

# MH Professional Engineering, PLLC



## HISTORIC PRESERVATION PROJECT EXPERIENCE

### GORE PLACE CARRIAGE HOUSE

Waltham, MA

- Lead Mechanical, Electrical, Plumbing, and Fire Protection Engineers for the relocation and renovation of a historic carriage house.
- The plumbing design included a new bathroom addition and the design of a new caterer's kitchen.
- The fire protection design included a new dry type sprinkler system installed throughout the existing building and the new addition. Special care was taken during the design with regard to pipe routing and installation to minimize the impact of the system on the historic features of the building.
- New electrical services were provided to relocated building, including new power to serve existing well and tent area, new fire alarm system design, and new motion sensor design.
- Specialized lighting was included to highlight historic displays.
- A complete HVAC system was added to the building which was previously unheated. A furnace /system with DX cooling was designed to fit in the new basement area and feed the main carriage house through floor register. The addition, which is slab on grade, was ducted using underground fiberglass ductwork.



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### **BLESSED HOPE WORSHIP CENTER**

Albany, NY

- Lead Mechanical, Electrical, and Plumbing Engineers.
- Completed design for the preservation and restoration of this nineteenth century church totaling approximately 22,000 ft<sup>2</sup>.
- The electrical and mechanical systems in the building were completely replaced to meet current code requirements.
- The internal unexcavated areas of the basement are being utilized as heat sinks for a geothermal cooling system.





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### **ASSOCIATION FOR THE PROTECTION OF THE ADIRONDACKS**

Niskayuna, NY

- This project included the rehabilitation of the 1930s home of Adirondack activist Paul Schaefer and a 4,000 ft<sup>2</sup> addition for the Adirondack Research Library, archives, and AFPA offices.
- Old and new structures share common materials and a reception and exhibit space axially linked the iconic Adirondack Room of the Schaefer House with the Library and visually with the nature sanctuary beyond.
- An 8-well geothermal system heats and cools the facility.



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### EQUINOX YOUTH SHELTER

Albany, NY

- Lead Mechanical Engineers.
- This building was originally the parish school for St. John's Church and was built in the late 1800s. It was completely gutted and rehabilitated for this project.
- Equinox operates the Youth Shelter serving runaway, abused, and homeless youth and helping them find safety, shelter, food, and a professional, caring staff to help them through the crisis of homelessness.
- A suite arrangement of rooms increased the capacity to house boys and girls and made staff supervision easier. The design incorporated space for group activities and private areas for crisis intervention.





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### **SENATE HOUSE MUSEUM AND HISTORIC SITE HVAC RENOVATIONS**

Kingston, NY

- Lead Mechanical and Electrical Engineers for the replacement of four air handling units and all associated piping in two historic buildings.
- HVAC systems consisted of four air handling units located in basements and an attic with limited space.
- Hot water and chilled water piping was replaced, including pumps, valves, control systems, and approximately 650 feet of underground piping.
- Electrical power distribution was upgraded and modified for the four new air handling units.
- Building management system was upgraded/expanded to include all equipment provided.



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### HILLSIDE VIEW APARTMENTS

Schenectady, NY

- Lead Mechanical, Electrical, and Plumbing Engineers for a low-income, multi-family housing project in Schenectady's Hamilton Hill.
- The project by The Community Builders includes 25 senior apartments at the former Horace Mann School at 602 Craig St. and 13 apartments at the former St. Columbus School at 400 Craig St., as well as additional apartments on Stanley and Emmett Streets.
- All buildings were either new construction or complete rehabilitations of abandoned buildings.
- NFPA 13 or 13R sprinkler systems were added to all but three of the two-family homes.
- Heating and cooling systems included a mixture of baseboard heat in the smaller building to a two-pipe changeover heating/cooling fan coil system in the large change of use projects.
- Electrical systems included generators, handicap accessibility features, a nurse call system for the senior living building, and a mix of fire alarm types based on building type and size.
- The building at 400 Craig St. is designed to include community arts/makers space on the ground floor. Art space includes wood shop, metal shop, fabric arts, a 3-D printing area with laser cutter and some general open work space.



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### STATE CAPITOL STAIR INVESTIGATION

Albany, NY

- Lead Mechanical and Electrical Engineers for a rehabilitation study of the Eastern Approach to the New York State Capitol.
- Designed a 9,000 ft<sup>2</sup> snow melt system for roadway.
- Conducted utility source and capacity investigation.
- Provided design for the removal and reinstallation of power distribution systems to facilitate the stair and roadway rehabilitation.





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## HISTORIC PRESERVATION PROJECT EXPERIENCE

### **CASTLE ON THE HILL EXISTING CONDITIONS STUDY, BINGHAMTON PSYCHIATRIC CENTER**

Binghamton, NY

- Lead Mechanical, Electrical, Plumbing, and Fire Protection Engineers for a study on an 86,000 ft<sup>2</sup> landmark constructed in 1858.
- The gothic revival building is listed on the National Register of Historic Places as the New York State Inebriate Asylum. The building has been vacant for approximately 20 years, but measures have been taken to preserve the building.
- MH Professional Engineering provided short-term recommendations and cost estimates for immediate actions that should be taken to stabilize building deterioration as well as long-term solutions and cost estimates for rehabilitating the building for future occupancy.

