



The School District *of* Haverford Township

LYNNEWOOD ELEMENTARY SCHOOL

SUSTAINABILITY

JUNE 13, 2019

LYNNEWOOD ELEMENTARY SCHOOL



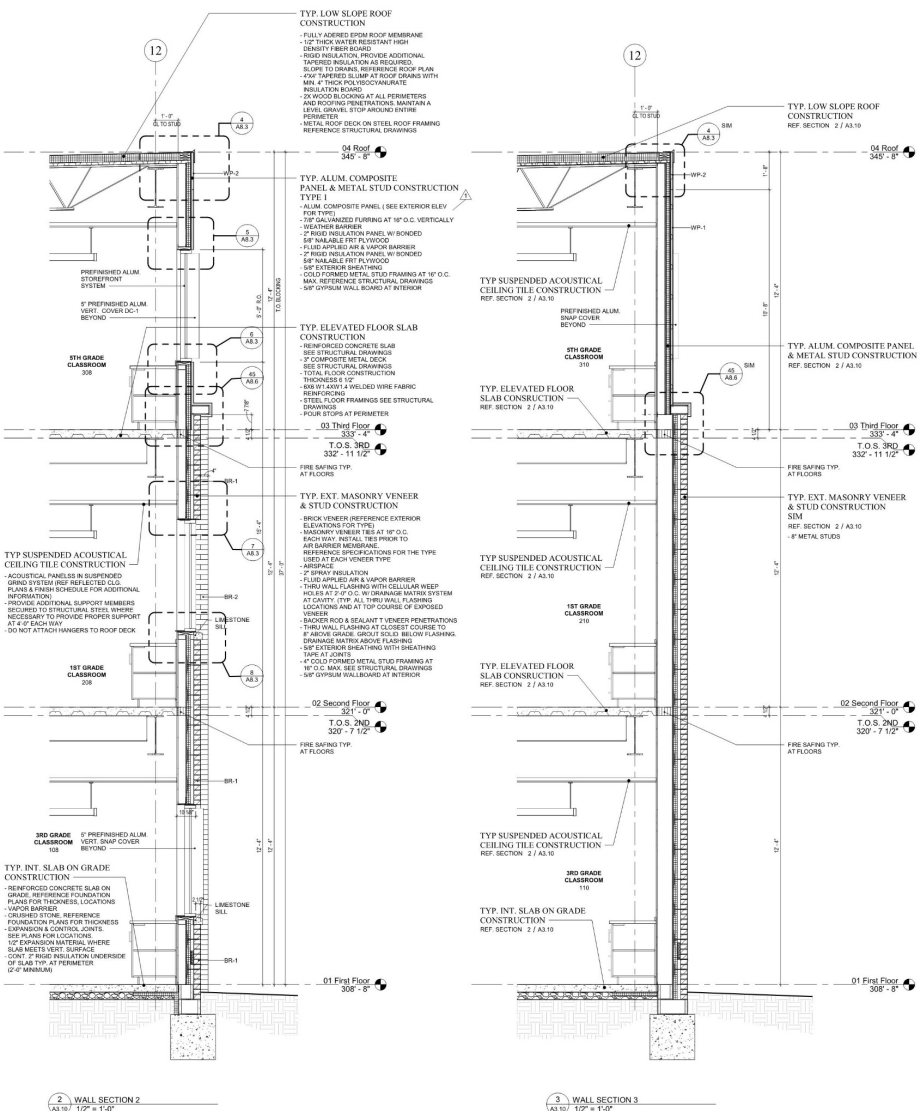
Sustainability

Advanced strategies are included in the design of the new Lynnewood Elementary School

- Increase energy efficiency
- Reflect positive environmental stewardship
- Promote sustainable practices

Exterior Envelope

- 



LYNNEWOOD ELEMENTARY SCHOOL



Interior

- Interior finishes produced via low energy manufacturing processes
- Renewable materials include high levels of recycled content
- Durable Materials reduce need for replacement
- Low VOC Paints
- Natural Lighting

LYNNEWOOD ELEMENTARY SCHOOL



Estimated Energy Reduction

- *Existing Lynnewood Elementary School*
Utility Costs = \$1.35 per square foot
- **New Lynnewood Elementary School**
Utility Costs = \$0.90 per square foot
- The efficient new school increases the amount of educational square footage, includes air conditioning, and reduces energy consumption.

LYNNEWOOD ELEMENTARY SCHOOL



Mechanical Systems

- High-efficiency gas-fired condensing boilers with variable speed hot water pumps.
- Variable speed chillers and chilled water pumps.
- Building-wide automatic temperature system capable of setting back temperatures when spaces are not occupied and reducing airflows when spaces are not fully occupied.
- Integral energy recovery systems in the building's air handling units capable of recovering over 75% of the heat contained in the relief air leaving the building.

LYNNEWOOD ELEMENTARY SCHOOL



Plumbing

- Low-flow plumbing fixtures were selected to minimize the building's energy footprint.
- Bottle filling stations were incorporated to encourage the use of reusable water bottles.
- High efficiency tankless water heaters.

LYNNEWOOD ELEMENTARY SCHOOL



Electricity

- Energy efficient LED lighting.
- Integrated programmable lighting controls system to optimize energy efficiency throughout the building.
- Occupancy sensors to switch off lights when a space is no longer occupied.
- Daylight sensors in select public areas to automatically adjust light levels based on the amount of natural light entering through the windows.

LYNNEWOOD ELEMENTARY SCHOOL



Solar Panels

- Ground mounted solar panels
 - Parking, stormwater management, and athletic field are large site features.
 - The site is constrained and there is no area for ground mounted panels.
- Rooftop mounted solar panels
 - To reduce dedicated interior space for mechanical systems, rooftop systems were utilized.
 - There is limited area for rooftop mounted panels.
- <2% KCBA projects have pursued Solar

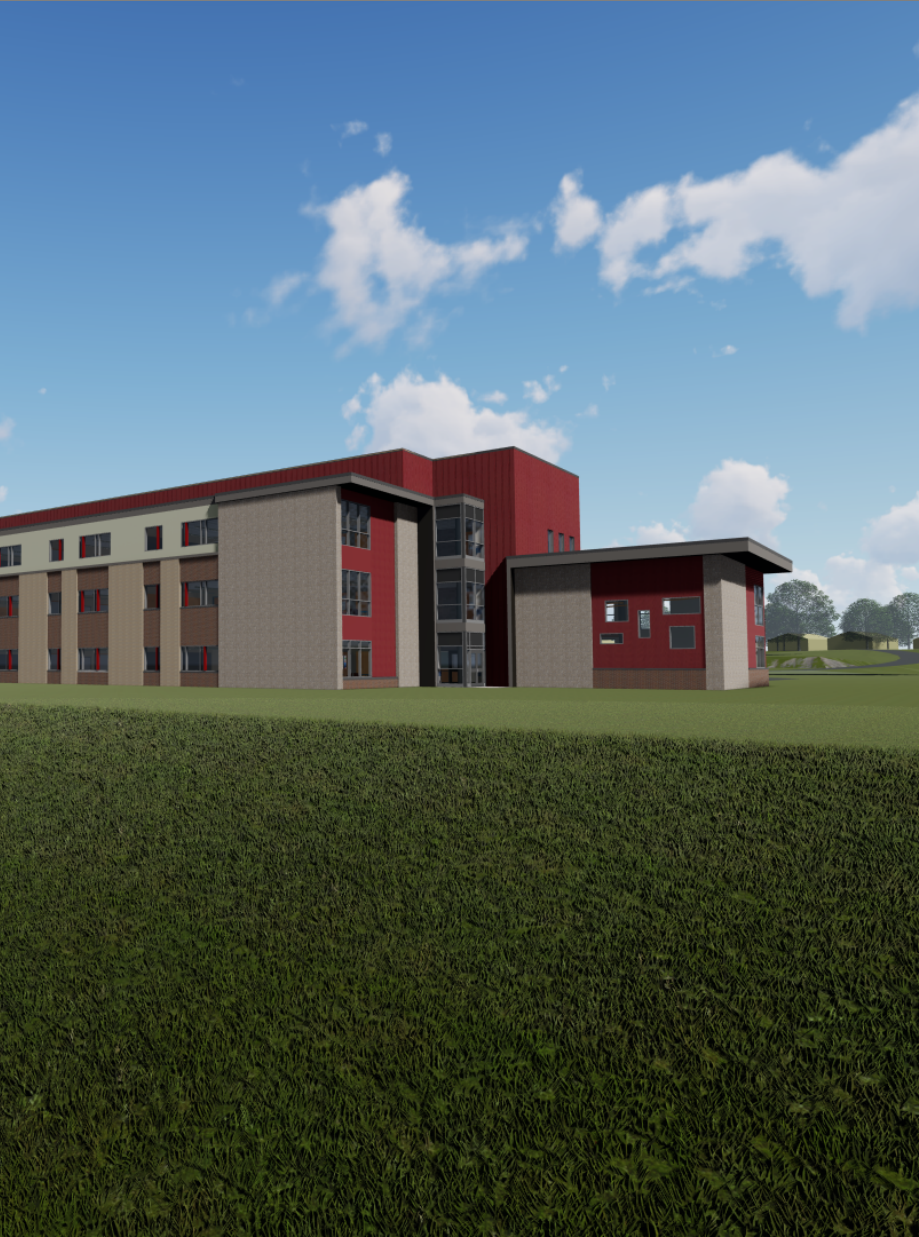
LYNNEWOOD ELEMENTARY SCHOOL



Construction

- A substantial ratio of construction materials are required to be manufactured in the United States.
 - Reduces transportation pollutants.
 - Ensures production practices adhere to high environmental standards.
- During construction, waste is being sorted in order to recycle to the greatest extent possible.

LYNNEWOOD ELEMENTARY SCHOOL



LEED Certification

- The new school design incorporates LEED concepts.
- LEED Certification was discussed but not pursued due to the added cost for the certification.
- Similar projects incorporate additional Design & Commissioning Fees in excess of \$250,000.
- Construction costs are also increased.

LYNNEWOOD ELEMENTARY SCHOOL



Construction Update

- Since Groundbreaking
 - Site fencing, demolition, & clearing
 - Asphalt walkways and construction entrances
- Next two weeks
 - Complete site demolition and clearing
 - Complete E&S controls installation
 - Removal of underground oil tank
 - Strip Topsoil

Discussion

