

The background image shows a person in a cleanroom environment, wearing a blue lab coat and a white hairnet, working on a large, complex, metallic structure. The structure is composed of many small, rectangular panels, possibly solar cells or thermal blankets, arranged in a grid pattern. The person is looking at the structure, and their hands are visible near the bottom left. A semi-transparent 3D model of the same structure is overlaid on the right side of the image, showing the internal framework and the arrangement of the panels. The overall scene is brightly lit, typical of a cleanroom.

## Company Name Confidential - Sunnyvale, CA

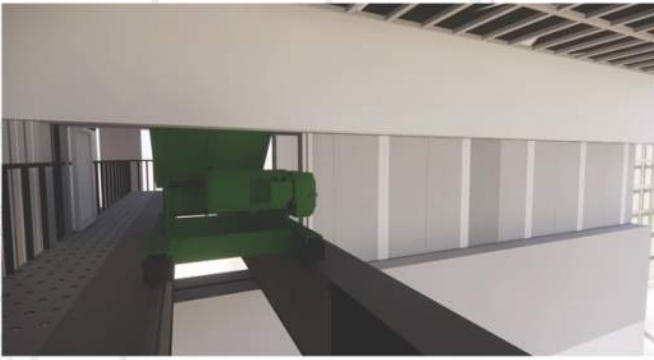
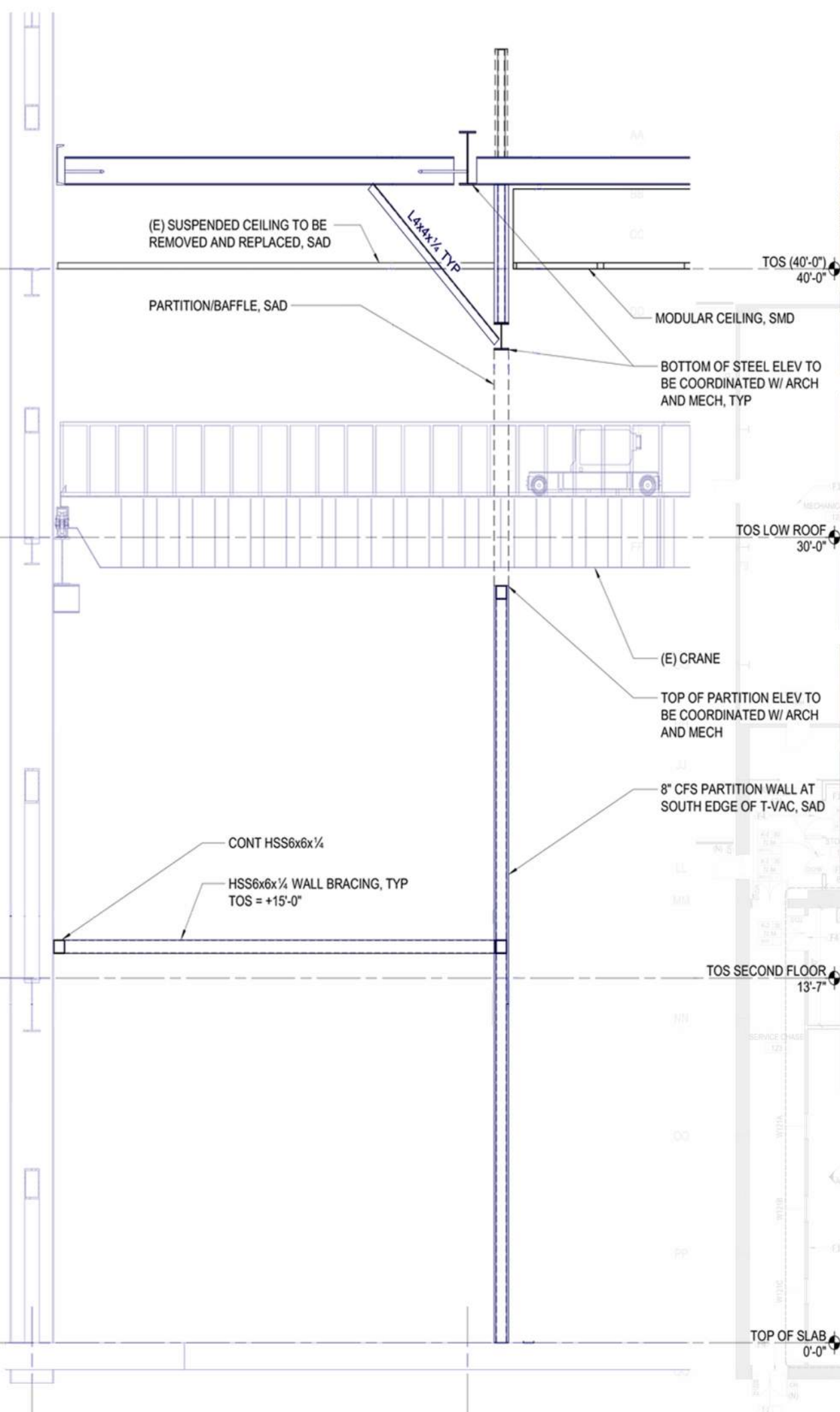
Ranked fifty seventh on Fortune 500 list of 2020, Optical Payload Center of Excellence is a department within this company.

Optical Payload for space missions is a comprehensive collection of optical spacecraft payloads with contributions by leading international rocket-scientists and instrument builders. This operation covers various applications, including observation, communications, navigation, weather, and science satellites and deep space exploration.

HGA was awarded this project in 2019. I as the acting project manager along with the architectural principal spent many months studying the process, conducting meetings, and learning about the workflow. Worked along with a designer on various designs to reach the desired layout. We used Revit as the main tool to produce the drawings and used 3D renderings to better demonstrate the areas to the end users and the client.

After Design Development phase I switched my focus on the technical aspect while managing the project, and worked on the details, and coordination required with the MEP Design Build firm.





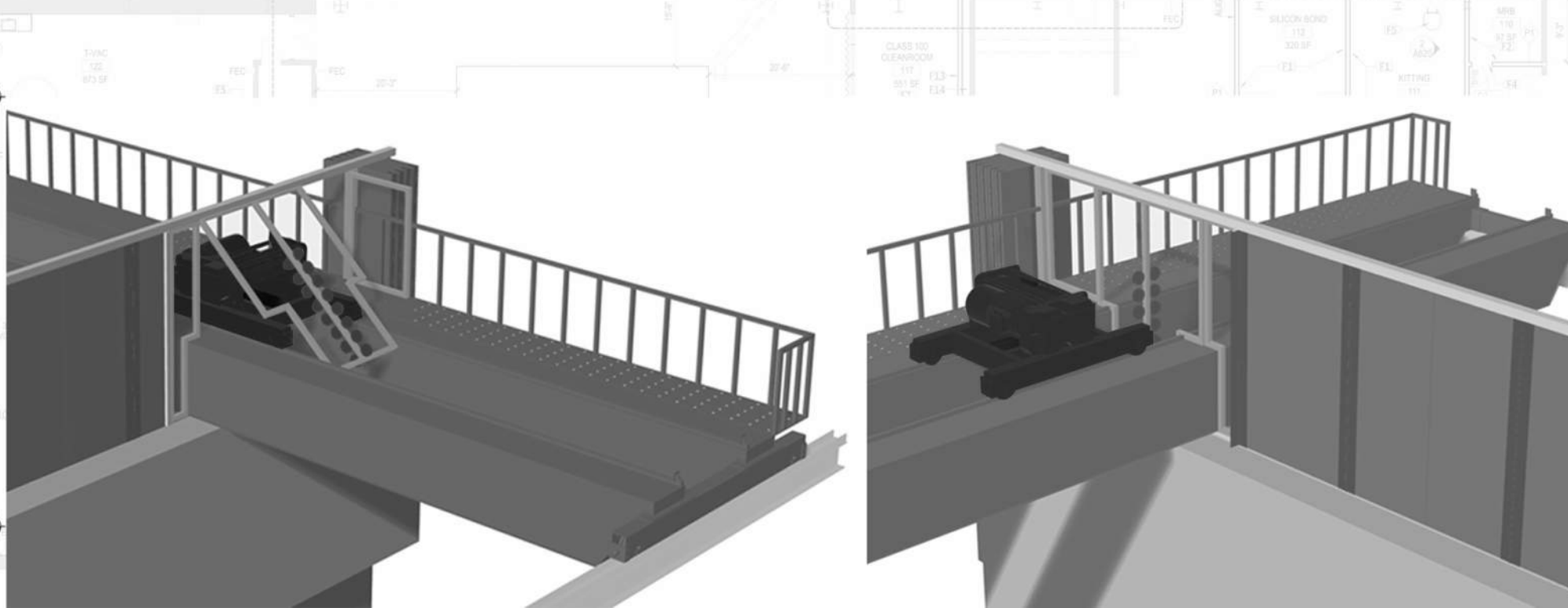
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The project consists of three main areas, Class 10, 100, and 1000 cleanroom. The Class 100 interacts with back-of-house service chase, Thermal Vacuum chamber, and Class 1000 Lab.

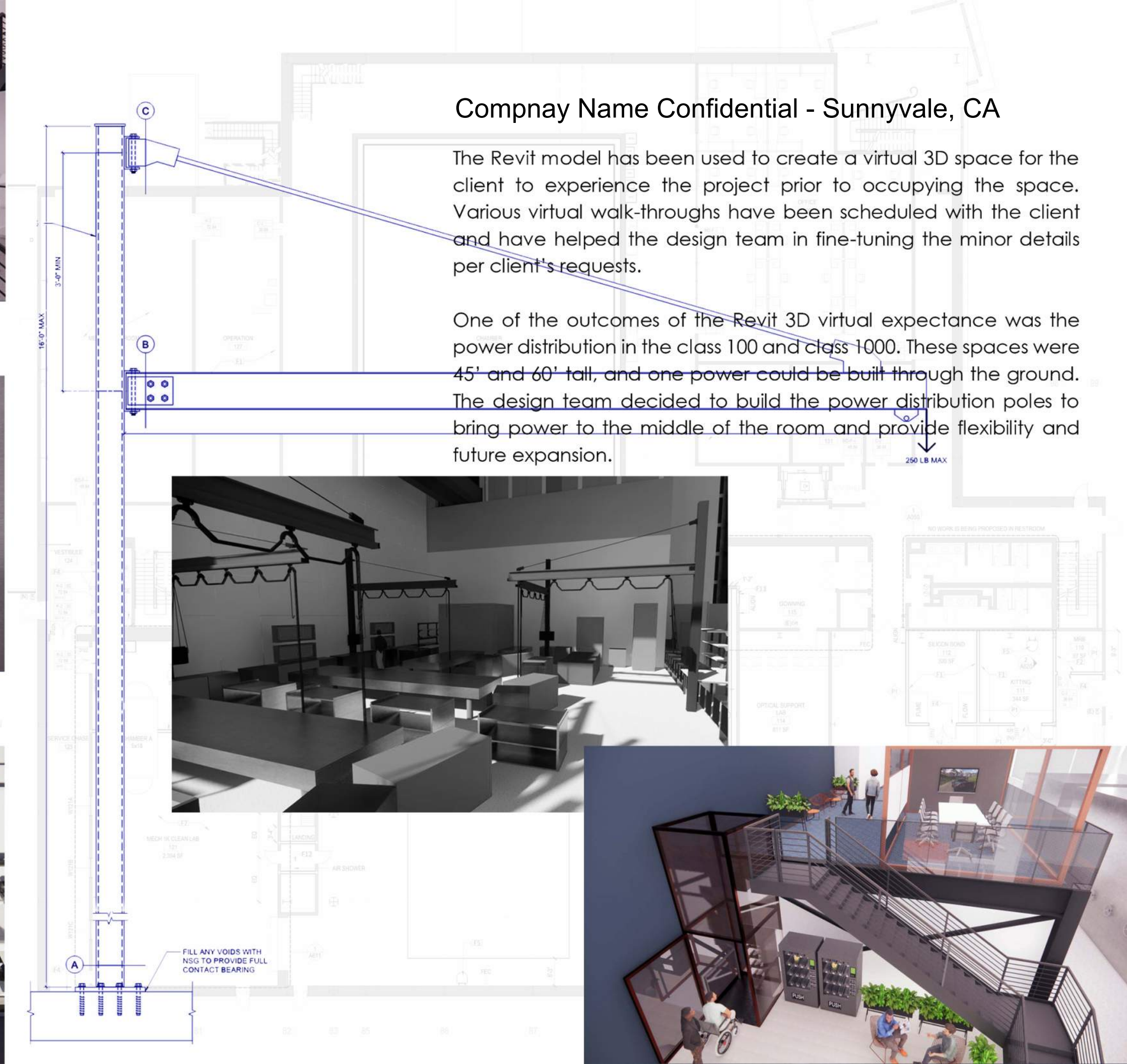
One of the challenges of the project was functionality of the crane on top of the class 100 and the back-of -house Thermal Vacuum chamber. The crane moves between the clean and dirty space which does not align with the fully enclosed space that a class 10 space requires.

I along with the architectural principal worked on various options and with different vendors to find the correct solutions. Also collaborated with the MEP and structural team on our findings and selected the optimal option.

The final product was an operable partition that operated with the movement of the crane and a push-pull door that held the crane hoist 30' above ground.







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The Revit model has been used to create a virtual 3D space for the client to experience the project prior to occupying the space. Various virtual walk-throughs have been scheduled with the client and have helped the design team in fine-tuning the minor details per client's requests.

One of the outcomes of the Revit 3D virtual expectance was the power distribution in the class 100 and class 1000. These spaces were 45' and 60' tall, and one power could be built through the ground. The design team decided to build the power distribution poles to bring power to the middle of the room and provide flexibility and future expansion.

