Sandstorm Stoppers
ASHRAE LowDown Showdown

Model Description

The building is an existing off site self-storage facility located in Upper Marlboro, Maryland supporting universities by reducing premium real estate. The purpose of facility is to maintain books, archive, media etc. in optimum condition for future use. This requires climate controlled storage areas maintained at 16 °C, 40% RH throughout the year.

A dedicated admin area supports the day to day operation of the facility which consists primarily of office space, meeting rooms, lunch rooms, and sorting areas.

Energy Savings Strategies

Existing building energy consumption of approximately 521 kWh/m²/year was reduced to 66 kWh/m²/year by applying minimum changes to retrofit building.

- Envelope: Replacement of Existing Glazing with High Performance Fiberglass Glazing and Reduction in infiltration
- Lighting: Replacing existing lighting with high performance LED lighting which reduces energy energy consumption by 52%.
- HVAC: Replacing existing Office Package Unit with Package Outdoor Heat Pump, Replacing existing centrifugal fans with direct drive fans, CDD wheel for RTU, and three stage electric heating for Warehouse Area.