

2022

Town Gown Report to the City of Cambridge



**MIT
VALUES...**

Welcome

Icons: rocket, group of people, flower, book, globe, graduates.

MIT logo at the bottom.



**EXCELLENCE
+
CURIOSITY**

Icons: hand writing on a book, graph, person with VR, brain, scientists in a lab.


MIT logo at the bottom.



**BELONGING
+
COMMUNITY**

Icons: group of people sitting, building, heart with hands, piano, saxophone, trumpet.

MIT logo at the bottom.



**OPENNESS
+
RESPECT**

Icons: hands shaking, scales of justice, person holding a plant, person with a child, group of people sitting.

MIT logo at the bottom.



Massachusetts
Institute of
Technology

2022 Town Gown Report

MIT's 2022 Town Gown report provides updates on the Institute's planning and development activities and features a new gateway to MIT in Kendall Square and the Institute's comprehensive sustainability programs. Every activity reported in these pages serves to advance MIT's mission of teaching and research as the Institute strives to address local and global challenges that impact society and the planet.



MIT Values banner displayed in Lobby 7 of the Main Campus. Image courtesy of Jake Belcher.

The Cover

Responding to calls from the community that MIT would benefit from having a statement of shared values, in December 2020 the Institute charged the MIT Values Statement Committee to develop one through broad consultation across the MIT community. On April 12, 2022, President Rafael Reif, Provost Cynthia Barnhart and Chancellor Melissa Nobles shared the values statement with the community, with their strong endorsement. MIT Values are enacted throughout campus and are evidenced in the Institute's planning and development initiatives.

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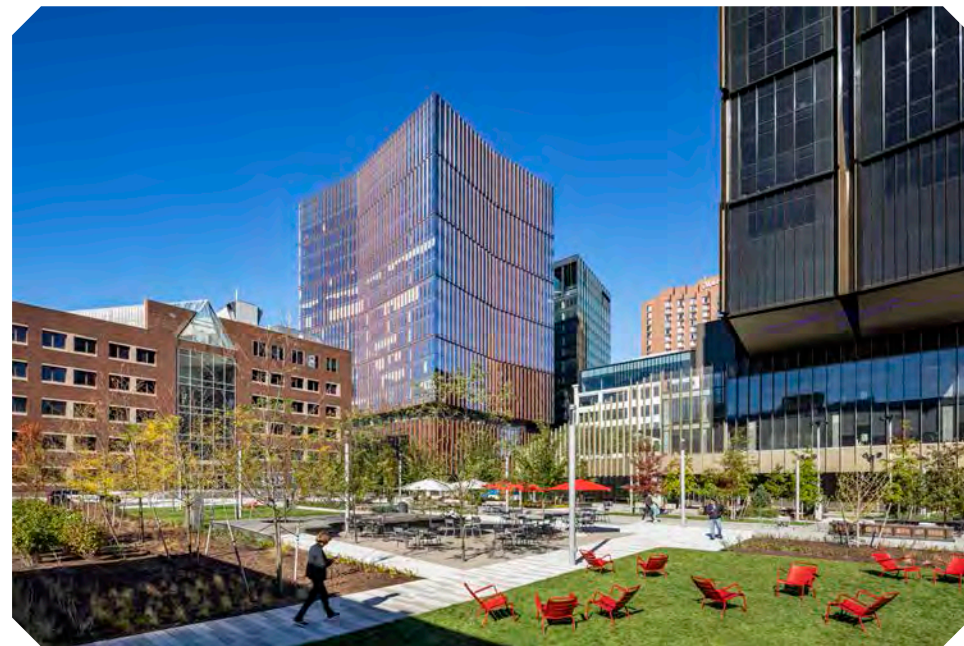
Unless otherwise specified, all tables and maps reflect data from the reporting period July 1, 2021 – June 30, 2022.

New Gateway to MIT in Kendall Square

Our collective ideas and aspirations for a new gateway on the east side of the MIT campus next to Kendall Square are taking shape in a substantial and exciting way. Even though we've been working internally and externally for more than 12 years on the Kendall Square Initiative (the replacement of six parking lots with a variety of buildings and the creation of a 2+ acre open space), it still feels surprising to stand in the midst of the new buildings and open spaces and take it all in. What a tremendous community accomplishment! Of course, the Institute's historic and traditional entrance at 77 Massachusetts Ave. will continue to welcome all through its iconic front doors.



Graduate Tower at Site 4. Image courtesy of John Horner.



314 Main Street. Image courtesy of Albert Vecerka/Esto.

The [Graduate Tower at Site 4](#) (Building E37, 45 Hayward) provides 454 housing units and a range of amenities for graduate students and families. Its location — in the heart of Kendall Square — is unparalleled in terms of its proximity to restaurants, retail, transit, open space, and the campus. The energy from the infusion of students and families is palpable as you walk around in the vicinity of the building.

The MIT Welcome Center (Building E38, 292 Main Street) offers a dynamic experience for prospective students and guests on campus. Visitors are invited to enjoy the bright and friendly space that features uniquely MIT artwork and lighting. All are welcome to check in with staff at the welcome desk, pick up campus maps, fill water bottles, charge phones, take pictures at the selfie wall, and use the public restrooms. The Welcome Center, anchored by MIT Admissions, is becoming known as a popular spot to meet and a destination for a range of events. The building's upper floors are home to MIT's InnovationHQ, Office of Sustainability, Abdul

Latif Jameel Water and Food Systems Lab (J-WAFS), MIT Open Space Programming, and Environmental Solutions Initiative — together creating a vibrant hub of research, discovery, and implementation in a range of disciplines. The Center is open to visitors Monday – Friday from 9 a.m. – 6 p.m., excluding MIT holidays and Institute closures.

The Kendall/MIT Open Space is adjacent to the MIT Welcome Center and offers over 2 acres of seating, public art, trees, and plantings. Right next to the Kendall/MIT MBTA station, it serves as both a place of respite and a community gathering space. In its first year, MIT's Open Space Programming group planned more than 60 public programs with 40+ collaborators and 4,800 attendees. The year-round events featured music, art, dance, film, family activi-



Science Club for Girls workshop in the Kendall/MIT Open Space. Image courtesy of MIT Open Space Programming.

ties, and food trucks. By every account, the open space is on its way to meeting its overarching objective — to provide an accessible, active, and welcoming space for the Cambridge, MIT, and Kendall Square communities.



MIT Museum at the Gambrill Center. Image courtesy of Karen Baird.

Steps away from the Welcome Center and open space, the MIT Museum at the Gambrill Center opened in its new location earlier this fall — an airy 56,000 square foot space at 314 Main Street (Building E28) — and we love that this street address is very MIT at its heart (think π). The Museum features new exhibitions and galleries that tell the story of MIT innovation and research. With a STEAM (science, technology, engineering, arts, and math) focus, it offers something extraordinary for everyone to experience. Learning labs, makerspaces, interactive displays, and meeting spaces — including broad open staircases and an amphitheater called “The Exchange” — make up the Museum's beautifully designed three floors. Visitors can also browse the Museum Store on the first floor. In recognition of its host community, the Museum offers complimentary admission to local residents by providing free memberships. So far, approximately 2,760 Cambridge households have signed up.

In addition to the Museum, innovation-centric 314 Main Street houses several technology and life sciences companies. Boeing, Capital One, Apple, Blackstone, IBM, Zai Lab, Cambridge Mobile Telematics, and Theseus



MBTA Headhouse Rendering. Image courtesy of Perkins&Will and NADAAA.

The new MBTA Kendall/MIT Headhouse is scheduled to be completed in early 2023. In order to ensure continuous public use of the station, MIT engaged in a complex process of constructing interim access while the permanent headhouse was being built. The finished design will be quite spectacular. A striking overhead canopy fabricated by a boat-builder and

Pharmaceuticals are all located in the facility's upper floors. The MIT Press Bookstore is open and thriving below, and Ripple Café and the Row 34 restaurant will fill out the remaining retail spaces in early 2023.

glass station enclosures are two of the much-anticipated architectural features.

By the end of spring 2023, nearly all elements of the new Kendall/MIT gateway will be in place and operating.



The playful doodles on the MIT Dome are drawn by Lydia K. '14 MEng '16 as part of her unusual adventures @nightlyfieldlog. Visitors can enjoy this mural on the first floor of the MIT Welcome Center. Photo courtesy of Gretchen Ertl.

Sustainability

MIT's Climate Action Plan for the Decade

MIT is marshaling its capabilities and charting a path to address the accelerating climate crisis. Guided by [Fast Forward: MIT's Climate Action Plan for the Decade](#), the MIT community is mobilized to address the causes and impacts of climate change at the global scale and the campus level. MIT is committed to eliminating direct emissions from campus by 2050 with a near-term milestone of achieving net-zero carbon emissions at MIT by 2026. Since 2014, when MIT launched a five-year plan for action on climate change, net campus emissions have been cut by 20%.

Led by Vice President for Research Maria Zuber, the Fast Forward climate action plan is both outward facing — addressing climate challenges globally — and focused on MIT's contributions to climate change, allowing the MIT community to work collaboratively to address the climate crisis. "We're committed to action; we're committed to moving fast; and we've organized ourselves better for success," Zuber says of the plan.

At the campus level, climate action efforts are organized around several commitments which build upon past work — including collaboration with the City of Cambridge — focused on climate mitigation, campus resiliency, and leadership in developing climate solutions. "This is an 'all-in' moment for MIT, and we're taking comprehensive steps to address our carbon footprint," says Glen Shor, executive vice president and treasurer at MIT. These comprehensive steps engage staff, students, faculty, and researchers from across the Institute to tap



Graphics depicting what we know and don't know about climate change. Illustrated by Rick Pinchera for the MIT Climate Portal, climate.mit.edu.

their expertise and experience in support of reaching these climate goals and commitments. Campus-level efforts are led by the Office of the Vice President for Campus Services and Stewardship (VPCSS) and the Office of Sustainability (MITOS), and more than a dozen cross-departmental teams are focused on building efficiency, transitioning to electric vehicles (EVs), and enabling large-scale renewable energy projects, among other strategies. Highlights from these efforts are summarized below.

Building Energy Efficiency

MIT made a commitment in 2016 that all new campus construction and major

renovation projects must earn at least Leadership in Energy and Environmental Design (LEED) Gold certification. To date, 24 spaces and buildings at MIT — ranging from intensive lab spaces to office areas — have earned a LEED designation, a performance-based rating system of a building's environmental attributes associated with its design, construction, operations, and management.

tion while improving occupant comfort and working with labs to implement programs such as fume hood hibernation and equipment adjustments. For example, raising ultra-low freezer set points by 10 degrees can reduce their energy consumption by as much as 40%. Together, these measures are projected to yield a 35% reduction in emissions for Building 46, which would contribute to reducing campus-level emissions by 2%.

Over the past decade, in addition to whole building intervention programs, the campus has taken targeted measures in over 100 campus buildings to add building insulation; replace old, inefficient windows; transition to energy-efficient lighting and mechanical systems; optimize lab ventilation systems; and install solar panels on campus — and MIT will

increase the capacity of renewable energy installations on campus by a minimum of 400% by 2026. These smaller-scale contributions to overall emissions reductions are essential steps in a comprehensive campus effort.

A Nimble District Energy System

MIT's district energy system is a network of underground pipes and power lines that moves energy from MIT's Central Utilities Plant (or the CUP, housed in Building 42C) to most Institute buildings to provide elec-

tricity, heating, and air conditioning. Using a closed-loop, central-source system like this enables MIT to operate more efficiently by using less energy to heat and cool its buildings and labs, and by maintaining better load control to accommodate seasonal variations in peak demand.

This past year, MIT completed a major upgrade of the district energy system whereby the majority of buildings on campus now benefit from the most advanced cogeneration technology for combined heating, cooling, and power delivery. This system generates electrical power that produces 15 to 25% less carbon than the current New England grid. The system is also able to export power during times when the grid is most stressed, which contributes to the resiliency of local energy systems. Conversely, any time the grid is a cleaner option, MIT is able to import a higher amount of electricity

from the utility and distribute this energy through our centralized system. MIT has the ability to import 100% of its electrical energy from the grid as it becomes cleaner, bringing MIT closer to meeting decarbonization goals.

MIT is also working to convert its existing steam-based heat distribution systems into more efficient hot-water systems, an initiative that will help the Institute achieve enhanced resiliency, increased reliability and safety, a reduction in heat energy losses, and lower greenhouse gas emissions. Elements of recent project work include adding two central hot water heat exchange plants on campus — one is housed in a rooftop addition on the CUP (Building 42C) to serve the new MIT Stephen A. Schwarzman College of Computing, and the other is in the basement of Building E40 with hot water distribution piping systems that serve

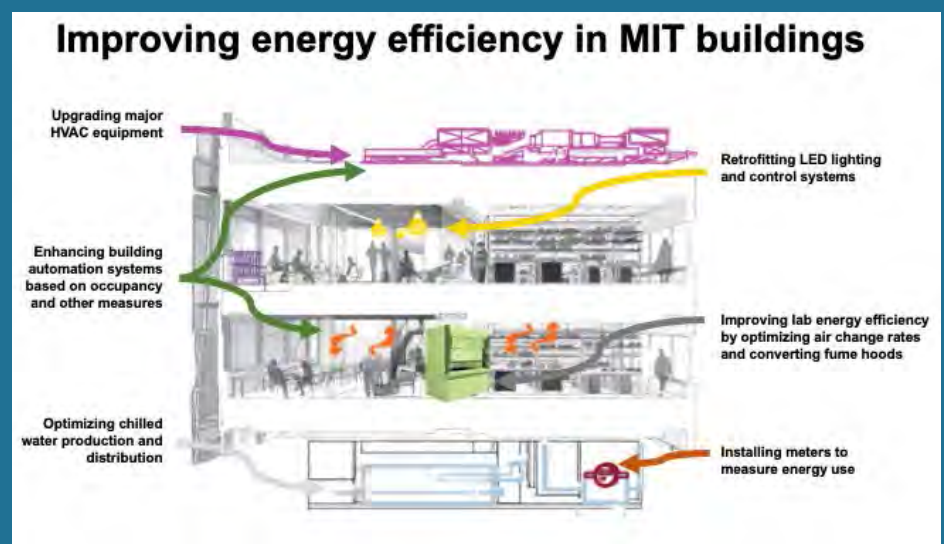


Image courtesy of MIT Department of Facilities.

Current efficiency efforts focus on reducing energy in the 20 campus buildings that account for more than 50% of MIT's energy consumption. One such project that aims to improve energy efficiency is in Building 46, which houses the Department of Brain and Cognitive Sciences and the Picower Institute for Learning and Memory.

Building 46 is the biggest energy consumer on the campus because of its large size and high concentration of lab spaces. Interventions include optimizing ventilation systems to significantly reduce energy consump-

MIT Energy Efficiency Upgrade Projects

Data as of June 30, 2022
Buildings with academic occupancy shown

Completed in 2021/2022

In Construction or Planned for 2022/2023



several East Campus buildings.

In addition to these efforts, MIT continues to work in collaboration with faculty, students, industry experts, peer institutions, and the cities of Cambridge and Boston to evaluate various strategies, opportunities, and constraints. MIT is reviewing options such as electric steam boilers and industrial-scale heat pumps, thermal batteries, geothermal exchange, micro-reactors, bio-based fuels, and green hydrogen produced from renewable energy, in order to incorporate the most beneficial technologies into a blueprint that will help MIT get to its 2050 goal.

Enabling Fleet Electrification

Next to building energy use, emissions from on-campus vehicles are a key target for reduction. This encompasses the expansion of EV charging stations on campus — increasing the number of stations from 120 to 360 — and the electrification of the Institute’s fleet through replacement of MIT-owned vehicles, including shuttle buses, vans, pickup trucks, passenger cars, and grounds maintenance equipment. In support of these efforts, a team of MIT student researchers led a study of the costs of replacing existing vehicles with EVs currently on the market versus buying new gas vehicles or leaving the existing ones in place. The research produced a set of specific recommendations for fleet vehicle replacement and charging infrastructure installation on campus to support both commuters and an MIT EV fleet in the future.

Increasing On-Campus Renewable Energy

Increasing solar electricity production on campus is another valuable strategy to eliminate direct campus carbon emissions. MIT committed to expanding its on-site solar generating capacity 400% (from <100 to 500 kilowatts or “kw”). On campus today, there are five rooftop solar photovoltaic (PV) systems that provide 86kw generating capacity, though several are near the end of their productive life cycle. The MIT staff team leading this initiative has identified potential locations for the new installations to meet the minimum 500kw goal and will seek approvals for those in FY23. As a matter of practice, MIT has for several years assessed each new building project or renovation for feasible and effective sustainability features, including rooftop solar. Academic stakeholders have also been engaged to enable opportunities for continued research on solar at MIT.

Designing for Climate Resiliency and Adaptation

Within Fast Forward, there is a call for MIT to “continue to advance climate resiliency plans and mitigation strategies for the campus and publish an adaptation roadmap for the campus by 2025.” The development of this plan began several years ago with the launch of the Climate Resiliency Committee, which seeks to ensure a campus community that continues to fulfill its mission in the face of current and future climate risks and disruptions due to flooding from more frequent and extreme rains, storm surges, and rising sea-levels, as well as extreme heat events.

Managing the uncertainty of these climate risks requires understanding challenges and identifying adaptive opportunities through integrated layers of resilience: community, buildings, infrastructure, and site. These organizing layers are both interdependent and collectively critical to supporting MIT’s mission. Experts from the MIT Joint Program on the Science and Policy of Global Change, the MIT Urban Risk Lab, and the Concrete Sustainability Hub serve as partners contributing new research to reduce the uncertainty for operational decision-making.

MIT continues to develop tools to utilize data collected by researchers to inform cam-

pus decisions related to the potential impacts of climate change. One such tool is the MIT Climate Resiliency Dashboard, a predictive model that illustrates potential future events in the form of flooding on campus.

The tool displays projected flooding data laid over a campus map of MIT and has already informed new building designs, such as the new Music Building and the MIT Schwarzman College of Computing, which are designed to be resilient in a 100-year flood event now anticipated under a changed climate to occur within the next 50 years. The underlying flood risk model visualized in the dashboard



The Hive Sustainability Garden was home to a heat sensor this summer. The sensor, managed by graduate student Lauren Futami, captured heat data to help inform campus resiliency and adaptation planning. Image courtesy of MIT Office of Sustainability.

10-Year Flood Risk Map



This map illustrates modeled peak flood elevation in the event of a future potential 5.6" 24-hour storm on campus under a changed climate. Each year, the probability of this event is 10%. However, over the course of 50 years, there's a 99% chance that this event will happen. The assumptions for this modeled storm are based on anticipated climate changes in 2030. Image courtesy of MIT Office of Sustainability.

Note: The water depth and peak water elevation values are the result of a modeling exercise based on the best available science and involve ranges of uncertainty.

is harmonized with the City of Cambridge flood risk model. These research efforts continue to give MIT and Cambridge a full understanding of potential floods (with heat events soon to be added) and their impacts on the buildings and systems on campus.

Tracking Our Emissions

MIT's Department of Facilities and MITOS work together to account for and publish data regarding our greenhouse gas emissions. The resulting yearly reports for the past eight years are available to the public at <http://sustainability.mit.edu>. This

yearly accounting enables MIT to better understand its direct contribution to greenhouse gas emissions and informs carbon reduction strategies. MIT's climate action plan calls for MIT's off-campus sites, including the Bates Research and Engineering Center, Haystack Observatory, and Endicott House to be included in MIT's scope of greenhouse gas emissions accounting. The inclusion of these spaces will enable a more complete picture of MIT's emissions and of the scope of work needed to reduce, offset, and ultimately eliminate them.

In addition, MIT is working to expand its

accounting to include indirect emissions — also called “Scope 3 emissions” — in order to understand the full breadth of emissions involved in operating the Institute. Since 2018, work has been done to build preliminary estimate and development methods for rapid data analysis of Scope 3 greenhouse gas emissions activities. The Institute's Scope 3 activities — measured by the Scope 3 protocol developed by the World Resources Institute and the World Business Council for Sustainable Development — include goods purchased by MIT, MIT-sponsored travel, employee commuting, campus-generated waste, and MIT capital goods such as building construction materials and large equipment.

Commuting to Campus and Traveling for Business

MIT is piloting a travel carbon offset program to offset Scope 3 emissions affiliated with Institute-sponsored business travel. In 2019, prior to the Covid-19 pandemic, MIT business air travel accounted for over 45,000 metric tons of carbon dioxide equivalent (CO₂e). This is comparable to the annual energy use in 8,756 U.S. homes. The soon-to-be finalized offset program encompasses a voluntary pilot program with a mileage-based fee, an annual collective investment in carbon offsets, and a commitment to an ongoing assessment to refine the program. Planned enrollment in the pilot is set to begin in late fall 2022.

Closer to home, Access MIT — the Institute's commuter program — continues to provide flexible commuting options in an effort to decrease on-campus parking and encourage benefits-eligible employees to

increase their use of public transportation as well as walking and biking. This is enabled via a pay-per-day parking program, no-cost local bus and subway access, and deeply discounted commuter rail passes as a way to support low carbon commutes. During the pandemic, while requests for parking accounts from employees increased by more than 40%, the parking lot occupancy rate remained at 65-70% due to the Institute's implementation of hybrid work schedules combined with a higher rate of inactive accounts.

Expanding Sustainable Food Options and Programming

The Fast Forward climate action plan calls for establishing quantitative goals related to food, water, and waste systems to advance MIT's commitment to climate. The Division of Student Life (DSL) has long worked with dining vendors, MITOS, and other campus partners to advance a more sustainable, affordable, and equitable food system. Collaborative efforts with MITOS ranged from increasing access to low-cost groceries on and around campus to sourcing sustainable coffee for campus cafes and convening a group of stakeholders to frame a quantitative climate goal related to food. This past year also saw the opening of the Launchpad in the Stratton Student Center, created through a collaboration between MIT and the nonprofit food business incubator Commonwealth Kitchen.

The Launchpad offers the MIT community more variety and healthy food options while also supporting diverse, local start-up food businesses and promoting a more just, equitable, and sustainable food economy.

Designing Out Waste on Campus

MITOS continues work with partners across campus to conduct a series of waste behavior studies to identify waste stream contamination (the wrong item going in the wrong bin) and overall data around specific types of waste like food, plastics, and polystyrene. Data from these audits is used to design programming, signage, and additional interventions to design out waste from MIT's campus. Practices such as behavioral signage directing users to choose the correct bin and centralized bin systems to decrease stream contamination and increase recycling rates were tested in academic and office buildings as well as an undergraduate residence, Random Hall. The Random Hall food waste collection pilot effectively established systems to increase the diversion of food waste away from landfills to enable re-capturing of energy from the residence's food waste. This pilot expanded to a year-long program in the 2022-2023 academic year in Random Hall and will help inform methods for designing out food waste from other campus residences.

The Fast Forward plan calls for a campus waste impact goal to be established and announced by the end of 2022. Building on lessons learned and data collected through campus waste pilot activities to date, MITOS convened key stakeholders in the 2022 academic year to begin scoping of proposed campus impact goals. MITOS also secured a new full-time position to support implementation of efforts to design out waste from MIT.

Dining, Dorms, and Research (2017)

This collection of waste audits was conducted over a yearlong period from 2016-2017 and encompassed an undergraduate dorm, two sets of academic and research spaces, and two dining areas. The study was led by Rachel Perlman SM '15, PhD '20 in collaboration with MITOS and the Department of Facilities for Perlman's thesis.

22% of the recycling was contaminated by weight.



58% of the trash could have been diverted.



Dining Hall Food Waste (2019)

In Fall 2019, MITOS partnered with Waste Watchers to conduct a food waste survey at two dining halls on campus, Baker Dining Hall and the Howard Dining Hall at Maseeh Hall. The food waste survey collected data on two selected days, one in September and one in October, and looked at food scraps from 100 individual students.

Table 1 - Audit Quantities by Weight

| | Audit Date | Total Food Weight* (kg) | Daily Dinner Food Waste (lb/person) | Annual Food Waste* (lb/student-year**) |
|----------------------------------|------------|-------------------------|-------------------------------------|--|
| Baker Dining Hall | 9/23/2019 | 7.02 | 0.15 | 75.68 |
| | 10/28/2019 | 9.1 | 0.20 | 98.1 |
| The Howard Dining Hall at Maseeh | 9/23/2019 | 6.44 | 0.14 | 69.42 |
| | 10/28/2019 | 6.46 | 0.14 | 69.6 |
| Average | 9/23/2019 | 6.73 | 0.15 | 72.55 |
| | 10/28/2019 | 7.78 | 0.17 | 83.9 |

Notes:
 * Total food waste refers to the food scraps from the plates of 100 students.
 ** One year is defined as two academic semesters at around 14 weeks each. One student is defined as an MIT undergrad enrolled in at least a 14 meals per week (or equivalent) plan.
 * Annual food waste represents breakfast, lunch and dinner waste as a scaled product of annual dinner waste using a factor of 2.5.



Sophomores Grace Sun and Sruthi Kalavacherla enjoy lunch from Las Palmas Restaurant in the Stratton Student Center. The Launchpad debuted this fall in the second-floor Lobdell Food Court. Image courtesy of Grace Sun.

MIT also began collaborating with local businesses to provide students access to lower-cost and at-cost groceries and food products through a partnership with the Daily Table, a nonprofit community grocer in Central Square, which now accepts Tech-CASH.

Course: Solving for Carbon Neutrality at MIT

Climate solutions come from all corners of the Institute, including from students. With a focus on designing solution scenarios for MIT for the short and long term, the Mechanical Engineering course “Solving for Carbon Neutrality at MIT” is designed with the support of MIT Facilities engineers and an interdisciplinary group of faculty who bring their knowledge to bear on the solutions. Undergraduate students are engaged in project-based learning that leverages the campus as a test bed for ideas. The spring 2022 cohort of students crafted plans to reach zero direct emissions by 2050 and shared these with VPCSS teams to inform future mitigation efforts.

Looking Ahead

Enabling Large-Scale Renewable Energy Projects

Building on the success of the 2016 Summit Farms Power Purchase Agreement (PPA) that enabled the construction of a 650-acre, 60-megawatt solar farm on fallow farmland in North Carolina, MIT continues to seek out collaborative opportunities to enable the development of new, large-scale renewable energy projects and accelerate the de-

carbonization of regional electricity grids. In 2022, through the purchase of 87,073 megawatt hours of solar power from Summit Farms, MIT offset over 27,000 metric tons of CO₂e from on-campus operations.

Data-Driven Decision Making

MITOS's Sustainability DataPool is a collaborative project that provides the MIT community with access to campus sustainability data and visualizations. Using real-time data, the tool empowers MIT community members by providing the data they need to understand current performance and develop innovative sustainability solutions and ideas. The collection and display of this data is essential to both inform the work of MIT and educate and empower the MIT community in devising ideas to help reach the goals of the climate action plan.

Continued Efforts

MIT is responding to the far-reaching impacts of climate change through engagement that stretches across the Institute. The strategies and solutions devised are designed to be responsive and adaptable.

Students, Faculty, and Staff

Student Population

MIT's undergraduate student population for FY22 was 4,629 — an increase of 269 from the previous year (note that FY22 uses enrollment figures from fall 2021). The increase in enrollment figures in 2021 is primarily attributed to a decrease in Covid-19 disruptions. Some students chose to defer enrollment in fall 2020, but undergraduate enrollment appears to have recovered.

Graduate student enrollment and the number of postdoctoral employees fluctuate based on the independent decisions of academic departments.

These determinations are governed by a variety of factors including the availability of research funding, the ability of international students to obtain visas, and, more recently, the impacts of the global pandemic. Since 2003, the average annual growth rate for graduate students has been 0.8%. After the Covid-19 disruptions in 2020, the graduate student population grew in 2021 by 354 students, a 5.3% increase and well over the trend line. Several departments saw above-average growth, but the growth in the Sloan School of Management student population accounted for nearly two-thirds of the total growth in graduate students. With the opening of the MIT Schwarzman College of

| Student Body | 2018 | 2019 | 2020 | 2021 | 2022 | 2032 |
|--|--------|--------|--------|--------|--------|---------------|
| Total Undergraduate Students | 4,489 | 4,550 | 4,516 | 4,360 | 4,629 | 4,700 |
| Day | 4,489 | 4,550 | 4,516 | 4,360 | 4,629 | |
| Evening | N/A | N/A | N/A | N/A | N/A | |
| Full Time | 4,456 | 4,506 | 4,487 | 4,234 | 4,579 | |
| Part Time | 33 | 44 | 29 | 126 | 50 | |
| Total Graduate Students | 6,695 | 6,742 | 6,780 | 6,729 | 7,083* | 7,100-7,300 |
| Day | 6,695 | 6,742 | 6,780 | 6,729 | 7,083 | |
| Evening | N/A | N/A | N/A | N/A | N/A | |
| Full Time | 6,571 | 6,740 | 6,774 | 6,713 | 7,080 | |
| Part Time | 124 | 2 | 6 | 16 | 3 | |
| Non-Degree Students | 197 | 195 | 159 | 121 | 164 | |
| Day | 197 | 195 | 159 | 121 | 164 | |
| Evening | N/A | N/A | N/A | N/A | N/A | |
| Total Students Attending Classes in Cambridge | 11,381 | 11,487 | 11,455 | 11,210 | 11,876 | 11,800-12,000 |
| Non-resident students not included | 85 | 87 | 65 | 44 | 58 | |
| Number of Cambridge undergraduate applicants accepted during the application cycle | | | | 9 | 8 | |

*International students account for 41% of the 2022 graduate student population.

| Faculty and Staff | 2018 | 2019 | 2020 | 2021 | 2022 | 2032 |
|---|--------|--------|--------|--------|-------|---------------|
| Cambridge-based Staff | | | | | | |
| Head Count | 10,801 | 10,813 | 10,805 | 10,225 | 9,603 | 10,000-11,000 |
| FTEs | 9,148 | 9,217 | 9,198 | 8,802 | 8,346 | |
| Postdoctoral Staff* | 1,442 | 1,434 | 1,452 | 1,279 | 1,237 | |
| Cambridge-based Faculty | | | | | | |
| Head Count | 1,027 | 1,037 | 1,050 | 1,040 | 1,047 | 1,100 |
| FTEs | 1,020 | 1,028 | 1,041 | 1,031 | 1,039 | |
| Number of Cambridge Residents Employed at Cambridge Facilities | 2,575 | 2,560 | 2,524 | 2,190 | 2,313 | 2,500-2,750 |

*Postdoctoral employees are included in the head count and FTEs for Cambridge-based staff.

Computing, MIT expects its graduate student population to increase further over the next decade, matching the augmented teaching and research facilities and faculty available.

Faculty and Staff

MIT's faculty and staff employment is largely based on the needs and strategies developed at the department, laboratory, and center (DLC) level rather than a centralized planning process at the Institute level.

Approximately 105 DLCs manage their own staffing in support of their objectives with funding that is assembled from a variety of sources. Staffing was reduced by more than 900 employees in the recession more than a decade ago. The staff population continued to grow until 2018, only recovering to pre-recession levels in 2015. Staff population has dropped in each of the last three years, with a reduction of 622 or 6.1% in the last year. The proportion of employees who are Cambridge residents is now up to 24%.

Postdoctoral employees are staff who have completed their formal education but continue to gain research experience by working in academic laboratories, similar to how medical doctors complete a residency program to specialize in a field of medicine. The number of postdoctoral

employees has dropped at an annual rate of 2.8% since 2015, including a significant decline of 3.3% in the current reporting year. The number of faculty members has been relatively flat, growing at 0.3% annually since 2010. The MIT Schwarzman College of Computing is expected to increase the faculty headcount by 50 over the next several years.

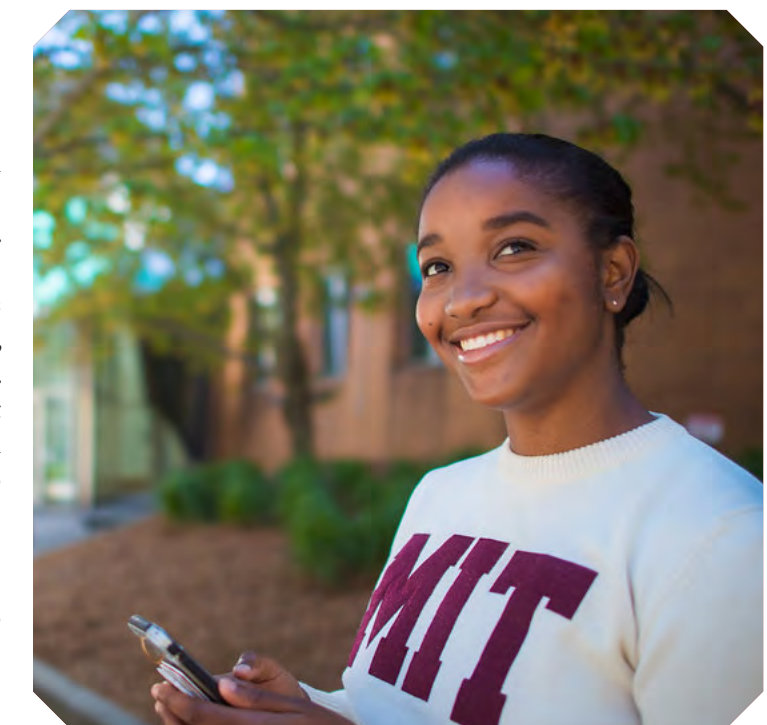


Image courtesy of Gretchen Ertl.

Housing

Undergraduate Housing

MIT houses 91.4% of its undergraduates in MIT-approved housing, primarily in on-campus residence halls but also in Fraternities, Sororities, and Independent Living Groups (FSILGs) in Cambridge, Brookline, and Boston. MIT offers four years of housing to all undergraduates and requires all first-year students to live on campus.

According to the latest City of Boston Student Housing Trends report, MIT houses a higher percentage of its undergraduate population than any other of the 24 reporting institutions. As a whole, the reporting colleges and universities house less than 51.1% of their undergraduate population.

As reported in more detail in the Campus Planning and Project sections, Burton-Conner House (W51) reopened in the fall of 2022 with 388 student beds after a major renovation. A continuing sequence of undergraduate residence hall renovations is anticipated over the next decade, with an extensive two-year renovation of



| Housing | Tax Exempt | | Taxable | |
|-------------|-------------------------------|---------------|--------------------------------|---------------|
| | MIT-Owned and Managed Housing | Other Housing | MIT-Owned and Managed Housing* | Other Housing |
| 2018 | | | | |
| Units | 0 | 0 | 163 | 939 |
| Buildings | 0 | 0 | 12 | 7 |
| 2019 | | | | |
| Units | 0 | 0 | 163 | 939 |
| Buildings | 0 | 0 | 11 | 7 |
| 2020 | | | | |
| Units | 0 | 0 | 163 | 939 |
| Buildings | 0 | 0 | 11 | 7 |
| 2021 | | | | |
| Units | 0 | 0 | 163 | 939 |
| Buildings | 0 | 0 | 11 | 7 |
| 2022 | | | | |
| Units | 0 | 0 | 463 | 938 |
| Buildings | 0 | 0 | 12 | 7 |
| 2032 | | | | |
| Units | 0 | 0 | 463 | 938 |
| Buildings | 0 | 0 | 12 | 7 |

*Occupied by both MIT and non-MIT residents.

| Student Residences | 2018 | 2019 | 2020 | 2021 | 2022 | 2032 |
|--|-------|-------|-------|-------|-------|-------------|
| Undergraduate Students Residing in Cambridge | | | | | | |
| In Institute-approved housing | 3,555 | 3,626 | 3,591 | 767 | 3,690 | 3,600-3,700 |
| In off-campus housing owned & managed by MIT | 0 | 0 | 0 | 0 | 0 | |
| In off-campus non-MIT housing | 159 | 146 | 126 | 217 | 202 | |
| Graduate Students Residing in Cambridge | | | | | | |
| In Institute-approved housing | 2,262 | 2,348 | 2,446 | 1,412 | 2,106 | 3,200-3,500 |
| In off-campus housing owned & managed by MIT | 22 | 32 | 38 | 29 | 25 | |
| In off-campus non-MIT housing | 2,500 | 2,415 | 2,422 | 2,303 | 2,811 | |
| Student Parking | | | | | | |
| Number of student parking accounts issued (including resident and commuter parking)* | 219 | 364** | 451 | 976 | 973 | |

*Reporting on accounts rather than spaces as we have done in previous years allows MIT to more accurately reflect the number of students driving on or around campus.

**Change in the number of active accounts from previous years is the result of a change in reporting.

the East Campus Residence Hall (Buildings 62 and 64) planned to begin next summer.

Graduate Housing

The housing needs of the graduate student population have been studied extensively in the Clay report (2014), in the Graduate Student Housing Working Group report (2018), and now in the ongoing work of the Graduate Housing Working Group (GHWG). The recommendations from the earlier reports included the addition of 500-1,100 new beds for graduate students.

MIT responded by making a commitment, as part of the 2017 Volpe zoning agreement, to deliver a total of 950 new or converted beds of graduate student housing and has made great progress toward that goal:

- At 70 Amherst Street (E2), 135 beds were converted to graduate student use in 2017, and an additional 15 graduate student beds were created or converted in other undergraduate facilities.

- The Graduate Tower at Site 4 (E37) opened in 2021 with 454 units. With the demolition of the Eastgate Apartments (E55), the net gain is 250 beds for graduate students.

- Construction started earlier this year on the West Campus Graduate Student Dormitory (W87 and W88), which will deliver approximately 676 new beds in 2024.

By the fall of 2024, MIT will have delivered more than 1,075 new beds for graduate housing, exceeding its commitment by more than 100 beds. These additional beds will allow 47% of the projected graduate student population to live in MIT housing.

Housing rates at MIT are formulated in consultation with the Graduate Housing Working Group, composed of student leaders, Heads of House, and Institute leaders. The Division of Student Life (DSL) and the Office of the Vice Chancellor (OVC) continue to work closely together to support graduate students as they navigate their MIT experience. MIT's goal is to provide an array of affordable, quality housing

options so that students can make choices that fit their individual circumstances.

As part of an ongoing effort to improve the on-campus graduate residential system, MIT has been working with faculty Heads of House in residence and student leaders to enhance graduate housing processes and technology. This year, MIT deployed new housing technology, known as “StarRez,” which has increased the convenience of housing selection, enhanced housing management tools, and promoted system efficiencies. In conjunction with housing technology improvements, MIT updated its graduate housing selection process to a “Self-Selection” model whereby prospective residents of graduate housing view and select an available unit in one easy-to-navigate online process. MIT also re-launched a graduate housing referral program which provides current residents of MIT graduate housing with a rental credit for each graduate student they refer who subsequently chooses to live in MIT graduate housing.

MIT is also in the process of adjusting its housing renewal policies to allow most graduate residents to renew their on-campus housing for the duration of their academic program. Offering more renewable license agreements will bring greater housing stability to students, address current vacancy challenges with an eye toward capacity increases in 2024, and help align timing of license agreements with academic program lengths.

As previously reported, MIT has made other recent management improvements intended to make the best use of existing resources while responding to and accommodating graduate student needs. These improvements include:

- Setting on-campus rental periods in closer alignment with off-campus housing market practices for greater convenience and improved choices.



- Improving communication and simplifying the housing selection process resulting in more beds being committed to graduate students sooner in the process, reducing uncertainty and improving the student experience.
- Guaranteeing a second year of housing in all facilities, which gives greater housing security for campus residents, particularly master’s-degree students who desire dependable housing for their full two-year program.
- Permitting roommates to sign up for housing as a group.
- Allowing couples in buildings previously reserved for single students as well as opening 1-bedroom units for single residents in previously family-only buildings.

MIT and Community Housing

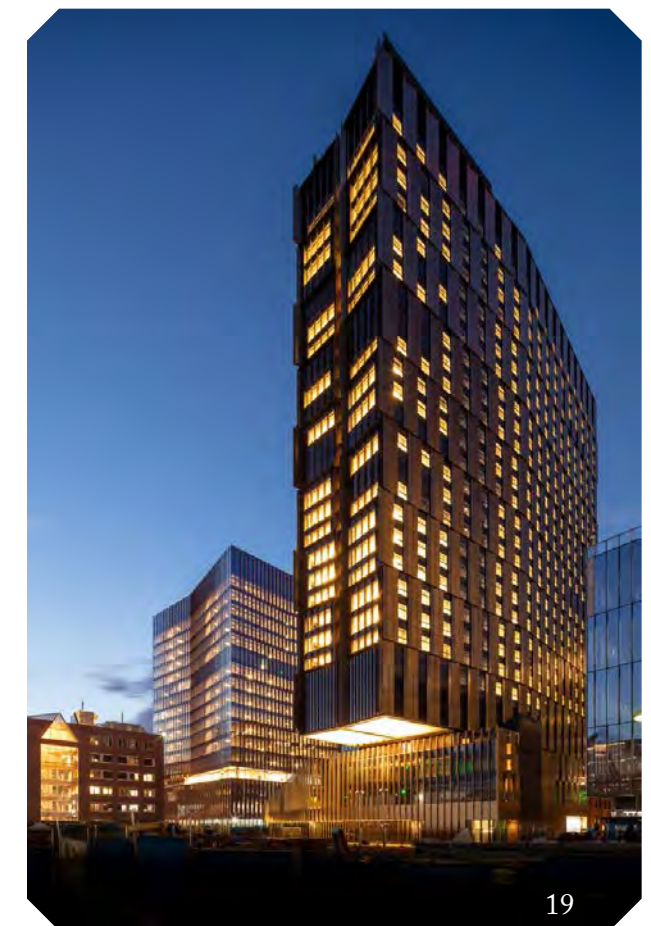
Like every employer in Greater Boston, MIT is impacted by high housing costs. The housing shortage imposes a burden on existing and prospective employees at all levels of the Institute, from service and professional staff to academic employees including faculty and postdoctoral researchers. High housing costs can create transportation and quality-of-life issues, as employees find they must search farther from campus to find suitable housing they can afford.

To assist with the high cost of housing, MIT provides a flexible, tax-efficient, low-interest mortgage program for its faculty. The program has proven to be an important recruiting and retention tool and is similar to programs offered by peer institutions. Since 2005, MIT’s program enrolled approximately 95% of eligible faculty, and more than 1,300 faculty members have participated in the program. An important goal of the program is to give faculty flexibility in choosing where they would like to live in the region.

MIT is taking major steps to build housing that will be available to all families in Cambridge and the region, including its own employees. Currently, MIT’s plans include building up to 1,700 units of housing in Kendall Square and at the Volpe site, of which approximately 330 will be affordable units.

The first of these efforts is now available for rent. 165 Main Street is a 300-unit apartment building with 54 affordable units, nine middle-income units, and 36 innovation units. There are also smaller efforts on a neighborhood scale, such as the current renovation of a triple decker that will provide three family units at 882 Main Street in the heart of Central Square.

In addition, MIT will contribute approximately \$66 million to the Cambridge Affordable Housing Trust during the course of the Kendall Square and Volpe projects.



The Graduate Tower at Site 4. Image courtesy of John Horner photography, NADAAA, and Perkins&Will.

Transportation

A Flexible, Sustainable Approach to Transportation

MIT's Access MIT program for benefits-eligible employees, launched in 2016, offers commuting incentives and a pay-per-day parking plan that have helped reduce the demand for parking on campus. Through the program, MIT encourages sustainable transportation practices while striving to create ongoing awareness and shared understanding of transportation choices and impacts, with the added benefits of reducing traffic congestion and advancing a culture of low-carbon commuting.

Commuters to campus are not required to make a monthly or annual financial commitment to a traditional parking pass. Instead, they pay for parking only on the days they need it, and they can opt on other days to commute via bike, subway, bus, or another method, without being charged for parking. Discounted monthly rail passes and a fully-subsidized transit pass for subway and local bus travel — embedded in the MIT employee ID card — further enable this flexibility.

Access MIT Program benefits include:

- Free, unrestricted use of the MBTA subway and local bus systems for benefits-eligible Cambridge campus MIT faculty and staff
- A 50-60% subsidy for monthly commuter rail passes
- A 50% subsidy for parking at MBTA stations, up to \$100 per month
- Reimbursement for up to 50% of private transit commuting costs where the MBTA is not available, up to \$255 per month
- Pay-per-day parking (currently at a rate of \$11/day)

Between 2016 and 2019, on-campus parking in gated lots fell by nearly 15%. Requests for on-campus parking accounts increased by more than 40% during the pandemic, but the advent of hybrid work schedules helped keep parking lot occupancy rates at 70% or below.

MIT, like many other employers, expects to continue offering remote and hybrid work options

for employees and has been seeking ways to support new commuting patterns. For example, MIT expanded the Access MIT program last winter to include the MBTA 5-Day Flex Pass. MIT employees receive a 60% subsidy on this pass, which provides five round-trip commuter rail tickets to be used within the 30-day period after purchase. For employees on a hybrid schedule, the Flex Pass may be more cost-efficient than a monthly commuter rail pass. MIT is now planning to launch a new 10-ride commuter rail pass during the upcoming months.

For students, faculty, and staff who commute to campus by bicycle, the Institute maintains more than 5,000 bike parking spaces across campus located in secure, accessible, well-lit spaces close to building entrances and placed indoors or in covered areas where possible. The ongoing Bicycle Commuter Benefit Program for full-time employees reimburses up to \$300 per year for the purchase, improvements, repair, or storage of a bicycle used for commuting to MIT. To increase flexibility, the program was revised in 2020 to allow cyclists to claim a partial subsidy even if they participate in other MIT-subsidized parking or transit programs. MIT plans to continue providing additional bike parking spaces and other bicycle infrastructure to meet the needs of our growing and enthusiastic cycling community.

MIT's Commuter Connections Bicycling website is a resource for anyone bicycling in and around MIT's campus. It includes information on bike parking and repair station locations as well as bike safety, etiquette, and security. It also provides resources regarding bicycle benefits and discounts. Additionally, the MIT Police maintain information on their website for bike safety, security, and registration.

For community members who don't own a bike or who need one temporarily, MIT sponsors six Bluebikes stations with a total of 184 docks on campus. Two of the stations (77 Massachu-

setts Ave. and at the corner of Vassar and Main Streets) have been in place since the bike-share program began in Cambridge in 2012 and are among the busiest in the Bluebikes system. MIT subsidizes annual Bluebikes participation for all eligible MIT students and employees, offering memberships at \$45/year (regularly \$119/year). Recently, MIT expanded the existing Bluebikes station at the Westgate low-rise residence by 28 docks, more than doubling the station's capacity to 53 docks, in conjunction with the new West Campus Graduate Student Dormitory project.

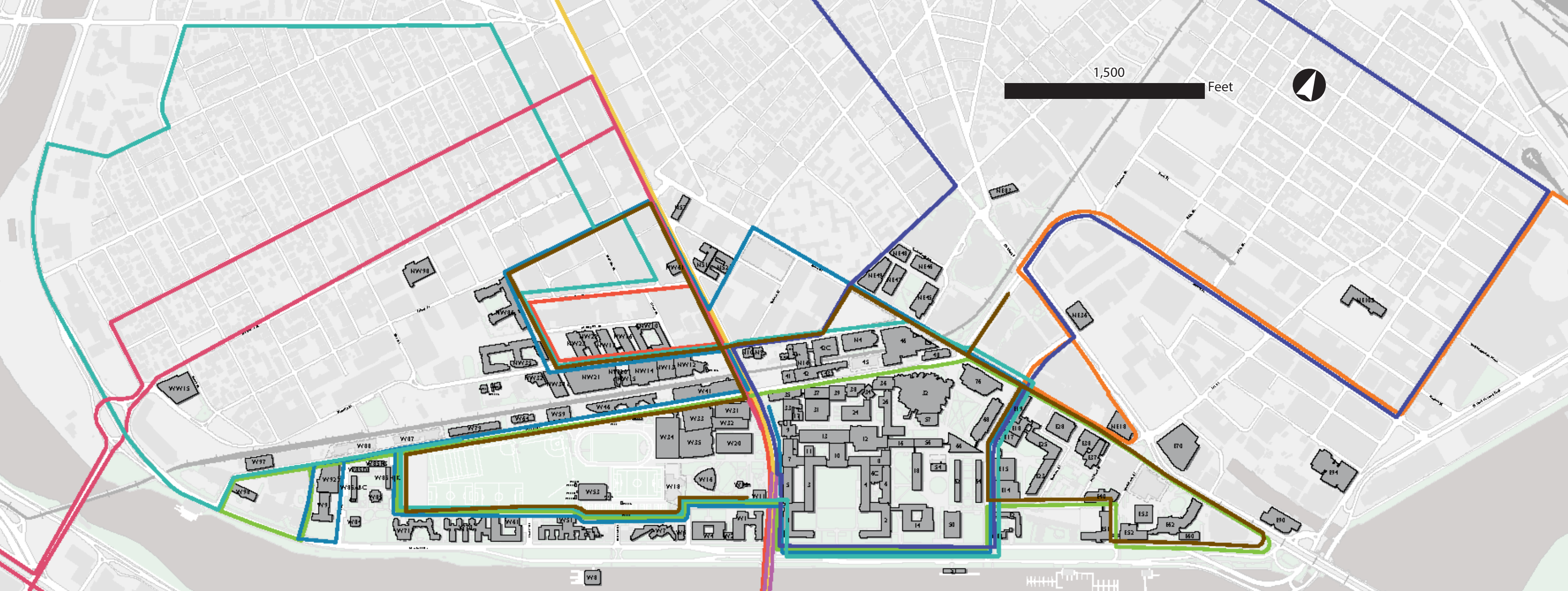
This year, MIT was again awarded the designation of Silver-level Bicycle Friendly University (BFU) by the League of American Bicyclists for its excellent bike infrastructure and programs. MIT has engaged with the League's BFU program since 2014.

While the Institute encourages the use of sustainable transportation methods, we also recognize that many community members can't avoid driving to campus. To serve its students, faculty, staff, and visitors, MIT maintains a campus-wide inventory of parking spaces. Parking account holders are assigned to areas of campus based primarily on where they live or work. For parking account holders with electric vehicles, MIT maintains 151 parking spaces on campus equipped for EV charging, distributed in garages and outside lots, including 22 new spaces activated within the past year. As MIT moves ahead with plans to electrify its fleet of MIT-owned vehicles — including shuttle buses, vans, and grounds equipment — the number of EV charging stations on campus will continue to grow.

Community members who commuted to campus during the unpredictability of the pandemic enjoyed enhanced commuter subsidies and a suspension of parking charges. However, the pay-per-day parking program resumed in July 2021, and commuter subsidies returned to normal rates in July 2022.



Image courtesy of Gretchen Ertl.



MIT Shuttle Routes

Data as of June 30, 2022
Buildings with academic occupancy shown

| | Route Name | Vehicle Type | Capacity | Frequency of Operation | | Weekday Hours of Operation | Weekend Hours of Operation |
|---|---|-----------------------------|----------|------------------------|----------|---|----------------------------------|
| | | | | Peak | Off-Peak | | |
| ■ | Tech Shuttle | Mid-size transit, biodiesel | 30 seats | 10 min | 20 min | 6:15AM-11:00PM (MIT holidays excluded) | --- |
| ■ | Boston Daytime Shuttle (Sept-May) | Mid-size transit, biodiesel | 30 seats | 30 min | 30 min | 8:00AM-5:45PM (MIT holidays excluded) | --- |
| ■ | SafeRide Cambridge East & Somerville | Mid-size transit, biodiesel | 30 seats | 40 min | 30 min | 6:00PM-11:00PM | 6:00PM-11:00PM |
| ■ | SafeRide Cambridge West & Brookline | Mini-bus, gas | 14 seats | 40 min | 30 min | 6:00PM-11:00PM | 6:00PM-11:00PM |
| ■ | SafeRide Boston East | Mid-size transit, biodiesel | 30 seats | 20 min | 30 min | 6:00PM-1:00AM | 6:00PM-1:00AM |
| ■ | SafeRide Campus Route | Mid-size transit, biodiesel | 30 seats | 35 min | 35 min | 6:00PM-11:00PM | 6:00PM-11:00PM |
| ■ | EZRide by CRTMA | --- | --- | 30 min | 20 min | 6:30AM-7:38M | --- |
| ■ | M2 Shuttle (Cambridge to Boston) | --- | --- | 30 min | 20 min | 6:50AM-10:45PM | --- |
| ■ | Trader Joe's/Whole Foods Shuttle | Mid-size transit, biodiesel | 30 seats | 45 min | 45 min | 11:30AM-4:30PM (Wednesday only) | 11:30AM-4:30PM (Sundays only) |
| ■ | Costco/Target Shuttle (3 Sundays/month) | Mid-size transit, biodiesel | 30 seats | 60 min | 60 min | --- | 11:00AM-3:00PM |
| ■ | OnDemand Shuttle | Mini-bus, gas | 14 seats | On Demand | | 11:00PM-2:30AM | 11:00PM-3:30AM |

Point of Origin for Commuter Trips to Cambridge

| Home Location | Count | Percentage |
|---------------------|---------------|---------------|
| Cambridge | 2,313 | 21.7% |
| Boston | 1,434 | 13.5% |
| Somerville | 564 | 5.3% |
| Arlington | 397 | 3.7% |
| Brookline | 305 | 2.9% |
| Newton | 271 | 2.5% |
| Medford | 244 | 2.3% |
| Belmont | 235 | 2.2% |
| Lexington | 220 | 2.1% |
| Quincy | 146 | 1.4% |
| Watertown | 165 | 1.5% |
| Malden | 139 | 1.3% |
| Winchester | 115 | 1.1% |
| Waltham | 102 | 1.0% |
| Melrose | 85 | 0.8% |
| North Of Boston | 616 | 5.8% |
| South of Boston | 85 | 0.8% |
| West Of Boston | 101 | 0.9% |
| Outside 128 | 1,733 | 16.3% |
| Outside 495 | 416 | 3.9% |
| Connecticut | 23 | 0.2% |
| Maine | 40 | 0.4% |
| New Hampshire | 172 | 1.6% |
| Rhode Island | 78 | 0.7% |
| Vermont | 19 | 0.2% |
| Outside New England | 495 | 4.6% |
| Outside US | 137 | 1.3% |
| Grand Total | 10,650 | 100.0% |

Parking spaces maintained in Cambridge

Number of parking spaces maintained on campus as reported in the annual MIT Parking Inventory **2,740**

Commuting Mode of Choice

| Commuting Mode | 2014 | 2016 | 2018 | 2021* | 2022 |
|----------------------------|------|------|------|-------|------------------------------|
| Drove alone entire way | 21% | 18% | 18% | 21% | Next survey planned for 2023 |
| Took public transportation | 39% | 42% | 43% | 31% | |
| Carpooled | 6% | 5% | 5% | 6% | |
| Bicycled | 15% | 16% | 16% | 22% | |
| Walked | 14% | 15% | 15% | 18% | |
| Other | 5% | 3% | 3% | 2% | |

*The most recent transportation survey was administered in 2021. The 2021 data has been restated to reflect only those employees who physically commuted to campus. This does not include 31.3% of respondents who worked or studied from home.

| | |
|---|---|
| ● Outdoor bike racks | — Major campus pathways |
| ▲ Indoor bike racks | — Off-street bike routes |
| ● Outdoor, covered bike racks | — On-street bike routes |
| B Bluebikes Stations | - - - On-street planned bike routes |

MIT Bicycle Infrastructure

Data as of June 30, 2022
Buildings with academic occupancy shown



Campus Planning

Progress on Renewing Vassar Street

MIT is strengthening Vassar Street as a central spine for the campus. It will be more resilient and attractive for all and better connected to adjacent Cambridge neighborhoods. This effort involves a dual emphasis: improving the public realm and expanding core campus activities, including research, teaching, and residential life. The Vassar Street renewal projects (moving from east to west) are:

- The extension of cycle tracks on Vassar Street to the intersection with Main Street (completed)
- The MIT Stephen A. Schwarzman College of Computing (Building 45, in construction)
- The Central Utilities Plant on Albany Street

(Building 42C, completed)

- The Vassar Street tree planting program (east of Massachusetts Avenue, completed)
- New street light fixtures (phased replacement of original fixtures with more energy-efficient LED technology, in construction)
- The Metropolitan Storage Warehouse (W41, in construction)
- The New Vassar Street Residence Hall for undergraduates (W46, completed)
- The West Campus Graduate Student Dormitory (W87 and W88, in construction)

The Grand Junction Multi-use Path for bicycles and pedestrians, now in design, will enliven the railroad corridor running east and west while

accommodating the MIT community's need to access its buildings. To date, MIT has contributed \$1,000,000 for the design and construction of the Path and is coordinating closely with the City of Cambridge design team. MIT has committed an additional \$8,000,000 for the project and will provide an easement through its property in the Grand Junction corridor from Main Street to Pacific Street.

The Grand Junction Path, the completed Central Utilities Plant upgrade, and the MIT Schwarzman College of Computing are making a substantial contribution to campus greening plans. Through these projects, an existing narrow asphalt path from Albany to Vassar Streets, crossing the railroad tracks, will be transformed into an attractive walkway that connects MIT; the new Ragon Institute of MGH, MIT, and Harvard (now under construction on MIT land); Main Street retail stores; the Engine at

750 Main Street; and The Port neighborhood. The walkway will include a rain garden and new tree plantings to cool and green this important pedestrian corridor and to filter stormwater runoff.

MIT has reestablished the structural soil and planted 36 new trees on Vassar Street from Massachusetts Avenue to Main Street. The plan is to carefully coordinate with ongoing utility and building construction in the area, including planting additional street trees at the MIT Schwarzman College of Computing.

The adaptive re-use of the Metropolitan Storage Warehouse (Met Warehouse) for the School of Architecture and Planning, Project Manus makerspace, and the Morningside Academy for Design will bring new life to this historic structure, dramatically altering this section of Vassar Street and revitalizing the Massachusetts

Tree Resources

Data as of June 30, 2022
Buildings with academic occupancy shown

Tree Locations ●



Image courtesy of Gretchen Ertl.

| Real Estate Leased | | |
|------------------------|--|----------------|
| Use | Leased Location* | Sq Ft** |
| Institutional/Academic | 255 Main Street | 35,594 |
| Institutional/Academic | 1 Kendall Square, Building 300 - 4th–5th Flr | 22,506 |
| Institutional/Academic | 1 Main Street - Suite 1250 | 31,836 |
| Institutional/Academic | 1 Main Street - Suite 900 | 31,571 |
| Institutional/Academic | 105 Broadway - 6th–7th Floor | 47,488 |
| Institutional/Academic | 222 Third Street - Suite 300 | 2,584 |
| Institutional/Academic | 245 First Street - Suite 1500 | 19,805 |
| Institutional/Academic | 300 Tech Square - 2nd Floor | 6,451 |
| Institutional/Academic | 400 Tech Square - 6th Floor | 10,901 |
| Institutional/Academic | 500 Tech Square | 93,108 |
| Institutional/Academic | 600 Tech Square - 2nd-4th Floor | 83,561 |
| Institutional/Academic | 600 Tech Square - 5th Floor | 25,346 |
| Institutional/Academic | 700 Tech Square | 15,753 |
| Total | | 426,504 |

* Leased by MIT from third-party landlords.
 **The Sq Ft may only be a portion of the entire building.

Avenue corner. MIT has proposed public realm improvements on Vassar Street, including removing the obsolete 400 linear-foot warehouse loading zone and investing in widening the narrow existing City sidewalk, planting trees, and installing new streetlights, benches, and bike parking on Vassar Street.

Construction of New Vassar (W46), the now-completed undergraduate residence on Vassar Street, provided major improvements to the Vassar streetscape with creative architecture, public art, bike parking, and benches. Additionally, the landscape includes green infrastructure elements such as new plantings, street trees, and trees on the plaza that will capture and filter

stormwater runoff. MIT installed light-colored paving and expanded the urban canopy, reducing heat island effects and creating outdoor space for social gatherings and improved access to campus. The area south of the Multi-use Path and the Grand Junction tracks was enlarged and transformed at the Pacific Street crossing into a lively urban plaza that will improve the pedestrian environment and properly connect cyclists to and from the Vassar Street cycle tracks.

The West Campus Graduate Student Dormitory provides the location of a final node, at least for the near future, of a north-south connection from the Grand Junction Multi-use Path. Fort Washington Park lies to the north of the Path,

| Property Transfers |
|---|
| Cambridge properties purchased since filing previous Town Gown Report: None |
| Cambridge properties sold since filing previous Town Gown Report: None |
| Cambridge properties donated since filing previous Town Gown Report: Three Park Properties — 3 Emily Street, 87 Brookline Street, and 35 Cherry Street |
| Planned dispositions or acquisitions: None |

and a large landscaped public plaza and walkway is planned as part of the new dormitory project. This enhanced connection to the network of open spaces will bring pedestrians and cyclists into a growing portion of the MIT campus and provide further connections to the river for the Cambridgeport community, including the signalized crossing on Amesbury Street. The City has approved MIT’s design of a complete reconstruction of the public way, including new trees and streetlights.

Property Donations

Many years of work with the City and the community culminated in the final transfer — from MIT to Cambridge — of the three parcels noted above. The City has determined that 3 Emily Street will continue as a community garden, while 87 Brookline has been set up temporarily as a pollinator garden and the use of 35 Cherry Street remains under discussion.

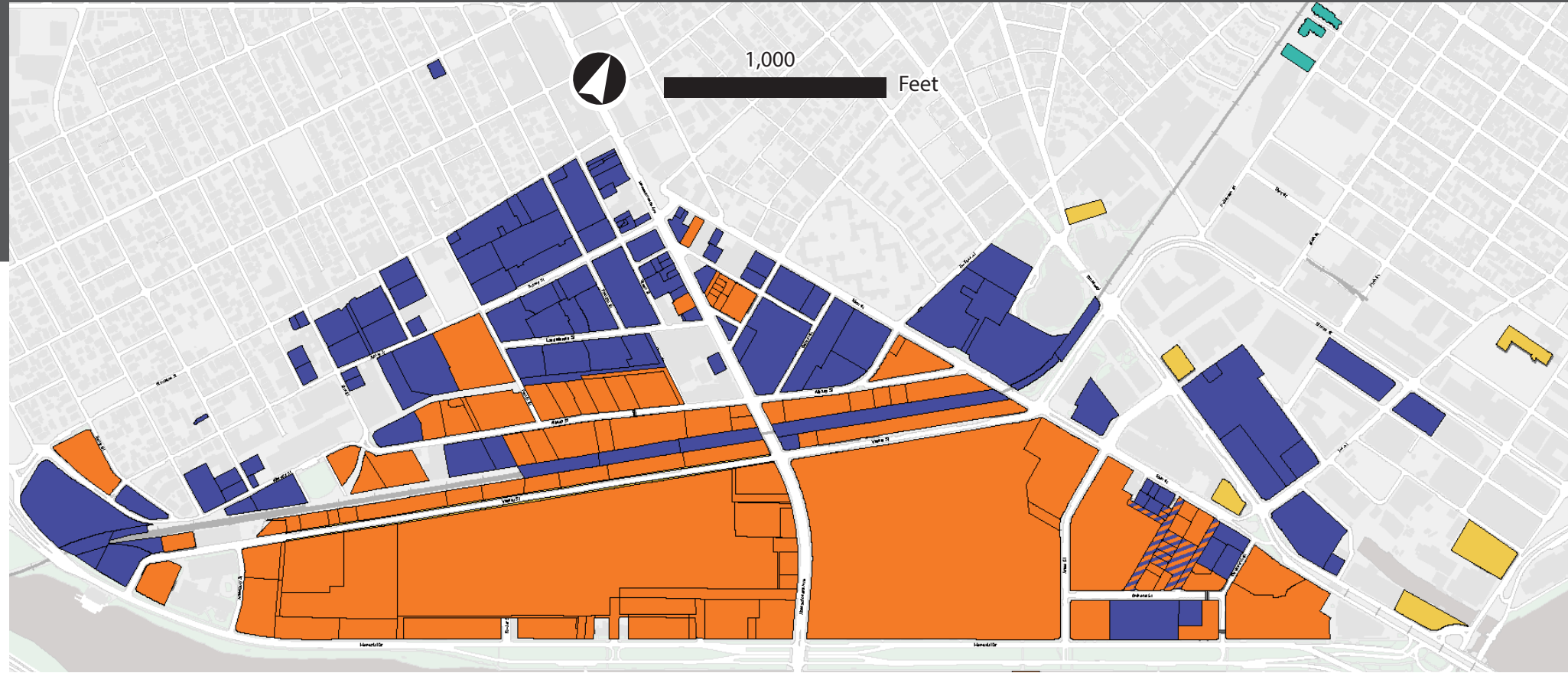
Eversource has advanced a proposal to place major electric transmission lines underneath Vassar Street. Redundant and resilient electric transmission connections to the new substation planned for the site of the Blue Garage in Kendall are needed. Substantial portions of the proposed route are in and around the southern sidewalk of Vassar Street; the extensive excavation support required to install the transmission line under dozens of MIT and municipal utilities could damage and would permanently complicate the maintenance and repair of these utilities. MIT is carefully reviewing this proposal and will work with Eversource and Cambridge to ensure that the final location is coordinated with all the other utilities, infrastructure, trees, and surface improvements in the area.



New Vassar Undergraduate Residence. Image courtesy of Gretchen Ertl.

MIT Property in Cambridge

Data as of June 30, 2022

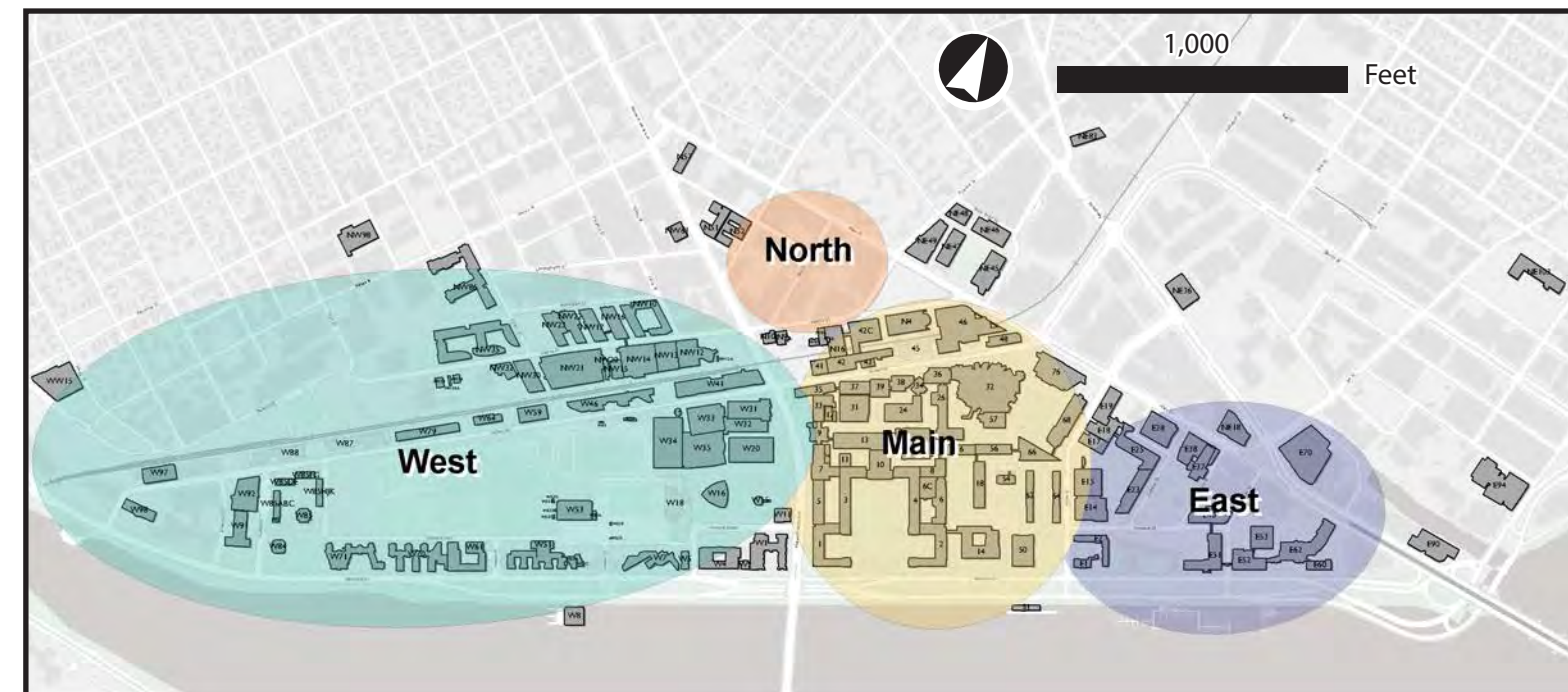


- Academic Plant
- Academic Leased
- Academic & Investment
- Commercial Property
- Commercial Property - Condominium Only

Future Development Opportunities

Data as of June 30, 2022
Buildings with academic occupancy shown

| Facilities and Land Owned | 2018 | 2019 | 2020 | 2021 | 2022 |
|---|-----------|-----------|-----------|-----------|-------------|
| Acres | | | | | |
| Tax Exempt | 166 | 168 | 168 | 168 | 168 |
| Taxable | 92 | 90 | 90 | 91 | 91 |
| Number of Buildings (academic) | 114 | 115 | 115 | 118 | 118 |
| Dormitories | | | | | |
| Number of Buildings | 28 | 28 | 28 | 30 | 29** |
| Number of Beds | 5,662 | 5,997 | 5,964 | 6,285* | 6,280 |
| Size of Buildings (gross square feet unless otherwise noted) | | | | | |
| Institutional/Academic | 6,985,293 | 7,223,070 | 7,223,070 | 7,325,522 | 7,852,775 |
| Student Activities/Athletic/Service | 2,068,551 | 2,063,599 | 2,063,599 | 2,166,267 | 2,166,267 |
| Dormitory/Nontaxable Residential | 2,882,602 | 2,882,602 | 2,894,036 | 3,484,978 | 3,304,698** |
| Commercial (in square feet) | 6,403,144 | 6,408,948 | 6,380,578 | 7,096,270 | 7,107,216 |
| Taxable Residential (in rental units) | 163 | 163 | 163 | 163 | 463*** |
| *The 2021 number is the number of beds available. The actual number of beds utilized during the reporting period was 2,225 due to Covid-19. | | | | | |
| **Reflects removal of Eastgate Residence Hall. ***Represents the addition of 165 Main Street. | | | | | |



Wayfinding

MIT is implementing a comprehensive campus wayfinding system to answer the perennial question of visitors emerging from the Kendall MBTA station: “Where is MIT?” The system serves Cambridge residents, people who work in Kendall Square, and visitors, especially those unfamiliar with the campus. It establishes MIT’s presence at the campus edge on a scale that is immediately visible and beckoning to visitors. The program reflects the unique spirit of MIT, making a complex campus more navigable and taking cues from the major urban and geographic elements that define this area.

The program required 91 variances from Cambridge sign regulations, provided unanimously by the Board of Zoning Appeal (BZA) in March 2021. The wayfinding program comprises three different elements: nine campus identifiers at campus gateway locations, 16 campus directories at more interior locations within the campus, and 78 pedestrian beacons — the workhorses of the system — along primary campus routes.

MIT is nearing completion of the pilot program of Campus Wayfinding signage with eight signs in the Kendall/MIT open space. Six pedestrian beacon signs have been installed, and one campus identifier and one campus directory sign have been fabricated and will be installed in early 2023 in coordination with the completion of the new MBTA Headhouse.



Wayfinding signage. Rendering courtesy of MIT Campus Planning.



Pedestrian beacon outside MIT Medical in East Campus. Image courtesy of Karen Baird.

Current Planning

New Ways of Working: Return to the Campus, Work from Home, and Hybrid Work

Like most businesses and organizations, MIT is still navigating how work has been changed by the pandemic. The Institute is providing support

for hybrid and flexible work arrangements where possible, and new habits of work are stabilizing. Students, faculty, researchers who need laboratory space and equipment, student-supporting staff, and direct service staff (maintenance, custodial, food service, etc.) are largely back on campus, but many administrative employees are working from home 3 or 4 days per week.

Supporting hybrid models of work, with some staff on campus and others working from home, creates challenges in terms of what our offices can do to support their teams and to use office space efficiently and effectively. Solutions have included opening up more areas for both heads-down work and collaboration, having fewer permanent work spaces, and utilizing more reservation systems for a variety of private spaces (offices, huddle rooms, phone/Zoom booths) based on need.

Some initial planning work has been completed, and several projects for office improvements are being considered. More work groups and their existing spaces will be reviewed to see if they are suitable for new styles of space designation. Changes will be incremental and treated as experiences to learn from.

Another opportunity for changing work space has emerged. Low utilization of conference rooms and the need for improved AV solutions for hybrid meetings has given rise to a pilot program to expand access to reservation-based, AV-enabled conference rooms across the campus. These conference spaces were formerly assigned for exclusive use by a single unit and had limited AV capabilities. This pilot program will be evaluated and considered for wider deployment.

Main Group Reconfiguration

The relocation of School of Architecture and Planning personnel and functions to the Metropolitan Warehouse provides an important opportunity for the reconfiguration of the Main Group buildings (Buildings 1 through 11, most of which date back to the early years of the campus). This move would allow for infrastructure system renewals, consolidation of uses that would benefit from greater proximity, and the expansion of growing programs for research and education. The work is just getting underway.

High-Intensity Research

MIT has a number of academically valuable high-intensity research buildings north of the Main Group with aging infrastructure that is no longer adequate for ongoing research activity. The amount and duration of construction is likely to require researchers to continue their work in a swing space. This plan will result in the renewal of these core research buildings.

Student Life and Housing

The Institute is planning to continue the renewal of undergraduate and graduate student residences beyond the projects recently completed (Burton-Conner House) or those that will start shortly (East Campus). MIT is exploring the appropriate project sequence for older student residences on the west side of campus in need of renewal and the related opportunities to better meet the needs of students and to continue transforming this part of our campus footprint.

Capital Renewal

Stewardship of the MIT campus requires continued investment to preserve historic and iconic buildings and to renew systems that support the teaching, research, and student life mission of MIT. Many of the large building renovation projects initiated through the MIT 2030 capital plan have created modern spaces with the updated, energy efficient systems needed to meet the challenging demands of contemporary research. Additionally, these projects have enhanced community and residential spaces essential for the thousands of people who work, play, and live in this vibrant community. The Institute recognizes this is a long-term effort, which requires careful planning of resources and attention to mitigation of construction disruption. The ambitions for the renewal program are high and, with perseverance, progress will continue in retiring deferred maintenance and sustaining MIT’s position as a global leader in teaching and research.

A few of the renewal projects initiated over the past year are highlighted here.

Building Security System Infrastructure

As part of ongoing efforts to renew its campus infrastructure, the Institute began planning in 2019 to transition its aging building security systems to a new platform provider. This project, upgrading nearly 600 IT panels across 143 buildings, was designed to adapt to changing technology, including MIT's new mobile credentialing initiative.

Scheduled to commence construction in early 2020, the project immediately pivoted in response to new access protocols put in place to address the Covid-19 pandemic. With fewer members of the MIT community on campus, the construction period was accelerated. The supporting software was integrated with MIT's

internet-based Covid Access Program, enabling dedicated access to the campus for the MIT community and its vendors and ensuring that MIT's 24/7 mission could continue uninterrupted.

Building 34 Curtain Wall

The EG&G Education Center (Building 34) is one of five buildings designed by SOM (formerly Skidmore, Owings and Merrill) along the southern side of Vassar Street between Main Street and Massachusetts Avenue. The building was initially constructed in 1971 as a pedestrian bridge between Buildings 36 and 38, and construction of the atrium lobby and classroom, lab, and lecture hall space was completed in 1982.

The original 50-year-old wood-framed curtain wall forming the pedestrian bridge was showing signs of deterioration due to age and exposure to



Building 34 Curtain Wall renewal. Image courtesy of MIT Department of Facilities.

the elements. MIT recently completed a renewal of the curtain wall by installing steel plates on the face of the framing and installing aluminum cladding to preserve the original façade's appearance. The interior hallways along this pedestrian bridge were also given a refresh with new railings and finishes along the inside of the curtain wall.

The entry renewal was completed in two phases, with the steps and podium completed in fall 2021 and the ship relief restoration completed in fall 2022.

Building 5 Entry

The entrance to the headquarters of The Center for Ocean Engineering, established in 1912 as the Pratt School of Naval Architecture, is denoted with a ship relief above the 55 Massachusetts Ave. entrance of Building 5, part of the original Main Group buildings designed by William Welles Bosworth and constructed between 1913 and 1937.



Building 5 ship relief renewal. Image courtesy of MIT Department of Facilities.

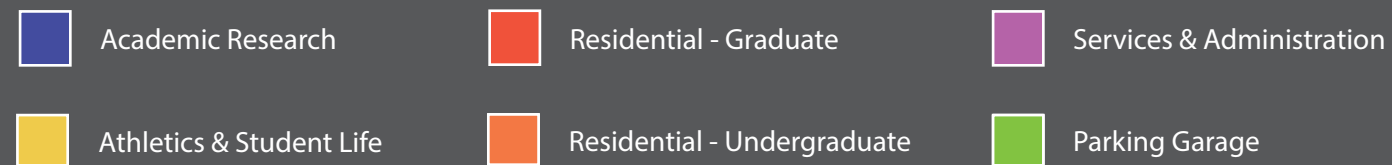
The limestone steps and entrance needed repair due to over 100 years of New England winters. MIT developed plans to identify cracks and spalls in the steps that needed repairs, including a cleaning approach to remove stains caused by atmospheric conditions and gypsum leaching out of the limestone, and to take restoration measures for the ship relief to restore and secure elements that had weakened over time.

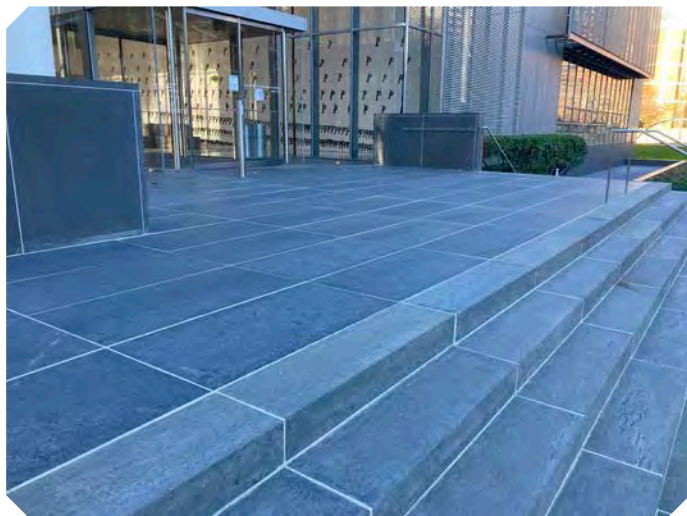
Exterior Steps and Terrace

The MIT campus contains countless plazas, terraces, and steps connecting buildings across the 168-acre campus. Harsh New England winters and vehicular access can cause uneven surfaces

MIT Buildings and Occupied Spaces by Use

Data as of June 30, 2022
Buildings with academic occupancy shown





Eastern Terrace at MIT Media Lab (E14). Image courtesy of MIT Department of Facilities.

and create tripping hazards for pedestrians. It's no surprise that renewal was needed for the high traffic areas around around the Brain and Cognitive Sciences Complex (Building 46), the Eastern Terrace at the Media Lab (E14), the sunken terrace at Simmons Hall (W79), and the steps to the Morris and Sophie Chang Building (E52, Sloan School of Management) and the Hermann Building (E53).

MIT conducted investigative field work to identify the root causes of the broken, collapsed, and/or heaving pavers and steps, and conducted research to understand the original design intent. Design plans were developed, ranging from simple paver and step replacement to major renewals including replacement of base soils, addition of drainage, installation of handrails, and material changes to increase longevity and improve safety. Construction was completed in fall 2022.

N52 Elevator

275 Massachusetts Ave. (Building N51) and 265 Massachusetts Ave. (Building N52) were acquired by MIT in 1964. Originally home to the Cambridge Motor Company and General Motor Company, these buildings are connected at each floor allowing them to share passenger and freight elevators.

The buildings are now home to the MIT D-Lab, Edgerton Clubs, and MIT's Environment,

Health and Safety Office. Due to age, the 1952 passenger elevator needed renewal to continue to support existing programs and provide access for the new MIT Hobby Shop scheduled to reopen in N51 in July 2023. With the relocation of the MIT Museum to its new home in Kendall Square, the reduced building occupancy presented an optimal time to renew this critical elevator. The new larger elevator cab will have increased speed and excellent reliability to continue serving these buildings into the future. Construction for the new elevator is scheduled to be complete by the end of 2022.

Structural and Façade Assessments

MIT's building stock extends back to the late 19th century. Former 19th and early 20th century industrial buildings make up much of the northwest sector of campus, and the purpose-built Main Group dates to 1916. Even the mid-century modern buildings dotting the campus show signs of wear. To maintain stewardship of its campus, the Institute has ongoing structural and façade assessment programs to assist with long-term planning activities. The structural assessment team visually inspects the foundations and structural systems, and the façade assessment team evaluates all elements of the building enclosure including windows, entry doors, and façade materials using various methods of up-close inspection, sometimes using lifts or industrial rope access for high-rise structures such as the Westgate Apartments. The five-year programs look at selected buildings each year and provide the Institute with recommendations for maintenance and short- and long-term planning of renewal needs.



Image courtesy of MIT Department of Facilities.

Projects

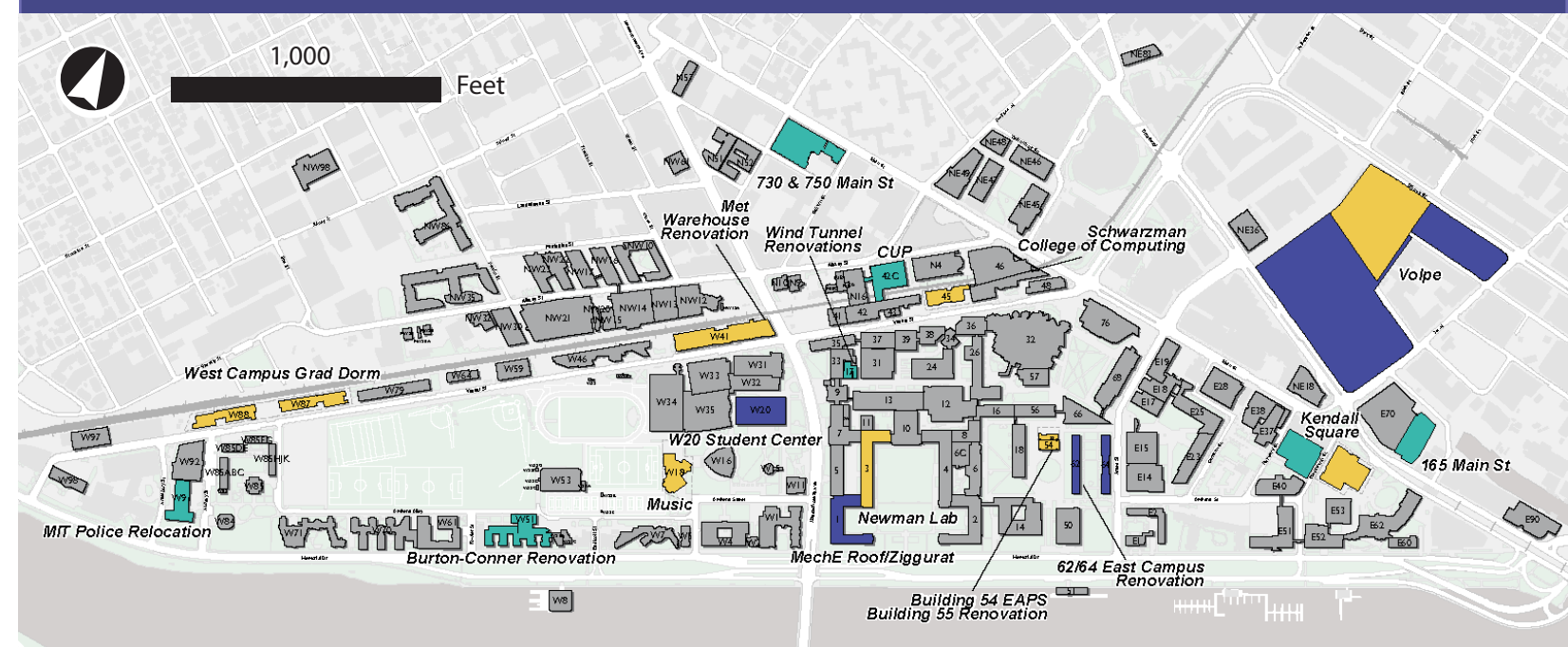
A number of new academic and investment buildings are currently in construction on campus and in Kendall Square, and MIT is looking ahead with a continued focus on housing, student life, and the renewal of existing assets. As part of our ongoing efforts to renovate established residence halls, the Burton-Conner House undergraduate residence (W51) reopened to students in the fall of 2022 with upgrades and improvements to the building's envelope, windows, infrastructure, and shared student spaces. Substantial renovation projects are planned for the East Campus Residence Hall (Buildings 62 and 64) and the Stratton Student Center (W20)

as well as for the Metropolitan Storage Warehouse (W41) and the Green Building (Building 54). These renewals and transformations will change the academic landscape on campus, as will the construction of new academic buildings such as the MIT Stephen A. Schwarzman College of Computing (Building 45) and the Music Building (W18). Construction is also underway on the new West Campus Graduate Dormitory (W87 – W88). These current and future projects support the Institute's mission and sustainability goals, continuing to improve campus resiliency and infrastructure while enhancing the spaces where our community studies, works, and lives.

MIT Major Projects

Data as of June 30, 2022
Buildings with academic occupancy shown

- Planning/Design
- Construction
- Completed



Completed

Central Utilities Plant Upgrade (Building 42C)

With two new natural gas turbines and substantial upgrades to systems and machinery, MIT's Central Utilities Plant (CUP) — a distributed energy resource based on combined heat and power technology (cogeneration) — has improved campus sustainability and resiliency and is now operating with reduced emissions and greater energy efficiency.

Police Relocation (W91)

The MIT Police headquarters, relocated as part of the West Campus Graduate Dormitory project, is now based in a newly renovated, two-story section of W91 that includes updated public-facing spaces as well as private spaces, meeting rooms, storage, and amenities such as a community room and space for active training.

Burton-Conner House (W51)

A five-story undergraduate residence on Memorial Drive, Burton-Conner House has undergone a major renovation which improved the building's envelope and infrastructure systems as well as its student common spaces, bathrooms, kitchens, and the Porter Room, a community gathering space.

165 Main Street

MIT completed construction of this 300-unit apartment building this spring. The residence includes 54 affordable units, nine middle-income units, 36 innovation units, and a bike repair station on Broad Canal Way. The market rate residential units are fully leased, and MIT is actively marketing the retail spaces on the ground floor.

238 Main Street

Base building construction of this commercial research and development building and the restoration of the existing historic building started in 2019 and was completed in 2021. Interior work has been completed for several tenants, and the two-building complex is now occu-

ped by Bayer, Beam Therapeutics, BlueRock Therapeutics, and Lab|Central. Construction of a CVS pharmacy is underway at the corner of Main and Hayward Streets, with occupancy expected in early 2023. MIT is actively marketing the retail spaces on the ground floor of the buildings.



Inside the MIT Museum. Image courtesy of John Horner.

MIT Museum at the Gambrill Center

The new MIT Museum at the Gambrill Center — the first three floors of the multipurpose building at 314 Main Street — encompasses 56,000 square feet of space designed by Höweler + Yoon and is enriched by elements that invite the community to join the conversation and participate in creation: a glass-walled lobby, a gathering space with a massive media wall, and hands-on learning labs, makerspaces, and interactive exhibits.

730 – 750 Main Street

The renovation of 750 Main Street and the expansion and renovation of the adjacent 730 Main Street building started in early 2020. MIT completed base building and tenant work at 750 Main Street, and the building is now occupied by The Engine (the entity launched by MIT that invests in early-stage tough tech companies).

The 730 Main Street base building is complete, and tenant work is anticipated this winter.

In Construction

200 Main Street (Kendall Site 2)

200 Main Street is the last of the major research and development projects in the Kendall Square Initiative. The Planning Board granted the special permit for this building in 2016 (together with the other Kendall Square buildings) and approved the final design earlier in 2022. Abatement and demolition of the existing building on the site started in 2021 and was completed in November 2022. Construction of the below-grade garage and building foundations is now underway.

Volpe Government Building

Launching the first phase of the Volpe site redevelopment project, MIT commenced work in 2019 to construct the John A. Volpe National Transportation Systems Center on behalf of the federal government. The contractor has completed the base building and is progressing on schedule with interior construction and exterior landscape improvements. The project is expected to be completed in 2023.



Conceptual rendering of the Third Street Park. Image courtesy of Design Distill.



Mark Drela, Terry J. Kohler Professor at MIT and director of the Wright Brothers Wind Tunnel. Image courtesy of Adam Glanzman.

Wright Brothers Wind Tunnel (Building 17)

An instrumental tool in the development of aerospace, architectural, vehicular, sports, and other engineering systems, the new wind tunnel incorporates state-of-the-art technologies and equipment that have expanded its capacity, lowered its power consumption, and enabled it to test speeds up to 230 mph.



Metropolitan Warehouse (W41)

Originally designed by Peabody & Stearns, the Metropolitan Storage Warehouse (Met Warehouse) is one of the oldest buildings on the MIT campus and is listed on the State Register of Historic Places. Its massive structure consists of five connected buildings constructed between 1895 and 1923. With its square brick tower and crenulated cornice, it resembles a medieval castle on a city street corner.

MIT has launched a renovation/adaptive reuse project that will redevelop the Met Warehouse building as a center of interdisciplinary design research and education and as a new home for the School of Architecture and Planning. The building will also house the new MIT Morningside Academy for Design, which aims to foster collaboration and innovation on campus, encouraging design work to grow across disciplines. In addition, the building's new Project Manus makerspace will serve as a flagship facility for MIT's community-wide makerspace initiative. Elements of the building's renovation include new classrooms, design studio space that will significantly increase MIT's capacity for arts and design programming, new faculty offices, and areas for meetings and collaborative activities.

The adaptive reuse plan is based around the five original buildings and involves partial removal of floors, columns, and the roof and façade to make way for a series of insertions that will bring light and air deep into the heart of the structure. The strategic integration of old and new is designed to preserve the building's historic character while leveraging and valorizing its existing spaces to serve the needs of current and future programming.

The architect for the project is Diller Scofidio + Renfro, and Shawmut Design and Construction is the construction manager. Construction is scheduled to be completed in 2025.

MIT Stephen A. Schwarzman College of Computing (Building 45)

Established in September 2019, the MIT Schwarzman College of Computing is a unique interdisciplinary organization that addresses the opportunities and challenges of the computing age — from hardware and software to algorithms and artificial intelligence — by transforming the capabilities of academia in three key areas: computing fields, computing across disciplines, and the social and ethical aspects of computing. The MIT Schwarzman College of Computing's unique structure is both broadly multidisciplinary and firmly focused as a home for computer science and artificial intelligence education and research. As a result, it will strengthen the computing fields and more effectively and creatively connect AI and computing to every discipline.

MIT is constructing a new building (Building 45) to house the MIT Schwarzman College of Computing, located at the site of the former Building 44. Building 45 is designed to provide state-of-the-art space for computing research and education, including collaborative spaces and gathering areas to facilitate spontaneous interactions. The building's lower floors will offer multiple convening areas including a 250-seat lecture hall, a suite of student spaces for project-based work and tutoring, and a café. The building's shingled-glass façade and transparent elements will further encourage the campus community to engage and interact with the MIT Schwarzman College of Computing.

Centrally located on Vassar Street between Main Street and Massachusetts Avenue, Building 45 will have an event space and outdoor



MIT Schwarzman College of Computing. Rendering courtesy of SOM.

terrace on its top floor, offering views of the campus and the Boston skyline. The building designer is SOM (formerly Skidmore, Owings and Merrill), and Suffolk Construction is the construction manager. Work is expected to be completed in 2023.

Earth and Environment Pavilion (Building 55)

The Cecil and Ida Green Building (Building 54) is the headquarters of MIT's Department of Earth, Atmospheric and Planetary Sciences (EAPS). In tandem with the project to update Building 54's infrastructure, construction is underway to renovate the primary lecture hall in Building 54 and create the new Earth and Environment Pavilion (Building 55): a LEED v4-certified addition that will serve as an atrium gateway to the Institute's programs focused on Earth and environmental sciences as well as climate science.

As planned, the Earth and Environment Pavilion project will yield about 11,900 square feet of additional space, providing new meeting places, classrooms, and study areas. The enlarged and



Earth and Environment Pavilion. Rendering courtesy of Anmahian Winton Architects.

revamped Green Building is expected to help EAPS attract and retain top faculty and students. The project's other ambitious objective is to enhance the research undertaken within the department by co-locating EAPS, the MIT-Woods Hole Oceanographic Institution Joint Program, and the MIT Environmental Solutions Initiative (ESI), creating a vital center for interdisciplinary research that affords greater opportunities for interaction and the cross-pollination of ideas.

Anmahian Winton Architects is the designer of Building 55, and Barr & Barr is the construction manager for the project. Construction is expected to be complete in 2023.

Green Building (Building 54)

The Green Building (Building 54), designed by I.M. Pei & Associates and completed in 1964, is a 22-story Brutalist concrete tower with 20 uniform floors above a double-height open entrance loggia. Currently, it is home to the Department of Earth, Atmospheric and Planetary Sciences, MIT's Environmental Solutions Initiative, and MIT-Woods Hole Oceanographic Institute Joint Program.

The infrastructure renewal project will enable the ongoing and long-term research needs for

the building by improving the building envelope, upgrading electrical and mechanical systems, and ensuring the building is accessible to the community. Additionally, the project will renew the concrete façade, replace the roof, install new main electrical substations, upgrade the restrooms and other building interiors, modernize the elevators, and carry out all code-required upgrades. The building's large radome has been replaced, and its rooftop

equipment layout and support are being redesigned.

The project team includes the design firm Beyer Blinder Belle Architects & Planners LLP and Barr & Barr as the construction manager. Work is scheduled to be completed in 2023.

The Music Building (W18)

The Institute has started construction on a new state-of-the-art Music Building that will support the popular music program's curricular requirements. Sited adjacent to Kresge Auditorium, the building's three complementary sections will house performance, rehearsal, and recording spaces as well as a large-scale, purpose-built performance lab. The brick-clad structures — the Performance Lab Pavilion, the Music Maker Pavilion, and the Music and Culture Pavilion — will be connected by a glass-walled lobby providing multiple entrance points. Each building will incorporate sound-insulating walls and world-class acoustical design. Below grade, a two-level garage will provide 143 parking spaces.

Building W18 is sited within an illustrious context that includes Eero Saarinen's Kresge Auditorium and MIT Chapel as well as Baker House, designed by Alvar Aalto, and the AI &



Music Building. Rendering courtesy of SANAA.

Barrie Zesiger Sports & Fitness Center, designed by Kevin Roche. In response, its design incorporates strong geometry, warmly colorful brick, a stand of trees, and a curving curtain wall and roof that are a visual extension of nearby Kresge. Its several entrances relate to the pedestrian walkways outside and invite people to pass through the airy, open lobby. The building will be set among a grove of trees that creates a shady new campus green space, complementing the historic Kresge quadrangle.

Sejima and Nishizawa and Associates (SANAA) is the design architect, Perry Dean Rogers Partners Architects is the executive architect firm, and Lee Kennedy Company is the construction manager. Construction of the building began in summer 2021 with a target completion date of 2024.

West Campus Graduate Dormitory (W87 – W88)

As part of MIT's Volpe zoning agreement to expand the stock of graduate student housing, MIT has begun construction on a new graduate student dormitory on Vassar Street that will add approximately 676 new beds and enhance connections with the surrounding neighborhood.

Located adjacent to Simmons Hall on the former site of Building W89 and the West Lot parking area, the dormitory will encompass two buildings framing a publicly accessible central



West Campus Grad Residence (W87 – W88). Rendering courtesy of KieranTimberlake, image by Brooklyn Digital.

including as a workshop or lab. The completed project is expected to add approximately 6,720 square feet of new usable space (including 5,020 square feet of interior space and 1,700 square feet of space for the rooftop terrace).

The designer is Annum Architects (formerly Ann Beha Architects), a firm with expertise in historically significant buildings.

East Campus Residence Hall (Buildings 62 – 64)



East Campus Building 62. Image courtesy of Karen Baird.

The East Campus undergraduate residence currently houses more than 350 students in two long five-story buildings, Buildings 62 – 64, that face each other across a courtyard. This centrally located residence — the second oldest dormitory on campus — is scheduled for a comprehensive renovation to renew infrastructure, update life safety systems and accessibility, and improve life for the students who live here.

Renovating and renewing the East Campus residence entails replacing mechanical, electrical, plumbing, fire protection, and technology infrastructure as well as providing a structurally sound, weather-tight building envelope. The project will also include residential life program improvements consistent with the MIT Architectural Principles for Undergraduate Residences. Improvements for the student communities in each of the ten “halls” include enlarged floor lounges and kitchen areas, upgraded bathrooms, and better artwork integration (the residence is known for its wall murals). Improvements for the larger East Campus community include secure entry areas and a new Talbot Lounge, new

laundry, music, and exercise spaces, and a greatly improved makerspace on the ground floor adjacent to the shared courtyard where the East Campus residents erect their expansive “Build” project — a roller coaster — during Residential Exploration (REX) week every September .

The architect for the project, William Rawn Associates, is collaborating with the East Campus Transition Team and the broader East Campus community on the student life elements of the project. The Transition Team is a working group composed of student residents from East Campus, members of the house team, and staff from the Division of Student Life.

Stratton Student Center (W20)

The Stratton Student Center (W20) holds a central place in the lives of MIT’s students. Since the Center opened in 1968, the needs of the student community have evolved substantially, and the infrastructure that supports the building has aged. MIT is planning a strategic improvement project to update key aspects of

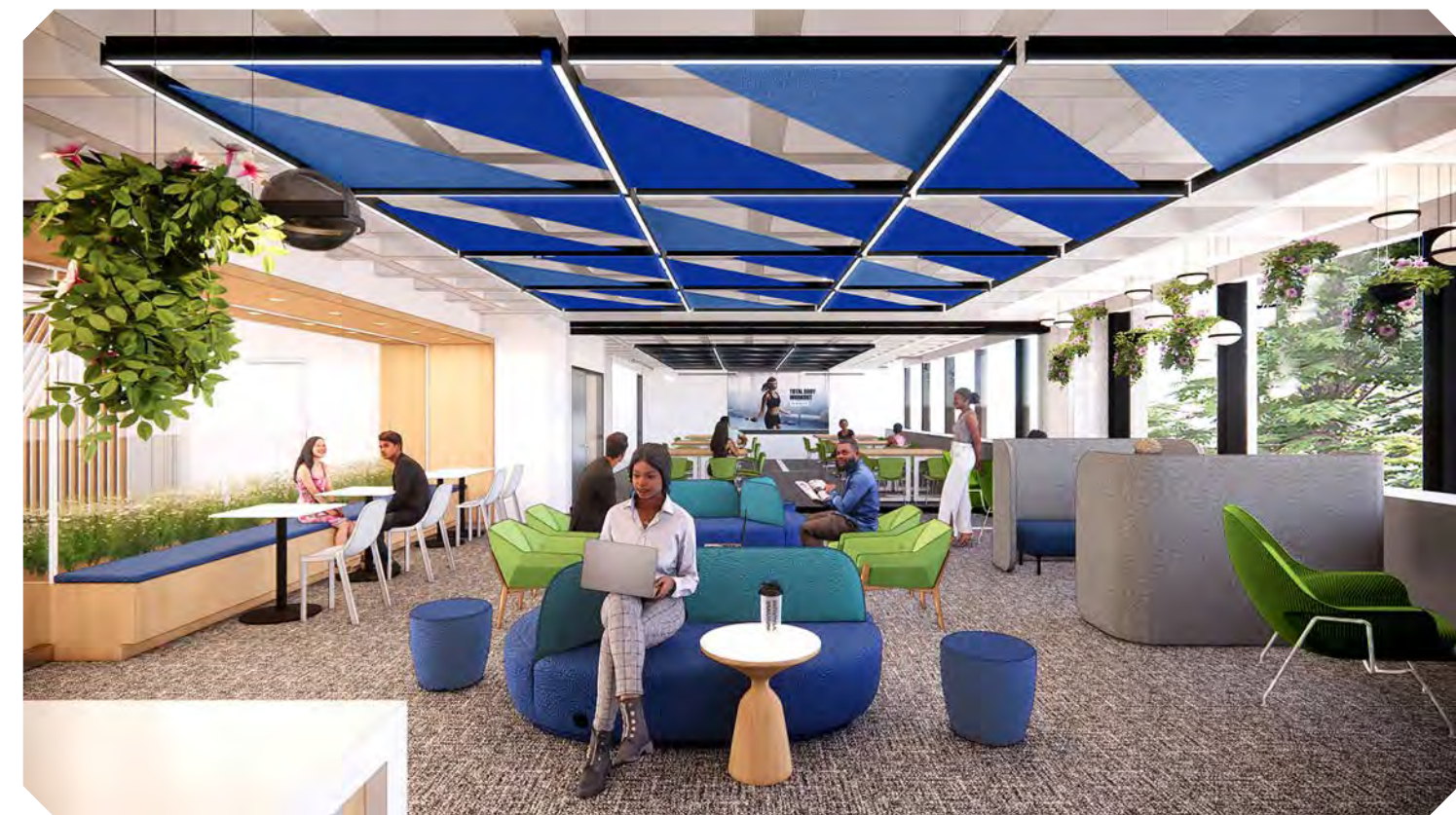
the building’s infrastructure and to strengthen the Student Center as a campus hub for wellbeing, performing arts and dance, healthy eating, and community building.

Project plans include a new Wellbeing Lab on the third floor that will provide programs and services to support students and help them build strong minds and bodies, foster healthy relationships with themselves and others, and work toward clarity of purpose. The Lab will be overseen by the Office of Student Wellbeing, which will lead programming and coordination of activities as well as leverage connections to existing wellbeing programs in the Department of Athletics, Physical Education, and Recreation.

The project design reinforces a “lounge network”

that encourages informal gatherings and collaboration on each floor of the building. Unused retail space on the first floor will be transformed into a flexible lounge, and the Stratton Lounge on the second floor will be revitalized. On the fourth floor, two multipurpose rooms will be upgraded to accommodate dance and movement activities as well as community gatherings, and a new multipurpose room will be added. Also, a 1960’s-era meeting space will be opened up and repurposed as a student lounge and event space.

Anchoring elements for the building like the central stairway atrium will be renewed with the goal of providing a more open and welcoming experience for community members and visitors alike. Key strategies for the design include using warmer materials and colors, adding lights



Rendering of the Wellbeing Lab, courtesy of Gensler.

MIT and Cambridge Public Schools

and greenery, and refreshing outdated finishes. Enhancements will also include accessibility upgrades indoors and out, as well as improvements to the Beech Court courtyard. Lastly, the Student Center's approach to food and dining will be updated with the goal of not only sustaining people and helping them connect with others but also celebrating different cuisines, dietary needs, and tastes. Retail offerings will reflect these goals, as will the second-floor Launchpad, an innovative partnership with the food business incubator CommonWealth Kitchen (CWK). This partnership has the potential to provide opportunities for local minority-owned businesses incubating at CWK to participate as onsite vendors or suppliers at the Student Center.

Volpe Redevelopment

The proposed next phase of the Volpe site redevelopment project, consistent with the zoning passed in 2017 by the Cambridge City Council, includes four commercial buildings, four residential buildings, over 3.5 acres of publicly beneficial open space, and a 25,000 square foot community center. After a robust community engagement process, the Planning Board approved MIT's masterplan for the site in the summer of 2021. During the summer of 2022, MIT started the design phase for the below-grade infrastructure as well as the open spaces and six of the eight individual buildings (three residential and three commercial). The Institute anticipates starting the design review for the initial buildings in 2023.

MIT extends its mission to advance knowledge through a variety of academic enrichment opportunities for Cambridge students and works closely with Cambridge Public Schools (CPS) to deepen engagement and participation. Below are selected examples of current initiatives.

Cambridge Mayor's Summer Youth Employment Program

In 2022, the Mayor's Summer Youth Employment Program (MSYEP) collaborated with the

on teaching the students how to utilize data, computing, and art to analyze and challenge the ways that power operates in society.

The students, who were compensated for their time, learned that data science and artificial intelligence can exacerbate systemic oppression in society, and also that certain tools can help to mitigate those societal harms. The high schoolers created data visualizations with the programming language Python and the data analysis tool Pandas by using data from their respective



Cambridge Mayor Sumbul Siddiqui visited the Mayor's Summer Youth Employment Program (MSYEP) worksite at the MIT Media Lab and learned how data science could be used to support marginalized communities. Photo courtesy of Katherine Ouellette.

MIT Personal Robots group (PRG) and Responsible AI for Social Empowerment and Education (RAISE) to offer a STEAM-centered learning site at the MIT Media Lab for a cohort of Cambridge high school students. Eleven participants spent six weeks learning coding and programming skills focused on data activism.

The curriculum objective was to equip students with critical thinking skills so they can feel empowered to utilize data science to address social injustices. The program's content was focused

intersectional identities.

Mayor Sumbul Siddiqui, a MYSEP graduate herself, visited the learning site and observed: "Students were able to learn ways to combat discrimination that occurs through artificial intelligence."

Pathways to Invention

MIT, with support from the Lemelson-MIT Program (LMIT) and other campus

MIT Cellular Antenna Installations

Data as of June 30, 2022
Buildings with academic occupancy shown

● Cellular Antenna Locations



collaborators, is helping local youth get on the Pathway to Invention. The program, now in its fifth year, includes offerings at multiple grade levels and focuses on educators and students. Highlights include:

Fletcher Maynard Academy Programs

25+ emerging inventors from Sisters with a Dream and the Girl Scouts explore STEM activities during the school year.

STEAM It Up!

Hundreds of K-8 learners engage in hands-on experiments at this annual Cambridge-wide family event.

Invention Education for Teachers

LMIT sponsored 26 educators from Cambridge and Boston at a three-day professional development workshop that highlighted ways of helping youth learn to invent.

Scanning Electron Microscope with CPS

MIT Museum educators collaborated with science teachers at Putnam Avenue, Rindge Avenue, and Cambridge Street Upper Schools to lead virtual classroom visits focused on using a Scanning Electron Microscope (SEM). The SEM, known as Scanny, is a tabletop research tool, on loan from Hitachi to the MIT Museum, that can magnify objects up to 2000x.

Over the course of 15 classroom visits, more than 285 young Cambridge scholars were invited to explore and engage with the smallest details of the world around them. From identifying mystery microparticles in wood samples to



MIT Office of Government & Community Relations congratulates Impact Scholarship winners. Photo courtesy of Cambridge Rindge and Latin High School.

learning about the structure of pollen, museum educators worked with CPS curriculum coordinators to create engaging virtual experiences that supplemented learning objectives.

The Cambridge Rindge and Latin High School also hosted Scanny on-site for an 8-week residency.

MIT Impact Scholarship

The MIT Impact Scholarship celebrated its sixth year of awarding annual scholarships to ten students from Cambridge Rindge and Latin High School, Prospect Hill Academy, and Community Charter School of Cambridge based on the impact they bring to the people and communities around them. The Office of Government & Community Relations facilitates the scholarship.

The program has awarded \$600,000 in scholarships to 60 Impact Scholars over the past six years.

Economic Impact

The Job Connector by MIT

Currently in its third year serving Cambridge residents, the Job Connector by MIT is a free workforce development hub that provides comprehensive support to job seekers at all stages of their careers. Through personalized one-on-one coaching and a variety of career development workshops, the Job Connector focuses on individuals and their specific situations in order to support their long-term goals.

In an effort to maintain strong ties to the community and connect with local job seekers, the Job Connector conducts extensive community outreach to bring its services to those who need it the most. Through partnerships with local organizations such as Homeowners Rehab Inc, My Brother's Keeper, Cambridge Housing Authority, Just A Start, Cambridge Police Department, Margaret Fuller Neighborhood House, and the Cambridge Office of Workforce Development, the Job Connector is able to immerse itself in the Cambridge community through many avenues.

Career Coaching and Individualized Assistance

Since opening its doors in October 2019, the Job Connector has worked with approximately 600 clients to help advance their careers in a variety of ways. From resume and cover letter writing to networking and interview preparation, staff have assisted individuals at all stages of the job search process.

In the past year alone, the Job Connector has worked with 154 clients, 40 of whom quickly obtained employment. Other clients were seeking information about additional training resources, employment tips, or specific career programs.

Tia Ferrie started her client journey with the

Job Connector through individualized coaching before participating in a training program, and she later received interview support for the position she still currently holds: a card-carrying member of Insulators Local 6.



Tia Ferrie (center) at the Women Build Boston Conference. Image courtesy of The Job Connector by MIT.

Programming

The Job Connector also provides professional development and industry-specific programs to individuals across Cambridge. Over the past year, six programs served more than 60 residents and explored topics including the construction and trades-based industry, barriers to employment, job searching 101, career development skills, and financial literacy. Professional development workshops were also presented through several external programs including IQHQ's Cambridge Summer internship and Enroot's Career Week.

Introduction to Construction and the Building Trades

Seventeen Cambridge residents learned the ins and outs of this high-growth industry, as a variety of industry experts provided first-hand information on topics such as local building trades unions, entrepreneurship within the field, construction management, real estate development, and more.



Second cohort of Cambridge residents in the Introduction to Construction and Building Trades program. Image courtesy of The Job Connector by MIT.

Hiring Fairs

Throughout the year, the Job Connector office space at 792 Main Street served as a host for various hiring fairs. In the spring, staff recruited throughout Cambridge for a local restaurant hiring fair and training opportunity as well as for the MIT Department of Athletics, Physical Education, and Recreation. Staff also partnered with local groups including Margaret Fuller Neighborhood House, the City of Cambridge, and Just A Start to collaborate on external hiring fairs throughout the city.

The Job Connector by MIT welcomes all Cambridge residents to stop by and learn about its services. We are here to help you!

Cambridge First Purchasing Program

MIT's Cambridge First Purchasing Program resulted in the additional investment of \$17.1 million in Cambridge businesses in FY22. This program, together with taxes paid, payments in lieu of taxes, and municipal fees, brought MIT's 2022 direct economic contribution to the City to over \$103 million. This figure does not include MIT's indirect investment in Cambridge such as student spending and the salaries of more than 2,500 residents employed by the Institute.

Small and Diverse Business Program

In 2020, President Rafael Reif committed MIT to increase procurement from minority- and Black-owned businesses. To respond to this charge, the Small and Diverse Business Program, housed within the Office of the Vice President for Finance, is developing new tools and resources to support campus purchasers in identifying and procuring from small, diverse, local, and sustainable businesses.

The Small and Diverse Business Program's campus network of active and engaged purchasers has been critical in these efforts, helping formulate the features of these new resources and testing the resulting projects throughout their development. In 2023, the Program will launch a new tool for identifying small, diverse, local, and sustainable businesses and a new procurement website with resources that enable purchasers to align their buying with MIT's commitment. Both of these efforts will be launched with an accompanying educational campaign to encourage adoption across campus.

In addition to this internal work, the Small and Diverse Business Program actively participates

| Payments to the City of Cambridge | | | | | |
|------------------------------------|---------------------|---------------------|---------------------|---------------------|----------------------|
| | FY 18 | FY 19 | FY20 | FY21 | FY22 |
| Real Estate Taxes Paid* | \$56,971,040 | \$60,291,173 | \$65,318,882 | \$70,355,886 | \$76,734,164 |
| Payment in Lieu of Taxes (PILOT)** | \$ 2,211,875 | \$2,150,218 | \$2,211,549 | \$2,232,696 | \$2,288,514 |
| Water and Sewer Fees Paid | \$7,937,273 | \$8,536,068 | \$7,812,810 | \$6,201,488 | \$8,319,592 |
| Other Fees and Permits Paid | \$11,483,296 | \$5,006,735 | \$8,242,958 | \$11,313,394 | \$16,321,388 |
| Total Payments | \$78,603,484 | \$75,984,194 | \$83,586,199 | \$90,103,464 | \$103,663,658 |

*Includes real estate taxes paid by MIT, taxes paid on MIT-owned property through ground leases, and real estate taxes generated by Independent Living Groups.
 **The amount of MIT's PILOT payment is governed by the 2004 agreement between MIT and the City of Cambridge.

in peer-learning circles to share best practices and new approaches. The program continues to work with local business development organizations to identify areas of opportunity and create bridges between campus and the wider business community. As the Small and Diverse Business Program launches new tools and resources in the coming year, this network of experts will continue to inform efforts on campus and in future work.

As the #1 taxpayer in Cambridge, MIT's FY22 real estate tax payment represents 15.5% of the City's total tax revenue stream.



Artifact Cider and Mariposa Bakery are MIT retail tenants in Central Square.

Diversity, Equity, and Inclusion

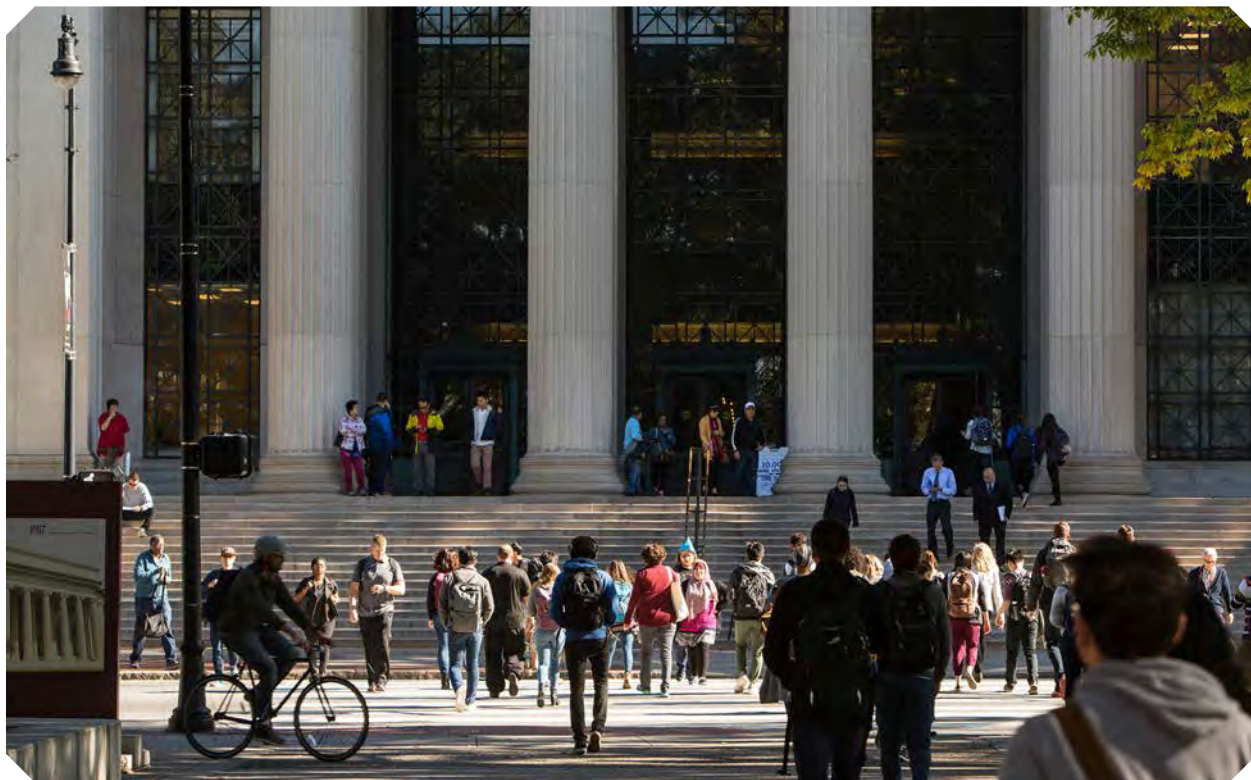
MIT released its Strategic Action Plan for Belonging, Achievement, and Composition in September 2022. The plan, which outlines three strategic priorities, 13 specific commitments, and 52 proposed actions, is the result of a comprehensive, two-year process led by a steering team made up of faculty, staff, postdoctoral employees, and students. The group reviewed past reports, studied data, gathered ideas, and solicited feedback from the broader MIT community.

In his announcement of the plan, President Reif observed: “There is essential work still ahead to make sure that everyone who earns a place here feels welcome. The plan we share today draws on best practices from the past but in a way that is far more coordinated, while allowing opportunities for new thinking.”

The plan’s goals are to enhance a sense of belonging through a more connected campus community, to support achievement by providing more equitable opportunities, and to ensure a diverse campus population by implementing coordinated practices for recruitment, hiring, and admissions.

In typical MIT style, the plan encourages all academic, research, and administrative units across campus to develop individualized approaches within the Institute-wide framework to best meet the needs of their own community members.

MIT’s Institute Community and Equity Office (ICEO) oversaw the creation of the plan and serves as a resource to the entire campus community as it continues to pursue this critical work.



View of 77 Massachusetts Ave. Image courtesy of Jake Belcher.



Photo of MIT Banana Lounge courtesy of Ian Cheeseman/Twitter.
Image of bananas courtesy of Rodrigo dos Reis on unsplash.com.

Sustainability Gone Bananas: A Microcosm

Opened in 2018, the MIT Banana Lounge exemplifies student creativity and ingenuity. By pairing accurate modeling with a sustainability lens, the lounge leaders keep their fellow students’ potassium levels high while maintaining a low eco-footprint.

284,000+ Bananas

The number of bananas consumed during the 2022 academic year at MIT’s Banana Lounge.

48 Crates

The average number of crates filled with 100 bananas each delivered three times per week from the Chelsea-based supplier Yell-O-Grow.

<1% Waste

By utilizing predictive data sets and turning overripe produce into banana bread, the lounge generates less than one percent of waste, which is then composted.

Acknowledgements

The preparation of this report is led by the Office of Government & Community Relations in collaboration with the Office of Campus Planning, the Office of the Vice President for Finance, MIT Investment Management Company, Institutional Research, the Institute’s Community Equity Office, the Office of Sustainability, the Facilities Department, and the Division of Student Life.



In September 2022, the Institute installed five billboard-scale banners in Lobby 7. Drawing on the words of the MIT Values Statement and illuminating them with line-art illustrations and a vivid color scheme, this installation is intended to promote the values to MIT's on-campus community, as well as visitors to the Institute's front door. Images courtesy of Jake Belcher.