

SHOWCASE PROJECT: ANNE ARUNDEL COUNTY PUBLIC SCHOOLS: FORT SMALLWOOD FACILITIES DIRECTORATE BUILDING

SOLUTION OVERVIEW

The Fort Smallwood Facilities Directorate is one of 12 administrative buildings in the Anne Arundel County Public School (AACPS) District located in Maryland. The district implemented a number of energy conservation measures (ECMs) including lighting upgrades, energy management equipment, and water-efficient fixtures. The project achieved an annual energy savings of 18 percent and annual cost savings of over \$33,000.

Anne Arundel County Public Schools is the fifth-largest public-school district in Maryland with 125 schools, serving a student population of 82,000 and a building portfolio of 13.8 million square feet.

SECTOR TYPE

Education

LOCATION

Pasadena, Maryland

PROJECT SIZE

42,490 Square Feet

FINANCIAL OVERVIEW

Project Cost: \$117,200

SOLUTIONS

The measures installed in the facility included a conversion to T-8 lighting and occupancy sensors, in addition to computer power management equipment, advanced power strips, and upgraded water efficiency fixtures.

Below is a list of the various savings measures, costs incurred and estimated savings expected upon the project's conclusion.

Savings Measure	Cost	Savings Achieved	Notes
T-8 lighting retrofit and occupancy sensors throughout	\$110, 219	Over \$88,000 in utility rebates and approx. 8% annual savings on	Project completed summer 2013. Annual simple payback was just over 1 year.

the building		energy bills	
Water efficiency fixtures in men's bathroom	\$5,000	Average monthly savings of \$30 (17%)	Includes sinks, faucets, flush-valves, associated parts (materials and labor). Project completed winter of 2015-16.
Computer power management and use of advanced power strips	Initial cost is approx. \$2,000	Completion is expected in early spring, 2018. Savings of \$1400 are expected after 3-6 months, resulting in simple payback calculation of 1.4 years.	A computer power management and advanced power strips project is being proposed for Facilities complex. The building will need 120 power strips, 1 per computer.

OTHER BENEFITS

In addition to the ECMs, the district also installed a 1.4 MW ground-mounted solar farm consisting of nearly 4,000 panels which was funded as part of a district power purchase agreement at zero cost to the district. AACPS will purchase the generated electricity at a discounted rate of \$0.055 per kWh. The system is expected to produce almost 2,000 MWh of electricity, returning a savings of nearly \$1.8 million over the 20-year life of the agreement.

A 2016 report identified Anne Arundel County as one of the top five Maryland counties with the most potential for benefit from a solar project – including the creation of more than 100 jobs and cost savings of approximately \$1 million over a 30-year period.

Annual Energy Use

(Source EUI)

Baseline(2014)



Actual(2017)



Energy Savings

18%

Annual Energy Cost

Baseline(2014)



Actual(2017)



Cost Savings

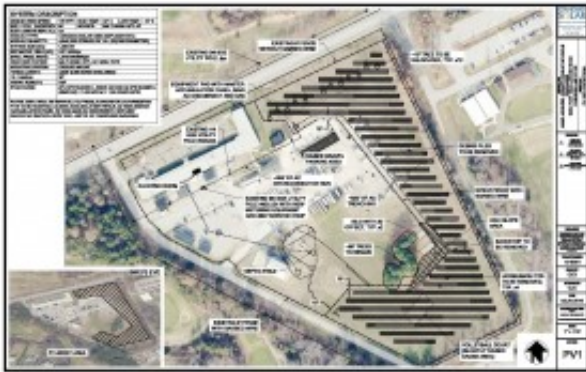
\$33,400



Fort Smallwood Solar Array



Fort Smallwood Facilities Building



Fort Smallwood Solar Rendering