

MH Professional Engineering, PLLC



HEALTHCARE PROJECT EXPERIENCE

ELLIS HOSPITAL A2 OPERATING ROOM CODE REVIEW

Schenectady, NY

- Lead Electrical Engineer for redundancy concerns within existing operating room suite at Ellis Hospital.
- Conducted necessary site investigations to examine how existing operating rooms were being fed with power.
- Performed a comprehensive code review to improve the redundancy problem while protecting patient safety and preventing disruption to the functions of the operating room during construction.
- Provided Ellis Hospital with information on how to rectify their existing installation to provide additional redundancy within the operating rooms.



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HEALTHCARE PROJECT EXPERIENCE

SYRACUSE COMMUNITY HEALTH CENTER

Syracuse, NY

- Lead Plumbing Engineer for the design of a 57,000 ft² new outpatient medical facility and 8,000 ft² renovation of existing outpatient medical facility.
- Geothermal system used as first stage of domestic water heating to reduce energy usage.
- Designed piping (domestic water, compressed air, and vacuum) for 10-chair dental suite.
- Design was compliant with NFPA 99 Healthcare Facilities Code and FGI Guidelines for Outpatient Facilities.



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HEALTHCARE PROJECT EXPERIENCE

VESTAL EXTENSION CLINIC, UNITED HEALTH SERVICES

Vestal, NY

- Lead Mechanical Engineer.
- Design was for a new 85,000 ft² medical office building.
- Spaces included Urgent Care facility; full imaging suite, including MRI, CT scanner, X-ray suite and vascular imaging suites; women's health care, including mammography, DEXA scan, and stereostatic suites, and internal medicine practice.



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HEALTHCARE PROJECT EXPERIENCE

WELLNESS CENTER REVOVATION, McCLELLAN CAMPUS ELLIS HEALTH CENTER

Schenectady, NY

- Lead Mechanical, Electrical, Plumbing, and Fire Protection Engineers for the renovation of a 4,500 ft² former laundry room to a fitness center in the basement of a facility at the Ellis Health Center.
- HVAC upgrades included a new outdoor air handling unit with packaged cooling, steam heating coil, and noise attenuation.
- Space was zoned with VAV boxes and connected to the existing facility building management system.
- Replaced a steam condensate return pump and a large section of failed steam condensate return piping.
- Plumbing design consisted of providing new locker rooms with showers and restrooms.
- Existing sprinkler system was reconfigured to serve the new space layout.
- Designed electric power distribution to mechanical equipment, general receptacle power, and specialty equipment, including means to provide normal, equipment, and life safety emergency feeders.
- Designed power, switching and wiring to interior lighting, associated controls, egress lighting, and exit signs.
- Designed raceway systems for telephone, data, access control, and security.
- Existing fire alarm system in the work space was modified in compliance with Building Code, NFPA 72, ADA and the electrical code.



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HEALTHCARE PROJECT EXPERIENCE

ALBANY IVF

Albany, NY

- Provided investigative mechanical and electrical engineering services for clinics.
- Review of operation of existing rooftop units and zone control dampers.
- Airflow survey and verification by a certified test and balance contractor.
- Review of existing wiring means and methods to verify code compliance.
- One-week recording of main electrical system by a third-party party electrical contractor to verify power condition.
- Provided verification services for corrective actions being provided by electrical contractor.



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HEALTHCARE PROJECT EXPERIENCE

RADIOLOGY DEPARTMENT RENOVATION STRATTON VETERANS ADMINISTRATION HOSPITAL

Albany, NY

- This contract included design and construction services for the renovation of the radiology department. The scope included the design of a new floor plan for approximately 11,200 ft² on the main hospital second floor A-wing, as well as providing a cohesive plan over multiple phases to accomplish the renovations while maintaining the radiology department in full operation. The main goals were to improve patient privacy, ADA compliance and workflow functionality.
- Specific work requirements included modifications to the existing sprinkler system, plumbing system, electrical system, and fire alarm system. Mechanical system upgrades included new air handling units and ducted system to replace the existing window air conditioning units and provide sufficient heating, cooling and ventilation. The design included the extension of existing chilled water piping and hot water heating piping from neighboring areas.



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HEALTHCARE PROJECT EXPERIENCE

UNITED HEALTH SERVICES HOSPITALS, INC.

New York Southern Tier

Served as the Lead Mechanical Engineer for the redesign and expansion of patient services and support services for a multitude of projects.

- Neurological Associates, Binghamton, NY
- Article 28 Upgrades, Orthopedics Associates, Binghamton, NY
- Pre-Admissions Testing, Johnson City, NY
- Physical Therapy Associates, Vestal, NY
- Laboratory Services and Family Practice, Owego, NY
- Wilson Memorial Hospital Dishroom Renovation, Johnson City, NY
- Perinatal Exam Suite and Laboratory Upgrades, Wilson Memorial Hospital, Johnson City, NY
- Article 28 Upgrades, Linear Accelerator at Wilson Square, Johnson City, NY
- Article 28 Upgrades for X-ray suite for Family Clinic, Deposit, NY
- Ortho Surgery Recovery, Memorial Building, Binghamton, NY
- Required HVAC upgrades for various Medical Center radiological equipment upgrades at Binghamton Hospital and Wilson Memorial Hospital
- Relocation of Professional Home Care Associates, Johnson City, NY
- Relocation and Expansion of ENT Associates, Wilson Square, Johnson City, NY
- Angiography Interventional Radiology Replacement, Johnson City, NY



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HEALTHCARE PROJECT EXPERIENCE

OUR LADY OF LOURDES HOSPITAL

Binghamton, NY

Served as Lead Mechanical Engineer for the redesign and expansion of patient services and support services for a multitude of projects.

- Primary Care Associates, Whitney Point, NY
- Women's Health Care Associates, Vestal, NY
- Youth Services and Mental Health Clinic, Binghamton, NY
- Primary Care Associates, Binghamton, NY
- Primary Care Associates, Hancock, NY



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HEALTHCARE PROJECT EXPERIENCE

HUDSON VALLEY ORTHOPEDICS CENTER

Hudson, NY

- Provided consulting and code review services for this design-build project, which included two Class C operating rooms, recovery area, anesthesia area and required ancillary spaces.
- The project required New York State Department of Health certification for outpatient surgical facilities. Medical gas systems, a medical gas storage area, and a hazardous medical waste storage area were included in the design.



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HEALTHCARE PROJECT EXPERIENCE

CHENANGO MEMORIAL HOSPITAL PHYSICAL THERAPY – EATON CENTER

Norwich, NY

- Served as the Lead Mechanical, Electrical, Plumbing, and Fire Protection Engineers for the first-floor renovation of an existing salon, BOCES classrooms and offices into a physical therapy suite.
- Systems were upgraded to meet Article 28 requirements.
- Electrical systems required careful coordination with location of powered therapy/exercise equipment.
- Floor plan layout was carefully aligned to prevent placement of plumbing fixtures over existing electrical switchgear in basement and to avoid requiring a sewage lift station.



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HEALTHCARE PROJECT EXPERIENCE

FAMILY CLINIC RENOVATION, UNITED HEALTH SERVICES

Deposit, NY

- Served as the Lead HVAC Engineer.
- Project involved the replacement of X-ray equipment.
- Existing HVAC equipment had to be modified/upgraded to meet current Article 28 requirements.
- Existing HVAC equipment is horizontal furnaces with DX cooling. The existing systems did not include mechanical ventilation air.
- System was upgraded to include dedicated outside air intake, two stages of filtration and booster fans to overcome additional static pressure.

PROFESSIONAL HOME CARE

Johnson City, NY

- Lead Mechanical Engineer for the gut rehabilitation of existing building for offices for UHS Professional Homecare.
- Building spaces consisted of showroom, home medical device storage, offices, oxygen tank storage, and soiled/clean workstations.
- Building also included compounding pharmacy designed to meet USP 797 2012 regulations, essentially creating an ISO 8 clean room.

UHS UROLOGY, WILSON SQUARE

Johnson City, NY

- Lead Mechanical Engineer for rehabilitation and reconfiguration of medical office space for Urology Associates. Space rehabilitation included upgrade of existing HVAC system to meet Article 28 guidelines (FGI 2010).
- Included study to upgrade the BMS system for the entire medical office building (6 stories).

KREMBS 3, 4 & 5 SHOWERS, BINGHAMTON GENERAL HOSPITAL

Binghamton, NY

- Lead Mechanical, Electrical, and Plumbing Engineers.
- Provided new plumbing (supply and drain) connections for new shower/toilet rooms.
- Provided new lighting throughout rooms, power outlets throughout as required, and a nurse call system.
- Exhaust system per applicable codes were provided in all rooms.
- Revised fire alarm system device locations.

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HEALTHCARE PROJECT EXPERIENCE

OR L, WILSON MEMORIAL HOSPITAL

Johnson City, NY

- Lead Mechanical Engineer for the expansion and rehabilitation of Operating Room L at Wilson Memorial Hospital.
- Space rehabilitation included upgrade of existing HVAC system to meet current Article 28 guidelines (FGI 2010).

STERILE PROCESSING, WILSON MEMORIAL HOSPITAL

Johnson City, NY

- Lead engineers for upgrade of HVAC system for hospital's existing sterile processing area.
- Upgrade included new air handling unit, ductwork, steam and chilled water coils, and electric connections.
- As project lead, structural engineer and architect were subconsultants.
- HVAC upgrade goal is to upgrade space to meet current Article 28 guidelines (FGI 2010), in particular the space pressurization requirement.

STERILE PROCESSING, BINGHAMTON GENERAL HOSPITAL

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