EAST CAMPUS / MIT GATEWAY
Alternative Approaches

Prepared by The Design Committee
July 19, 2013
This report lays out strategic options for design and program of the MIT East Campus and a new Gateway to the institute in the Kendall Square area. Its purpose is to define principles for the planning and design of this critical area of the campus, in light of the recent up-zoning approval given to MIT by the City of Cambridge, and the intention of the MIT Investment Management Company (MITIMCO) to construct approximately 900,000 sq ft of commercial office and laboratory space on the campus south of Main Street. The report examines alternative approaches to achieving this amount of development that will also result in a high quality campus environment, mesh with the broader public realm of Kendall Square and the Charles River, and serve student and future academic needs.

This brief report and design study was prepared by a Design Committee of architecture, urban design, and planning faculty in the School of Architecture and Planning. The Design Committee was appointed by Provost Chris Kaiser and Executive Vice President and Treasurer Israel Ruiz following a recommendation of the faculty Task Force on Community Engagement in 2030 Planning on Development of MIT-Owned Property in Kendall Square. The Task Force was charged by the provost in 2012 with reviewing the Kendall Square project, and recommending whether to go forward. In the process, the Task Force raised concerns about the conceptual diagram put forth for development of the area, which had been prepared by MITIMCO. The Task Force agreed to “support moving forward with MIT’s submission of the rezoning petition provided that… A comprehensive urban design plan for East Campus is conducted and completed after the petition is approved but before anything is built in the area covered by the petition. The plan needs to consider alternatives to the current MITIMCO diagram for commercial building sites, floor plates, program, heights, and scale of development” guided by a set of design principles articulated by the Task Force.
The work of the Design Committee is aimed at opening up alternative approaches to the design and programming for East Campus and the MIT Gateway. It is also intended to inform the work of a subsequent campus planning consultant, which MIT will retain in the fall of 2013 to prepare a formal East Campus / MIT Gateway Plan.

In examining the situation and preparing alternative approaches, the Design Committee was guided by and fully supports the Design Principles articulated by the Task Force. These are excerpted and included in full below, follow by a list of additional, more detailed guidelines that the Design Committee considers to be important in moving forward.

Principles defined by the Task Force to guide development of the area include:

**Design Principles, Criteria.** Kendall Square, with its Red Line MBTA station, clearly has the potential to serve as a new gateway to MIT, similar to the function now served by 77 Mass. Ave. to the west. Equally important, much of the property that would be developed for commercial tenants could house MIT uses at some point in the future. Therefore, it is critical that these buildings and the space they create on the ground be considered first as a part of the campus designed to support our students, faculty and staff...

- **There must be a gateway to MIT worthy of MIT and its aspirations, mission and standards of design excellence.** The gateway should not just be an entrance, but a physically prominent node of activity, equivalent to the function of MIT’s Lobby 7, containing destinations relevant to the MIT community and helpful to visitors (e.g. an information office) linked to clearly recognizable spaces that support learning and research (e.g. laboratories, studios, classrooms, study and meeting spaces accessible to the public). It should connect MIT directly to Kendall Square with minimal physical barriers or gaps. The gateway should be welcoming to residents and visitors.

- **East Campus buildings and spaces must create and convey a campus feeling that serves the needs of the MIT community in ways that attract people to the area across the broad band of hours that typifies the rhythm of student, faculty, and staff life.** This means, for example, providing amenities and services for students, faculty, staff and residents, with a minimal corporate presence (on the campus side), and well-defined public space for people to gather, affordable places to eat, bicycle parking, and access, etc. To ensure this, the ground floor space on all buildings should be primarily reserved for inviting academic, student life, or retail uses, and not have a “gated,” privatized character.

- **Any commercial space in Kendall Square should serve as an extension of the campus and not the other way around.** The businesses invited to locate there should complement and support the mission of MIT to promote innovation and start-ups and allow maximum access to students and faculty for research, class projects, and other mutual learning opportunities. Kendall Square should not just be a commercial or corporate office location that happens to be adjacent to a university.
• **The portion of the development intended for commercial use should generate an appropriate financial return to warrant investment of MIT endowment funds.** However, given the location of this development on campus and the need to support academic and student life, it may not be reasonable to expect the same level of return as that from commercial property developed in sites removed from the campus. Alternatively, it would be appropriate for the Institute to consider investing a portion of the income from the Kendall commercial development into developing the campus spaces, facilities and academic environment planned for the area.

• **Design of commercial development should proceed only in the context of a comprehensive plan for the future of the East Campus, including its public realm, academic, student life, transport, and recreational functions, taking into account potential disposition of all property between Main Street and the Charles River.** It is not sufficient or prudent to design commercial buildings in the absence of a systematic analysis and clear understanding of how the remainder of the East Campus is intended to evolve. It is important that ample space for future academic expansion be reserved in the up-zoning petition. We have not studied this issue in sufficient depth to reach a conclusion about how much space at this point, and, therefore, it is another issue for further review and discussion in the post-up-zoning design phase and plan for East Campus.

“Flexibility: Envelope versus Constraints. We have heard from the Cambridge City Manager, MITIMCo, and others that the up-zoning petition would create an “envelope” that would allow for considerable flexibility in design and development options going forward… Among the options that should be considered are:

• Less commercial development in the area shown as Site 3 on the MITIMCO plan, providing the potential to develop a significant gateway to the campus.

• A better defined campus space connecting to Eastgate and Sloan that is more closely associated with Main Street, so there can be sufficient interaction and permeability to support campus activity. This space should also facilitate interaction with the rest of the Institute, which is vital to achieving the goal of a “One MIT” campus culture.

• More space for academic development and student life.

• Reallocation of height and massing to the edges rather than heart of the campus area, or a smaller commercial project overall.

• Alternate sites for commercial office and housing development that reduce impact on the campus.”
Design and Development Guidelines

Based on its analysis of the East Campus and alternative approaches, the Design Committee believes that the following more specific guidelines should be added to the above to guide the work of the campus planning and design consultant on the East Campus / MIT Gateway:

- **Gateway spaces** – will have a 21st century character, be humanely scaled, defined on the edges by buildings, planting or other elements, include inside (or covered) as well as outside public space, to accommodate for the climate, and connect directly to Main Street and the Kendall T Stop. Digital media may be incorporated to engage the public with MIT, reveal hidden content, animate, and define the place, providing a sense of MIT and the future.

- **Gateway programs** – will incorporate activities and uses that engage MIT, students, faculty, research, and culture with the larger community, creating an integrated public realm. Examples of appropriate programs discussed by the Committee include: MIT admissions information center, MIT Museum, Edgerton Center (engaging elementary school kids), DUSP Science Teacher Education Program, CoLab, MITx production studios and outreach, ILP, MIT Press, Coop, card center, travel office, community meeting spaces, cafes, restaurants. In the long run, an MIT Performing Arts Center (inviting the public) could provide an anchor for the gateway.

- **Infinite Corridor** – will connect through to the gateway space and Kendall T stop, extending on to Sloan. To enhance the connection, alterations to Buildings 23-25 and or Carleton Street may be considered.

- **River Connection** – will be established to enable direct physical and visual access from the gateway to the Charles River. It is possible to achieve this with minimal effort between 100 Memorial Drive and Building E-51, which is explored in the alternatives.

- **Sloan School Connection** – will be an important part of the spatial network and movement system on East Campus. It is envisioned as a defined public space, with activities along, that terminates in, and helps to create an appropriate entrance space to the Sloan School campus.

- **Phasing** – of development will occur over time, anticipated to be approximately 15 years. Phasing should be guided by a vision, but able to accommodate changes in program – such as the need for additional academic space or housing – as MIT’s requirements evolve in the future. However, the project needs to be spatially complete at each stage to ensure the integrity and usefulness of the whole East Campus throughout the development period.

Additional considerations and guidelines are developed graphically in the report, and should be considered integral with this list.
PROJECT GOALS
MIT’s success in innovation is dependent on external interactions with the extended academic and business world and collaborations within the Institute itself. The Institute has helped attract to land adjacent to campus a multitude of life-science and technology companies, ranging from start-up, venture backed firms to well established giants such as Novartis, Pfizer, Sanofi-Aventis, Takeda, Schlumberger, Microsoft, and Google. This fertile environment has enhanced research collaboration both within the Institute and between the Institute and industry, resulting in the creation of a highly productive discovery environment, a powerful economic engine, an extremely effective talent magnet, and one of the world’s most highly recognized life-science and technology centers. All of this helps MIT recruit and retain the best faculty, students, and staff. MIT’s Kendall Square Initiative should provide new space to allow this powerful academic-industry innovation dynamic to grow.

Provide space for both new innovative academic initiatives and commercial enterprises.
2. Lively Urban Environment

Despite the excitement of the creative intellectual developments in and around Kendall Square, the physical environment is still not reflective of a world-class institution, leading innovation cluster, or vibrant city square. Kendall Square has only a budding sense of excitement and identity and lacks fundamental amenities such as basic retail services and places to entertain, meet and assemble that are critical to a successful urban interactive place.

Create a destination gathering place with amenities and services and active streetscapes.
3. Vibrant Gateway

The Infinite Corridor, the major pedestrian thoroughfare through campus, ends well before Kendall Square and leaves the Sloan School disconnected. The revitalization of Kendall Square provides an opportunity to extend the Infinite Corridor and establish a major new gateway at the east end of the campus where it meets the central business district and the neighboring community.

Establish a vibrant gateway and connective link between the Institute, the central business district, and the Cambridge community.
4. Feasible Development

Achieving the vision of a revitalized Kendall Square will require a significant financial investment by MIT. However, to ensure that MIT does not need to divert precious academic resources from critical Institute initiatives such as faculty research and student scholarships, the plan should be economically self-supporting in addition to being viable under market, physical, and legal/political considerations. Furthermore, to ensure city support, the plan should generate increased tax payments to the City of Cambridge to provide funds to help it achieve its policy objectives, such as maintaining a low residential tax, creating more affordable housing units, and improving the school system.

Create an overall development plan that is economically viable
Elkus/Manfredi Architects Scheme
Campus Prototypes

Joseph Jacques Ramée - Architectural plan of Union College (1813)

William Burgis - View of Harvard College (1726)
Harvard University
Harvard University
Columbia University

McKim, Mead & White - Columbia University (1903)

W.A Boring - Project for a skyscraper completion to University Hall (1932)
Columbia University
Columbia University
Columbia University
Plan of the proposed buildings for MIT (1913)

William Welles Bosworth - Proposed MIT Academic Building
MIT - 2013

MIT Site Plan
BUILDING + BUILDING + BUILDING ≠ CAMPUS

Frank Gehry - Ray and Maria Stata Center
BUILDING + BUILDING + BUILDING ≠ CAMPUS
East Campus
East Campus
East Campus Site Plan
ARE tech square

Höweler + Yoon Architecture - Study for ARE Tech Square
SCALE COMPARISON
Scale Comparison
Scale Comparison

Comparison with Killian Court

- Killian Court: 200,000 SF
- Harvard Main Yard: 160,000 SF
- Columbia Main Yard: 165,000 SF
- ARE Tech Square: 30,000 SF

Scope of Work: 500,000 SF
URBAN CAMPUS
Novartis, Basel Headquarters
Coherence
Connection

Novartis, Basel Headquarters - Connections
Public Spaces
Critical Concepts

GATE

INFINITE CORRIDOR

CONNECTION

WATER
Connection

Vassar Street
Killian Court
River Front
Sloan
Boston
East Campus / MIT Gateway - Alternative Approaches

Water

Infinite Corridor

Existing water connection

NEW WATER CONNECTION

Main Street

Boston

Charles River
STRATEGIES
Strategies

STRATEGY 1
East Campus Gateway as Public Space

STRATEGY 2
East Campus Gateway as Network

STRATEGY 3
East Campus Gateway as Infinite Corridor extension
Strategy 1 - Gateway as Public Space

STRATEGY 1
Gateway as
Public Space
Strategy 1 - Gateway as Public Space

MIT Court Yards
Strategy 1 - Gateway as Public Space

- Killian Court: 200,000 SF
- Harvard Main Yard: 160,000 SF
- Columbia Main Yard: 185,000 SF
- ARE Tech Square: 30,000 SF

Scale Comparison
Strategy 1A - Grand Lawn
Strategy 1A - Grand Lawn
Strategy 1A - Grand Lawn

Michel Desvigne - Keio University, Tokyo

Chyutin Architects - BGU University Entrance Square & Art Gallery, Israel
Strategy 1A - Grand Lawn
Strategy 1B - Grand Canopy

Anish Kapoor - Cloud Gate, Chicago

Buckminster Fuller Dome
Strategy 1B - Grand Canopy

LAB 1
30,000 SF
150 x 200 ft
15 floors

LAB 2
20,000 SF
100 x 200 ft
5 floors

LAB 3
15,000 SF
100 x 300 ft
5 floors

ACADEMIC 1
10,000 SF
150 x 200 ft
15 floors
Strategy 1B - Grand Canopy
Strategy 1B - Grand Canopy
Strategy 1B - Grand Canopy

Eskew+Dumez+Ripple - Louisiana State Museum
Strategy 2 - Gateway as Network

STRATEGY 2
Gateway as Network
Strategy 2A - Gateway as Network

LAB. 1
26,960 SF
155' 10 floors

LAB. 2
28,270 SF
155' 10 floors

LAB. 3
36,200 SF
155' 10 floors

LAB. 4
31,000 SF
95' 6 floors

LAB. 5
31,895 SF
95' 6 floors

ACADEMIC. 1
24,450 SF
95' 6 floors

ACADEMIC. 2
41,460 SF
95' 6 floors

ACADEMIC. 3
16,700 SF
95' 6 floors

ACADEMIC. 4
31,000 SF
95' 6 floors

ACADEMIC. 5
31,895 SF
95' 6 floors

ACADEMIC. 6
41,460 SF
95' 6 floors

ACADEMIC. 7
24,450 SF
95' 6 floors
Strategy 2A - Gateway as Network
Strategy 2B - Gateway as Network

LAB. 1
26,600 SF
170’ 11 floors

LAB. 3
33,644 SF
155’ 10 floors

LAB. 2
28,270 SF
170’ 11 floors

ACADEMIC. 1
24,000 SF
170’ 11 floors

ACADEMIC. 2
22,774 SF
170’ 11 floors

ACADEMIC. 4
15,378 SF
95’ 6 floors

ACADEMIC. 3
15,604 SF
95’ 6 floors

ACADEMIC. 3
34,096 SF
95’ 6 floors

ACADEMIC. 1
24,000 SF
170’ 11 floors
Strategy 2B - Gateway as Network
Strategy 2 - Gateway as Network

University of Illinois Desire Line

Berger + Parkkinen - Nordic Embassy Complex, Berlin
Strategy 2 - Gateway as Network
Strategy 3 - Gateway as Infinite Corridor extension

STRATEGY 3
Gateway as
Infinite Connection
Strategy 3A - Gateway as Infinite Corridor extension

LAB. 1
25,000 SF
185’ 12 floors

LAB. 2
25,000 SF
185’ 12 floors

LAB. 3
26,000 SF
185’ 12 floors

ACADEMIC 3
36,000 SF
200’ 13 floors

ACADEMIC 5
12,600 SF
150’ 10 floors

ACADEMIC 4
8,400 SF
150’ 10 floors

ACADEMIC 2
9,189 SF
155’ 10 floors

ACADEMIC 1
3,200 SF
155’ 10 floors
Strategy 3A - Gateway as Infinite Corridor extension

LAB. 1
25,000 SF
185' 12 floors

LAB. 2
25,000 SF
185' 12 floors

LAB. 3
26,000 SF
185' 12 floors

ACADEMIC. 1
14,500 SF
150' 10 floors

ACADEMIC. 2
16,000 SF
200' 13 floors

ACADEMIC. 3
26,000 SF
150' 10 floors

ACADEMIC. 4
16,000 SF
180' 10 floors

ACADEMIC. 5
12,600 SF
180' 10 floors
Strategy 3A - Gateway as Infinite Corridor extension
Strategy 3B - Gateway as Infinite Corridor extension

- **LAB. 1**: 25,000 SF, 125' 8 floors
- **LAB. 2**: 25,000 SF, 185' 12 floors
- **LAB. 3**: 26,000 SF, 185' 12 floors
- **ACADEMIC. 1**: 23,200 SF, 125' 8 floors
- **ACADEMIC. 2**: 25,000 SF, 125' 8 floors
- **ACADEMIC. 3**: 26,000 SF, 125' 8 floors
- **ACADEMIC. 4**: 36,000 SF, 125' 8 floors
- **ACADEMIC. 5**: 28,400 SF, 120' 8 floors

East Campus / MIT Gateway - Alternative Approaches
Strategy 3B - Gateway as Infinite Corridor extension
Strategy 3B - Gateway as Infinite Corridor extension
Strategy 3 - Gateway as Infinite Corridor extension

Weiss Manfredi - Olympic Sculpture Park, Seattle

DS+R - High Line, New York
Strategy 3 - Gateway as Infinite Corridor extension

West 8 - Avenida De Portugal, Madrid
Peter walker - University of california Library Walk, San Diego
Critical Concepts

STRATEGY 1
East Campus Gateway as Public Space

STRATEGY 2
East Campus Gateway as Network

STRATEGY 3
East Campus Gateway as Infinite Corridor extension