

April 5, 2024

GLEN COVE CITY SCHOOLS

EPC Progress
Updates



LIGHTING UPGRADES

At Gribbin Elementary School

- New recessed 2x4 LED light panels in hallways on the first and second floors.
- New recessed 1x4 LED light panels in the main office with a reduction in the number of fixtures.
- New 2x2 LED panels in classroom 20 along with the retrofit of 4ft line voltage lamps and ballast removal.
- Each new 2x4 panel uses the equivalent wattage of one fluorescent 4ft tube, the existing one having two tubes.
- Each 1x4 fixture uses about $\frac{3}{4}$ wattage of a fluorescent 4ft tube, with the existing one having one or two tubes.



PREVIOUS UPGRADES

LIGHTING UPGRADES

At Landing Elementary School

- New recessed 2x 4 LED light panels in gym/auditorium with additional 1' x 4' surface mount fixtures in the copy room area
- Retrofitted LED tubes in recessed fixtures in modular area
- Retrofitted LED lamps in attic
- New 2x2 LED panels in classrooms and hallway



SOLAR INSTALLATION

At Gribbin Elementary

- Installed solar arrays with a RM10 EVO footing style





SOLAR INSTALLATION

At Glen Cove High School

- Footings, panels, and ballast blocks have been installed on the lower gym roof
- These 150 panels will not be able to produce power until the inverter and AC-side equipment is installed and PSE&GLI gives their final approval



LIGHTING UPGRADES

At Connolly Elementary School

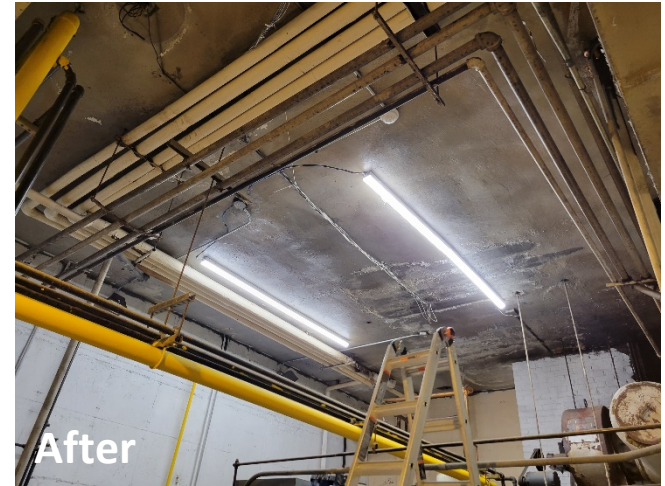
- New recessed LED light fixtures in the music room/stage
- New LED lighting in offices and faculty lounge
- Reducing wattage per fixture by approximately 30-40%



LIGHTING UPGRADES

At Connolly Elementary School

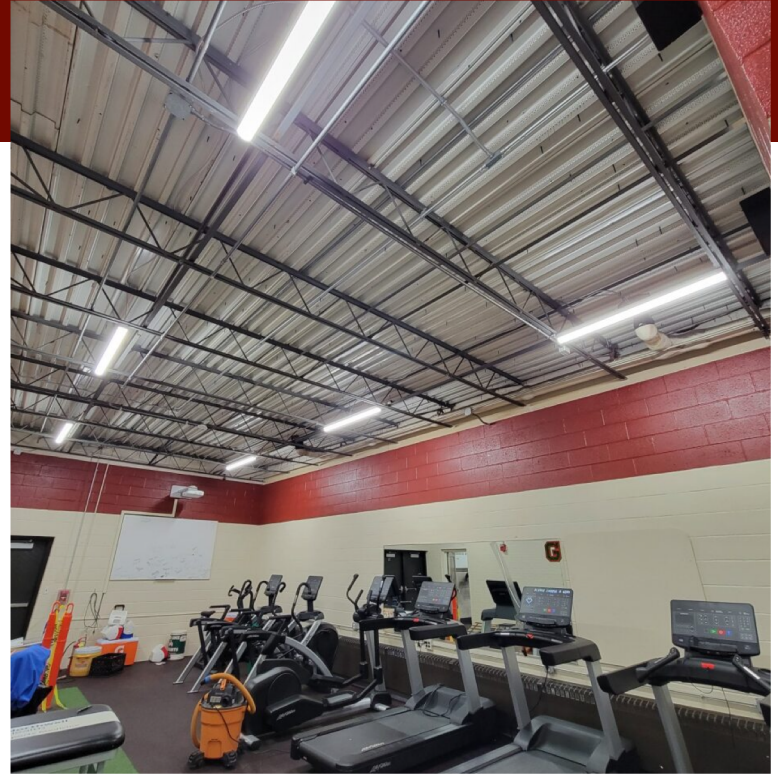
- New surface-mounted LED light fixtures in the corridors on both floors.
- New surface-mounted LED light fixtures in the cafeteria
- New 2' and 4' LED linear lighting in boiler room, new LED a-lamps in furnace room
- Reducing wattage per fixture by approx. 40%



LIGHTING UPGRADES

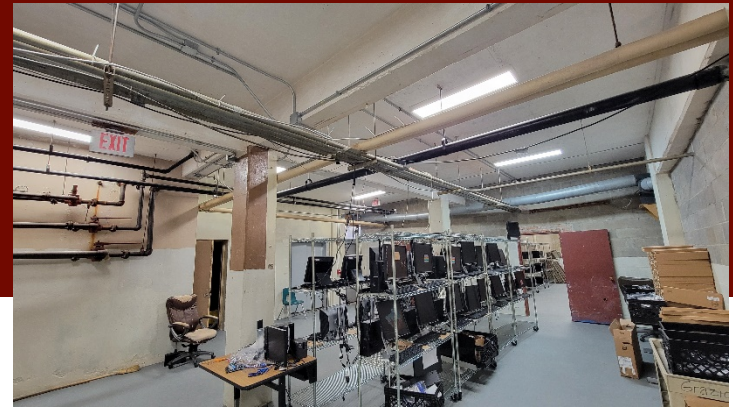
At Glen Cove High School

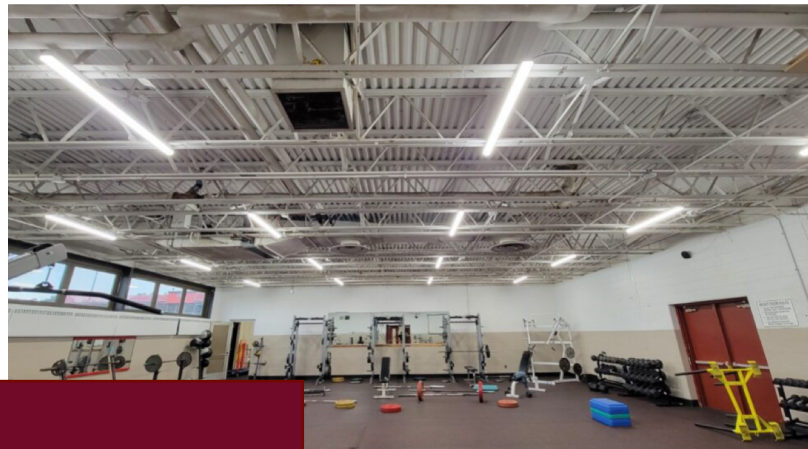
- New surface-mounted 1' x 4' LED flat panels and LED vapor-tight light fixtures installed in the girls', boys', and team locker rooms.
- Reducing wattage per fixture by approximately 40%
- Providing more uniform lighting in locker rooms and offices.



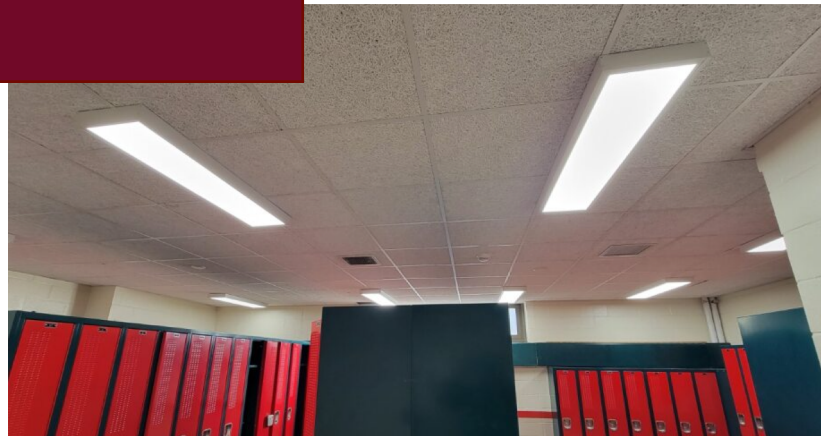
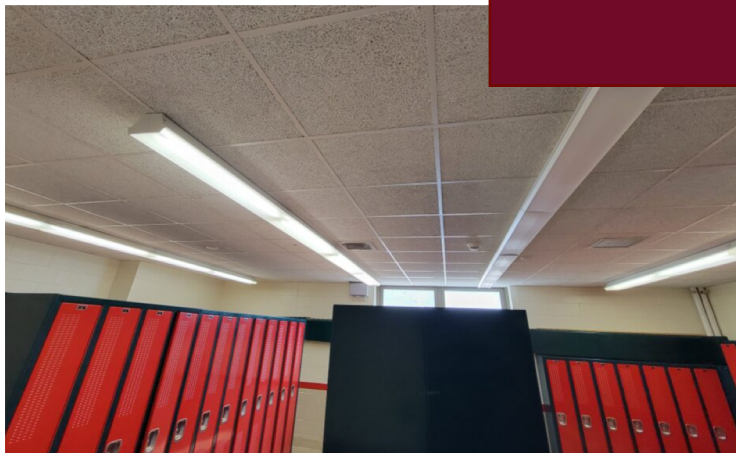
LIGHTING UPGRADES

- New surface-mounted LED light fixtures in the basement and boiler room areas
- Reducing wattage per fixture by approximately 40%





BEFORE & AFTER



LIGHTING UPGRADES

At Glen Cove High School

- New lighting fixtures installed in classrooms, staff offices, storage rooms, and bathrooms
- Reduced number of fixtures in classrooms when possible by 25%
 - LED flat panels replacing fluorescent tube lamps fixtures
 - Reducing wattage per fixture by about 40%



LIGHTING UPGRADES

At Glen Cove High School

- New ceiling fans installed in the music room
 - To replace existing and extend below the ceiling as requested by the district
 - Matching existing fans in the second classroom



LIGHTING UPGRADES

- Completed all of the hallways in the building replacing 1x4' surface mount fluorescent fixtures with recessed 2x4 LED flat panels
- Created a consistent lighting layout in the hallways with the new recessed panels
- Replaced smoke alarms and integrated them into the new grid



LIGHTING UPGRADES

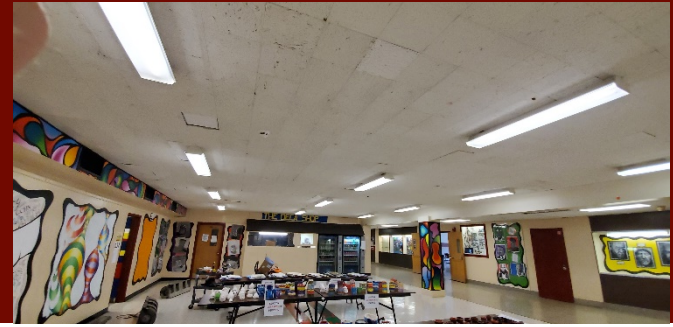
- Old lighting fixtures have been replaced alongside the ceiling replacement
- Existing 1x1' ceiling tiles have been replaced with a 2x2' grid including the installation of new 2x2' LED panels
- New lighting will provide an increase in energy cost savings and decrease maintenance requirements
- This measure was part of an accelerated schedule to prepare for the start of summer school
- Group of five areas will be upgraded next week



Top: Before
Bottom: After

LIGHTING UPGRADES

- Old lighting fixtures have been replaced alongside the ceiling replacement
- Existing 1x1' ceiling tiles have been replaced with a 2x2' grid including the installation of new 2x2' LED panels
- New lighting will provide an increase in energy cost savings and decrease maintenance requirements



Top: Before
Middle: During
Bottom: After

VFD & MOTOR REPLACEMENT

- Variable Frequency Drives (VFDs) were installed at Glen Cove High School and Gribbin Elementary School
- VFDs vary the frequency the motors on pumps and fans for better efficiencies when running



VFD & MOTOR REPLACEMENT

- Ecosystem replaced old motors with inverter rated ECM motors
- Ecosystem will install VFDs this fall to increase motor efficiency



BOILER UPGRADES

At Connolly Elementary School

- New boiler hot water piping has been installed and insulated
- A new exhaust liner was installed in the existing chimney
- Boilers and newly installed pumps have been wired
- Equipment is ready for start-up and commissioning



BOILER UPGRADES

At Connolly Elementary School

- Began demolition of existing furnaces in mechanical spaces
- Cutting the furnaces and bringing them out piece by piece



Gas-fired furnace

BOILER UPGRADES

At Connolly Elementary School

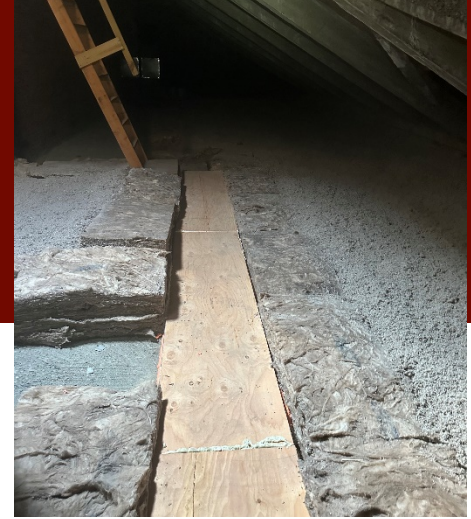
- Disconnected natural gas and power from the existing furnaces
- New cement pad poured that the new boilers will be placed on



Top: Existing furnaces
Bottom: New cement pad

ENVELOPE REPLACEMENTS

- Improvements will insulate weak points, minimizing unwanted air infiltration and reducing wasted energy
- Cellulose was installed in the Landing Elementary School attic to enhance student comfort
- Weather stripping was installed on exterior doors throughout the district to minimize draft
- Sealed windows and roof-wall intersection to reduce heat loss



ESTIMATED COMPLETION

1. Solar PV - **Spring 2024**
2. Lighting Upgrades - **Fall 2024**
3. Boiler Upgrades - **Fall 2023**
4. VFD and Motor Replacement - **Winter 2024**
5. Ventilation Upgrade - **Summer 2024**
6. BMS and Controls Upgrades - **Winter 2024**
7. Computer Energy Manager - **Winter 2024**
8. Plug Load Managers - **Winter 2024**
9. Envelope Improvements - **Fall 2023**
10. Insulation Improvements - **Fall 2023**

