



2022 Town Gown Report to the City of Cambridge

February 07, 2023



Introduction

Glen Shor
*Executive Vice President
and Treasurer*

- Excellence + Curiosity
- Openness + Respect
- Belonging + Community

MIT VALUES



+ EXCELLENCE + CURIOSITY

We strive for the highest standards of integrity, and intellectual and creative excellence. We seek new knowledge and practical impact, in service to the nation and the world.

We prize originality, ingenuity, honesty, and boldness. We love discovery and exploration, invention and making. We delight in the full spectrum of human wisdom.

Drawing strength from MIT's distinctive roots, we believe in learning by doing, and we blur the boundaries between disciplines as we seek to solve hard problems. Embracing the unconventional, we welcome quirkiness, nerdiness, creative irreverence, and play.

We accept the risk of failing as a rung on the ladder of growth. With fearless curiosity, we question our assumptions, look outward, and learn from others.

+ OPENNESS + RESPECT

We champion the open sharing of information and ideas.

Because learning is nourished by a diversity of views, we cherish free expression, debate, and dialogue in pursuit of truth—and we commit to using these tools with respect for each other and our community.

We strive to be transparent and worthy of each other's trust—and we challenge ourselves to face difficult facts, speak plainly about failings in our systems, and work to overcome them.

We take special care not to overlook bad behavior or disrespect on the grounds of great accomplishment, talent, or power.

+ BELONGING + COMMUNITY

We strive to make our community a humane and welcoming place where people from a diverse range of backgrounds can grow and thrive—and where we all feel that we belong.

We know that attending to our own and each other's wellbeing in mind, body, and spirit is essential. We believe that decency, kindness, respect, and compassion for each other as human beings are signs of strength.

Valuing potential over pedigree, we know that talent and good ideas can come from anywhere—and we value one another's contributions in every role.

Together we possess uncommon strengths, and we shoulder the responsibility to use them with wisdom and care for humanity and the natural world.



New MIT President



Sally Kornbluth

New Gateway to MIT in Kendall Square



314 Main Street

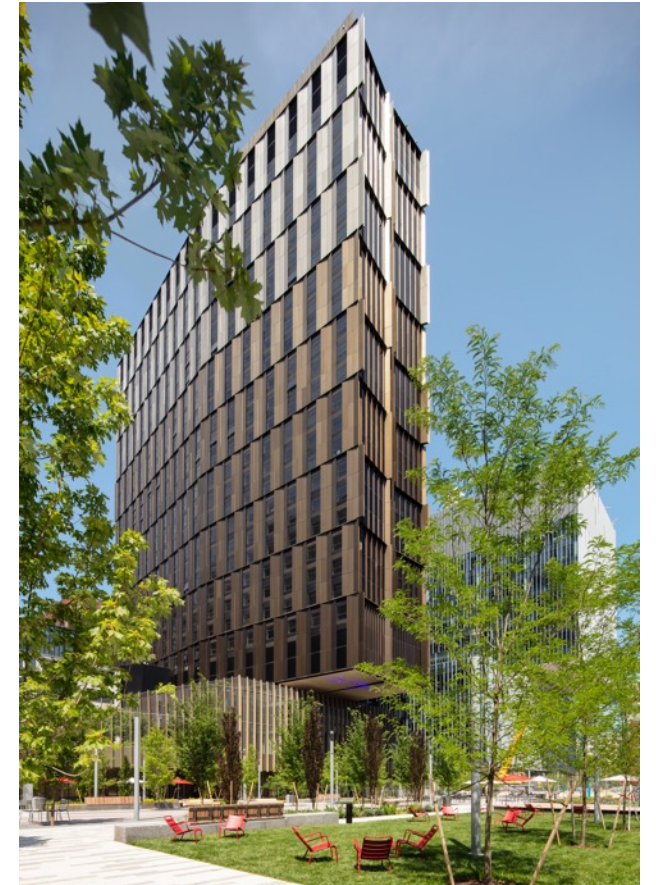
Image courtesy of Albert Vecerko/Esto



**Visitors receive a tour at the MIT
Welcome Center**



**MIT Museum at the Gambrill
Center**



Graduate Tower at Site 4

Image courtesy of John Horner

Academic Projects

Joe Higgins
*Vice President for
Campus Services and
Stewardship*



Projects In Construction

Music Building



Earth and Environment Pavilion



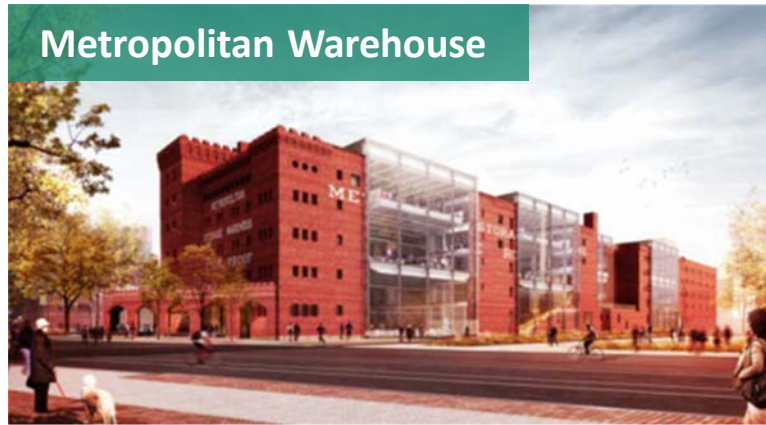
Stratton Student Center



West Campus Graduate Student Housing



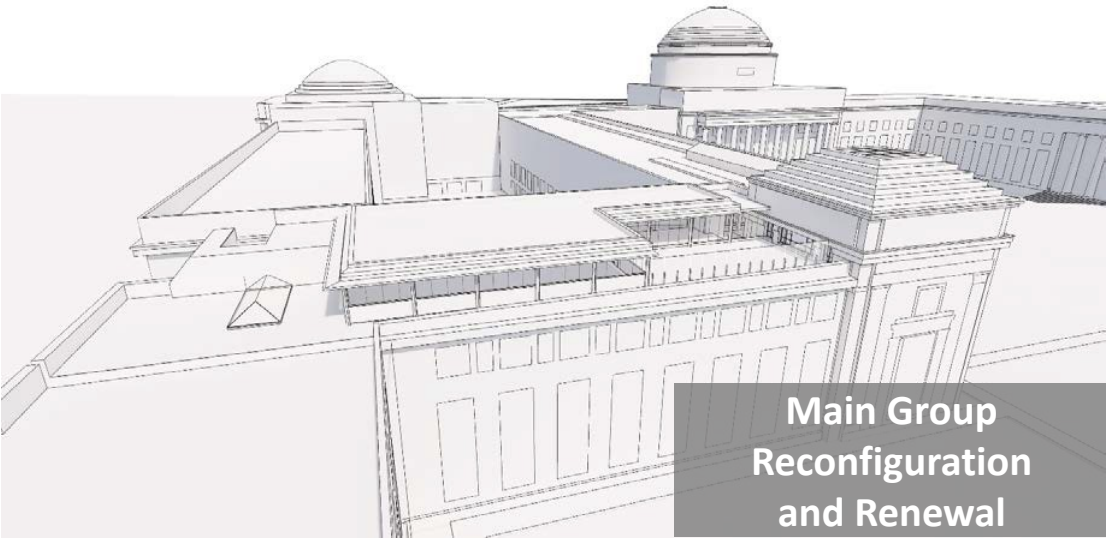
Metropolitan Warehouse



MIT Schwarzman College of Computing



Projects In Design And Planning (Focus On Renewal)





Climate and Sustainability

Julie Newman
Director of Sustainability



MIT's Path to Zero Emissions



2014-present

Progress: 15–20% reduction in net campus emissions despite new growth

- Completed more than **300 energy conservation projects** on campus
- Implemented **energy efficient design solutions** for new buildings and renovations, including 25 projects achieving Leadership in Energy and Environmental Design (**LEED**) certification from the US Green Building Council
- Upgraded the Central Utilities Plant to generate electric power that is **15-25% less carbon intensive** than New England grid
- Enabled a new solar photovoltaic power plant in North Carolina equivalent to **~40% of MIT's electricity use**



2026

Milestone: Net-zero campus emissions

- Accelerate **energy reductions** in the largest energy using buildings on campus
- Partner with leading organizations to enable **utility-scale renewable energy projects** that have the highest impact in decarbonization of regional electrical power grids
- Increase the capacity of renewable energy (primarily **solar panels**) on campus rooftops
- Initiate the **conversion of fleet vehicles** to fully electric and increase the number of charging stations accessible to our community
- Enable **community solar projects** in support of Commonwealth's sustainability goals



2050

Goal: Zero direct campus emissions

- Develop the pathways to **evolve our district energy systems** and apply leading technologies and strategies for the **next energy era** – working in collaboration with faculty, students, industry experts, peer institutions, Eversource, and the cities of Cambridge and Boston
- Employ **artificial intelligence** to reduce on-campus energy consumption, making deeper energy reductions in existing buildings
- Continue **renewable energy partnerships** to decarbonize regional power grids — essential to attaining this 2050 goal!

New Building Designs and Innovations

With an eye to designing for the next energy era, the Metropolitan Storage Warehouse will use **electric heat pumps** as its main heating and supplemental cooling source.



Fast Forward: Planning for a Changing Climate

MIT Climate Resiliency Dashboard

No issues detected x

Edit

Climate Resiliency



Office of Sustainability

Climate Resilient MIT

MIT Climate Risks

Current: 10-Year Storm

Current: 100-Year Storm

2030: 10-Year Storm

2030: 100-Year Storm

Flood Risk to Buildings

Heat Risk

Resources

Current | 100-Year Storm

This map illustrates modeled peak flood elevation in the event of a future potential 8.7" 24-hour storm on campus under the current climate. Each year, the probability of this event is 1%. However, over the course of 50 years, there's 39% chance that this event will happen. The assumptions for this modeled storm are based on current climate conditions.

How to read this map?

The projected flood depth is represented by a gradient of blue color, where darker color indicates higher water depth. Clicking on a projected flood polygon will open a pop-up window with location specific ground elevation, water depth, and peak water elevation. Zooming in will expose the peak flood elevation for every point.

Note that the water depth and peak elevation values are the result of a modeling exercise based on the best available science and involve ranges of uncertainty. Assumptions about future urban development and the rate of greenhouse gas emissions mitigation, as well as continuous improvements to flood risk models, may shift these projected flood elevations over time.

Red lines delineate the boundaries of each drainage catchment area on campus. Any water that falls or moves across the surface within each boundary generally flows to the same collection point, such as a stormwater drain system. The campus and City share an integrated stormwater pipe network that runs beneath the streets and carries stormwater to different downstream drainage locations.

What can we understand from this map?

1. Describes one moment in time. The model that simulated this map shows the flow of water for the entire 24-hour period, and we provide this image to explore the impact on campus for the peak water elevation.



The Launchpad at MIT



Collaboration with Commonwealth Kitchen incubator establishes access to healthy food options and food startups on campus

Commercial Projects

Michael Owu
*Vice President,
Real Estate*

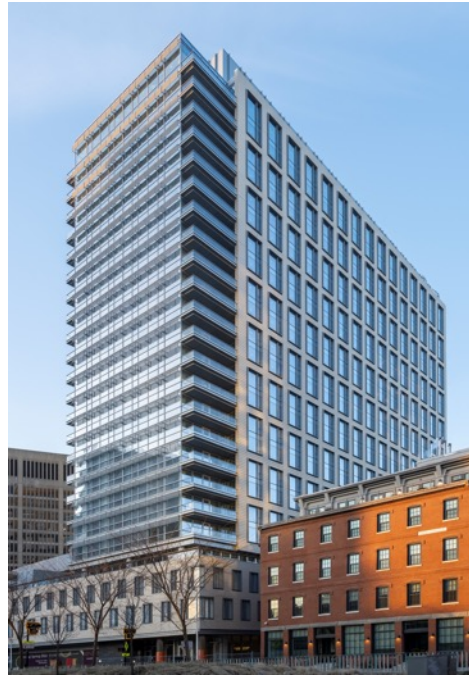


Completed Projects



238 Main Street

Image courtesy of Steve Dunwell Photography



165 Main Street

Image courtesy of Gunnar Glueck



730-750 Main Street

Image courtesy of Steve Dunwell Photography

Projects In Construction



200 Main Street Rendering
Image courtesy of Elkus Manfredi Architect



Volpe Transportation Center

Volpe Update



Volpe Third Street Park Rendering

Courtesy of Design Distill



MIT in the Community

Sarah Gallop

*Director,
Office of Government &
Community Relations*



Collaboration with Cambridge Public Schools

- **Data Activism with Cambridge teens**
 - Cambridge MSYEP and MIT Media Lab/MIT RAISE
- **Scanning Electron Microscope Explorations**
 - CRLS and MIT Museum
- **MIT Impact Scholarships**
 - \$90,000 distributed to 35 Cambridge scholars in 2022-23



Cambridge Mayor Sumbul Siddiqui visited the Mayor's Summer Youth Employment Program at MIT Media Lab

Open Space Programming

- Programs and events
- Collaborations and community partners
- Upcoming activities



The Job Connector by MIT

- **Training programs**
- **Workshops**
- **Hiring fairs**
- **Individual counseling**



Thank You!

