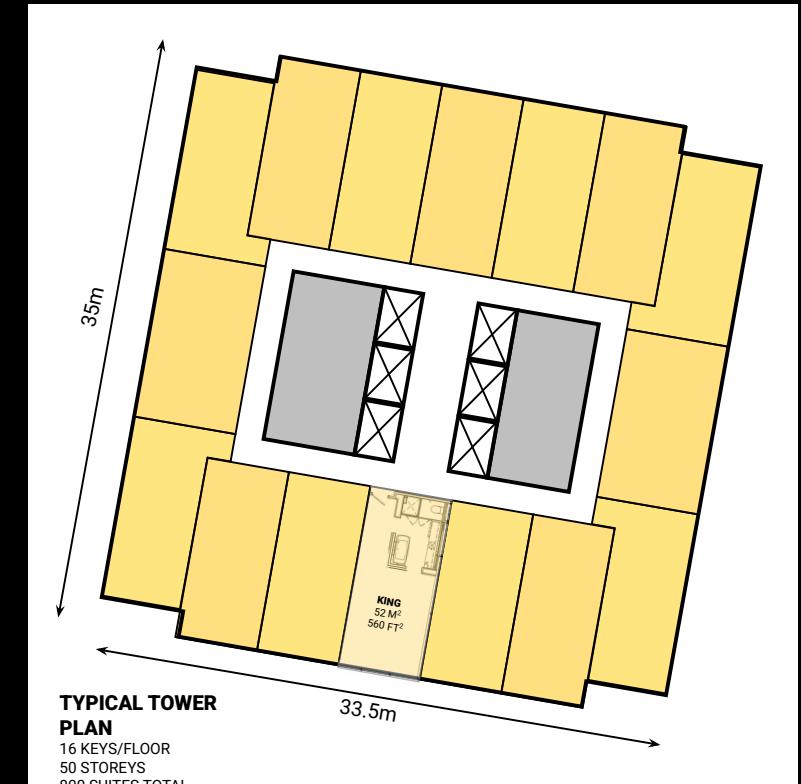


Case Study 02 - The Challenge

To design a 50-storey, 800-suite hotel from a simple hand sketch. The goal was to use AI to translate the 2D sketch into a 3D massing model and explore various photorealistic facade treatments.



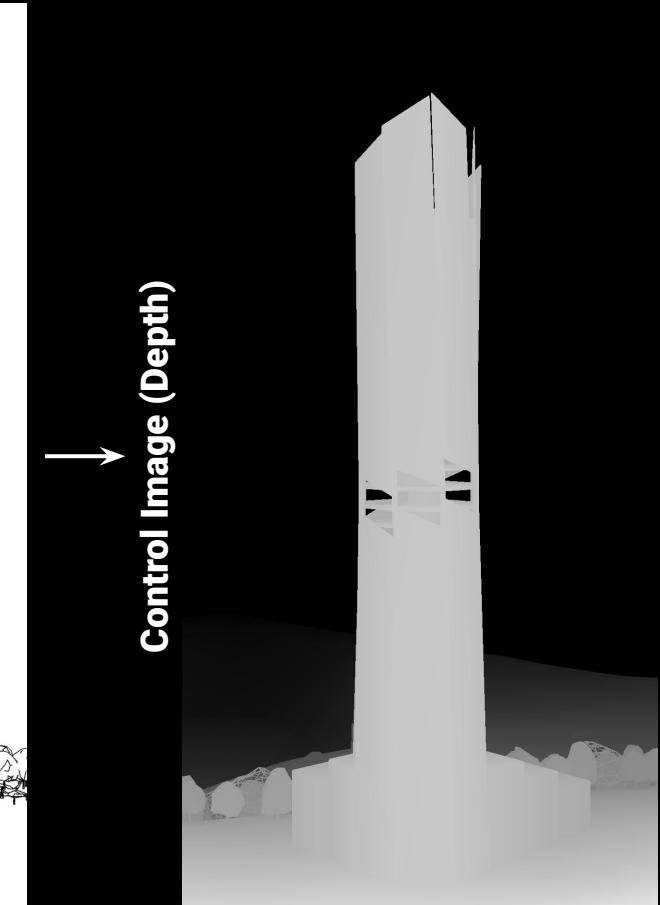
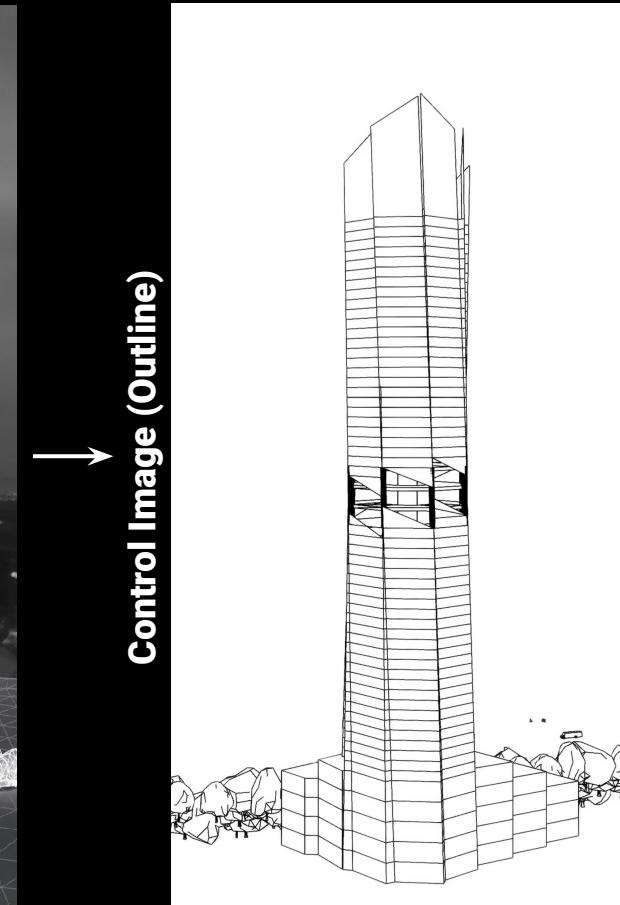
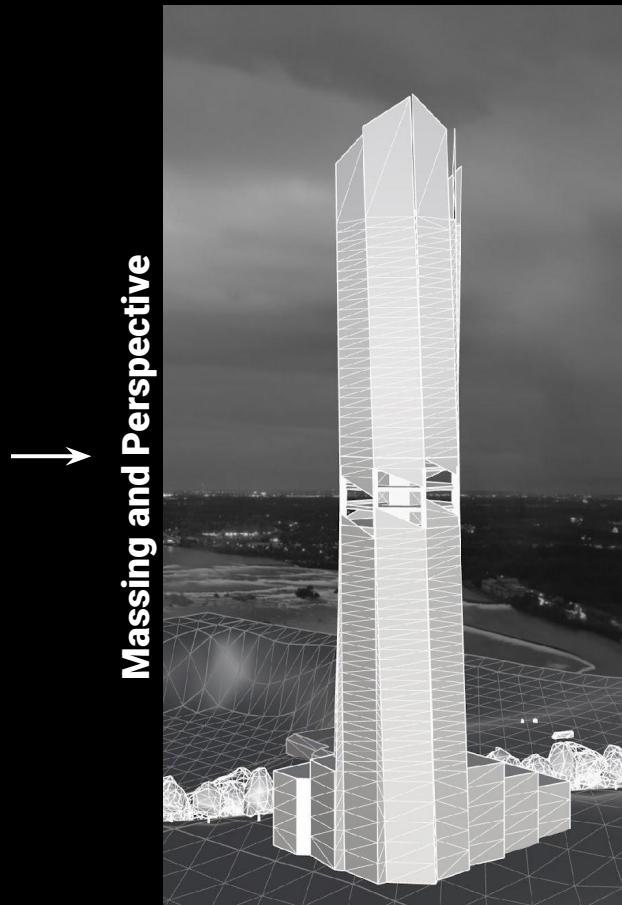
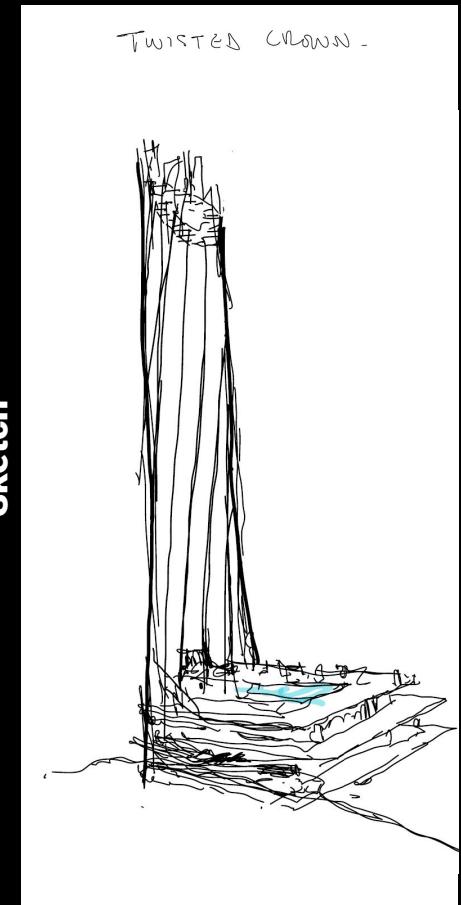
Site Constraints



Concept Plan

My Workflow - From Sketch to AI

My process involved translating an initial hand sketch into a simple 3D massing model. From this model, I extracted precise Outline and Depth maps to act as inputs for Stable Diffusion, ensuring the AI's creativity adhered to the core design intent.



Step 1 - Rapid Design Iteration

Using the ControlNet inputs, I generated a wide array of facade treatments, lighting conditions, and material options in minutes. This allows for high-level design conversations with a range of photorealistic options.

Choosing Desirable



Final Render

The selected AI-generated tower design was professionally composited and post-processed in Photoshop. This created the final, client-ready visualization, placing the new design into its real-world context.

