

GLENSTONE MUSEUM

ARCHITECTS: Thomas Phifer and Partners

Location: Potomac, Maryland

Completed: 2018

Size: 204,000 GSF

Services: MEP/FP

Glenstone Museum is a consummate example of the choreographed integration of architecture, landscape, and art. Its mission is to provide visitors with a personal experience that ensures “an intimate encounter with art.” The museum, with its personal collection of post-World War II art, was originally opened in 2006 and now includes a new museum building called the Pavilions, an additional 130 acres of meadows, woodlands, and streams, an Arrival Hall, bookstore and café.

The design team was given a mandate to advance the state of the art in museum design. Overall, the brief required **Altieri** to do what we do best – design highly inventive engineering solutions, specifically targeted at optimization of energy efficiency and expansive abilities for redundancy; achieved with the quality, character, and integrity of the architecture as the paramount intention.

Altieri designed a highly controlled, multi-layered museum environment with extremely tight tolerances. Elements of the building systems designed to optimize energy efficiency include frictionless centrifugal chillers and a modular heat recovery chiller, air handler systems arranged as blow-through to reduce necessary air volume by at least 15%, collection storage units fitted with passive desiccant wheels to allow conditions drier than 50°F dew point, an energy recovery wheel treating outdoor air, and a photovoltaic array covering the roof of the Arrival Hall. Abilities for redundancy are provided through multiple supply fans, dehumidified ventilation air from a dedicated outdoor air processing (DOAP) unit, and a multi-fuel system of generators to allow for a “business as usual” mission critical operation. To date, the overall systems are exceeding expectations in terms of low energy consumption – current EUI is tracking at 75, almost 50% better than the expected 150 EUI.



Water Court at the Pavilions - Photo: Iwan Baan - Courtesy: Glenstone Museum (IMAGE 1815)