

## NEW JEFFERSON HOUSTON SCHOOL OPENING THIS FALL



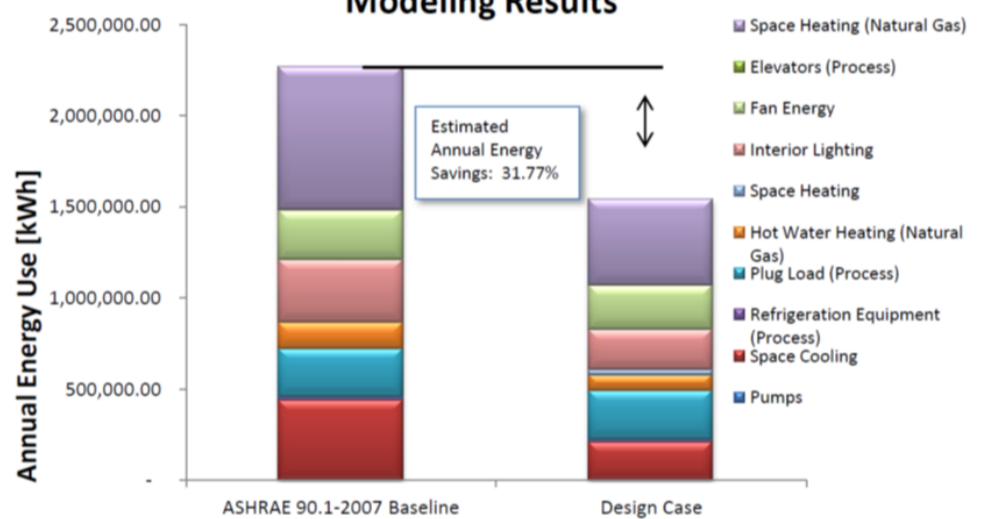
Construction is nearing completion at Alexandria City Public School's Jefferson Houston PreK-8 School. B2E Consulting Engineers, PC, is part of the design team for this new LEED Silver school, being constructed on the site of the existing K-5 Jefferson Houston Elementary School. The existing school has remained open during the entire construction process, with minimal disruption to student life. This summer, the existing school was demolished, making way for the new park and ball field to open for students in September.

The new Jefferson Houston is a \$45 million, 130,000 SF facility that will house up to 750 students. The new building will fill an entire city block in the Parker-Grey Historic District of Alexandria. The school features large, well-lit and flexible classroom spaces. Some design features include a student commons, gymnasium with one

full wall of windows, a media center, a large white-box theater, an auditorium, a state of the art kitchen and cafeteria space. The K-8 school will be one of the most energy efficient schools in the country. The school will use 32% less energy than code requires (ASHRAE 90.1-2007). This translates into an annual savings of \$66,300

per year in energy related operating costs (electricity & natural gas). See the graphic below. The Energy Utilization Index (EUI) for this building is calculated at 36 KBTU/SF per year.

### Jefferson Houston Elementary School Energy Modeling Results



B2E designed the Mechanical, Electrical, Plumbing, and Fire Protection systems for the school, including high-efficiency lighting, HVAC, and hot water heating systems. The HVAC system includes an air-cooled Variable Refrigerant Flow (VRF) heating and cooling system. Ventilation air is brought into the school using a dedicated outside air system (DOAS). The DOAS uses energy recovery technology to pre-heat/pre-cool the outside air with the neutral exhaust air leaving the building. LED and T-5 fluorescent lighting was used throughout the building. The building uses linear pendant fixtures in areas without ceilings. Solar tubes are placed strategically offering more direct daylight in interior spaces. Light shades are incorporated into the façade at large window areas which diffuse the daylight throughout the rooms.

An accelerated construction schedule requiring fast turn-around times and efficient communication between stakeholders has been in place since design began in 2011. The project remains on-time and is projected to be completed \$1.5 million under budget.