

MH Professional Engineering, PLLC



K-12 PROJECT EXPERIENCE

SCHODACK CENTRAL SCHOOL DISTRICT, MAPLE HILL MIDDLE/HIGH SCHOOL & CASTLETON ELEMENTARY SCHOOL RECONSTRUCTION

Castleton-on-Hudson, NY

- Lead Mechanical, Electrical, Plumbing, and Fire Protection Engineers for the complete renovation of instructional and instructional support spaces.
- Created middle school small learning community on second floor.
- Addition & Reconstruction provided for high school (first floor) and middle school (second floor) STEM Center.
- Created a dedicated arts wing, including a building expansion, to accommodate band and chorus programs shared by the high school and middle school.
- High school and middle school are secure and can be isolated from spaces shared by community during off hours.
- Existing district offices relocated to allow for expansion of high school.
- Existing technology spaces renovated to support modern STEM program.
- Added sprinkler system to approximately three-quarters of the existing building, including fire pump.
- Modified plumbing systems to match revised floor plans, including chemistry, biology and physics classrooms.
- Upgraded/expanded electric distribution system to match floorplan layout. Worked closely with district to verify and reorganize loads on the existing generator in order to get fire pump on emergency power.
- Completely modernized heating and ventilation systems throughout renovated area, including air conditioning to several areas and complete control system upgrade.
- Provided LED, Energy Star lighting throughout renovated areas and complete control system upgrade.
- In the elementary school, renovated secure entrances, art rooms, music room, and nurses' suite; provided air conditioning for each classroom; and provided electrical design to support renovations, added air conditioning, and technology expansions.



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K-12 PROJECT EXPERIENCE

DURKIN ADMINISTRATION BUILDING, WORCESTER MA CENTRAL SCHOOL DISTRICT

Worcester, MA

- Lead Mechanical and Electrical Engineers for energy conservation upgrade project in seven-story school administration building.
- Project includes replacement of cooling towers with VFDs on fans, new variable primary chiller, adding VFDs to condenser water pumps, changing fan coil unit motors to ECM motors, adjustment of outside air delivery to match current code requirements, and upgrade to control system components and sequence of operation.



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REPLACE WATER LINES, SCHODACK CENTRAL SCHOOL DISTRICT

Castleton-on-Hudson, NY

- Lead Plumbing Engineers.
- Disconnection of potable water system from existing well and booster pumps.
- Removal of existing galvanized steel cold water, hot water and recirculation piping mains in the basement and crawl spaces of the school.
- Installation of copper cold water, hot water and recirculation mains, including new valves and insulation (approximately 4,500 lineal feet of piping).
- Installation of a new domestic water service from the town's municipal water system, including installation of backflow prevention.



K-12 PROJECT EXPERIENCE

DOLGEVILLE CENTRAL SCHOOL DISTRICT

Dolgeville, NY

- Lead Mechanical, Electrical, Plumbing, and Fire Protection Engineers.
- Renovated areas included complete reconfiguration of high school athletic wing (locker rooms, weight room, team room and team locker area), upgrades to auditorium power, new concession stand, new music/choral room, renovated/expanded high school and elementary cafeterias, and complete rehabilitation/reconfiguration of kitchen and serving lines.
- Designed ventilation systems, heating systems, make-up air ductwork, kitchen hood exhaust and general exhaust. Modified heating hot water piping for new equipment connections. Included controls upgrades for new equipment and existing equipment to remain.
- Modified the building's sanitary drainage, venting piping, and domestic water systems in renovated areas.
- Provided modifications to electric power distribution for mechanical equipment, general receptacle power, and specialty equipment power feeds.
- Designed power, switching and wiring to indoor/outdoor lighting, associated controls, egress lighting, and exit signs for renovated areas.
- Designed modifications to building's clock, public address, telephone and data systems.
- Designed raceway/conduit to accommodate security, telephone and data wiring.
- Designed boiler replacement project, including associated upgrades to exit lights, emergency lighting and carbon monoxide detection.
- Designed toilet room addition for existing bus garage.



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K-12 PROJECT EXPERIENCE

WARRENSBURG CENTRAL SCHOOL DISTRICT

Warrensburg, NY

- Provided building conditions survey for most recent SED Building Conditions reporting period.
- Provided design and construction services for the replacement/conversion of an aging pneumatic control system at Warrensburg Elementary School.



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SCHUYLERVILLE CENTRAL SCHOOL DISTRICT

Schuylerville, NY

- Designed upgrade/rehabilitation of district's administration building.
- Designed upgrade of mechanical, including complete control system upgrade, and plumbing systems for elementary classroom wing.
- Designed HVAC upgrades for classroom addition.
- Designed upgrade to heating system in middle school office area.
- Designed HVAC upgrades to high school gymnasium. Systems were original to the building (1965).
- Reviewed, diagnosed and resolved several issues within buildings that had lingering, unsolved construction problems: gas vent location, overheating kiln rooms.
- Provided engineering review, schematic design and estimating services for proposed high school kitchen upgrade.



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MORIAH CENTRAL SCHOOL DISTRICT

Port Henry, NY

- The project included full electrical distribution system upgrade, addition of air conditioning to several areas in building, upgrade of the metal shop exhaust and ventilation system, and upgrades to the electric and HVAC systems in the bus garage.



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K-12 PROJECT EXPERIENCE

364 WARREN STREET SCHOOL

Hudson, NY

- Lead Mechanical Engineers in charge of improving the ventilation system of an 1800s building in order to meet NYS Mechanical Code and NYS State Education requirements.
- Performed on site review of existing conditions.
- Designed outdoor air supply system, including air-to-air-heat recovery system to match occupancy indicated by owner.
- Designed supplemental heating and cooling system for outside air system.
- Designed modifications to existing second floor RTU system to suit occupancy and NYS Education Department requirements.



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COLUMBIA-GREENE ACADEMY, 11 WARREN STREET

Hudson, NY

- Lead Mechanical, Electrical, and Plumbing Engineers for the design of Columbia-Greene Academy.
- Project included lighting design for interior lighting and circuiting, power and receptacle layout, and power for mechanical equipment and new fire alarm system.
- Created layout of a paging system, wireless access points and new clocks.
- Modified sanitary drainage and venting and domestic water system throughout building.
- Modified existing sprinkler system to match reconfigured spaces.
- Designed new HVAC distribution system to match reconfigured spaces.



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K-12 PROJECT EXPERIENCE

ONONDAGA NATION SCHOOL, EXPANSION AND INFRASTRUCTURE STUDY

Nedrow, NY

- Lead Mechanical and Electrical Engineers for a study to expand spaces and improve technological infrastructure at the Onondaga Nation School.
- The school has not had any upgrades or improvements since the early 1990s.
- The program study outlined the building system upgrades necessary to meet today's expanding technological needs, but also normal "wear and tear" that a school endures.
- Integral to the study was a requirement to provide a gymnasium/multipurpose space large enough for full court competition sports, extensive shower facilities and a food preparation kitchen for cultural events.
- As part of the study, the addition and systems proposed had to reflect the Onondaga Nation beliefs and philosophies.
- As a reflection of the Onondaga Nation's respect for Mother Nature, photovoltaic panels, solar domestic hot water, rain water harvesting, and a geothermal heating and cooling system were proposed.



K-12 PROJECT EXPERIENCE

BUS GARAGE RENOVATIONS, SCHODACK CENTRAL SCHOOL DISTRICT

Schodack, NY

- Lead Mechanical, Electrical, and Plumbing Engineers for the renovation of a bus garage.
- Designed the replacement of an oil-fired furnace which provides conditioning and ventilation air to the space.
- Designed a new carbon monoxide monitoring and exhaust system.
- Designed the plumbing systems to accommodate ADA bathroom layouts and replacement of the domestic water heater.
- Designed electrical power distribution for grinder pumps; lighting in the renovated bathrooms; power distribution for receptacles, exhaust fans and an air handling unit; and a new fire alarm system.

AUDITORIUM MODIFICATIONS, MAPLE HILL HIGH SCHOOL, SCHODACK CENTRAL SCHOOL DISTRICT

Schodack, NY

- Lead Electrical Engineers for auditorium theatrical system modifications.
- Designed power distribution for proposed IQ panel for the dimming equipment, audio rack power and receptacles.
- Designed electrical drawings showing conduit routings for audio cabling and lighting controls.

KITCHEN HOOD REPLACEMENT, MAPLE HILL HIGH SCHOOL, SCHODACK CENTRAL SCHOOL DISTRICT

Schodack, NY

- Lead Mechanical, Electrical, and Plumbing Engineers for the renovation of the commercial kitchen.
- Designed a make-up air, exhaust air, and associated ductwork system to serve the kitchen hood.
- Designed the renovation of plumbing systems to accommodate the equipment modifications and natural gas distribution to the make-up air unit.
- Power distribution for the replacement hood, exhaust fan, make-up air unit, and equipment modifications; LED lighting for renovated areas; and fire alarm devices, detection, carbon monoxide and notification in renovated areas.

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CAFETERIA LIGHTING & SIGN IMPROVEMENTS, MAPLE HILL HIGH SCHOOL, SCHODACK CENTRAL SCHOOL DISTRICT

Schodack, NY

- Lead Electrical Engineers for upgraded cafeteria lighting and digital sign.
- Designed site power for the sign; cafeteria lighting and controls; and provided sketches showing the existing cafeteria ceiling items to be removed and stored for reinstallation.

TECHNOLOGY ROOM RENOVATIONS, MAPLE HILL HIGH SCHOOL, SCHODACK CENTRAL SCHOOL DISTRICT

Schodack, NY

- Lead Mechanical, Electrical, and Plumbing Engineers for the renovation of a high school woodshop and technology classrooms.
- Designed new HVAC systems to serve the classrooms in compliance with SED requirements, including a recirculating dust collection system.
- Designed the renovation of plumbing systems to accommodate the new layout.
- Designed power distribution for power panels, rooftop units, special shop equipment, receptacles and wire mold.
- Designed lighting in the renovated spaces.
- Designed modifications to the existing fire alarm system, including detection devices, notification devices and fan shut-downs.

