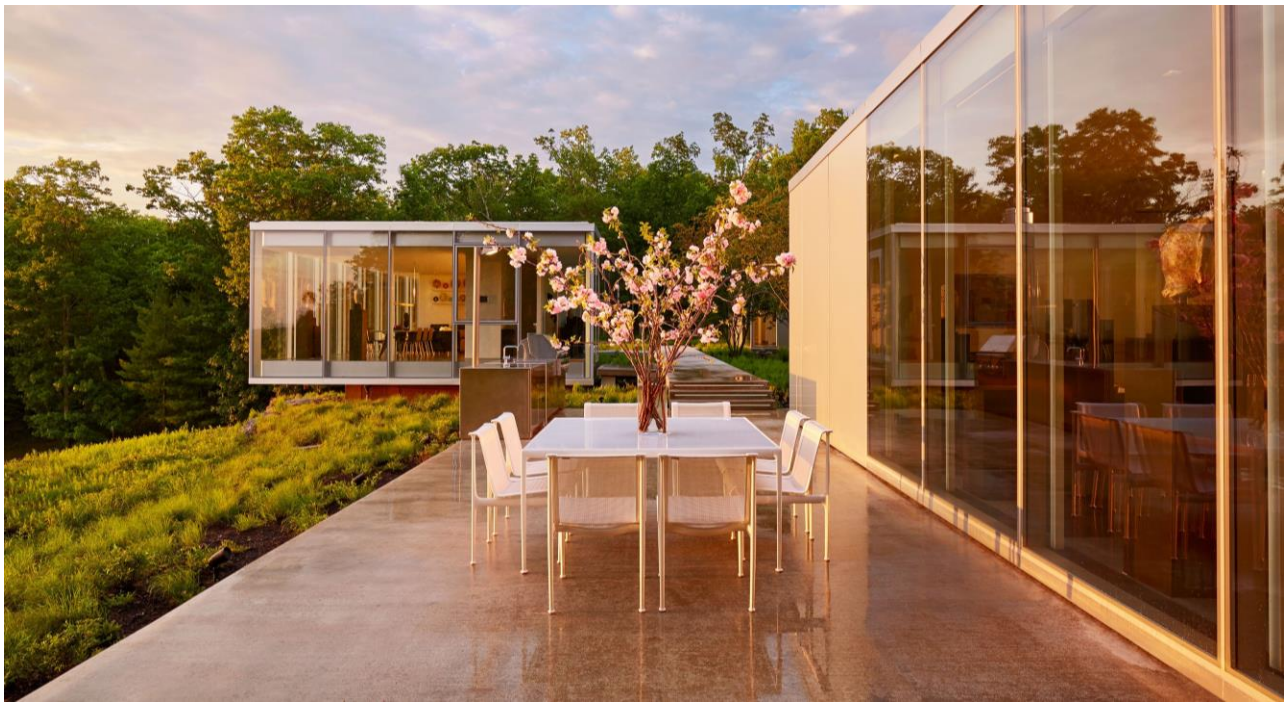
Private Residence

Mechanical, Electrical, and Plumbing

Ghent, New York



The Building:

This unique residence was built on a hillside overlooking the Hudson River and Catskill Mountains. The residence consists of four glass pavilions designed by Toshiko Mori Architects of New York, NY. The style is reminiscent of Mies Van De Rohe's Farnsworth House, a favorite of the owners. Each pavilioin serves as a different part of the living space. The main building houses the owner's suite including bedroom, sitting area, and bathroom. Cooking activities are separated into a central cooking pavilion designed as a gathering place for the owners and their guests. A third pavilion serves as exercise studio and private spa. The fourth pavilion is a guest retreat where the owner's friends can relax in privacy. An outdoor walkway connects pavilions.

Nature of Firm's Responsibilities:

The architectural design and remote location added several challenges to the mechanical, electrical, and plumbing design. The modern design required concealing all of the systems within the architecture elements so they were not visible to the casual eye. The exterior glass walls and hard interior surfaces added complexities such as solar heat gain and amplified acoustic reflection.

Landmark Facilities Group met the complex requirements with an innovative application of conventional technologies. They created an air delivery system that used geothermal heat exchange for heating and cooling. The system is both visually and acoustically invisible to the occupants. They included a radiant heating system in the floor slab to increase occupant comfort. And, they incorporated a snow melt system into the outdoor walkway to keep it clear of snow and ice. The resulting system compliments the revolutionary architectural design while providing the owner flexibility for the future.