

# MECHANICAL SYSTEMS ARLINGTON HS

An extensive solar array produces clean electricity to offset a portion of the building system's energy use.

Energy Recovery Wheels convert energy for heating or cooling from exhaust air to intake air without mixing the air.

Cooling Mode

Heating Mode

Air-Cooled Heat Pumps heat OR cool water through refrigeration cycles.

Rooftop Air Handling Units bring in fresh outdoor air.

Terminal Units adjust the air composition to maintain optimal CO<sub>2</sub> and temperature levels in classrooms.

All mechanical systems at AHS do not burn fossil fuels on-site, instead using electrical energy for refrigeration cycles to heat and cool the building.

The systems include centralized Air-Cooled Heat Pumps (ACHP), Heat Recovery Air Handling Units (HRU), and Variable Refrigerant Flow (VRF) Systems.

Sensors within the classrooms monitor CO<sub>2</sub> (carbon dioxide, what we breathe out) and supply the appropriate amount of fresh air to ensure optimal indoor air quality.

The system detects when the space is unoccupied and automatically reduces the supply air to conserve energy spent conditioning the space.

