

INDUSTRY

Commercial office space

PROJECT NAME

Government Accountability Office (GAO)
Headquarters Building

OWNER

U.S. Government

LOCATION

441 G St NW, Washington, DC, 20001

CONSULTING ENGINEER

R.G. Vanderweil Engineers, LCCP

CONTRACTOR

Shapiro & Duncan, Inc.



Better known as the “congressional watchdog,” the U.S. Government Accountability Office serves as a federal government agency.

PROJECT SUMMARY

Built between 1949 and 1951, the Government Accountability Office (GAO) seven-story building located in Washington DC has served as a model for both government and private buildings throughout DC.

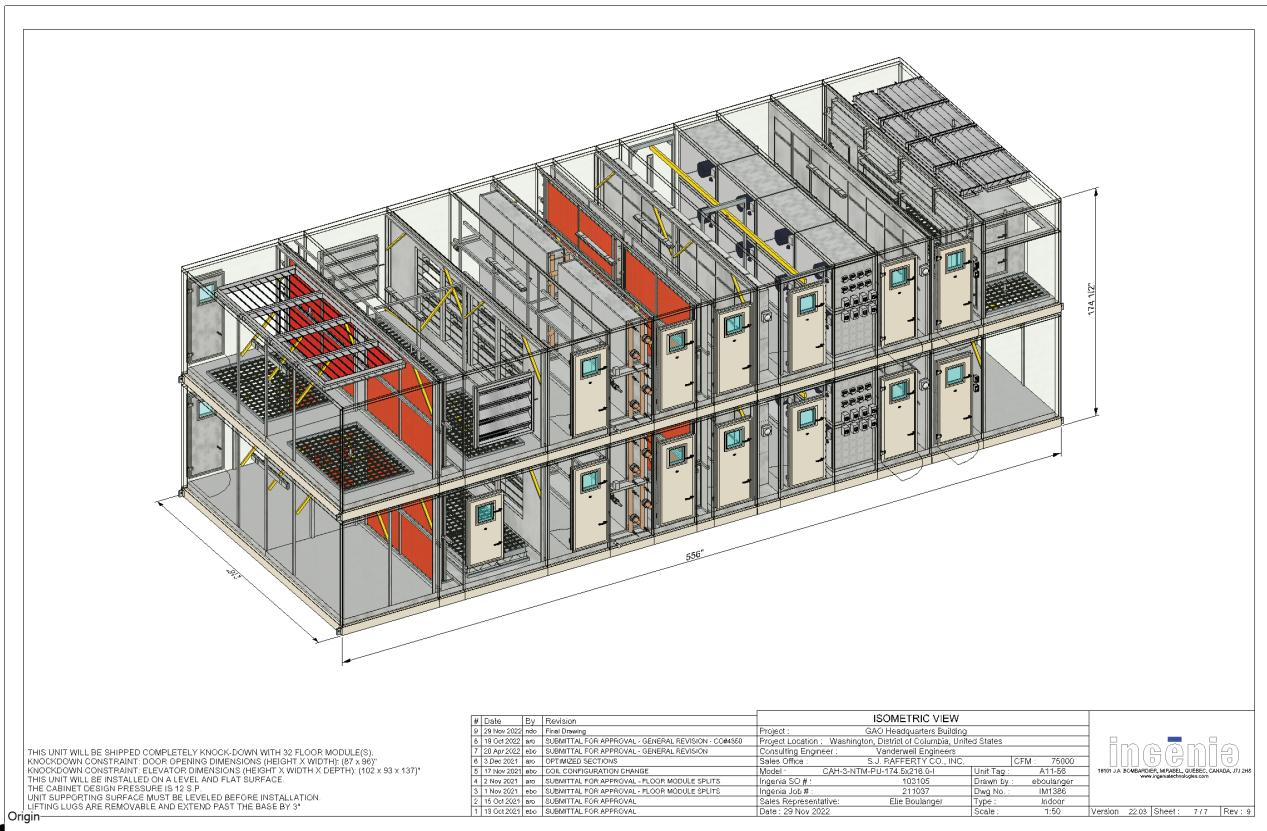
As in many postwar buildings, the mechanical room and all its components were constructed as part of the building structure. The massive 14'+ height air handlers reached EOL (End-of-Life) and required replacements.

Due to existing piping and ductwork space limitations around the units, extensive coordination was required.



TECHNICAL CHALLENGES

- The replacement 14'+ height 75,000 CFM Air Handling Units located in the Penthouse could only be done through an existing 94" wide x 137" deep x 84" high freight elevator, therefore the need for units to be in “knocked down” configuration.
- Due to the existing piping and ductwork surrounding the replacement Air Handling Units, an experienced manufacturer that designs units with modeling software to help eliminate coordination risks with prefabricated piping and ductwork was required.
- Experienced field technicians performed field assembly of these “knocked down” configuration units and performed field leakage testing on-site after assembly.



SOLUTIONS OFFERED BY INGÉNIA

- INGÉNIA[®] provided (7) 75,000 CFM double decker air handling units to provide redundancy and reduce required floor space. The other (5) units were various CFM rated units and were single decker units.
- Experienced field technicians performed the field assembly of the “knocked down” units and performed customer-witnessed field leakage testing, meeting the specified requirement of 1% leakage at 10" w.g. pressure. Most units achieved a leakage rate of less than 1/2%.
- All AHU's were shipped as knock down construction due to the limited access into the mechanical rooms. The assembly of the units was done by our local representative's service team.
- The AHU's featured INGÉNIA's aluminum construction, with lighter panels making field assembly easier and faster. Additionally, aluminum provides better corrosion resistance.
- Design coordination was facilitated by Ingenia's virtual air handler modeling technology which saved precious time throughout the design process. Complex piping for the units was perfectly fabricated based on Ingenia's 3D models and Revit drawings.