



# Mechanical, Electrical and Plumbing (MEP) Systems



## Lockatong Engineering Licensed Professional Engineers

When it comes to real property – the land or the structures that sit on it, or both – it must efficiently serve all your needs while retaining its value as an asset throughout its use.

That's where quality structural, mechanical, electrical, life-safety and environmental investigations help you make better decisions. An experienced professional's evaluation can save you money now and prevent costly surprises in the future.

Along with property and building investigations, systems diagnostics and environmental evaluations, Lockatong Engineering specializes in design, project management and energy management services that build on the results of our professional investigations.

Whether you are looking to evaluate a property for its potential as an investment, to modify it for greater energy efficiency or otherwise better serve your needs, or to preserve and enhance its value now and going forward, Lockatong Engineering offers the services and expertise that make your task easier and your decisions more assured.

Conveniently located in Hunterdon County, New Jersey, Lockatong Engineering serves clients large and small throughout New Jersey, Pennsylvania and as far north and south as New York and Delaware.

With long-term relationships through the National Academy of Building Inspection Engineers, we partner to service clients throughout the United States.

*Lockatong Engineering also provides these professional services that complement your building's MEP Systems:*

**Property Condition Assessment** for a comprehensive evaluation of the current condition of the site and building systems and opinion of probable cost for a preliminary budget to remedy the physical deficiencies identified.

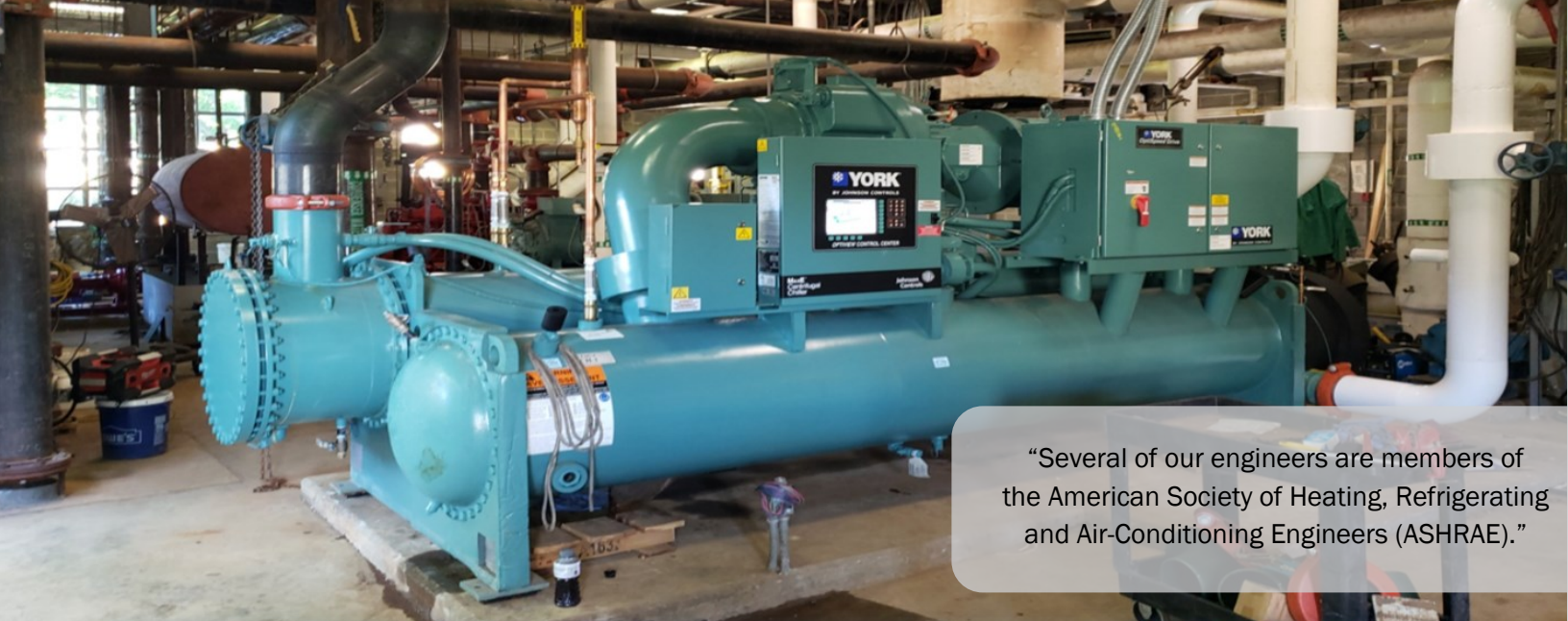


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By professional engineers for MEP systems  
in multi-family residences, commercial  
buildings, or institutional facilities





“Several of our engineers are members of the American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE).”

The mechanical, electrical and plumbing (MEP) systems of any building are integral to making the building suitable for human occupancy. MEP can also include fire protection systems, controls, processing piping and data communication lines.

These important systems that operate your facility at its peak performance carry a heavy burden of responsibility for the success of your venture and comfort and safety of the occupants. Lockatong Engineering appreciates that your organization's future rests on us designing the exact right system for the job — and that each system takes into account the other systems within your facility for an efficient whole.

Lockatong Engineering's professional engineers have finely tuned their MEP engineering skills by education and project experience, which enables them to understand and take advantage of opportunities unique to facilities, condominium and commercial buildings, as well as manufacturing sites.

Good design ensures a successful installation of MEP systems, i.e., the design must fit construction requirements, incorporating dimensions and space requirements of the systems being installed. This is where Lockatong Engineering's expertise can help. Location of where a system is to be placed is taken into account when drafting a design. For example, an HVAC system that is being placed on a roof may need structural reinforcement due to the size and weight of the HVAC unit, or a structural redesign may be needed to accommodate noise or vibrations caused by the equipment. Other considerations include maintenance and service. Access for cleaning, inspection and replacement of large components must be provided. For rooftop equipment, fall protection must be considered in equipment placement. All of this is considered when working on drawings.

Another aspect to be considered when drafting plans are specific city or state building codes. Lockatong's engineers will make sure that all appropriate codes, industry standards and best practices are met. Our designs are not just for new installations. Our experienced engineers will identify potential problems in existing MEP systems and determine how best to improve performance.

## M: Mechanical Engineering

Heating, cooling and ventilation are all key areas to consider in the mechanical planning of a building. These systems interact to keep temperature and humidity within a range that provides comfort and health, and ensures that enough fresh air is supplied to keep pollutant concentrations at low and safe levels. Mechanical drawings establish placement of heating and A/C systems. Our design drawings also provide specifications for installing and fabricating ducts, piping connections and air-handling units.

## E: Electrical Engineering

The electrical system in a building keeps the lights on, keeps our devices powered and keeps all other systems running. Life safety, emergency lighting, fire alarm systems and smoke detection are also essential components to any type of building. We provide detailed electrical drawings showing the exact layout of electrical units to support lighting, mechanical, life safety and process systems. Lockatong is also experienced in the design of photovoltaic systems for commercial, institutional and utility scale projects.

## P: Plumbing Engineering

Standard plumbing usually covers mains pressure potable water, sewerage, stormwater, natural gas, and fire protection systems (which include water supply, standpipe, hydrants, and automatic sprinklers). In commercial and institutional buildings, these systems are expanded to accommodate many more uses. For example, steam, condensate, process and medical gases in healthcare are special plumbing systems.

*Our engineers have experience in fire protection, domestic, utility, process and specialized piping systems to help in investigation of problems, design of modification and additions and capacity limitations. We have assisted clients in mapping complex piping routes, especially in healthcare with their critical medical gas systems.*



“Lockatong Engineering will analyze your MEP problem, formulate a solution, and provide the design needed to ensure a smooth installation of the MEP system. We will also provide monitoring during the project to confirm that construction is proceeding according to our specifications.”