



**Massachusetts
Institute of
Technology**



**2009 Town Gown Report to the City of Cambridge
December 9, 2009**

2009 Annual Town Gown Report

Massachusetts Institute of Technology

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2008 Annual Town Gown Report Massachusetts Institute of Technology

2008-2009 term (7/1/08 – 6/30/09)
Submitted December 9, 2009

I. Existing Conditions

A. Faculty & Staff

	2005	2006	2007	2008	2009	2019 (projected)
Cambridge-based Staff						
Head Count	8,173	8,588	9,033 ¹	9,407 ²	9,778	9,000-10,000
FTEs	7,145	7,473	7,710	7,935	8,258	
Cambridge-based Faculty						
Head Count	970	976	984	994	996	~1,100
FTEs	963	971	978	990	991	
Number of Cambridge Residents Employed at Cambridge Facilities	1,827	1,860	2,024	2,153	2,267	~2,300

¹ The establishment of the Broad Institute, the McGovern Institute for Brain Research, and the Picower Institute for Learning and Memory accounts for the increase in staff.

² Additional expansion of both newer and more established research centers accounts for much of the staff growth between 2007 and 2008.

B. Student Body

	2005	2006	2007	2008	2009	2019 (projected)
Total Undergraduate Students	4,132	4,053	4,114	4,163	4,138	4,500
Day	4,132	4,053	4,114	4,163	4,138	
Evening	N/A	N/A	N/A	N/A	N/A	
Full Time	4,077	4,005	4,058	4,114	4,105	
Part Time	55	48	56	49	33	
Total Graduate Students	5,953	5,881	5,884	5,806	5,916	6,000-6,200 ³
Day	5,953	5,881	5,884	5,806	5,916	
Evening	N/A	N/A	N/A	N/A	N/A	
Full Time	5,813	5,839	5,833	5,731	5,889	
Part Time	140	42	51	75	27	
Non-Degree Students	150	176	166	148	151	
Day	150	176	166	148	151	
Evening	N/A	N/A	N/A	N/A	N/A	
Total Students Attending Classes in Cambridge	10,235	10,110	10,164	10,117	10,205	10,500-10,700
Non-resident students not included	85	96	89	103	151	

³ 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

	2005	2006	2007	2008	2009	2019 (projected)
Number of Undergraduate Students residing in Cambridge						
In Institute-approved housing (includes dormitories, fraternities, sororities and independent living groups)	3,281	3,270	3,272	3,228	3,315	3,200- 3,400
In off-campus housing owned and managed by MIT	4	7	7	6	5	
In off-campus non-MIT housing	88	69	53	75	77	
Number of Graduate Students residing in Cambridge						
In Institute-approved housing (includes dormitories, fraternities, sororities and independent living groups)	2,148	2,172	2,144	2,178	2,275	2,100- 2,500
In off-campus housing owned and managed by MIT	195	172	172	183	161	
In off-campus non-MIT housing	1,736	1,803	1,563	1,477	1,652	
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 Owned⁴

	2005	2006	2007	2008	2009	2019 (projected)
Acres						
Tax Exempt	157	157	160	160	160	
Taxable	84	87	85	95	95	
Number of Buildings (academic)						
	126	127	102 ⁵	103	104	
Dormitories						
Number of Buildings	26	26	26	25 ⁶	26	
Number of Beds	5,248	5,248	5,290	5,290	5,364	
Size of Buildings (gross floor area)						
Institutional/Academic	5,898,196	6,315,432	6,032,363	6,286,578	6,015,884	
Student Activities/Athletic/Service	1,845,681	1,845,681	2,159,664	2,208,555	2,245,478	
Dormitory/Nontaxable Residential	2,681,280	2,680,967	2,679,144	2,677,669	2,930,504	
Commercial ⁷	4,625,434	4,716,417	4,771,460	5,112,406	5,112,406	
Taxable Residential ⁸	172	172	172	175 ⁹	175	

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

⁴ MIT and the City agreed that sub-area divisions are unnecessary in this section.

⁵ Buildings leased by MIT or not located in Cambridge have been removed from the count.

⁶ The change in number of dormitory buildings is due to a change in reporting methodology.

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)
2005				
Number of Units	none	none	172	727
Number of Buildings	none	none	12	6
2006				
Number of Units	none	none	172	1,105
Number of Buildings	none	none	12	7
2007				
Number of Units	none	none	172	1,105
Number of Buildings	none	none	12	7
2008				
Number of Units	none	none	175 ¹¹	1,105
Number of Buildings	none	none	15 ¹²	7
2009				
Number of Units	none	none	175	1,105
Number of Buildings	none	none	15	7
2019 (Projected)				
Number of Units	none	none	175	1,105
Number of Buildings	none	none	15	7

¹⁰ Occupied by both MIT and non-MIT residents.

¹¹ The addition of three units is the result of a change in reporting methodology.

¹² The addition of three buildings is the result of a change in reporting methodology.

Property Transfers

Cambridge properties purchased since filing previous Town Gown Report:
None

Cambridge properties sold since filing previous Town Gown Report:
None

Planned dispositions or acquisitions:
None

E. Real Estate Leased

Use	Leased Location ¹³	Square Feet ¹⁴
Institutional/Academic	1 Cambridge Center	10,746
Institutional/Academic	5 Cambridge Center	42,445
Institutional/Academic	7 Cambridge Center	231,028
Institutional/Academic	320 Charles Street	98,513
Institutional/Academic	190 Fifth Street	19,214
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	604,276

¹³ Leased by MIT from third-party landlords.

¹⁴ The square footage will, in some cases, only be a portion of the entire building.

F. Payments to City of Cambridge

	FY 05	FY 06	FY 07	FY 08	FY09
Real Estate Taxes Paid ¹⁵	\$24,514,865	\$24,909,401	\$25,322,904	\$28,905,163	\$31,219,327*
Payment in Lieu of Taxes (PILOT) ¹⁶	\$1,504,000	\$1,541,600	\$1,922,079	\$1,847,603	\$1,774,115
Water & Sewer Fees Paid	\$4,343,079	\$4,992,678	\$5,920,644	\$5,456,917	\$4,661,336
Other Fees & Permits Paid	\$347,959	\$913,167	\$1,240,107	\$3,527,639	\$996,525
Total Payments**	\$30,709,903	\$32,356,846	\$34,405,734	\$39,737,322	\$38,651,303

* MIT's FY 09 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 \$41.2 million in Cambridge businesses in FY 09. This program, together with taxes paid, payments in lieu of taxes, and municipal fees, brought MIT's 2009 economic contribution to the City to almost \$78 million.

¹⁵ 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.

¹⁶ 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	7:15AM – 7:10PM	none
Northwest Shuttle	Mid-size transit 28 seats	10 minute peak, 20 minute off peak	7:25AM – 6:41PM	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

Ridership Data

Route Name	Annual Ridership
Tech Shuttle	238,150
Northwest Shuttle	148,340
Boston Daytime Shuttle	72,845
Combined Saferide Shuttles	278,140

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. To better coordinate our services, MIT is currently exploring the possibility of using the EZRide shuttle to replace the Northwest Shuttle.

II. Future Plans Narrative

A. Looking Back at MIT Campus Development, 2000 – 2009

Academic Mission: Teaching, Research, and Community

This year, the City asked that the 2009 Town Gown Report include additional context by reflecting on campus development efforts over the last five years. For MIT, context is best provided by looking back on the entire decade beginning in 2000. The scope of development on the MIT campus since 2000 was the largest that had been seen since the major expansion of the campus in the 1960s. Nearly three million square feet will have been built on existing campus property by the end of the decade. These building activities were consistent with the emerging academic and student life priorities of the Institute.

Teaching & Research

Providing the highest quality research and teaching facilities and promoting interdisciplinary collaboration are among the top priorities of MIT. There were many projects over the last decade devoted to fulfilling these goals:



- << The co-location of the computer science and electrical engineering laboratories and departments in the Stata Center complex;

- >> Consolidating the new Picower and McGovern Institutes and the Brain and Cognitive Science Department in the Brain and Cognitive Sciences building;





- << Providing a renovated home for Physics and new space for Material Science and Engineering in the PDSI project, while upgrading key infrastructure for some of the surrounding original Main Group buildings;
- The expansion of the Media Lab to create and demonstrate new forms of technology for everyday life;
- The modernization of the MIT Sloan School to reflect its global standing in management research and teaching; and



- >> The establishment of the Koch Institute, an outstanding example of the integration of advanced science and engineering, devoted to the prevention, treatments and, ultimately, cures for cancer.

The addition of academic space to the campus in the most recent decade is roughly double the average academic growth in space during the postwar decades in which MIT became a modern research university.

Student Life and Learning

The 1998 *Task Force on Student Life and Learning Report* kicked off a new emphasis on student life that became central to MIT's capital plans of this decade. The subsequent residential expansion is unprecedented in MIT's history, reflecting a reinvigorated focus on student life, especially for the graduate student population, and in support of the policy to provide on-campus housing for all freshmen.

Residential development during the past decade was nearly three times the average residential expansion and nearly a third of all new construction. These residential projects included:



- NW30 (also called the Warehouse) at 224 Albany Street has 120 graduate student beds. This adaptive re-use project kicked off the major expansion in graduate student housing, which continued throughout the decade;
- << Simmons Hall at 229 Vassar Street has 344 beds for undergraduates. In addition to providing sufficient space to house all freshmen on campus, Simmons provided a setting to implement some of the plans for strengthening residential life, including a house dining program, extensive common space and expanded presence of housemasters, resident scholar and graduate student advisors serving as part of the student support system;

- >> Sidney-Pacific at 70 Pacific Street has 682 beds for graduate students. It was the single largest addition of graduate student accommodations in MIT history; and



- << NW35 (called Ashdown House) at 235 Albany Street has 532 beds for graduate students, although 50 beds are now occupied by a special group of undergraduates who are the seed community for a renovated W1 (see below).

There have been two other key student life projects in the capital program over the last decade.

- >> The Student Street in the Stata complex provided a unique boost to student life in the northwest sector of the campus, and includes dining facilities, a coffee bar, a child care facility, a library extension and computer workstations, study and demonstration space, a fitness center, and auditorium-style classrooms; and



- << The Zesiger Athletic Center at 100 Vassar Street dramatically expanded physical education, recreation and athletic opportunities on campus

Campus Infrastructure and Energy

The campus infrastructure additions over the last decade consist primarily of underground garage space. The garages at Sidney-Pacific, Sloan and Stata provided replacement parking for surface lots that have been eliminated or dramatically reduced in size. No net new parking has been added on the campus in more than 15 years.

The last major expansion of utility infrastructure to be completed was the renovation of the Central Utility Plant (CUP) on Vassar Street along with the extension and upgrade of utility distribution lines. A 25 year-old cooling tower was also replaced with a more visually appealing tower on E40 at the corner of Hayward and Amherst Streets. The expansion of the cooling tower and chiller plant on Albany Street at the back of the CUP is now in construction.

A campus-wide energy reduction program has been underway since 2005, growing in scope and scale each year. Early projects included lighting controls and fixture upgrades, steam trap renewal, vending machine efficiency equipment installations, and behavior change campaigns to encourage community members to turn out lights, close fume hood sashes, and use revolving doors. By installing steam meters in two identical East Campus residences, MIT was able to show a 60% reduction in steam use by steam trap renewal for the pilot

building. There have been five high energy-using buildings that have undergone continuous commissioning, which focuses MIT's maintenance efforts on specific HVAC components that have saved considerable energy in those buildings.

Current projects include lighting upgrades for Stata and the Student Center and a fume hood air flow uptake reduction project. As an integral part of laboratory ventilation systems, fume hoods are a major contributor to making typical laboratories four- to five-times more energy intensive than typical commercial buildings. A fume hood consumes up to three times more energy than an average house. Based on careful consideration by the Department of Environmental Health and Safety at MIT, the Institute can reduce the amount of air flow uptake of the fume hood by 20% without hindering its efficacy or compromising laboratory safety, and thus reduce the net energy consumed by the fume hoods in our laboratories.

Public Infrastructure

MIT has engaged in an extensive series of improvements on City-owned property over the last decade. These improvements represent a mix of voluntary initiatives and negotiated project requirements. Among them:

- Cambridgeport Roadways – A \$2 million contribution directly to the cost of the Roadways project plus \$6 million for the acquisition and relocation of California Paint to accommodate the changes to Waverly Street - \$8 million;



- << Vassar Street Reconstruction and improvements – A mile of City street, with all new public utilities, sidewalks, cycle tracks, lighting, and landscaping - \$35 million;
- Cambridge Drainage project - Utility upgrade payments and drain line installation. A direct payment to the City for drain line improvement around the campus and additional drain installation on Audrey Street - \$3 million;
- Galileo Galilei Way, Vassar Street and Main Street intersection - A set of pedestrian improvements designed to reduce the distance that pedestrians have to walk in the roadway - \$500,000;
- Albany and Pacific Street reconstruction - A full depth reconstruction of the roadways surrounding the NW35 residence hall at 235 Albany Street and extending down Albany

Street to meet the Cambridgeport roadways improvements - \$2.7 million;

- Waverly Street extension multi-use path - An unpaved public way that is now a portion of a City multi-use path, with new drainage, lights, landscaping, and pavement - \$600,000.
- East Campus roadway reconstruction (just now substantially complete), including full depth reconstruction, new paving, a raised crosswalk, curb extensions, new sidewalks, new landscaping, lighting and street furniture on Ames, Amherst, Wadsworth, and Main Streets - \$3.1 million; and
- Memorial Drive signalization - A state project in which MIT reconstructed portions of Memorial Drive to install pedestrian-activated crosswalk signals at Wadsworth and Fowler Streets and contributed directly to the installation of signals at Memorial Drive and Massachusetts Avenue - \$1.5 million.

There are many other smaller projects on City property not listed here, but these selected MIT efforts represent over \$50 million of investment in the public infrastructure of the City of Cambridge.

Current Context

The economic reversals that started last year have affected MIT like other businesses and organizations. Among other consequences on campus, this resulted in a temporary halt in the start of the renovation of a planned 462-bed residence hall for undergraduates at W1 (305 Memorial Drive). A major donor's gift has permitted the work to resume, allowing complete restoration of the building shell to



continue. Funding is still being sought to allow this renovation to continue to completion.

MIT's fundamental stability and resilience have been demonstrated by the continuation of construction of three other major projects: the Media Lab extension, the new MIT Sloan building and the Koch Institute. In addition, a key enabling project, the expansion of the chiller and cooling tower plant on Albany Street, has also moved forward in tandem with these projects. The Media Lab is being completed in fall 2009, and the other projects will be substantially complete by the end of 2010. There are no capital projects in design at this time, although MIT is advancing the development of a High Performance Computing Center in Holyoke, Massachusetts, with a public/private consortium. Because contemporary science and

engineering research require specialized facilities that are not currently available on campus, some new construction is expected, but it is likely to take place at a slower pace than that of the recent period.

The planning work described a year ago, which focused on translating academic vision into physical plans, continues. Initial programmatic ideas that have emerged have not yet been located on campus, reconciled with other possibilities or otherwise approved. One emerging emphasis for future campus work, however, has been on the need to renovate aging facilities in the fulfillment of programmatic desires. While recovery from the current economic downturn is expected, the pace and scope of new projects will be affected by diminished resources for an unknown period of time.

MIT Students, Faculty, and Staff

The number of undergraduates at MIT has dropped by 300 to 400 from the historic average of around 4500 in the 1970s and 1980s. Implementation of the plan to restore the undergraduate population to about 4,500 is on hold pending the expansion of the on-campus housing stock for undergraduates, primarily through completing the renovation of W1. A variety of methods of adding students is under discussion, including increasing transfer students and those wishing to complete an undergraduate degree and continue on to earn a master's degree.

In recent years, the trend in the number of graduate students has been flat or negative, but there was a 2% increase 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 tenure-track faculty members has been stable at just under 1,000. The rate of staff growth has been decelerating for the last three years, and is now down to a 3.9% increase. The separation of the Broad Institute from MIT in July 2009 will be reflected in next year's Town Gown Report. This change will result in a one-time reduction in staff population and the removal of a growth driver.

Housing

MIT now houses 41% of all of its graduate students and 60% of its graduate students who live Cambridge. The number of graduate students living in off-campus housing in Cambridge has decreased by 151 since 2006.

B. Looking Ahead at Campus Planning & Development Transportation

Railroad Pedestrian Crossing

MIT is preparing preliminary designs for a safe pedestrian crossing from the end of Pacific Street to Vassar Street. CSX, the railroad company that retains an easement to maintain and operate the rail tracks in the Grand Junction corridor, invited MIT to submit a pedestrian crossing design for approval. The context for this proposal has been altered by the Commonwealth of Massachusetts' pending acquisition of CSX tracks and track rights, including the Grand Junction rail line. MIT anticipates working with both CSX and the Commonwealth in making this desired improvement a reality and will provide the relevant City of Cambridge departments an opportunity to make comments on the preliminary design of the proposed pedestrian and bicycle crossing.

Urban Ring

Despite good progress made last year working with the Executive Office of Transportation (EOT) Urban Ring team and City of Cambridge staff, the Urban Ring was omitted from the state's Regional Transportation Plan, a prerequisite to applying for any federal funding. This change, coupled with the dire financial condition of the MBTA and the state transportation system generally has slowed if not stopped the progress of the Urban Ring project. MIT intends to continue working with the City of Cambridge and others to see how progress can be made in preparing the Urban Ring to move forward when resources become more available.

One reason that the Urban Ring remains a priority for MIT is that the operation of W98 at 600 Memorial Drive for MIT administrative uses has given rise to new thinking about development on this 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 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).

Bicycle Planning and Improvements

There was a request this year from the City to discuss MIT's planning for bicycle facilities on campus. There is a good deal to report in this area, as detailed below.

MIT has seen a significant rise in both the number of bike commuters and resident students using bikes on campus, and with it has come the need to accommodate more bike parking. Respondents to the 2008 MIT Transportation Survey indicated that providing cyclists with additional outdoor covered bike racks or indoor storage rooms would be the most effective ways to improve bike storage on campus.

Over the past year, MIT has responded to these needs by installing 350 new bike parking spaces in high demand areas and replacing 100 old spaces by removing outdated racks and installing "inverted-u" style racks recommended by the City. The majority of these bike parking spaces have been placed in covered areas, and two new secure bike cages with key-card access have been constructed at E53 and W45. Additionally, a new outdoor bicycle cage is being planned as part of renovations to W1, to be sited in an area previously used for vehicle parking. MIT plans to continue to provide similar amounts of additional new and replacement bike parking on an annual basis, with a focus on providing secure, covered spaces that are easy to access and located near building entrances.

In order to assist cyclists with minor repairs and adjustments, two bicycle repair stations with tools and air pumps have been installed at the Stata Center and Student Center. The repair stations have proven to be popular with the community, and MIT is planning to install three additional stations in the eastern portion of the campus.



MIT has recently completed the reconstruction and revitalization of Vassar Street West, which includes a dedicated off-street cycle track. The completion of this section, along with the 2004 project east of Massachusetts Avenue, provides a nearly one mile long multi-modal corridor extending from Main Street to Audrey Street.

MIT has launched a number of Transportation Demand Management (TDM) strategies over the past year specifically targeted at bicyclists. Full-time employees are now eligible to participate in the MIT

Bicycle Commuter Benefit Program, which provides reimbursement of \$20/month (\$240/year) for the purchase, improvement, repair or storage of a bicycle used for commuting to MIT. This commuter benefit may also be used to purchase a Bike Commuter Membership with MIT Recreation Sports, which allows cyclists access to shower and locker room facilities. In 2009, two shower facilities on campus were renovated to provide additional access to clean, secure facilities. MIT will continue to identify and pursue additional TDM strategies to encourage and increase bicycling on campus.

An MIT representative attends the monthly Cambridge Bicycle Committee meeting, and MIT will continue to collaborate and participate with this group to improve conditions for cyclists in the City.

In December 2008, the City of Boston and the Metropolitan Area Planning Council (MAPC) invited metropolitan-area municipalities and educational institutions, including MIT, to take part in drafting an RFP for a regional bike share system, which would consist of self-service bike rental stations distributed throughout the City. MAPC has recently selected the Public Bike System Company of Montreal as a vendor for the bike share system, and the City of Boston is in the process of signing on. It is anticipated that the vendor will be interested in placing rental locations in and around the MIT campus. Access to a bike share system would be valuable to the MIT community as an additional means of transit for both intra-campus and city-wide travel. Bike share would also allow visitors from the Boston area a convenient alternative to travel by automobile. MIT will be working closely with the vendor and the City of Cambridge to explore the details of the program as it unfolds.

Grand Junction Community Path

MIT has met several times 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. This dialogue is expected to continue.

Development Opportunities

As identified on Map 4, 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, although there are fewer of these parcels now than ten years ago. Looking at the redevelopment of existing buildings poses significant space relocation burdens that dramatically increase the cost of a project. Replacement of parking lots and garages by underground parking is a similar burden for tightly constrained project budgets.

Medical Parking Lot and Hayward Blocks

The area between Hayward and Wadsworth Streets, behind the 238 Main Street building, has long been viewed as a future redevelopment area, but no specific program has emerged. Another significant academic development opportunity is behind the MIT Press Bookstore (Building E38) and the adjacent MIT-owned commercial building (Building E39), between Carleton, Amherst, and Hayward Streets. The current occupants of Buildings E33 and E34 will eventually be relocated elsewhere on campus, and these buildings will be demolished. These parcels provide an attractive site for future needs.

Kendall MBTA Station Block

A smaller but critical parcel adjacent to the Kendall MBTA Station is in the heart of Kendall Square. The parking lot is combined with a small single story building in the midst of much taller buildings. This location could make a significant contribution to enlivening Kendall Square.

Albany Street, Massachusetts Avenue, and Vassar Street

These lots are underutilized and could provide a site for a variety of academic uses, in close proximity to the core academic campus. The frontage on three streets would require ground floor uses that would activate 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.

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. The relocation of the MIT Police to W89 on Vassar Street early this decade, 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 zoning that supports transit-oriented development.

C. Investment Activities

MIT invests in commercial real estate in Cambridge using the endowment and other capital of the Institute. These real estate investment activities help to improve the urban environment in the transitional areas between 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 \$31.2 million in fiscal year 2009, over 12% of the City's total tax levy—help to support the many programs and services enjoyed by Cambridge residents.

MIT's commercial real estate activities are influenced by the same market forces that affect all other real estate operations in the City. Successful transactions are executed when demand from tenants matches up with supply from landlords in an economic framework that works for both parties.

Like most other commercial real estate property owners in the City, MIT has also been negatively impacted by the general economic conditions of the past 18 to 24 months. Although Cambridge has been spared the consequences of overbuilding that other cities have experienced, the financial crisis has affected Cambridge real estate in several ways. First, some successful businesses have put expansion or relocation plans on hold as they wait to see how the economy recovers. Second, some companies that are dependent on private venture capital to support their operations and research are finding it harder to secure additional rounds of funding. And third, some companies, particularly retail operators, are having difficulty securing capital from banks and other lending agencies to fund the build-out of their space as they seek to

expand. As a result, the number of new transactions has dropped, and major renovations and new construction activities have slowed down.

For MIT's real estate investment activity, this means many existing development projects are on hold, few new projects will be coming out of the ground in the short term, and more time and energy will be spent on maintaining and improving existing operating properties and planning for the future when the markets rebound.

Last year we reported on our ongoing investment planning efforts on the edges of the campus, with a particular focus on the investment properties on the Massachusetts Avenue corridor and in Kendall Square.

On Massachusetts Avenue at the corner of Albany Street MIT has leased an existing parking lot (currently used by Analog Devices) to Novartis Institutes for BioMedical Research. As part of the future development of this site, Novartis will include active ground floor uses, helping to improve this important corridor.

In Kendall Square, we are actively involved with the new Kendall Square Association, whose purpose is to improve, protect, and promote the general economic welfare of the Square, and are continuing to explore the feasibility of developing more retail and lifestyle services in existing and potential new buildings.

D. Past Investment Projects (1999 to 2009)

The MIT Investment Management Company completed four major projects in the last 10 years, from 1999 to 2009. This list does not include the multiple smaller interior turnkey construction projects we completed in existing buildings.

700 Main Street (completed 2001)

This 180,000 square foot project involved the renovation of the existing historic structure as a laboratory building and construction a new laboratory addition together with accessory surface parking. Designed by Cambridge-based architect Tsoi/Kobus & Architects, Inc., the building and parking lot are currently leased to Shire Pharmaceutical Group (which acquired the original tenant, Transkaryotic Therapies, Inc.).

Seven Cambridge Center (completed 2006)

This project involved the interior construction of the 192,000 square foot building at Cambridge Center. Interior construction was performed concurrently with construction of the base building work being performed by Boston Properties. Completed in 2006, the building was designed by Elkus|Manfredi Architects, Inc., and is occupied by the Broad Institute.

Technology Square (completed 2006)

MIT acquired this 1.2 million square foot 8-building portfolio from Beacon Capital in 2001. Following the acquisition, MIT converted some of the buildings from office to lab use, brought in several major tenants, and completed several interior construction projects for smaller tenants. MIT sold the buildings to Alexandria Real Estate Equities in 2006.

One Broadway Façade and Site Improvements (completed 2009)

This project involved the replacement of the exterior façade of the first through fourth floors of the 16-story office building with a new glass curtain wall and a complete reconstruction of the plaza and City sidewalk on Broadway and Third Street adjacent to the building. We completed construction in the spring of 2009.

III. List of Projects

A. Enhanced Academic Facilities

Media Lab and School of Architecture and Planning (formerly known as the Media Lab Extension)

This new facility includes electronic research labs, student and faculty offices, meeting space, and exhibition spaces for the Media Lab and the School of Architecture and Planning. The facility accommodates a growing educational program in media studies and other programs from the School of Architecture and Planning. The designer of the project is architect Fumihiko Maki of Tokyo, with Leers Weinzapfel of Boston as associate architect.



This project includes a raised crosswalk between Buildings 66 and E15, and significant public infrastructure improvements including neckdowns and crosswalks at the corner of Ames and Amherst Streets, and the repaving of portions of Ames and Amherst Streets. The project is complete and occupied.

Koch Institute for Integrative Cancer Research (formerly known as the Cancer Research Facility)



The building approved by the Planning Board in January 2008 as the Cancer Research Facility has been named the Koch Institute for Integrative Cancer Research. It is being built at the end of the former East parking lot at the corner of Main and Ames Streets. The proposed building is ±367,000 gross square feet, and has been designed by Ellenzweig Associates. Heat recovery systems, variable air volume hoods and a full year of commissioning are among the energy saving features of the building. It is expected to receive a LEED Silver rating. The east campus garage being constructed under the Sloan School Expansion will permanently absorb the parking displaced by this project. An extensive landscape program will be implemented at the public edges and sides of the building. A gallery of scientific exhibits will be part of the Main Street

entry area. Construction began in April 2008 and is scheduled to conclude at the end of 2010.

Sloan School Expansion



This new building will accommodate the expanding needs of the school by housing all Sloan faculty and providing enhanced teaching and learning spaces. This project has been 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. Low-flow urinals, toilets and other plumbing fixtures are a few of the measures that will reduce the building's water use by 20%. The Sloan

School Expansion is expected to receive a LEED Silver rating. The accompanying underground garage will accommodate approximately 425 parking spaces for the East Campus area. The existing surface parking lot will be reduced from 311 to 57 spaces. Construction began in summer 2007 and will be complete in the fall of 2010. The reconstruction of the intersection of Main Street and Broadway by MIT is complete and the balance of the civil and landscaping work will be completed in the spring.

B. Housing

305 Memorial Drive Renovation

As noted above, this project to create 462 new undergraduate beds at the former Ashdown House is currently partially funded only through the envelope improvements, including rehabilitation of its masonry walls and the installation of new windows. Funding is being sought to continue the project through full interior renovation.

Ashdown House (NW35 at 235 Albany Street)

Ashdown House, a 532-bed graduate residence opened in the fall of 2008. It received a LEED Gold rating from the U.S. Green Building Council this fall.



C. Public Improvement Projects

Vassar Streetscape West

The rebuilding of Vassar Street was completed in 2009. It transformed a deteriorating industrial road into an urban street that includes landscape and streetscape enhancements, pedestrian and bicycle paths, traffic calming strategies, and consolidated utility lines. This project east of Massachusetts Avenue was completed in 2004, and the Vassar Streetscape West construction began in November 2006 and took three years to complete.

Cambridge Drainage Projects

There are two City drainage lines for the Cambridgeport district that are planned to cross MIT property. MIT constructed a storm water drainage connection from Vassar Street down Audrey Street (a private way) to two former river-water cooling pipes. In accordance with the Institute's Storm Drain agreement with the City, MIT is giving these improvements to the City without charge. As soon as the property transfer takes place, the City will make some additional improvements in the manholes to make the new outfall operational.

The City has also proposed and designed a drain line to cross the West Parking Lot, run down Amherst Alley, and then adjacent to Next House out to Memorial Drive and the Charles River. The construction of the drain line crossing of Vassar Street took place in 2007 in coordination with MIT's construction of the Vassar West improvements.

East Campus Roadways

As seen on Map 7, MIT is constructing or re-constructing the major streets in East Campus: Ames, Amherst, and Wadsworth. This includes new sidewalks, traffic safety improvements, new landscaping, raised crosswalks, neckdowns and crosswalks. The connection of Main Street to Broadway is being reconfigured, and additional green space is being added. Additional work on Ames Street is planned for 2010.

D. Service and Circulation Infrastructure

MIT intends to maintain its parking inventory by replacing or rehabilitating aging garages and parking lots on valuable campus locations. The Institute also plans to expand and upgrade its utility infrastructure to keep pace with its building program.

Utility Expansion



As previously reported, the growth of demand for chilled water on campus requires the development of additional cooling towers.

Temporary boilers and cooling towers near the Central Utility Plant will be replaced during the implementation of a larger strategy to provide sufficient permanent steam and chilled water to serve the currently planned building projects.

The existing cooling tower and chiller hall structure at N16 is being expanded onto MIT land behind the Central Utility Plant, over the rail track easement. The project includes high efficiency

compressors, fans and pumps that will save 850,000 kWh annually, or enough electricity to serve 80 households for a year. This construction is scheduled to conclude in spring 2010. Replacement of some existing cooling towers and chillers will occur in a later phase of the project.

Parking

As noted previously, MIT has not added any net new parking spaces in more 15 years. Recently a significant number of parking spaces have been either temporarily lost to construction or permanently displaced. There has been a modest replacement of parking spaces as part of leasing off-campus office and laboratory space.

E. Current Investment Projects

The MIT Investment Management Company does not have any new projects to report on this year.

Of the four projects that we reported on last year, one is complete (One Broadway façade and plaza, described above) and the other three, listed below, are on hold until sufficient advance leasing and financing arrangements have been achieved.

650 Main Street New Construction

The proposed new project, to be located on the site of the current surface parking lot, consists of 418,000 square feet of office and/or laboratory building above a below-grade parking garage. We received the Article 19 Special Permit from the Planning Board in March 2009, and are currently completing design documents. The building is being designed to meet the LEED Silver criteria, and we anticipate starting construction once we secure a tenant.

640 Memorial Drive Renovation and Addition

This property consists of a five-story historically significant building containing approximately 206,000 square feet of office and laboratory space. The building was previously leased to Millennium Pharmaceuticals and Pathology Services and is currently vacant. We have completed construction documents for the renovation of the existing structure and a new addition and are marketing the building to potential tenants. We anticipate starting construction once we secure a tenant.

130 Brookline Street Restoration

130 Brookline Street is a vacant two-story, 45,000 square foot concrete frame industrial structure built in the 1920s. We have completed design plans for the conversion of the structure into a laboratory building and are marketing the building to potential tenants. We have replaced numerous windows to improve the appearance of the building until such time as we are able to secure a tenant and begin construction.

IV. Mapping Requirements

Map 1: MIT Property in Cambridge

All real estate owned in the City of Cambridge
&
Real estate leased

Map 2: MIT Academic Projects

Development projects for academic property completed within the past year,
now underway, proposed or planned within the next three years

Map 3: MITIMCo Investment Projects

Development projects for investment property

Map 4: Future Development Opportunities

Sub-areas/precincts of MIT campus indicating the location of future
development areas and projects

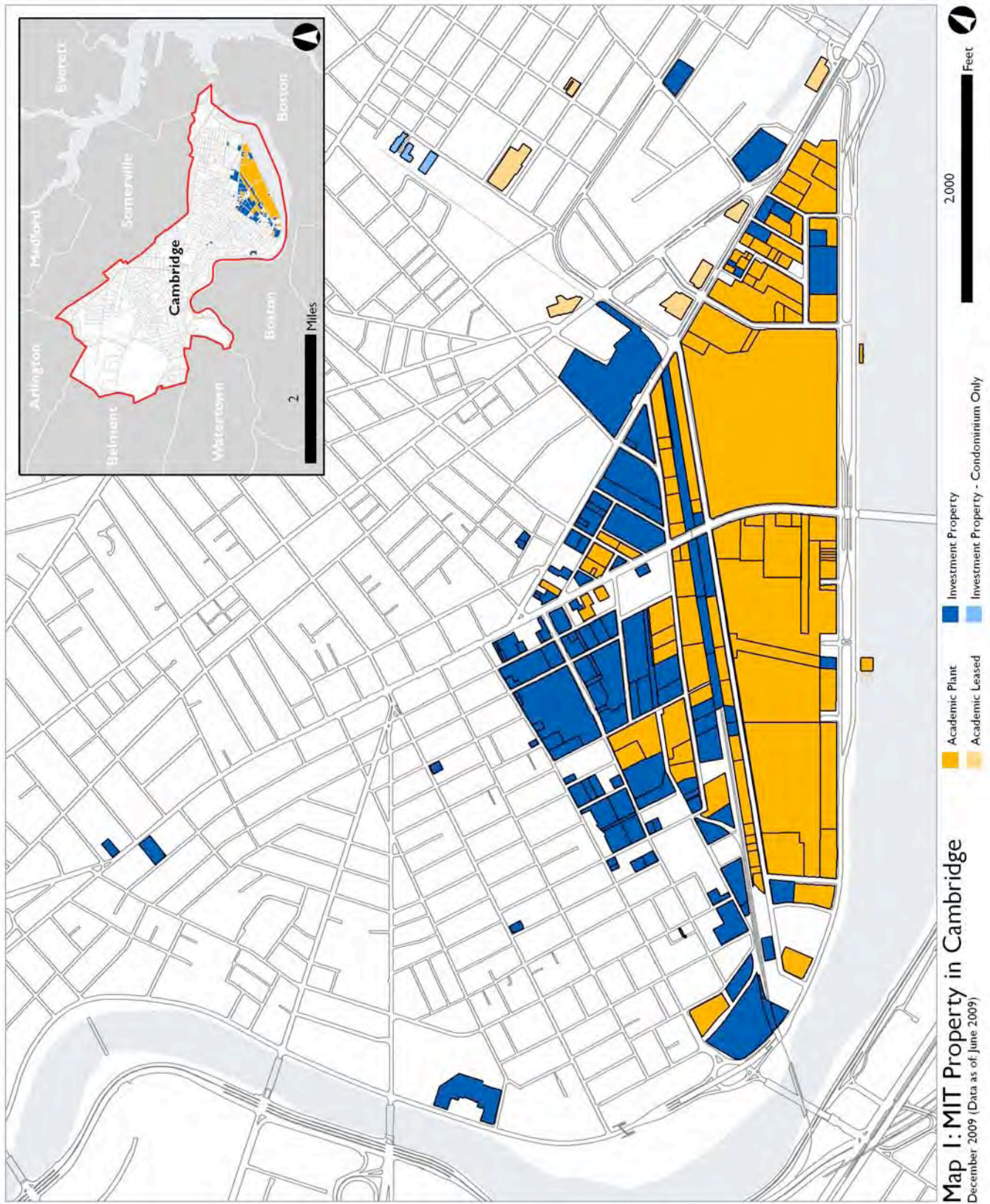
Map 5: MIT Shuttle Routes

All regularly scheduled campus shuttle and transit routes

Map 6: MIT Academic Buildings Constructed Since 2000

Map 7: New Public Infrastructure Projects

Infrastructure projects constructed since 2000

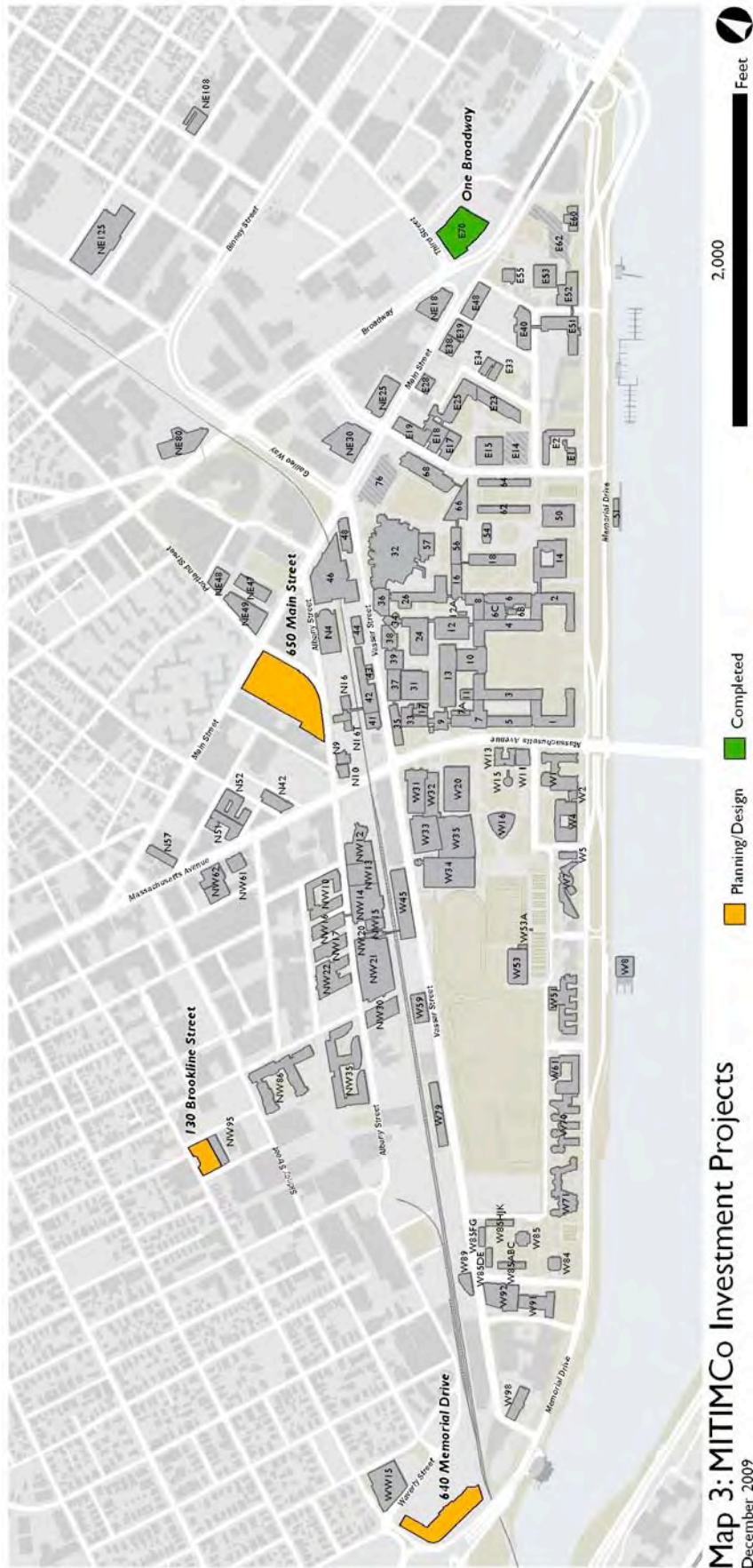


Map 2: MIT Academic Projects

December 2009

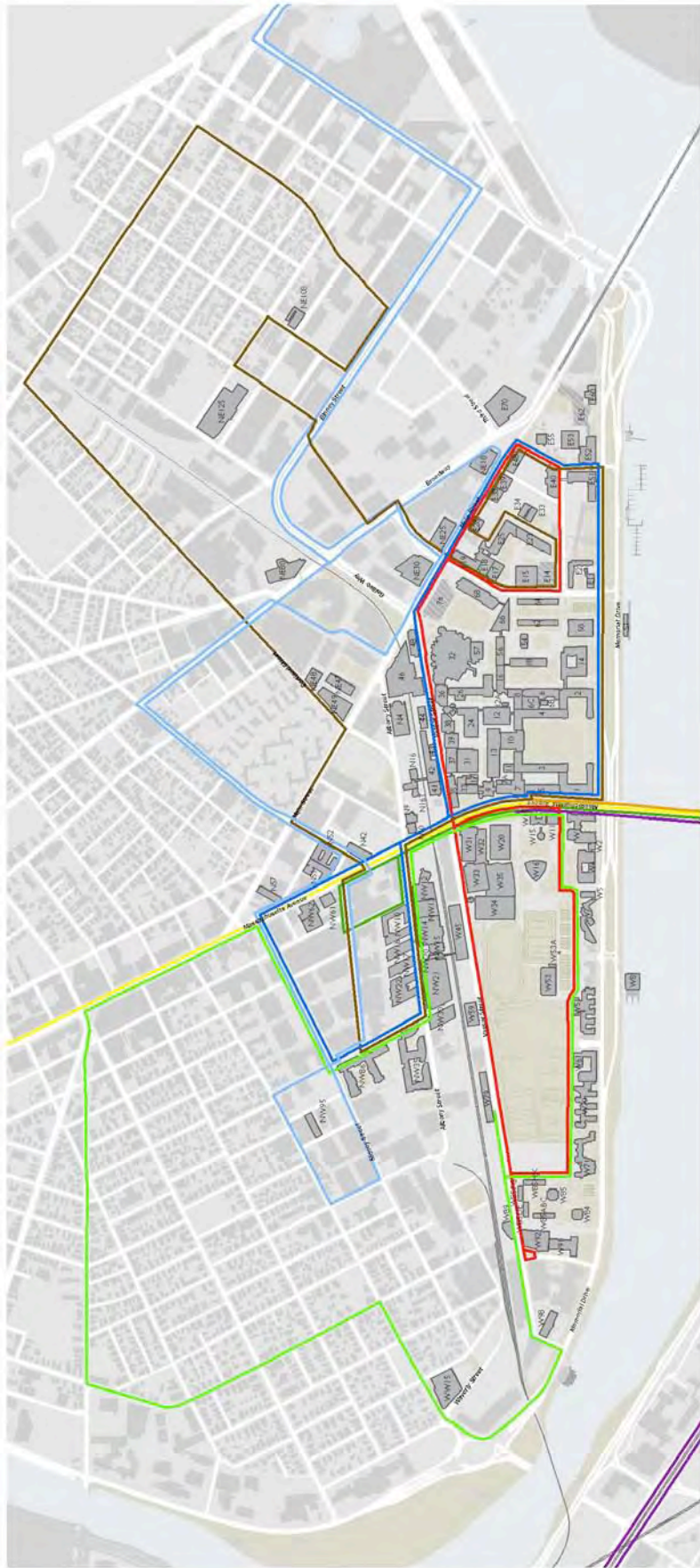
- Planning/Design
- Construction
- Completed





Map 4: Future Development Opportunities
December 2009





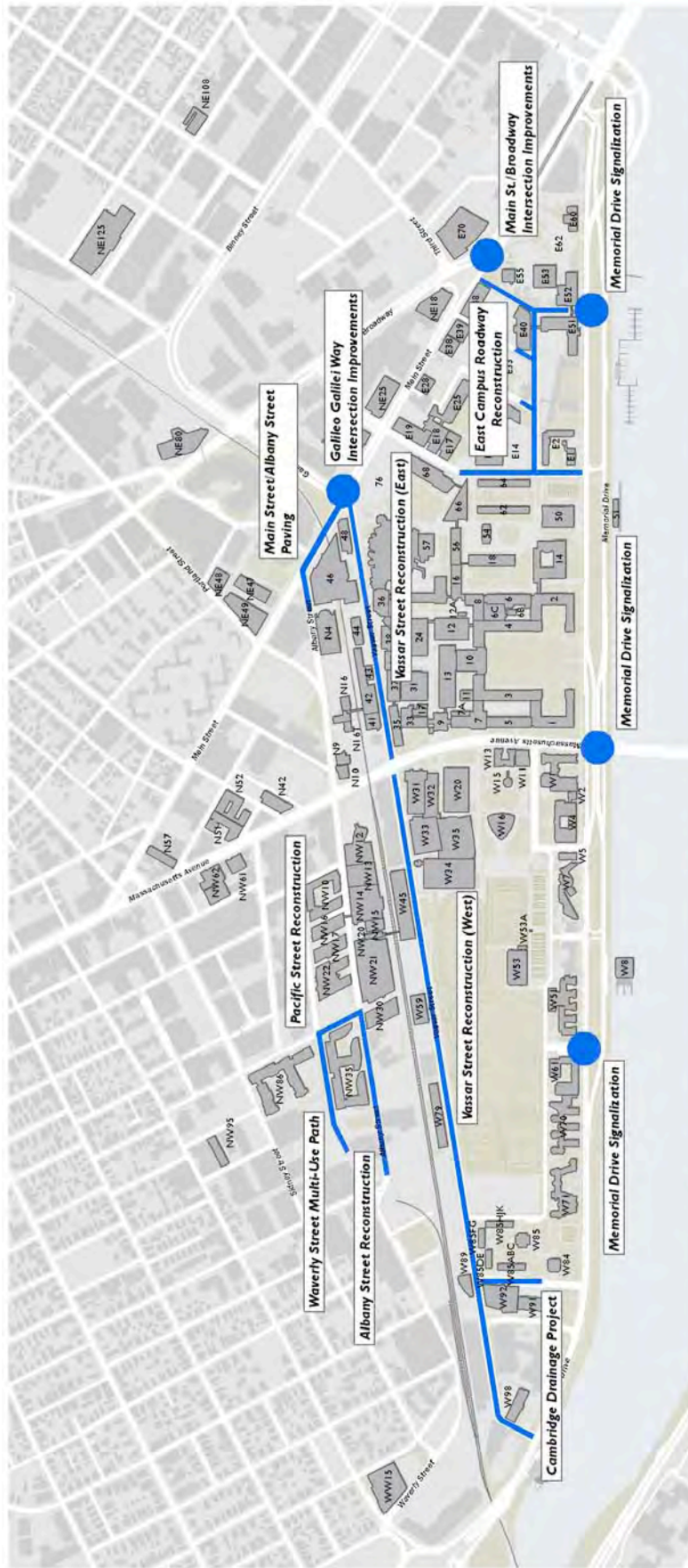
Map 5: MIT Shuttle Routes

December 2009

Map 6: MIT Academic Buildings Constructed Since 2000
 December 2009

Buildings Constructed Since 2000





Map 7: Public Infrastructure Projects Constructed Since 2000
December 2009

V. Transportation Demand Management

A. Commuting Mode of Choice

MIT conducts a commuting survey every two years. The chart below summarizes the responses to the survey question, “How did you commute to campus each day last week?” Data reflects average Monday-Friday responses and excludes students living on-campus and people reporting that they did not come to campus.

Commuting Mode	2002	2004	2006	2008
Drove alone entire way	27%	26%	26%	21%
Took public transportation	36%	36%	37%	39%
Carpooled	6%	6%	6%	7%
Bicycled	12%	12%	12%	13%
Walked	16%	15%	14%	16%
Other	4%	4%	5%	4%

B. Point of Origin for Commuter Trips to Cambridge

Home Location	Number of People working on the MIT Main Campus	Percentage
Cambridge	2,267	21.0%
Boston	1,444	13.4%
Somerville	840	7.8%
Arlington	415	3.9%
Brookline	382	3.5%
Newton	295	2.7%
Medford	268	2.5%
Lexington	261	2.4%
Belmont	242	2.2%
Malden	173	1.6%
Quincy	146	1.4%
Watertown	144	1.3%
Waltham	119	1.1%
Acton	72	0.7%
Woburn	80	0.7%
North Of Boston	685	6.4%
West of Boston	161	1.5%
South Of Boston	87	0.8%
Outside 128	1,666	15.5%
Outside 495	369	3.4%
Out of State - Connecticut	20	0.2%
Out of State - Maine	30	0.3%
Out of State - New Hampshire	133	1.2%
Out of State - Rhode Island	52	0.5%
Out of State - Vermont	6	0.1%
Outside New England	387	3.6%
Unknown	30	0.3%
Grand Total	10,774	100.0%

C. TDM Strategy Updates

In addition to dozens of programs and policies described in previous reports, MIT has added new programs to assist in reducing traffic and pollution associated with automobile use. The new bike programs, such as bike commuter benefits and additional bike cages, racks and repair stations, are described in detail on page 17.

Alternative Transit Subsidy

In an attempt to further decrease the number of employees who commute to work by car, MIT is offering an incentive to those whose transportation needs are not met by the existing MBTA transit, bus, or commuter rail system. All eligible MIT employees who use an alternative form of transit may participate. Types of alternative transit include private bus lines and trains. The maximum benefit for employees who qualify is 50% reimbursement of their monthly commuting cost, up to a monthly limit.

VI. Institution Specific Information Requests

1. Discuss planning for bicycle facilities on campus.

See Section II. B., Transportation: Bicycle Planning and Improvements.

2. Provide an update on long term planning for the main campus, with a particular focus on plans for campus green space and campus edges, where MIT property abuts other landowners.

See Section II., Future Plans Narrative, including descriptions of development opportunities fronting on important public streets, such as Main Street, Albany Street, Massachusetts Avenue and Vassar Street. Also see Section III., List of Projects: Koch Institute for Integrative Cancer Research, Media Lab and School of Architecture and Planning, and Sloan School Expansion.

3. Provide information on any plans for additional housing and other uses under consideration for MIT owned parcels in Cambridgeport.

There are no new plans for additional housing or other uses on MIT land in Cambridgeport. See also Section II.B., Future Plans Narrative: Northwest Parking Lots.

4. What are MIT's plans for 1 Broadway? Will the ongoing effort to attract incubators and start-up companies continue?

See Section II. D., Past Investment Projects: One Broadway Façade and Site Improvements.

Cover image of Walker Memorial in spring by Christopher Harting.

Historic Morss Hall in Walker Memorial is one of the many campus venues that MIT makes available for Cambridge-based nonprofit agencies to use for fundraising events and celebrations.



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