

# DISCOVERY ELEMENTARY SCHOOL

Arlington, VA

Completed: 2015

Project Size: 97,588 square feet

Architect: VMDO Architects

ICF System: Fox Blocks

## ICFs PROVIDE A HIGH PERFORMANCE BUILDING

Discovery Elementary School, which opened in 2015, was the first elementary school building to be built in the local public-school system in over a decade. The design utilized every nook and cranny of the school to integrate design, sustainability and learning, and served as a catalyst for future zero-energy design requirements in the district. It promotes student engagement and environmental stewardship while advancing the municipality's carbon and energy goals. Upon opening, the school was the first zero-energy school in the mid-Atlantic. With a floor plan of 97,588 square feet, the two-story elementary school was built using 3,000 linear feet of ICF bearing wall.

### 01. Cost Effective.

The project was completed under budget, returning millions of dollars to the district to fund other projects, and the building annually saves more than \$100,000 per year in utility costs, which shifts funds to academic needs.

### 02. Raising the Bar.

The school was named a U.S. Department of Education Green Ribbon School and is a recipient of various design accolades, including the AIA COTE Award and A4LE National Award.

### 03. Environmentally Conscious.

To meet energy goals, sustainable building elements included 1,706 roof-mounted solar panels, a geother-mal well field, solar pre-heat of domestic water, 100 percent LED lighting and ICF exterior walls. Actual EUI is approximately 16 kBtu/ft<sup>2</sup>, which is 76 percent lower than the national school average for Climate Zone 4. With the photovoltaic array, the school is "net positive energy"—producing more power than it uses. An energy dashboard is on display for teacher curriculum and student projects.