

# ENERGY STAR Design Profile

**The North Star School**  
715 Children's Center Road SW  
Leesburg, VA 20175



## Why We Chose ENERGY STAR:

- The North Star School achieved Designed to Earn the ENERGY STAR certification by meeting EPA criteria for reducing energy and CO<sub>2</sub> emissions.
- It was important that The North Star School achieved Designed to Earn the ENERGY STAR because it signals to the market that the project is intended to perform in the top 25% of the nation's most energy efficient buildings.
- Stantec Architecture is also helping the environment by delivering an energy efficient design to our client because ENERGY STAR buildings have a proven track record and yield an average of 30 percent annual energy savings and CO<sub>2</sub> reductions.
- The North Star School is recognized for achieving Designed to Earn the ENERGY STAR for potential future financial benefits from reduced energy costs and CO<sub>2</sub> emissions over the life of the building.
- Stantec Architecture found Target Finder/Portfolio Manager tool was helpful in evaluating how various design strategies will affect the energy estimates for the project.

## Energy Efficient Design Strategies:

- The projected annual energy and CO<sub>2</sub> savings of the design is 25.9% as compared to the median building.
- The estimated total annual energy savings for this project is 1,288,948 kBtu/yr with an estimated cost savings of \$26,712/yr.
- This project is intended to have a 25.9% reduced carbon footprint because of energy conscious decisions made during the design process.
- Sustainable strategies include increased natural daylighting and views to the outside through additional windows, a high efficiency HVAC system with enhanced air filtration to provide excellent indoor air quality and LED lighting throughout the school.



## Architect of Record:

Stantec Architecture

## Engineering Firm:

Ascent Engineering Group

## Building Owner:

Loudoun County Public Schools

## ENERGY STAR Design Score:

76

## Percent Energy and CO<sub>2</sub> Reduction\*:

25.9%

## Design Year/ Estimated Occupancy Date:

August 2021

## Space Type:

K-12 School

## Floor Space:

93,905 Square Feet

## Estimated Energy Use Intensity:

39 kBtu/ft/yr

## Estimated Total Annual Energy Use:

3,691,100 kBtu/yr

## Estimated Annual Energy Cost:

\$76,492

## Technologies Specified:

Increased natural daylighting and views, high efficiency HVAC system, reduction in water usage, and LED lighting

## For More Information

Stantec: (571) 291-5828

LCPS: (571) 252-1161

Ascent Eng: (540) 265-4447

\*Percent Energy and CO<sub>2</sub> Reductions are based on comparison to a median building of similar type.

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ARCHITECT OF RECORD:  
**Stantec Architecture**



BUILDING OWNER:  
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ENERGY STAR DESIGN SCORE

**76**

ESTIMATED ENERGY USE INTENSITY

**39**

kBtu/FT/YR

PERCENT ENERGY AND CO<sub>2</sub> REDUCTION

**25.9%**



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