



**Massachusetts
Institute of
Technology**



2011 Town Gown Report to the City of Cambridge
December 13, 2011

2011 Annual Town Gown Report

Massachusetts Institute of Technology

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2011 Annual Town Gown Report Massachusetts Institute of Technology

2010-2011 term (7/1/10 – 6/30/11)
Submitted December 13, 2011

I. Existing Conditions

A. Faculty & Staff

	2007	2008	2009	2010	2011	2011 (projected)
Cambridge-based Staff						
Head Count ¹	9,033	9,407	9,778	8,857	8,893	9,000-10,000
FTEs	7,710	7,935	8,258	7,461	7,483	
Cambridge-based Faculty						
Head Count	984	994	996	1,012	1,002	~1,100
FTEs	978	990	991	1,009	997	
Number of Cambridge Residents Employed at Cambridge Facilities	2,024	2,153	2,267	2,170	2,258	~2,300

¹ The establishment and expansion of the Broad Institute, the McGovern Institute for Brain Research, and the Picower Institute for Learning and Memory and more established research centers accounts for much of the staff growth between 2007 and 2009. The decrease in staff in 2010 is due mainly to the separation of the Broad Institute, which was effective July 1, 2009.

B. Student Body

	2007	2008	2009	2010	2011	2021 (projected)
Total Undergraduate Students	4,114	4,163	4,138	4,218	4,285	4,500
Day	4,114	4,163	4,138	4,218	4,285	
Evening	N/A	N/A	N/A	N/A	N/A	
Full Time	4,058	4,114	4,105	4,190	4,241	
Part Time	56	49	33	28	44	
Total Graduate Students	5,884	5,806	5,916	5,960	6,040	6,000-6,200 ²
Day	5,884	5,806	5,916	5,960	6,040	
Evening	N/A	N/A	N/A	N/A	N/A	
Full Time	5,833	5,731	5,889	5,940	6,017	
Part Time	51	75	27	20	23	
Non-Degree Students	166	148	151	134	153	
Day	166	148	151	134	153	
Evening	N/A	N/A	N/A	N/A	N/A	
Total Students Attending Classes in Cambridge	10,164	10,117	10,205	10,312	10,478	10,500-10,700
Non-resident students not included	89	103	151	72	88	

² There is not an overall plan to make changes to the graduate student population. Enrollment fluctuates depending on the independent decisions of academic departments. These decisions are governed by a variety of factors including the availability of research funding and the ability of international students to obtain visas. International students account for approximately 38% of the graduate student population.

C. Student Residences

	2007	2008	2009	2010	2011	2021 (projected)
Number of Undergraduate Students residing in Cambridge						
In Institute-approved housing (includes dormitories, fraternities, sororities and independent living groups)	3,272	3,228	3,315	3,328	3,410	3,200- 3,400
In off-campus housing owned and managed by MIT	7	6	5	3	14	
In off-campus non-MIT housing	53	75	77	101	92	
Number of Graduate Students residing in Cambridge						
In Institute-approved housing (includes dormitories, fraternities, sororities and independent living groups)	2,144	2,178	2,275	2,313	2,286	2,100- 2,500
In off-campus housing owned and managed by MIT	172	183	161	129	96	
In off-campus non-MIT housing	1,563	1,477	1,652	1,690	1,903	
Student Parking						
Number of parking spaces maintained for undergraduate and graduate students (including resident and commuter parking)	1,103	1,103	1,103	1,103	1,103	1,103

D. Facilities & Land Owned³

	2007	2008	2009	2010	2011	2021 (projected)
Acres						
Tax Exempt	160	160	160	160 ⁴	160	
Taxable	85	95	95	94	93	
Number of Buildings (academic)						
	102	103	104	107	110	
Dormitories						
Number of Buildings	26	25 ⁵	26	26	28	
Number of Beds	5,290	5,290	5,364	5,524	5,491	
Size of Buildings (gross floor area)						
Institutional/Academic	6,032,363	6,286,578	6,015,884	6,401,422	6,766,465	
Student Activities/Athletic/Service	2,159,664	2,208,555	2,245,478	2,443,534	2,462,281	
Dormitory/Nontaxable Residential	2,679,144	2,677,669	2,930,504	2,930,215	2,919,890⁶	
Commercial ⁷	4,771,460	5,112,406	5,112,406	5,138,431	5,096,716	
Taxable Residential ⁸	172	175 ⁹	175	175	171	

Parking spaces maintained in Cambridge

Number of parking spaces maintained for students:	1,103
Number of parking spaces maintained for faculty, staff and visitors:	3,923

³ MIT and the City agreed that sub-area divisions are unnecessary in this section.

⁴ While this figure remains the same, previous years' acreage erroneously included 1 acre that was not tax-exempt. The acreage should have been reported as 159 for 2007, 2008, and 2009.

⁵ The change in number of dormitory buildings is due to a change in reporting methodology.

⁶ The decrease in the gross floor area of Dormitory/Nontaxable Residential is due to a correction in space plans for NW86. In 2010 the gross floor area should have been reported as 2,903,504 gsf.

⁷ MIT's commercial properties are measured by rentable square feet.

⁸ MIT's taxable residential properties are measured by rental units.

⁹ The addition of three units is the result of a change in reporting methodology.

Housing

	Tax Exempt: MIT-Owned and Managed Housing	Tax Exempt: Other Housing	Taxable: MIT-Owned and Managed Housing ¹⁰	Taxable: Other Housing (Univ. Park & 100 Mem. Dr. Ground Leases)
2007				
Number of Units	none	none	172	1,105
Number of Buildings	none	none	12	7
2008¹¹				
Number of Units	none	none	175	1,105
Number of Buildings	none	none	15	7
2009				
Number of Units	none	none	175	1,105
Number of Buildings	none	none	15	7
2010				
Number of Units	none	none	175	1,105
Number of Buildings	none	none	15	7
2011				
Number of Units	none	none	171	1,101
Number of Buildings	none	none	15	7
2021 (Projected)				
Number of Units	none	none	171	1,101
Number of Buildings	none	none	15	7

¹⁰ Occupied by both MIT and non-MIT residents.

¹¹ The addition of three units and three buildings in the Taxable: MIT-Owned and Managed Housing count is the result of a change in reporting methodology.

Property Transfers

Cambridge properties purchased since filing previous Town Gown Report:

8 Carleton Street

Cambridge properties sold since filing previous Town Gown Report:

52 JFK Street, Unit #106 and Unit #303 at 218 Thorndike Street, Unit #103 and Unit #110 at 63-71 Fulkerson Street

Planned dispositions or acquisitions:

Dispositions: Condominiums at 218 Thorndike Street and 63-71 Fulkerson Street

E. Real Estate Leased

Use	Leased Location ¹²	Square Feet ¹³
Institutional/Academic	1 Cambridge Center	16,912
Institutional/Academic	5 Cambridge Center	30,576
Institutional/Academic	7 Cambridge Center	231,028
Institutional/Academic	500 Technology Square	86,515
Institutional/Academic	600 Technology Square	83,561
Institutional/Academic	700 Technology Square	8,876
Institutional/Academic	One Hampshire Street	23,378
	TOTAL	480,846

¹² Leased by MIT from third-party landlords.

¹³ The square footage will, in some cases, only be a portion of the entire building.

F. Payments to City of Cambridge

	FY 07	FY 08	FY 09	FY 10	FY 11
Real Estate Taxes Paid ¹⁴	\$25,322,904	\$28,905,163	\$31,219,327	\$32,978,289	\$34,926,204*
Payment in Lieu of Taxes (PILOT) ¹⁵	\$1,922,079	\$1,847,603	\$1,774,115	\$1,701,638	\$1,744,179
Water & Sewer Fees Paid	\$5,920,644	\$5,456,917	\$4,661,336	\$5,403,736	\$5,938,689
Other Fees & Permits Paid	\$1,240,107	\$3,527,639	\$996,525	\$851,810	\$2,163,013
Total Payments**	\$34,405,734	\$39,737,322	\$38,651,303	\$40,801,473	\$44,772,085

* MIT's FY 11 real estate tax payment represents 12.3% of the City's total tax revenue stream.

** MIT's Cambridge First Purchasing Program resulted in the additional investment of over \$43.9 million in Cambridge businesses in FY 11. This program, together with taxes paid, payments in lieu of taxes, and municipal fees, brought MIT's 2011 economic contribution to the City to more than \$88.6 million.

¹⁴ 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.

¹⁵ The amount of MIT's PILOT payment is governed by the 2004 agreement between MIT and the City of Cambridge.

G. Institutional Shuttle Information

Route Name	Vehicle Type and Capacity	Frequency of Operation	Weekday Hours of Operation	Weekend Hours of Operation
Tech Shuttle	Mid-size transit 28 seats	10 minute peak, 20 minute off peak	6:15AM – 7:10PM	none
Boston Daytime Shuttle	Mid-size transit 28 seats	25 minute (September - May)	8:00AM – 5:54PM	none
Cambridge East Saferide	Mid-size transit 28 seats	30 minute	6:00PM – 2:25AM	6:00PM – 3:25AM
Cambridge West Saferide	Mid-size transit 28 seats	30 minute	6:00PM – 2:31AM	6:00PM – 3:31AM
Boston East Saferide	Mid-size transit 28 seats	20 minute	6:00PM – 2:37AM	6:00PM – 3:14AM
Boston West Saferide	14 passenger mini-bus	30 minute	6:05PM – 2:31AM	6:05PM – 3:31AM
Grocery Shuttle	Mid-size transit 28 seats	45 minute	none	Sunday 11:30AM- 4:30PM

Ridership Data

Route Name	Annual Ridership
Tech Shuttle	552,000
Combined Saferide Shuttles	273,000
Boston Daytime Shuttle	75,000
Grocery Shuttle	7,500
EZRide (Northwest Shuttle) ¹⁶	260,300

¹⁶ Operated by CRTMA.

Shuttle Coordination Efforts

MIT's shuttle service is based on ensuring safety and meeting the demands of faculty, staff, and student users. As the demand for services changes, the Institute adjusts its shuttle services to best serve the community. There is very little overlap of MIT shuttle service with other public or private bus and shuttle services.

The Graduate Student Council in partnership with the Undergraduate Association funds a Sunday afternoon Grocery shuttle with service to Trader Joe's and Whole Foods Market from campus residences.

In August 2010, MIT ceased operating the Northwest Shuttle and employed the Charles River TMA EZRide shuttle to operate the Northwest Campus Route. This combined EZRide/Northwest Campus Shuttle service results in the removal of one shuttle bus from the streets of Cambridge for 1,500 hours per year.

II. Future Plans Narrative

A. MIT 2030: MIT's Planning Framework

MIT has been engaged in an effort called MIT2030 that has developed into a planning tool for the physical campus. (See <http://web.mit.edu/mit2030/>)

MIT 2030 is a framework that helps the Institute make thoughtful, well-informed choices about its physical development and renewal, to serve MIT's mission and evolving needs.

MIT answers to a vital and demanding mission: to advance knowledge and educate students in science, technology, and other areas of scholarship that will best serve the nation and the world in the 21st century. Since our founding in 1861, our campus has evolved, sometimes dramatically, to help us rise to the challenge. In 2008, the Institute launched the comprehensive MIT 2030 planning process and now relies on this framework to guide and inform its physical progress. Drawing on insights from faculty and student leaders, donors and alumni, MIT 2030 is not a fixed plan. Rather, it's an ongoing process, a tool for envisioning — and inventing — a vibrant future for our physical campus and the innovation district close by.

MIT academic and administrative leaders have undertaken this collaborative ongoing effort to envision how the MIT campus and surroundings could evolve to meet future academic and research needs. The planning process considers everything from individual systems upgrades (including roofs and windows) through the repurposing of spaces and buildings, partial or complete renovations, and (if needed) new construction. The MIT 2030 framework provides guidelines that help focus and clarify this process.

MIT 2030 goals and guiding principles

The objectives of MIT 2030 are to:

- Align campus renewal priorities with academic needs and opportunities;
- Assist and guide ongoing capital planning and decision making by Institute leadership;
- Pursue an overall development approach that integrates campus planning objectives and MIT real estate activity to continue creating and supporting an innovation ecosystem while fostering fruitful collaborations between MIT and its surrounding community; and
- Provide thoughtful guidance for the ongoing physical and financial stewardship of the Institute, to ensure the continuation and integrity of its mission.

After reviewing assessments of available space and academic priorities, the planning team gathered feedback and prepared recommendations based on an analysis of renovation requirements. While developing its strategy for addressing MIT's future academic and physical needs, the team was guided by the following principles:

- Where possible, address facilities requirements through renewal and renovation;
- Accelerate systematic capital renewal programs (renewal of roofs, elevators, other systems); and
- Deploy facilities maintenance projects for incremental improvements in appearance and functionality.

The MIT 2030 framework will continue to guide MIT senior leadership in the evolution of the campus and its surrounding environment in the coming years. MIT expects that MIT 2030 will continue as an annual engagement and evaluation of the needs of the campus and, as a result, will continue to evolve and change over time.

B. The Innovation Ecosystem and the Power of Proximity

MIT has been called the prime mover of the innovation ecosystem that comprises the campus and the technology-based industries that surround it. President Susan Hockfield's remarks (see page 12) at the recent groundbreaking for 610 Main Street serve to illustrate how MIT's collaboration with science and technology-based industry is fully consistent with MIT's history, its core principles and its future as a research university. This new building is to be the home of Pfizer's Cardiovascular, Metabolic and Endocrine diseases, and Neuroscience Units. While these remarks were specific to the occasion of the 610 Main Street groundbreaking for Pfizer, the vision and approach President Hockfield articulates describes a much broader approach to collaboration with industry partners.

The innovation ecosystem extends to science and technology-based start-up companies as well. A prominent example of this entrepreneurial activity can be found at the Cambridge Innovation Center, located in the MIT-owned One Broadway building in the heart of Kendall Square. From its start in 1999, with five tenant companies in 3,000 square feet, the Cambridge Innovation Center (CIC) has grown to 485 tenant companies using 150,000 square feet. Its list of tenants, half of which are MIT-related, includes a growing number of venture capital firms and angel investors, along with large numbers of technology-based businesses. CIC clients have raised over \$1.2 billion in venture capital since 2001.

Remarks of MIT President Susan Hockfield Groundbreaking for 610 Main Street November 21, 2011

...150 years ago, MIT's founder and first president, William Barton Rogers, launched MIT with a revolutionary educational vision. Rogers wanted to accelerate America's early industrialization, and recognized a great need for people who could grasp the principles of science and engineering firmly enough to devise the new technologies and new materials required to speed industrial progress.

Rogers envisioned a "polytechnic institute" where students would master science and engineering through real-world problem solving and hands-on research. Because he championed the most fundamental scientific research, the most practical applications -- and the fruitful interaction between them -- MIT became a new kind of "innovation machine."

So it's no surprise at all that we believe that cultivating Kendall Square's innovation cluster directly supports our mission of advancing knowledge and educating students, in service to the nation and the world.

Today, MIT ranks among the world's premier research universities.

But -- in the spirit of William Barton Rogers -- we're even more ambitious than that label implies. We urgently want to make a difference in the world -- and that means ensuring that our ideas make it to the market.

That drive for real-world impact is why we encourage our faculty and students to turn their innovations into start-ups.

It's why, among our peer universities, MIT stands apart in the depth, breadth, continuity and intensity of our connections with industry.

And it's why we are so excited that Kendall Square will now be home to Pfizer...

Pfizer has supported MIT students and dozens of MIT research teams for well over a decade, on projects led by some of our most distinguished faculty...

Given the creative power of proximity -- and given Pfizer's growing commitment to "open innovation"- having Pfizer's new research facility right next door is bound to multiply those collaborations, and to speed the crucial cycle from discovery to innovation.

This will surely be good for Pfizer -- or they would not have made this dramatic move to Kendall Square.

And we believe it will also be very beneficial to MIT:

- It will lead to collaborations that will support cutting-edge faculty research -- vitally important when the model of federal research funding is under assault. And it will provide an avenue to the one thing our faculty members can't resist: important new research problems from the field.
- Having Pfizer so nearby will be good for our students for the same reasons -- and also as a potential source of internships and jobs. (Already, Pfizer overall employs about 90 MIT graduates.)
- Pfizer's presence also represents a key step forward in our effort to develop a new campus model that may have applications far beyond MIT. As we enhance our own campus facilities to help the MIT community do its very best work, we are also working to integrate with and support our local innovation economy -- and that, I'm certain, will be good for Cambridge and the innovation cluster as a whole.

C. MIT Students, Faculty, and Staff

The number of undergraduates at MIT has dropped by 524 over 25 years, reaching a low point of 4,109 in 2004. Slow growth has added back 176 undergraduates since that time. The now completed renovation of W1, Fariborz Maseeh Hall, will permit implementation of a long-discussed plan to restore the undergraduate population from 4,285 for the academic year 2010 – 2011 to about 4,500 over the next few years. (Please note that the figures for students reflect the prior school year's numbers.)

In recent years, the trend in the number of graduate students has been relatively flat, with growth of 1.3% to a total of 6,040 total graduate students in the most recent year. Graduate student population growth is contingent on a large number of factors, including research funding levels, and economic conditions.

For 25 years, the number of tenured faculty members has been stable at around 1,000. The separation of the Broad Institute from MIT in July 2009 is reflected in the 9.4% decrease in total staff for the 2009-2010 school year. This change was a one-time reduction in staff population and removes a growth driver from the Institute's population numbers. There has been only a 0.4% annual gain in the staff population for the 2010-2011 school year over the previous year.

D. Housing

Undergraduate Housing

MIT provides housing for its undergraduate students in 12 residence halls. In addition, students may choose to live in one of 38 fraternities, sororities, or independent living groups (FSILGs) in Boston and Cambridge. Housing is guaranteed for all four years of the undergraduate experience; therefore over 98% of MIT's 4,285 undergraduates live in residence halls or FSILGs. MIT is evaluating the existing conditions of our residences as part of renewal planning.

Graduate Housing

Graduate housing is provided in seven residence halls and apartment buildings on the MIT campus. Currently, MIT houses 39% of its over 6,000 graduate students and 56% of its graduate students who live Cambridge. Since 1997, the number of MIT graduate students housed on campus has risen from 1,660 to 2,382. In the last decade, MIT has invested significantly in the creation of a graduate resident community in the northwest sector of the campus that has brought on line over 1,300 new graduate beds in three new or renovated facilities:

The Warehouse, 224 Albany Street (2001): 120 beds

Sidney-Pacific, 70 Pacific Street (2002): 682 beds

Ashdown, 235 Albany Street (2008): 532 beds

By way of comparison, of the 38,200+ graduate students attending schools in the City of Boston, 65.1% live outside of Boston and only 6% are housed on university campuses. MIT stands out among its peers in housing 39% of its graduate students.

Among MIT's peer institutions, only Stanford and UC San Diego provide a higher level of graduate student housing.

Faculty Housing Assistance Program

To assist with the high cost of housing in the regional area, MIT provides flexible, tax efficient, low interest mortgage programs for its faculty. The overall program has proven to be an important recruiting and retention tool and is similar to ones offered by MIT's peers. The program enrollment is approximately 95% of eligible faculty. There are programs for both junior and senior faculty which were significantly enhanced in 2005. Among the over 500 faculty members who participate in these programs, about 125 live in Cambridge. An important goal of the program is to promote the ability for faculty to choose where they would like to live in the regional area.

Some faculty and senior administrators live on campus as residence hall housemasters. These housemasters are invested in the student experience and live with 100-500 students. There are currently 36 housemasters at MIT living in 18 residence halls.

E. Looking Ahead at MIT Planning & Development

Besides MIT's academic activity, MIT invests in commercial real estate in Cambridge using the endowment and other capital of the Institute. These real estate investment activities provide a platform for educational and research collaborations between MIT and industry, help build and sustain Cambridge's powerful innovation cluster and help to improve the urban environment for the academic campus and our neighbors. The income they generate helps support MIT's mission of research and education, while the real estate taxes paid to the City—totaling approximately \$33.9 million in fiscal year 2011, about 12% of the City's total tax levy—help to support the many programs and services enjoyed by Cambridge residents.

As reported in previous Town-Gown reports, MIT's collaborative planning efforts remain focused in two areas: the Massachusetts Avenue corridor and Kendall Square.

Massachusetts Avenue Corridor

MIT's lease of a four-acre parcel of land on Massachusetts Avenue at the corner of Albany Street to Novartis Institutes for BioMedical Research was included in last year's report. Earlier this year, the City approved Novartis's request for rezoning of this parcel to allow the development to proceed, and Novartis has submitted a special permit application for the project. As required by MIT's lease with Novartis, the proposed building includes active ground floor uses on Massachusetts Avenue, helping to enliven this important corridor.

Further up Massachusetts Avenue towards Lafayette Square, MIT has entered into an agreement with Forest City to investigate the redevelopment of part of the block between Blanche Street and Lansdowne Street. This agreement, a logical extension

of the Institute's 25-year relationship with Forest City at University Park @ MIT, could result in the creation of an office/laboratory facility with ground floor retail on Massachusetts Avenue. Earlier this year Forest City submitted a zoning petition for this development, and expects to re-file a revised petition in response to community feedback. MIT is working with Forest City to explore the addition of housing on MIT-owned land as part of the re-filed petition.

MIT has also begun to explore other properties the Institute owns along Massachusetts Avenue for possible improvement or enhancement. This may include improvements to facades of existing buildings or new developments with ground floor retail.

Through these initiatives, MIT hopes to continue the transformation of this section of Massachusetts Avenue into a vibrant and attractive corridor connecting the Institute to Lafayette Square and beyond.

Further up Massachusetts Avenue in Central Square, MIT completed several important lease transactions, resulting in 100% occupancy of its available retail space. At 450 Massachusetts Avenue, Veggie Galaxy opened its doors to rave reviews this summer, while Moksa continues its build-out in the adjacent retail space. And next door at 424 Massachusetts Avenue, Cambridge Community Television began operations in September and Economy Hardware opened its revamped store in December.

MIT was an active participant in the City's Red Ribbon Commission on the Delights & Concerns of Central Square. The Institute looks forward to continuing to work constructively and cooperatively with the City and business and residential neighbors to implement some of the ideas and recommendations that are emerging from this process.

Kendall Square

After over a year of public outreach, including meetings with city government, city administration, neighborhood groups, and abutters, and numerous internal MIT groups, MIT filed a zoning petition in April 2011 for a 26-acre parcel of land in Kendall Square. MIT proposed the zoning to allow for the creation of a mixed-use development with R&D space for innovative commercial and academic users, residential space, a critical amount of ground floor retail space, publicly accessible open space, and an enhanced connection between the Institute and the adjacent commercial district.

Given the complexity of the petition, and the need to allow sufficient dialog with the City as it engages in its Kendall Square/Central Square (K2C2) study, MIT allowed the petition to expire in October. MIT is continuing to work towards developing a viable plan that best responds to the sometimes conflicting interests and concerns that have been heard over the past two years, and expects to file a revised petition in early 2012.

As MIT works with the City to define a larger vision for Kendall Square, MIT is continuing its efforts to bring new life to the area. At One Broadway, the Institute partnered with Gary Strack, owner of Central Kitchen and The Enormous Room in Central Square, to open Firebrand Saints, a new restaurant that opened in the late summer of 2011. And in the adjacent space, MIT has signed a letter of intent with another local team for a new restaurant concept which is expected to open in 2012.

Academic Planning

Planning on the MIT core academic campus is centered on renovation and revitalization. In August, 2011, MIT completed the renovation of two buildings along Memorial Drive: W1, Fariborz Maseeh Hall and E60, the Arthur D. Little Building. A pilot exterior restoration project for Building 2 of the original Main Group buildings has also been completed. MIT has developed preliminary designs for renovating Walker Memorial Hall for Music and Theater Arts and has been programming for the renovation of E52, the former Sloan School of Management headquarters for the Department of Economics and Sloan administrative groups. In addition to the full building renovations listed above, the expectation is that MIT will engage in incremental renewal projects in buildings across the entire campus from laboratories on Albany Street to residence halls to classrooms, laboratories and offices on the main campus.

There are two new buildings that were reported on last year that are not yet sited or designed: nMaSS (formerly called the Materials Research Facility of the Future (MRFF)) and the Energy and Environment Building. The nMaSS building is a challenge to site because of its technical and programmatic requirements. The Energy and Environment building is proposed to house the growing set of energy research activities on campus, along with portions of the Earth, Atmosphere and Planetary Sciences (EAPS) and Civil Engineering Departments. The constituent parts of the program are still in development and no specific site has been selected, although there is interest in replacing the parking lots, bank kiosk and modular buildings on the corner of Massachusetts Avenue, Albany Street and Vassar Street with the new Energy & Environment building.

Development Opportunities

As identified on Map 3, several areas on campus provide development opportunities, but no specific site has been selected for any particular building. Parking lots, buildings that are not appropriate for contemporary academic requirements and aging parking garages all are possibilities for future development.

Kendall MBTA Station Block, Medical Parking Lot and Hayward Blocks

The area directly adjacent to the Kendall T stop is the heart of the Kendall Square collaborative redevelopment initiative. The parcel at the rear of the Medical Lot block on Amherst Street, including the former Research Institute for Medicine and Chemistry (RIMAC) property is being considered as a future academic development

site that will be integrated into the larger plan for this area. It will serve as both a gateway to the rest of MIT and a crossroads within the campus. No specific program has been developed for this site.

Albany Street, Massachusetts Avenue and Vassar Street

The lots on the east side of the intersections of Massachusetts Avenue and Vassar and Albany Streets are underutilized and could provide a site for a variety of academic uses, in close proximity to the core academic campus. The Energy & Environment building has been considered for this location, but no formal siting has been done. The frontage on three streets would allow for ground floor uses that would contribute to the activation of the street.

Albany and West Garages

These garages and the parking lots adjacent to them also could provide important sites in proximity to the core campus, but the burden of accommodating parking relocation would be significant. These two garages provide a major portion of MIT's parking. Redevelopment in these locations might entail structured parking combined with other uses.

600 Main Street

This triangular-shaped block's relative proximity to the core campus and scale make it an attractive location for academic uses. The site provides an opportunity to improve street frontage in an area in which significant new developments have taken place, are planned, or are under construction, including the retail space at Tech Square and the first of two 610 Main Street buildings.

730-750 Main Street

This block is an optimal size for an academic or commercial science building. In addition, future redevelopment of this site would allow for the continuation of the emerging retail corridor along Main Street.

Westgate Lot

This is a very large site with potential to accommodate a great deal of space, but its distance from central campus makes it less attractive for academic uses. However, the relocation of the MIT Police to W89 on Vassar Street decade few years ago, the use of W98 (600 Memorial Drive) for administrative uses, and the consolidation of many functions of Information Services and Technology (IS&T) in W91 and W92 demonstrate that the west end of campus is a good location for a variety of administrative and support activities.

Northwest Parking Lots

These lots could be used for administrative, support, or residential uses, but their unusual shapes, low density zoning and remoteness from campus make them less

attractive. However, over time the perception of this area could be altered by transportation improvements and the provision of new zoning that better supports transit-oriented development than the existing low-density zoning.

F. Transportation

Bicycle Planning and Improvements



MIT is committed to providing bicycle amenities to support and encourage students, faculty, and staff to commute to MIT by bicycle. In 2011, MIT created a total of 1042 new and replacement bike parking spaces at existing high demand locations and as part of new construction at the Koch Institute and North Court and Maseeh Hall. All new bike racks have been located with a focus on providing secure, accessible, well-lit spaces close to building entrances, and placed indoors or in covered areas where possible. MIT plans to continue to provide additional parking spaces to meet the needs of our growing and enthusiastic cycling community.



The MIT Bicycle Commuter Benefit Program continues to be a popular Transportation Demand Management (TDM) strategy specifically targeted at bicyclists. Full-time employees are eligible to participate in the program, which provides reimbursement of \$20/month (\$240/year) for the purchase, improvements, repair or storage of a

bicycle used for commuting to MIT. Additionally, bicycle commuters who need to drive to campus a few times per month have the option of enrolling in a pre-paid, post-tax occasional parking permit. Eighty-eight cyclists signed up for the benefit this year, and increased enrollment is anticipated with the recent launch of the “MIT Commuter Connections” advertising campaign.

In 2011, MIT released an updated version of the “Getting Around MIT by Bicycle” information pamphlet and map (see http://web.mit.edu/facilities/transportation/Getting_Around_by_Bike2011.pdf and http://web.mit.edu/facilities/transportation/Getting_Around_by_Bike_map.pdf). In addition to a map showing bike lanes, bike parking areas, and bike repair stations, the brochure educates the community on bike safety, etiquette, and security, and communicates the need to share the road with pedestrians, vehicles, and other roadway users.

This summer’s launch of the Hubway bike share system in Boston has proven incredibly successful with 100,000 rides recorded in the first 10 weeks of the program. The City of Cambridge is currently in negotiations to expand the program

into Cambridge, and MIT has committed to sponsoring two Hubway stations on campus. MIT looks forward to continued collaboration with the City to establish this important new link in the region's transportation network.

Pedestrian Crossing of Grand Junction Railroad Tracks

MIT has prepared designs for a grade-level pedestrian crossing from the end of Pacific Street to Vassar Street. The Commonwealth of Massachusetts has acquired the CSX tracks and track rights, including the Grand Junction rail line. MIT is working with the Commonwealth in making this desired improvement a reality, including funding the improvements. The drawings are 95% complete. The timing of completion of the project is contingent upon the issuance of a license by MassDOT allowing pedestrians to cross the tracks after the signal and new crossing footpath are installed.

Urban Ring

The Urban Ring was once again omitted from the state's 2011 Regional Transportation Plan, a prerequisite to applying for any federal funding. The dire financial condition of the MBTA and the state transportation system generally has put the Urban Ring project largely on hold. MIT intends to continue working with the City of Cambridge and others to see what progress can be made with existing resources and projects in preparing the Urban Ring to move forward when resources become more available.

One reason that the Urban Ring remains of interest to MIT is the increase of MIT administrative uses on the far west end of the campus. Development in this area would improve the visibility of the Fort Washington Park and create a node of transit-supported buildings that would help transform this area of small scale service and residential buildings, obsolete industrial buildings, service yards, and parking lots. The new transit node suggests an opportunity to revise the existing low density zoning to a density more appropriate to transit-oriented development (TOD).

Grand Junction Commuter Rail

The Commonwealth has expressed interest in running passenger service from the Worcester/Framingham line up the Grand Junction to North Station, potentially including a station in Kendall Square.

MassDOT has just completed a ridership projection and analysis of the traffic impact of such a service and determined that it would not move forward on the commuter rail service project on the Grand Junction at this time. In order to fully understand and respond to the commuter rail proposal, MIT is conducting its own study to assess the potential benefits and difficulties that such a service would pose for MIT and to review the state study.

Grand Junction Community Path

MIT has met in the past with City staff to discuss how and whether the City's proposed multi-use path on MIT property in the Grand Junction corridor should be built. Some of the practical issues of potentially conflicting uses in the corridor have been raised but not resolved. MIT has suggested that its significant investment in the Vassar Street cycle track and widened sidewalks provides the essential connection and most of the benefits that the Grand Junction Path would provide at no cost to the City and with no intrusion on MIT's existing operations or future development. The on-street bicycle improvements proposed for Binney Street and Galileo Way, both nearing construction stage, will provide an important link to the existing Vassar Street cycle track improvements, including crossing at the already signalized Main Street and Vassar Street intersection.

G. New Sustainability Efforts in Planning, Building Design and Infrastructure

MIT continues to pursue strategies for energy efficiency and renewable and sustainable design for the campus. In addition to a goal of LEED Silver or higher for major building projects (see Map 5), we are committed to building systems and equipment that operate properly at initial occupancy, are maintained over time to remain efficient, and are flexible with regard to future innovations. The new Sloan School and Koch Institute buildings, in addition to both receiving LEED Gold, are the most efficient buildings of their type on campus relative to energy usage. This has been accomplished by a combination of high efficiency equipment and systems, cutting-edge building envelopes, and focused operating strategies and participation by building occupants. MIT will be seeking a LEED Commercial Interior (CI) certification for the first time for a major laboratory renovation in the basement of E25. The energy demands of the laboratory are substantial compared with those of office or retail interiors typically certified in this category, so it will be a challenge to meet these standards.

MIT's focus, however, is not only on major new or renovation projects. The Institute leadership supports investing in energy efficiency projects around steam systems, lighting fixtures and controls, fume hood management, data based building commissioning, and other related projects. We are committed to reinvesting the calculated savings of energy usage in other energy saving projects and programs. (See Map 6)

MIT is also working with external partners, most notably NSTAR and the US Department of Energy (DoE). Efficiency Forward, our program with NSTAR, established the goal of reducing total electrical energy demand by 34 million kilowatt hours or 15% of MIT's total electrical usage over a three-year period. The program is in the second year and it appears that the goals and commitments will be achieved or exceeded.

III. List of Projects

Seated at the heart of one of the most dense innovation clusters in the world, the Institute is relying on the MIT 2030 framework to provide guidance as it shapes the campus and responds to ongoing changes in its community. The majority of campus projects focus on incremental and selective renewal — from laboratories on Albany Street to offices on the main campus, and from individual systems renewals to partial or full building renovations. For example, a renewal program for campus dormitories has emerged as a top priority. In addition, some buildings require extensive renovations and may need to be repurposed. MIT expects that by 2030, much of the campus will be renewed and/or renovated. At the same time, MIT is actively engaged in a process to enliven Kendall Square and explore new opportunities for academic/industry collaboration. The area is already home to world-class research institutions and innovation economy companies. These companies — many of which were started by MIT, including Cambridge-based firms Biogen Idec, Akamai, and Zipcar — have created thousands of jobs. MIT’s engagement will continue to help position this area as a prime destination for rising companies and the world's top talent.

A. Recently Completed



281 Albany Street

MIT renovated this 30,000 square foot property for laboratory use last year. The renovation included the addition of windows around the perimeter of the site, the relocation of the loading dock, and the construction of a new accessible entrance at the west side of the building. This effort transformed an obsolete manufacturing facility into a next-generation laboratory facility and helped improve the streetscape along Albany Street. Aileron Therapeutics, Inc., a biopharmaceutical company

founded in 2005 to develop and advance a revolutionary class of drugs called Stapled Peptides, took occupancy of the entire first floor of the building in October last year, and recently expanded to the second floor.



E60, Former Arthur D. Little Building

Building E60 was constructed in 1917 and is listed in the National Register of Historic Places and is a National Historic Landmark. The now renovated building houses offices for the Sloan School of Management. The project scope included interior demolition and renovations, repair and restoration of the building envelope, complete repair or replacement of mechanical, electrical, plumbing, fire protection, access control and communications systems and all other improvements required to meet all

federal, state and local code compliance. Renovations were completed in cooperation with the Cambridge Historical Commission. The project is expected to

achieve a minimum rating of LEED Silver. The building was completed in August 2011.



Fariborz Maseeh Hall: 305 Memorial Drive Renovation

This project (featured on the cover) was completed in two phases of work. The first phase of construction consisted of upgrading the building envelope and completing the non-structural interior demolition. This scope of work included window replacement, full masonry cleaning and joint re-pointing, repair or replacement of limestone features, re-building and seismic bracing of the roof parapets, replacement of the copper cupolas and interior demolition of floors 1 through 6. This work was an important first step for the full renovation of the building and helped protect the building interior until the remaining renovation work could be completed.

The second phase of the Fariborz Maseeh Hall Renovation Project was completed in August 2011 and has now delivered more than 460 undergraduate student beds. The project included replacement of all major mechanical and electrical systems, code and seismic upgrades, renovations to student rooms and activities spaces, and the creation of a new dining hall. Significant historic building features have been maintained and restored, and the building is anticipated to receive a minimum Silver LEED rating.





Koch Institute for Integrative Cancer Research

The Koch Institute for Integrative Cancer Research is a ±367,000 gross square feet building designed by Ellenzweig Associates and completed in 2010. Heat recovery systems, variable air volume hoods and a full year of commissioning are among the energy-focused features of the building. The Koch Institute building has achieved a LEED Gold rating. An extensive landscape program at the public edges and sides of the building is in place, with a major new courtyard called North Court to the rear of the building. A gallery of scientific exhibits is featured in the Main Street public lobby.



640 Memorial Drive Renovation

This property consists of a five-story historically significant building containing approximately 206,000 square feet of office and laboratory space. In July 2010, MIT executed a lease agreement with sanofi-aventis, U.S. Inc. to occupy approximately half the building. MIT completed the renovation of the base building systems for a first class laboratory facility this fall. Sanofi-aventis has delayed tenant work as it refines its space needs following the acquisition of Genzyme earlier this year. MIT expects the work to resume in this building for its

oncology headquarters this winter. MIT continues to market the remaining space in the building.



Sloan School Expansion

This new building accommodates the expanding needs of the school by housing all Sloan faculty and providing enhanced teaching and learning spaces. This project was designed by Moore Ruble Yudell Architects & Planners with Bruner/Cott & Associates as the local architect. Sunshades and screens on the southern façade of the building will incorporate daylighting while reducing the heat gain from the sun. Energy use is 40% less than a conventional building of the same size. Low-flow urinals, toilets and other plumbing fixtures are a few of the measures that have reduced the building's water use by 20%. The Sloan School Expansion has achieved a LEED Gold rating. The accompanying underground garage accommodates 425 parking spaces for the East Campus area. The former surface parking lot has been reduced from 311 to 57 spaces. The building has been occupied for a little over a year.



Utility Expansion

Boiler 8, a unit adjacent to N16A on Albany Street, was installed on a temporary basis and its air permit would have expired in 2011. The replacement boiler, Boiler 9, will play the same role in the steam generation system as Boiler 8 did – to provide steam in the event that the largest steam producer on campus goes down and prevent loss of heat to buildings on the central campus steam loop. In addition, an enclosure has been provided for Boiler 7 and the new Boiler 9 to reduce wear and tear and increase efficiency. This project was completed Fall 2011.

B. In Construction

Buildings E17 and E18

This renovation project is to renew and repurpose E17 and E18, recently vacated by the Koch Institute for Integrative Cancer Research. The renovation would provide needed expansion space for Chemical Engineering and office swing space to enable future renovation projects on campus.



610 Main Street New Construction (formerly 650 Main Street)

Located on the site of the current surface parking lot, this new development consists of 418,000 square feet in two office and/or laboratory buildings above a below-grade parking garage. On September 1, 2011 MIT signed a 10-year lease with Pfizer Inc. to occupy 80% of the south building. Construction started on the site in October of this year and is expected to be completed at the end of 2013. In addition, MIT has also executed a lease with Pfizer Inc. to occupy approximately 75,000 square feet of space in the adjacent 700 Main Street property on a temporary basis during the construction of its new facility at 610 Main Street South.

C. In Planning



130 Brookline Street Restoration

130 Brookline Street is a vacant two-story, 45,000 square foot concrete frame industrial structure built in the 1920s. MIT has completed design plans for the conversion of the structure into a laboratory building and is marketing the building to potential tenants. Although MIT has not secured a tenant, the Institute is seeking to start renovating the building this winter to improve its physical appearance and prevent further deterioration of the structure.



Building 2

There is a pressing need to continue renewing the Main Group for state-of-the-art education and research. Possible pilot opportunities include renovation of sections of Building 2, home to MIT's Department of Mathematics and portions of MIT's Department of Chemistry, focusing on the renovation of an existing laboratory on the third floor. The project will be completed using sustainable design and construction initiatives with the goal of achieving

a minimum rating of LEED Silver.

E52 - Sloan and Economics Department

Since E52 was partially vacated by MIT Sloan School of Management faculty moving into the new Building E62 and administration into E60, MIT now has an opportunity to renovate E52 to accommodate a conference center, the Department of Economics and other programmatic units of MIT Sloan. Building E52 was constructed in 1938 as the headquarters for Lever Brothers and has not been significantly upgraded over time.

Grounds Services

The Grounds Services unit now at 310 Massachusetts Avenue will be moved to a new location on campus. In addition to moving Grounds, co-location of the Repair & Maintenance group and other operations units has been studied. The study indicated that the California Paint building at 142 Waverly would be a good fit for the Grounds Services and Repair & Maintenance divisions. Community members and City officials raised concerns about this location last summer. MIT is now planning for alternatives to the California Paint location, which is no longer being considered for this use.



Music and Theater Arts – Walker Memorial

The Music and Theater Arts section at MIT has grown and is in need of teaching and performance spaces for its academic program. Walker Memorial Hall is a significant campus building that has served many roles on the MIT campus over its 95-year history. Currently in need of renovation, Walker appears to be a good match with the programmatic needs of Music and Theater Arts, providing both a home for the consolidated

department and extracurricular performance use, and a solid vision for the building renovation. This project is an evolution of the Music and Theater Arts program originally proposed for the corner of Albany Street and Massachusetts Avenue. A concept design has been prepared and studies for accommodating existing programs housed at Walker are underway.

345 Vassar Street

This two-story, 32,000 square foot building was previously occupied by Idera Pharmaceuticals. MIT recently completed interior demolition of the obsolete offices and laboratories and is exploring alternatives to position the building for office, laboratory, or institutional use.



Wood Sailing Pavilion Floating Docks

The proposed project consists of construction of a floating dock to expand the existing MIT sailing facility. The proposed expansion will provide space for approximately 100 boats and sailboards, which are currently stored on the pile-supported fixed elevation pier and within the MIT Sailing Pavilion storage bays. The project does not expand the number of vessels at the facility. It is designed to address constraints associated with limited dock space and up to a 3-foot elevation difference between the existing dock and river surface, which poses safety concerns and boat maintenance issues. The proposed floating dock will remain on the Charles River year-round.

The project has received all necessary permits and is planned for installation before the end of 2011.

IV. Mapping Requirements

Map 1: MIT Property in Cambridge

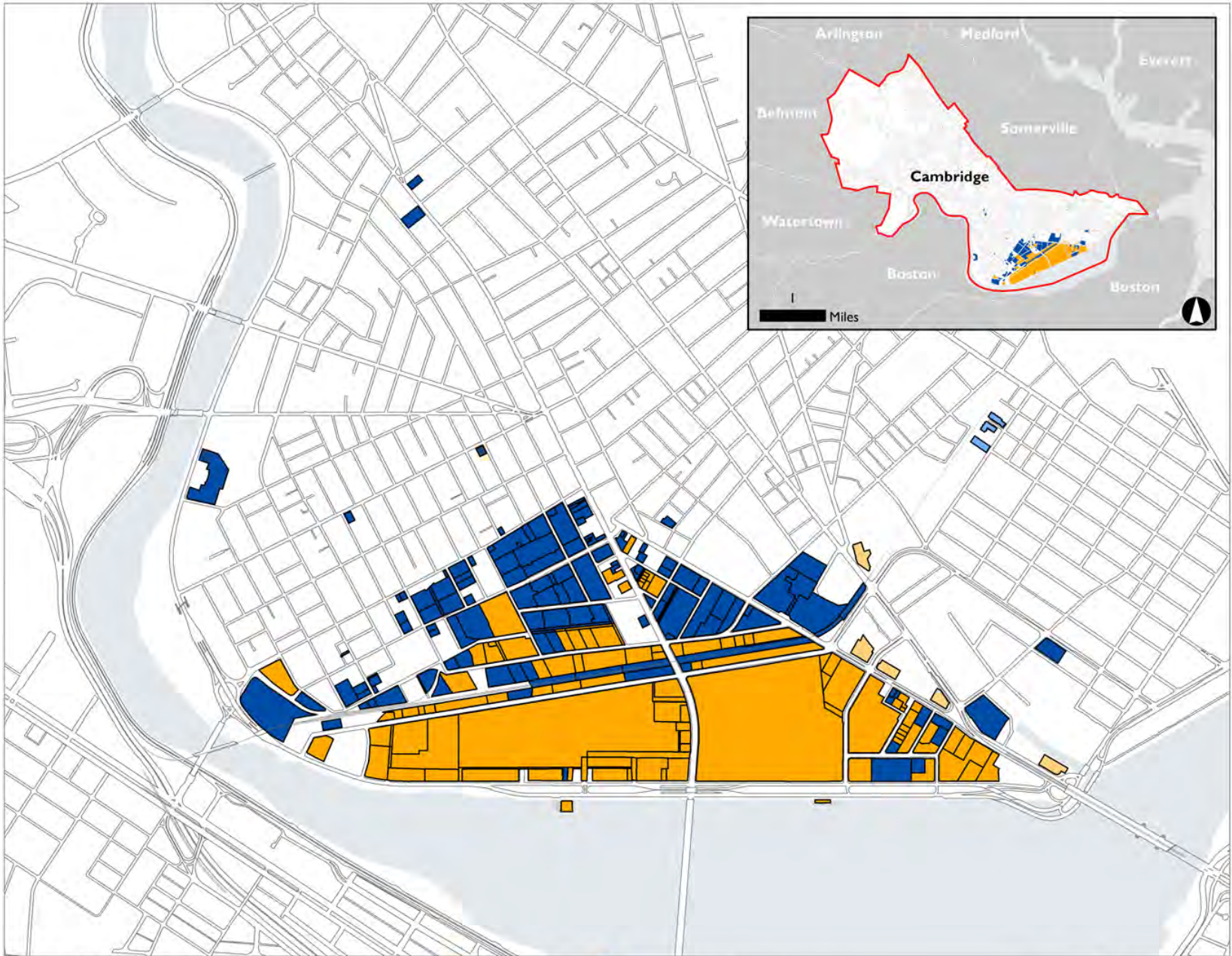
Map 2: MIT Projects

Map 3: Future Development Opportunities

Map 4: MIT Shuttle Routes

Map 5: MIT LEED Certified Buildings

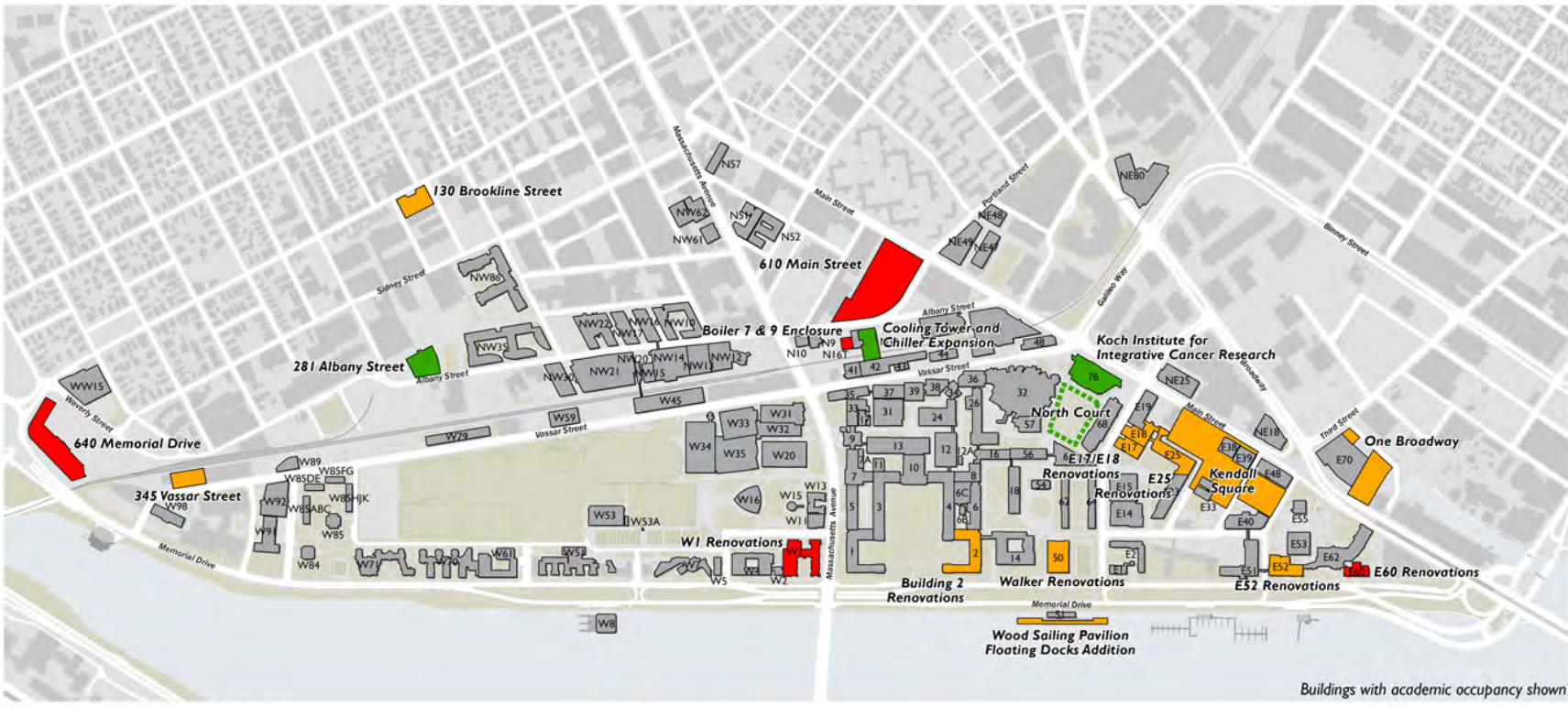
Map 6: MIT Energy Efficiency Upgrade Projects, 2007-2011



Map 1: MIT Property in Cambridge
December 2011 (Data as of June 30, 2011)

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

1,000 Feet



Map 2: MIT Projects
 December 2011 (Data as of June 30, 2011)

■ Planning/Design
 ■ Construction
 ■ Completed

1,000 Feet

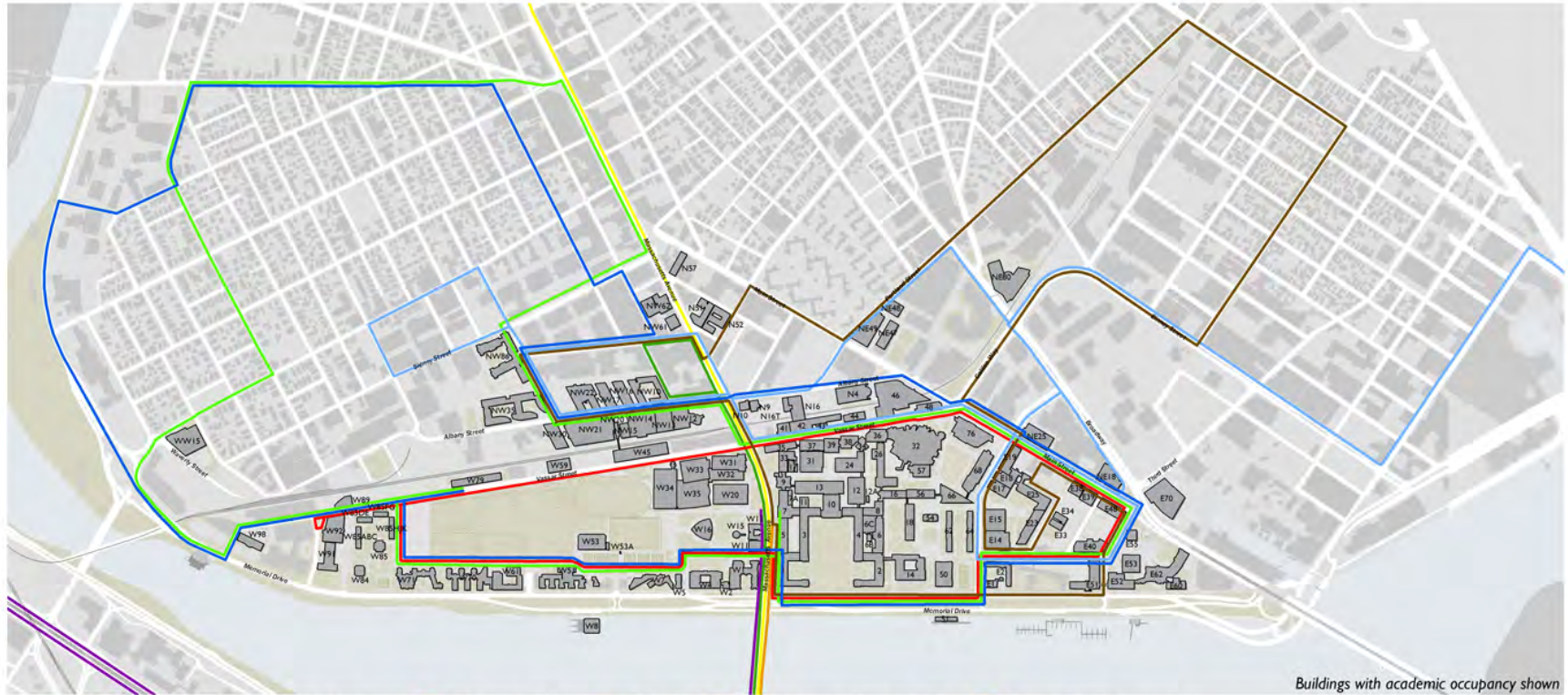


Map 3: Future Development Opportunities
December 2011 (Data as of June 30, 2011)

 Future Development Opportunities

Buildings with academic occupancy shown





Buildings with academic occupancy shown
1,500 Feet

Map 4: MIT Shuttle Routes
December 2011 (Data as of June 30, 2011)

- MIT Shuttle TECH
- Boston Daytime
- Weekend Shuttle
- M2 Shuttle
- EZ Ride
- Saferide Shuttle Cambridge East
- Saferide Shuttle Cambridge West
- Saferide Shuttle Boston East
- Saferide Shuttle Boston West





Map 6: MIT Energy Efficiency Upgrade Projects, 2007-2011
December 2011 (Data as of June 30, 2011)

■ Buildings with Energy Efficiency Upgrade Projects Completed or Planned for 2011

1,000 Feet

V. Transportation Demand Management

A. Commuting Mode of Choice

The latest survey results for commuting mode choice are available in the 2010 Town Gown Report to the City of Cambridge.

B. Point of Origin for Commuter Trips to Cambridge

Home Location	Number of People working on the MIT Main Campus	Percentage
Cambridge	2258	22.8%
Boston	1256	12.7%
Somerville	750	7.6%
Arlington	381	3.9%
Brookline	319	3.2%
Newton	275	2.8%
Lexington	248	2.5%
Medford	230	2.3%
Belmont	216	2.2%
Watertown	164	1.7%
Malden	143	1.4%
Waltham	86	0.9%
Woburn	74	0.7%
Acton	67	0.7%
Billerica	42	0.4%
North Of Boston	608	6.1%
South Of Boston	196	2.0%
West of Boston	127	1.3%
Outside 128	1446	14.6%
Outside 495	317	3.2%
Out of State - Connecticut	17	0.2%
Out of State - Maine	20	0.2%
Out of State - New Hampshire	125	1.3%
Out of State - Rhode Island	49	0.5%
Out of State - Vermont	7	0.1%
Outside New England	447	4.5%
Unknown	27	0.3%
Grand Total	9,895	100.0%

C. TDM Strategy Updates

Zipcar Partnership

MIT partnered with Zipcar to implement the 18+ program which allows students and staff between the ages of 18 and 21 to obtain a Zipcar membership. The number of Zipcars housed on campus was also increased to 20 to support the additional members. We also host a Zipcar Toyota Prius PHEV, Plug in Hybrid Electric Vehicle, in our Albany Street garage.

Zimride Ridesharing

MIT is partnering with Zimride to launch a social network for ridesharing. This private network empowers individuals to join together in carpools or for one-time trips to reduce traffic and campus parking difficulties and could provide substantial cost-savings and environmental benefits for the community.

Zimride developed a custom rideshare solution to serve MIT's campus population. Through Zimride's web-based interface, the community can find others with similar commuting patterns or one-time rides. Zimriders can view profiles for common networks, interests and friends before deciding to share a ride.

Zimride is the largest online social rideshare community in North America with over 350,000 users. It has implemented private rideshare communities for over 80 of the nation's leading universities and companies.

Recognition

MIT received a Mass ECO Award from the Mass Department of Transportation for Excellence in Commuter Programs.

MIT won first place in the Bike Week, Mass Commuter Challenge, in the Large Academic Category.

VI. Institution Specific Information Requests

1. How do you anticipate that the K2C2 Study will affect your long term planning. Please see E. Looking Ahead at Campus Planning and Development in section II. Future Plans Narrative.
2. Provide an update on long term academic and non-academic planning for the main campus, with a particular focus on all potential locations for academic uses and plans for green space and edges along Massachusetts Avenue, particularly near the railroad crossing, and adjacent to Area 4. Please see E. Looking Ahead at Campus Planning and Development in section II. Future Plans Narrative.
3. Provide information on any plans for additional housing or other uses under consideration for MIT owned parcels in Cambridgeport and Area 4. Please see E. Looking Ahead at Campus Planning and Development in section II. Future Plans Narrative.
4. Provide information on MIT's plans for ground floor retail along Main Street and in Kendall Square. Please see E. Looking Ahead at Campus Planning and Development in section II. Future Plans Narrative.
5. Provide an update on discussions about development of a multi-use path along the Grand Junction railroad right-of-way. Please see Grand Junction Community Path in section II. F., Future Plans Narrative, Transportation.
6. Discuss planning for bicycle facilities on campus. Please see Bicycle Planning and Improvements in section II. F., Future Plans Narrative, Transportation.
7. Provide an update on the 610 Main Street building, which has been permitted. Please see List of Projects in Construction.

Featured on the cover is a view of the Charles River from recently renovated Fariborz Maseeh Hall.