



Mechanical/Electrical/Plumbing (MEP)

Improving, maintaining & preserving your building systems.

Marx Okubo's in-house Mechanical/Electrical/Plumbing (MEP) group knows that your real estate portfolio is a substantial investment and must have high-performing building systems. We work with building owners and operators to ensure that the building system assets are well maintained and work at peak performance.

SERVICES ACROSS
THE LIFECYCLE

- Owner's Representation
- Property Condition Assessment
- Project Management
- Constructability Reviews
- Repair & Reconstruction
- Facility Condition Assessment
- Construction Loan Monitoring

- Accessibility
- Building Enclosure
- Fire Protection/Life Safety
- **Mechanical/Electrical/Plumbing**
- Sustainability & Resilience
- Structural Engineering
- ASAP®



MEP systems are among the most complex and expensive building components to install, maintain, and replace. Marx Okubo brings in-depth knowledge of MEP system operating characteristics, expected service life, failure modes, and costs to help minimize risk for clients who are purchasing or are maintaining a property throughout the building's lifecycle.

We use our own in-house licensed engineers to evaluate the building systems—helping clients identify, evaluate, and implement solutions for the maintenance, repair, and replacement of system assets. Building systems have a large impact on energy consumption and operating expenses to keep a building in peak performance. By evaluating the building energy consumption or looking at the operations and maintenance practices of MEP systems, we can improve building performance resulting in a beneficial return on investment.

Marx Okubo has extensive knowledge of national and local regulatory and code requirements to actively keep clients in compliance with national, state, and local building codes and regulatory statutes that have become increasingly important in the pursuit of green technology alternatives.



We consult to limit your exposure now, giving you greater confidence in your decisions for the future.

KEY MEP SERVICES:

- > Property condition assessments
- > Facility condition assessments
- > Energy, water and greenhouse gas assessments
- > Building diagnostics and forensic investigations
- > Operations and maintenance reviews
- > Design peer reviews
- > ENERGY STAR benchmarking
- > LEED consulting and LEED GAP Analysis
- > Indoor air quality complaint response, mitigation and proactive monitoring
- > Commissioning of new and existing buildings

Connect with a
MEP specialist.



OUTCOME

With this creative approach, we worked collaboratively with the entire team to develop a complex-but-workable solution. Our solution saved the client project installation costs, and the new equipment will ultimately reduce operating costs with an attractive return on the investment.

100 North Tampa

Tampa, Florida

CLIENT

PGIM Real Estate

SERVICES

Sustainability,
Mechanical/Electrical/Plumbing

Marx Okubo was engaged to complete an ASHRAE Level III Energy Audit on an approximately 853,336-square-foot, 42-story office building located in Tampa, Florida. For our survey, we reviewed the physical condition of the building systems, equipment, and components related to the building infrastructure accessible or visible during several site visits. Following the energy audit, we performed an evaluation for replacement of the existing Trane centrifugal chillers, which included three alternate chiller scenarios. The three alternatives were evaluated on the basis of energy usage, lifecycle cost, and environmental impact.

Our team was able to model the entire building and match energy usage in the model with detailed historical utility billing provided by the property manager. This energy model then allowed us to evaluate each alternative for the best property-specific recommendation. Our evaluation determined the most cost-effective solution for the client. For the installation, we worked with a local mechanical contractor to determine reduced tonnage equipment sizes as well as disassembled chiller components that could be transported by rigging contractors down the elevator shaft to the basement central plant. Once transported, the chillers required reassembly in the basement by manufacturer's technicians. Solving this challenge in this way avoided the only alternative installation, which would have been far more disruptive as it included cutting the concrete sidewalk with both traffic and flood insurance implications.



OUTCOME

The energy audit identified energy conservation measures that could result in approximately \$594,743 in potential energy cost savings.

UBS Energy Audit Portfolio

Various cities and states throughout the US

CLIENT

UBS Realty Investors

SERVICES

Sustainability, Mechanical /
Electrical / Plumbing

Our team worked with UBS Realty Investors, LLC, to complete seven ASHRAE Level II energy audits on 39 buildings, spread out over seven properties, totaling more than 2,209,325 square feet. Our survey included a review of the physical conditions related to systems, equipment, and components of the building infrastructure to determine recommended energy conservation measures (ECMs), water conservation measures, and how to improve building operations.

The energy audit identified energy conservation measures that could result in approximately \$594,743 in potential energy cost savings from reduced annual energy consumption and annual maintenance savings.

The audit also identified low-cost measures such as lighting upgrades as well as capital improvement measures that include HVAC equipment upgrades. In general, the results of an energy audit tend not to recommend replacing HVAC equipment because the high cost outweighs the relatively low annual savings. However, our evaluations considered the incremental cost of replacing equipment that is at the end of its useful service life with high-efficiency equipment, and thus installation of this equipment was included with our recommendations.



OUTCOME

The energy audit resulted in approximately \$3,000,000 of potential annual cost savings with a projected overall payback period of 5.6 years which equates to a 17.7% return on investment.

Hospital in Southern California

Southern California

CLIENT

Withheld

SERVICES

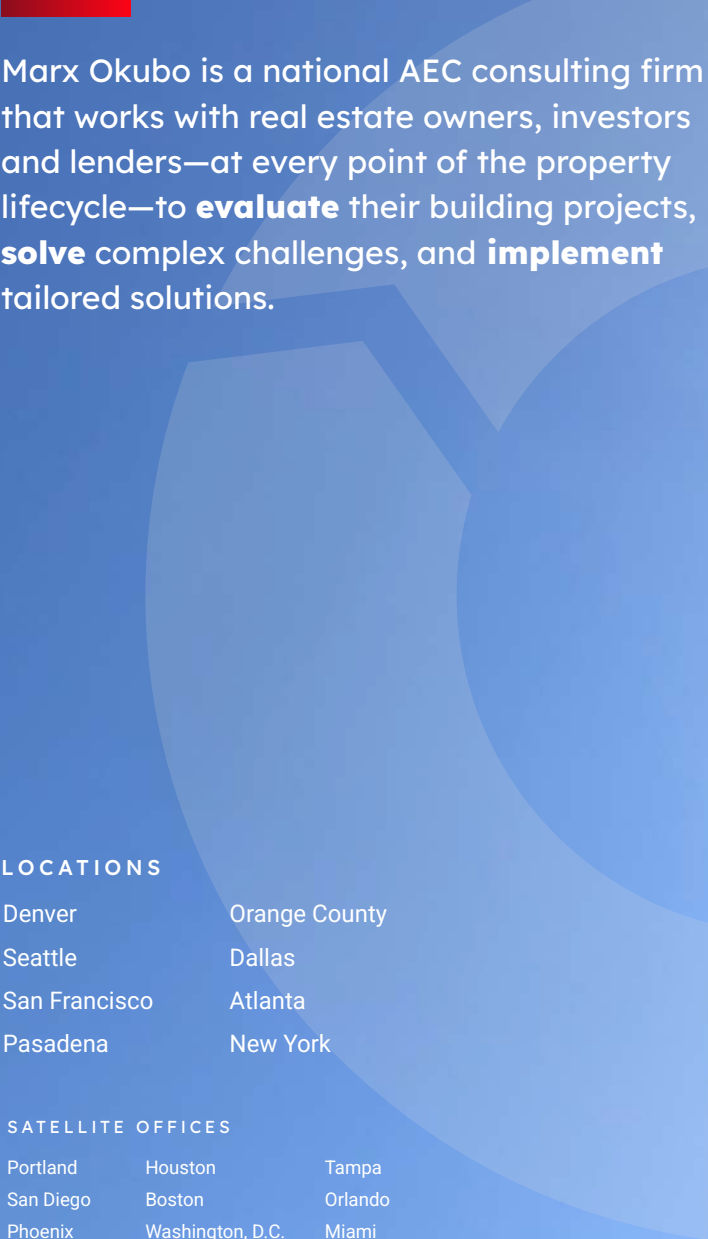
Facility Condition Assessment,
Sustainability, Mechanical /
Electrical / Plumbing

Marx Okubo completed a facility condition assessment, life cycle analysis (LCA), and an ASHRAE Level II energy audit of a large hospital in Southern California, which included 23 buildings totaling approximately 2,182,390 square feet. Our survey included a physical condition review of the building systems, equipment, and components related to the building infrastructure to determine potential energy conservation measures (ECMs) and improve building operations.

The LCA considered age, condition, and remaining useful life to determine equipment replacement period for key equipment and to prioritize when equipment replacements were warranted.

The energy audit resulted in approximately \$3,000,000 of potential annual cost savings with a projected overall payback period of 5.6 years which equates to a 17.7% return on investment. The energy audit results were coordinated with the LCA to optimize planning of equipment replacements.

🔴 Uncertainty **doesn't stand a chance.**



Marx Okubo is a national AEC consulting firm that works with real estate owners, investors and lenders—at every point of the property lifecycle—to **evaluate** their building projects, **solve** complex challenges, and **implement** tailored solutions.

LOCATIONS

Denver	Orange County
Seattle	Dallas
San Francisco	Atlanta
Pasadena	New York

SATELLITE OFFICES

Portland	Houston	Tampa
San Diego	Boston	Orlando
Phoenix	Washington, D.C.	Miami
Austin	Nashville	

