



# Resiliency

DEDICATED TO IDENTIFYING AND MINIMIZING NATURAL DISASTER RISKS, WHILE MAXIMIZING CONTINUITY OF OPERATIONS.

Marx|Okubo works with investors, owners, tenants, and property managers during site selection, design, construction, operations, and event response activities to identify property risks, understand how to reduce risks and repair costs, and maximize the continuity of operations of a property. With our in-house resiliency specialists, we are committed to evaluating and improving the built environment's response to climate-related natural disasters.

 Owner's Representation

 Property Condition Assessment

 Project Management

 Constructability Reviews

 Repair | Reconstruction

 Facility Condition Assessment

 Construction Loan Monitoring

 Accessibility

 Building Enclosure

 Fire | Life Safety

 Mechanical | Electrical | Plumbing

 **ESG | Resiliency**

 Structural Engineering

 ESG | Sustainability

 ASAP® - Automated Structure Alert Program





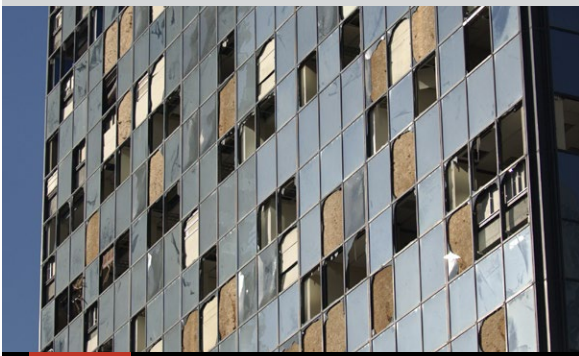
## Key resiliency services:

### New Construction:

- > **Property Resilience Assessment:** Site selection hazard screening, desktop-based vulnerability assessment of project documents, and mitigation strategy recommendation
- > **Property Hazard Assessment**

### Existing Building:

- > **Property Resilience Assessment:** Site hazard screening, observation-based vulnerability assessment, and mitigation strategy recommendation
- > **Post-Disaster Assessment:** Observation-based damage assessment, repair recommendation, and mitigation strategy recommendation
- > **Business Continuity Planning:** Potential operation disruption analysis and recommendations, planning consulting
- > **Property Hazard Assessment**



*We work to assess and limit risk, vulnerabilities and impact, and ultimately, strengthen your preparedness and continuity.*

Through an understanding of climate risks and building science and operations, Marx|Okubo can help determine how a building will likely respond to potential hazard events. Our team works with a client to determine an acceptable level of physical and operational risk and provide recommendations on how the property or operations can be altered to meet property or portfolio-specific goals.

Our in-house resiliency team is a dedicated group of professionals, including licensed architects and engineers, who specialize in identifying potential physical vulnerabilities and social vulnerabilities of the built environment, as caused by natural hazards. Physical hazards include earthquakes, flooding, hurricanes, wildfires, severe winter storms and tornadoes.

We consult on all phases of a building's lifecycle to anticipate or develop solutions for a variety of natural events. We are focused on how the design and construction, pre-event operations, and post-event response can reduce repair costs and maximize the continuity of operations of a property. Ultimately, as climate risk exposure levels can influence insurance costs, capital improvement costs, and overall integrity of buildings across a portfolio, clients are more frequently needing to perform a portfolio resiliency analysis to identify the properties that decrease the portfolio's overall resiliency rating while maintaining operational integrity of their buildings overall.



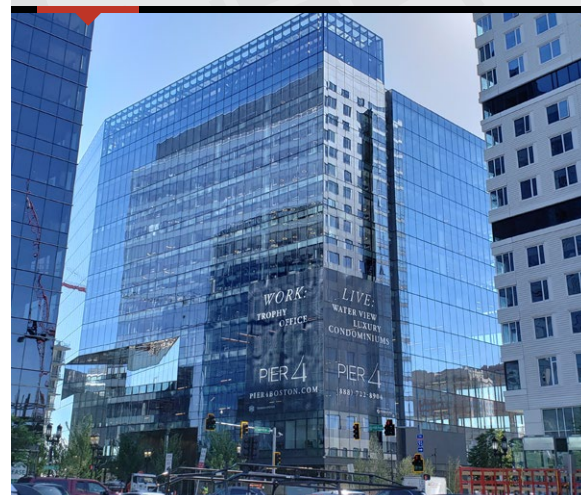
# Project Examples

## Pier 4

Client: **Commonwealth Partners**

Location: **Boston, Massachusetts**

Marx|Okubo's resiliency assessment included identifying key climate threats and assessing the property's vulnerabilities. We made recommendations to reduce the climate hazard risk to the client's acceptable level appropriate to its unique resiliency protocols, property management relationships and capital improvement budgets. As the property is located in an area with frequent hurricanes and also where rising sea levels threaten continuing development along the Boston Harbor, we incorporated strategies and tools to reduce the flood risk. Our solutions included using flood-resistant finishes and separated sub-grade vertical transportation, as well as implementing various methods of site detention and storm surge protection.



## Bridge Tranche III Portfolio

Client: **Morgan Stanley Real Estate Advisor, Inc.**

Marx|Okubo was hired to advise on the purchase of ten industrial projects that varied in location, size, site infrastructure and status. Our team identified the construction status, confirmed ongoing construction aligned with comprehensive project document review, and efficiently ascertained any design concerns to client within a tight due diligence timeline. We determined which properties had increased resiliency risk levels, as well as could easily analyze individual properties' (and the whole portfolio's) associated risk levels. While engaged in the project, it was Marx|Okubo's focus to ensure that the client's project had a high resiliency rating upon completion.



## Warehouse Facility

Client: **A logistics real estate firm**

Location: **Miami-Dade County, Florida**

The client for this project, the owner of a warehouse facility located in an area subject to hurricanes, flooding, tornadoes and associated disruption to utilities, engaged Marx|Okubo to conduct a preliminary site vulnerability assessment, which identified and quantified potential physical hazards and how they could affect the property. This assessment allowed the client to make an educated decision on whether to pursue the project and ensured that hazards were discussed with the design team so vulnerabilities could be addressed prior to development in order to streamline the construction process. Marx|Okubo's evaluation allowed for a collaborative approach between architecture and engineering design professionals in order to provide the highest quality product without unnecessary costs.







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.

We help clients understand their projects' complexities, so they can make more informed decisions and, ultimately, mitigate their risk.

Denver • Seattle • San Francisco • Pasadena • Orange County • Dallas • Atlanta • New York

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