

Massachusetts Institute of Technology  
East Campus Urban Design Study: Final Report

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# MIT East Campus Urban Design Study: Final Report

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## Landscape Approaches

### Introduction

The three landscape approaches aim to create a contiguous and well-connected public realm that is generous and welcoming to all potential users. The landscape spaces are configured in a way to create a central landscape that is scaled to give identity to the East Campus, an identity that is different yet complementary to other landscape spaces on campus.

All three approaches employ a hybrid landscape as the central space, which is partly plaza-like, yet richly planted. This type of landscape is physically robust and can be heavily used, accommodating larger events when necessary, but also has many more intimate spaces to make it comfortable and welcoming to smaller groups and individuals. In all approaches the central landscape spaces are well connected to the city, Infinite Corridor, Sloan School and the river.

Approach 1 is specifically tailored to architectural Scheme A, but Approaches 2 and 3 can be paired interchangeably with architectural Schemes B and C. All landscape approaches were developed as allowable by existing zoning, and in “enhanced options”, which would require a process with the city or state to achieve their more desirable outcomes.

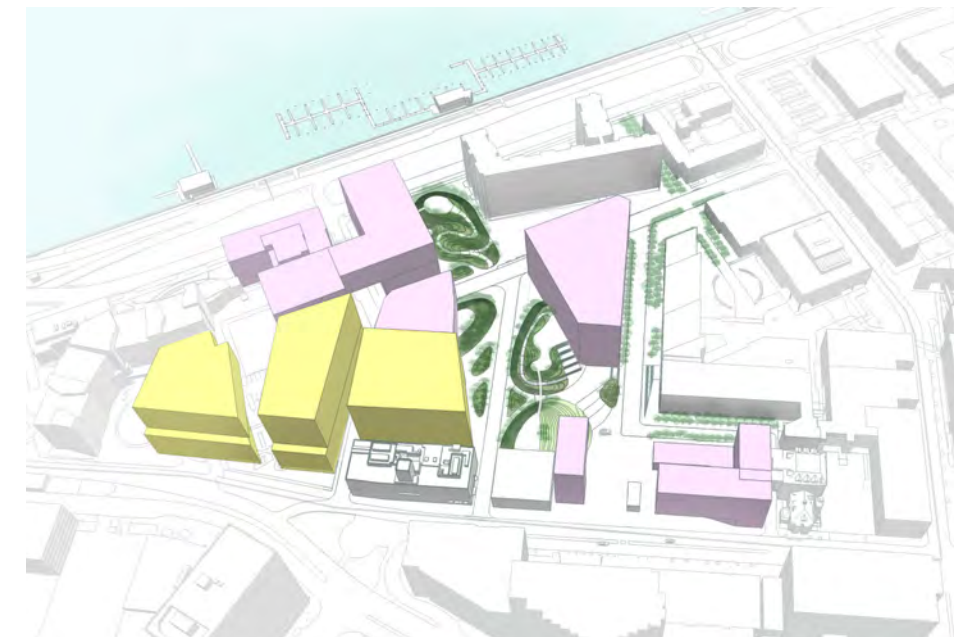
Approach 1 View from the River (shown with Scheme A)



Approach 2 View from Main Street (shown with Scheme B)



Approach 3 View from the River (shown with Scheme C)



## Approach 1 (shown with Scheme A) Landscape Diagrams

Landscape Approach 1 is designed for architectural Scheme A. The approach creates an urban gateway plaza around the T headhouse, which draws people into the East Campus and opens up to a larger plaza either behind E38, or its replacement. A visual connection from the T headhouse to the river is established by shaping the proposed commercial building behind E39 and proposed academic building on Carleton and Amherst. This visual connection will draw people from the gateway plaza towards a central landscape space at Amherst, Wadsworth and Hayward. This central space in turn is connected to a generous landscape that leads to the river.

Landscape improvements common to all three approaches are made to Carleton and Wadsworth Streets, and a new pedestrian crossing leads across Amherst to a new walkway down the west side of 100 Memorial Drive, improving the connections and pedestrian options between Main Street and the Charles River.

In the “Enhanced Option” Hayward Street is redirected to connect directly to Wadsworth Street, yielding a more contiguous central landscape, which is not crossed by vehicles. This redirection of Hayward reduces the road crossings for pedestrians between the Sloan School and the central campus to the west, and improves access to the commercial building behind E48.



Long Term Plan, Approach 1



Long Term Plan, Approach 1 Enhanced Option

## Approach 1 (shown with Scheme A) Phasing Diagrams

Within the first 5 years, part of the urban gateway plaza can be built around the T headhouse and the pedestrian and landscape improvements can be made to Carleton and Wadsworth Streets. Surface parking can be maintained along Amherst and Wadsworth, and contained within a landscape frame. The center of the East Campus, behind E38 and E39, can be developed as a temporary plaza until a commercial building is built here.

In 10 years, with the completion of the three commercial buildings, the first phase of the central landscape space can be built, north and west of E40, and the gateway plaza can be completed. Surface parking can be maintained on the future footprint of the academic building planned on Carleton and Amherst.

Approach 1, Phase 1: 5 years



Approach 1, Phase 2: 10 years



Approach 1, Long Term Plan



### Approach 1 (shown with Scheme A) Vignette 1 - River Connection



Existing



Key Plan



Proposed Connection to the River West of 100 Memorial Drive

### Approach 1 (shown with Scheme A) Vignette 2 - Landscape Core



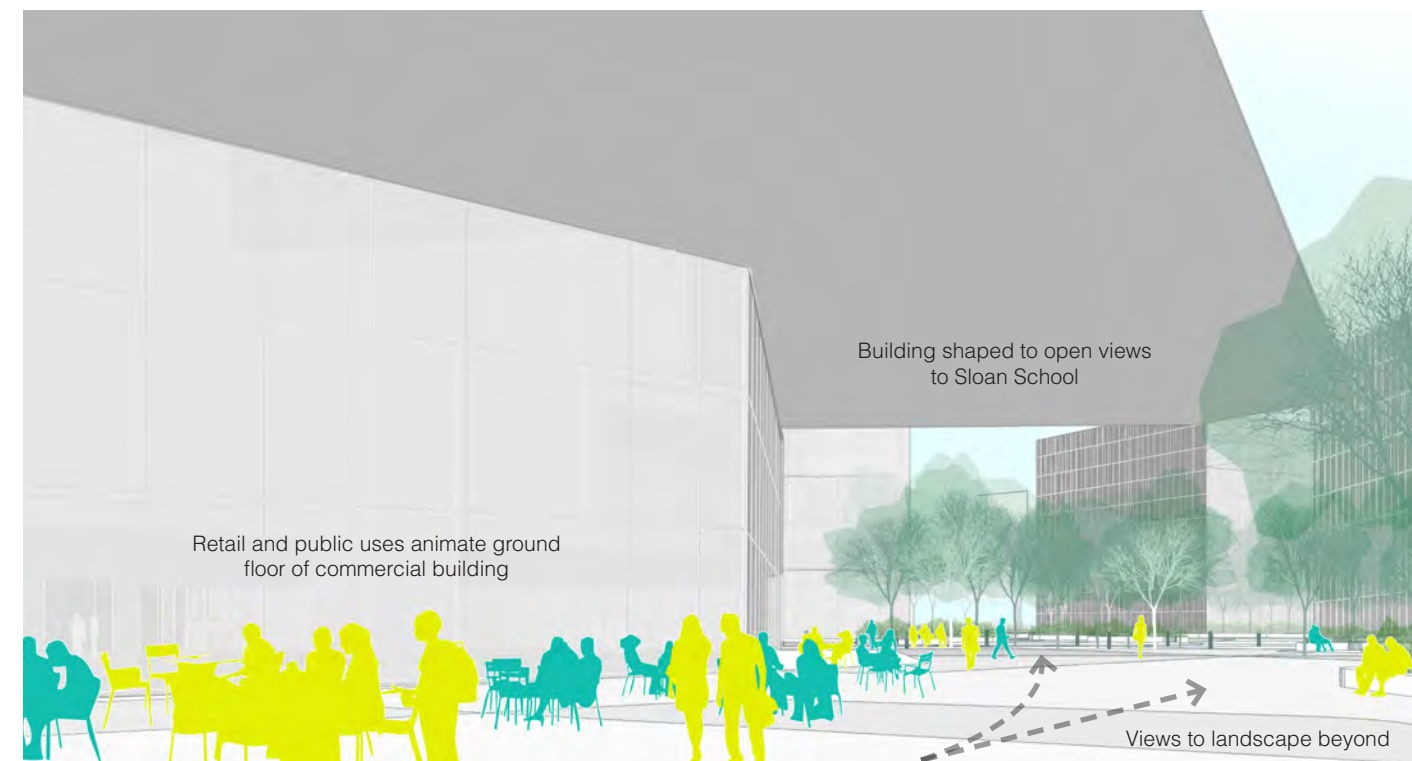
Existing



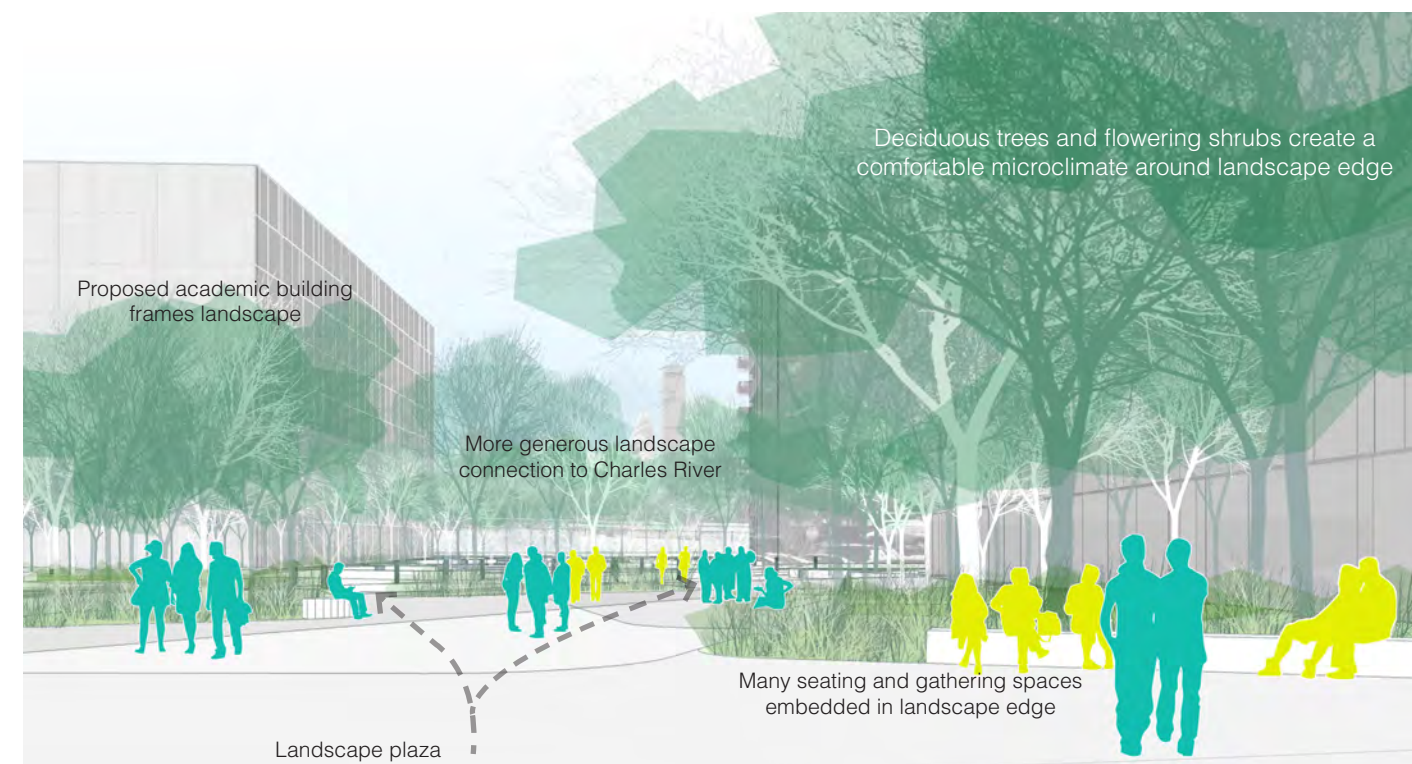
Key Plan



Existing



Proposed



Proposed



### Approach 1 (shown with Scheme A) Vignette 3 - Landscape Connections



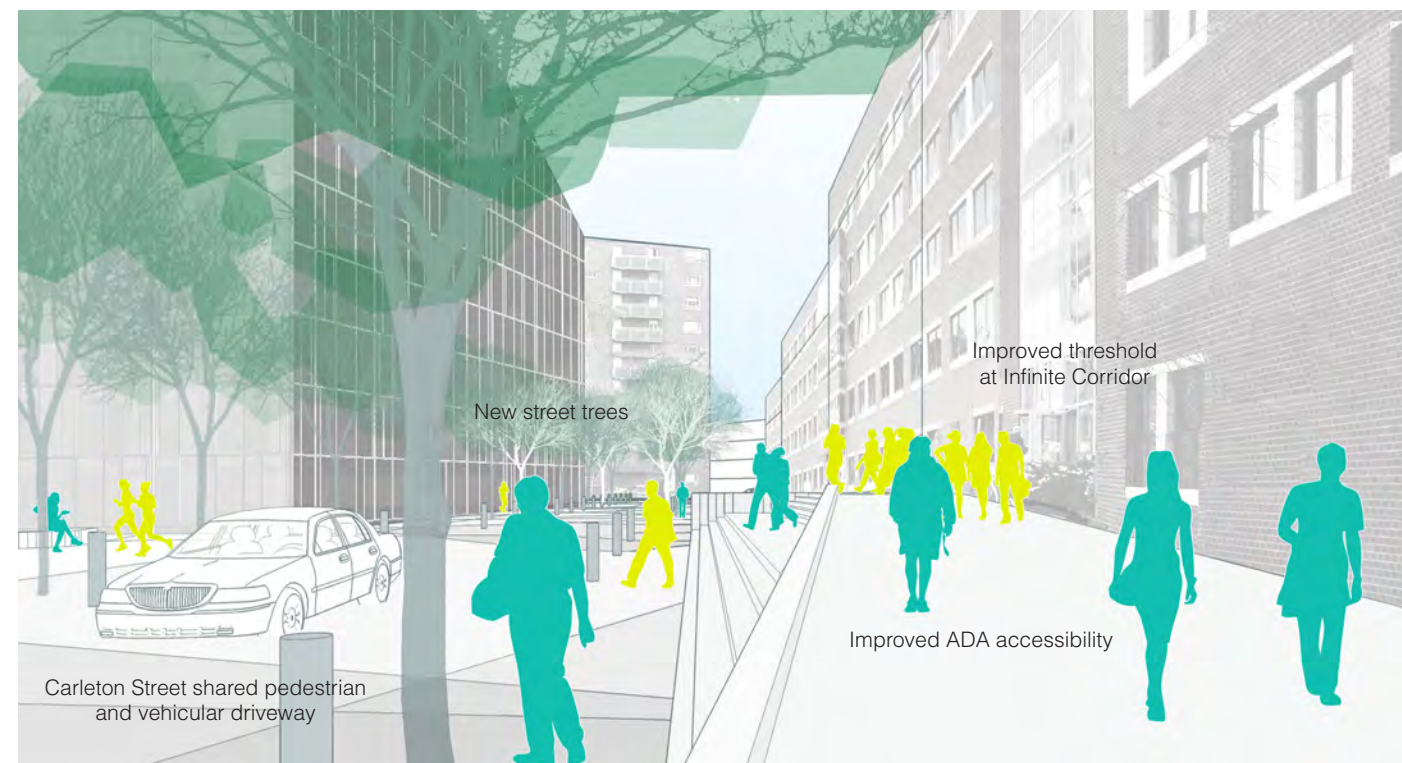
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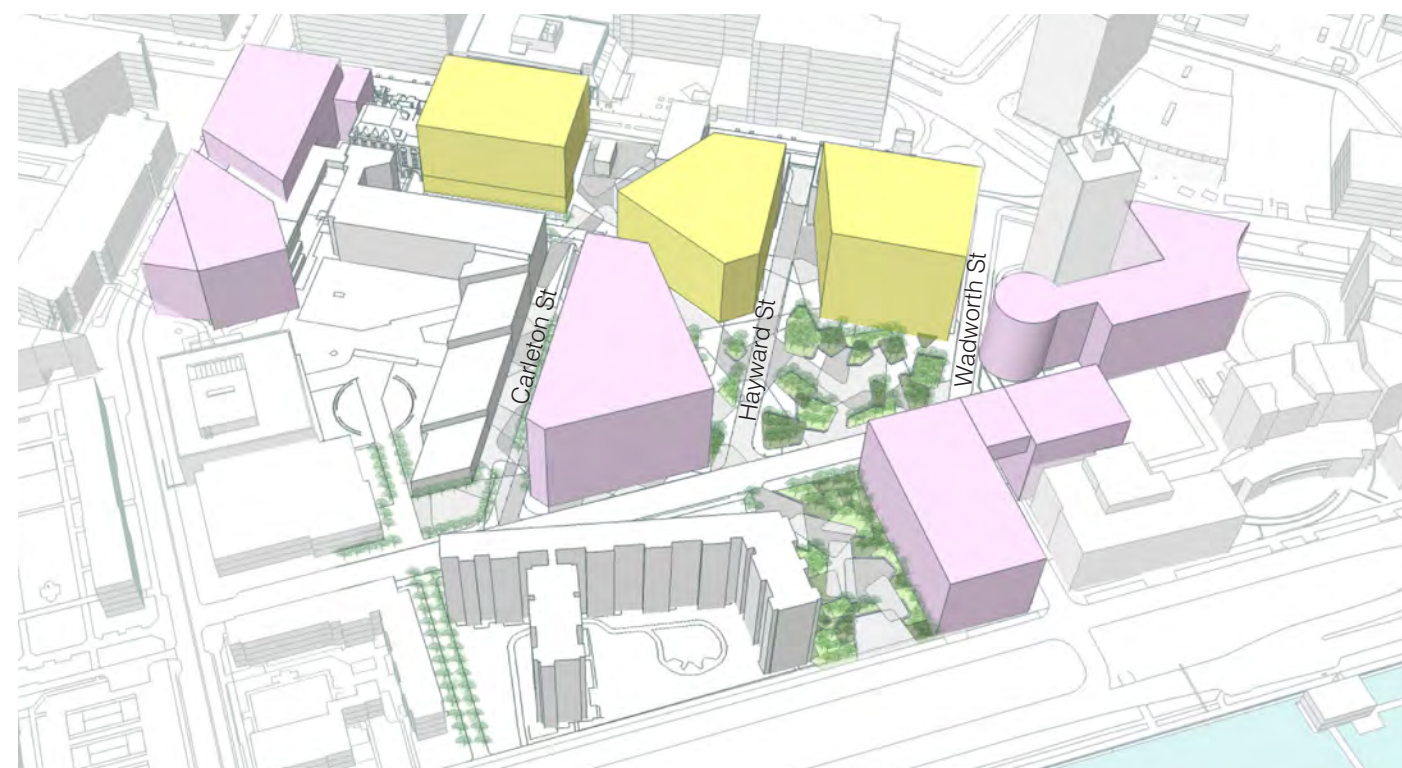
Key Plan



Existing



Proposed



Proposed

## Approach 2 (shown with Scheme B) Landscape Diagrams

Approach 2 allows the urban gateway plaza around the T headhouse to be directly connected to the central landscape space behind E38 and E39, creating a much stronger arrival experience into East Campus, and a more immediately welcoming central space better connected to Main Street. In this approach, a broader northern edge of the planned academic building between Carleton and Hayward Streets creates a more strongly figured urban plaza, but less strong visual connections to the river, and less sunlight penetration to the central landscape space.

In the “Enhanced Option”, Carleton Street is truncated and raised so that an uninterrupted connection can be made from the Infinite Corridor, through E23 into the East Campus. Hayward Street is reconfigured to run behind E38 and E39 bringing the life of Main Street more deeply into East Campus and creating a lively, south-facing edge behind the historic buildings looking towards the central landscape space.

Raising the central landscape space in the “Enhanced Option” to connect with the Infinite Corridor also makes it a more prominent organizing feature of the East Campus, and connecting it by a wide, low flight of grand stairs from the gateway plaza emphasizes the sense of arrival from the T. The enhanced scheme eliminates two road crossings between the Infinite Corridor and the Sloan School, and one road crossing between Main Street and the river.



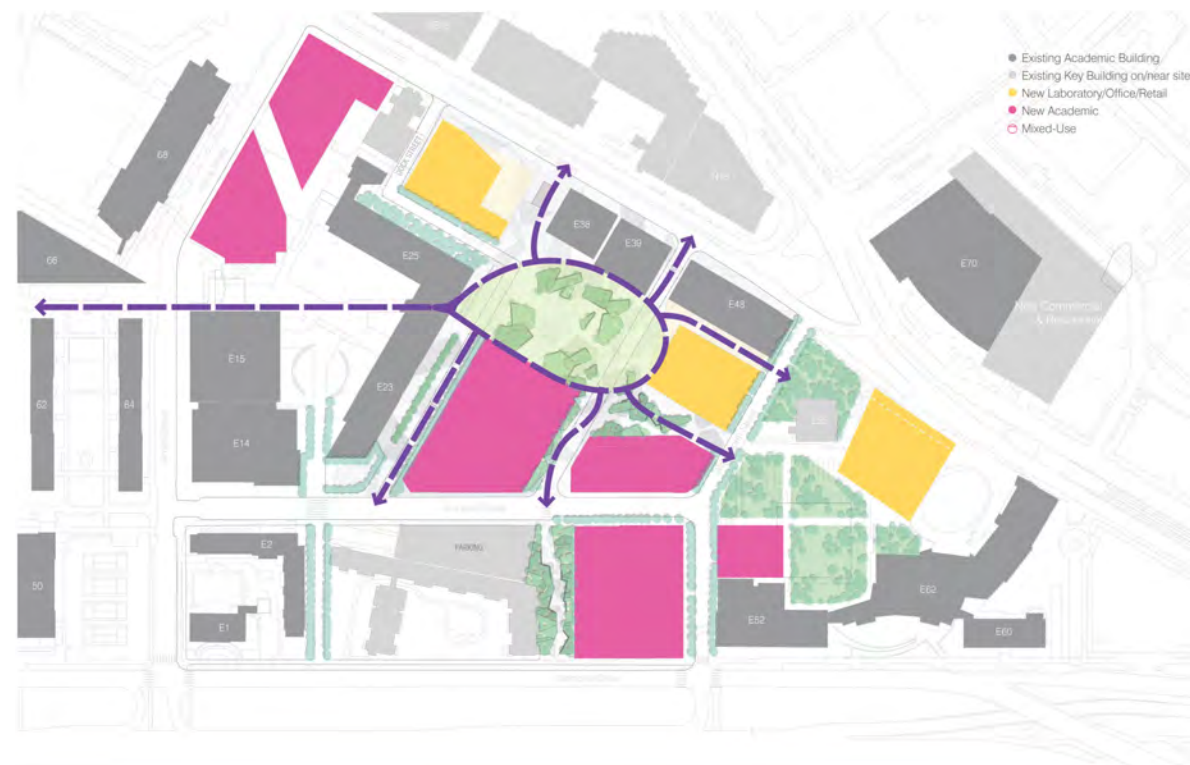
Long Term Plan, Approach 2



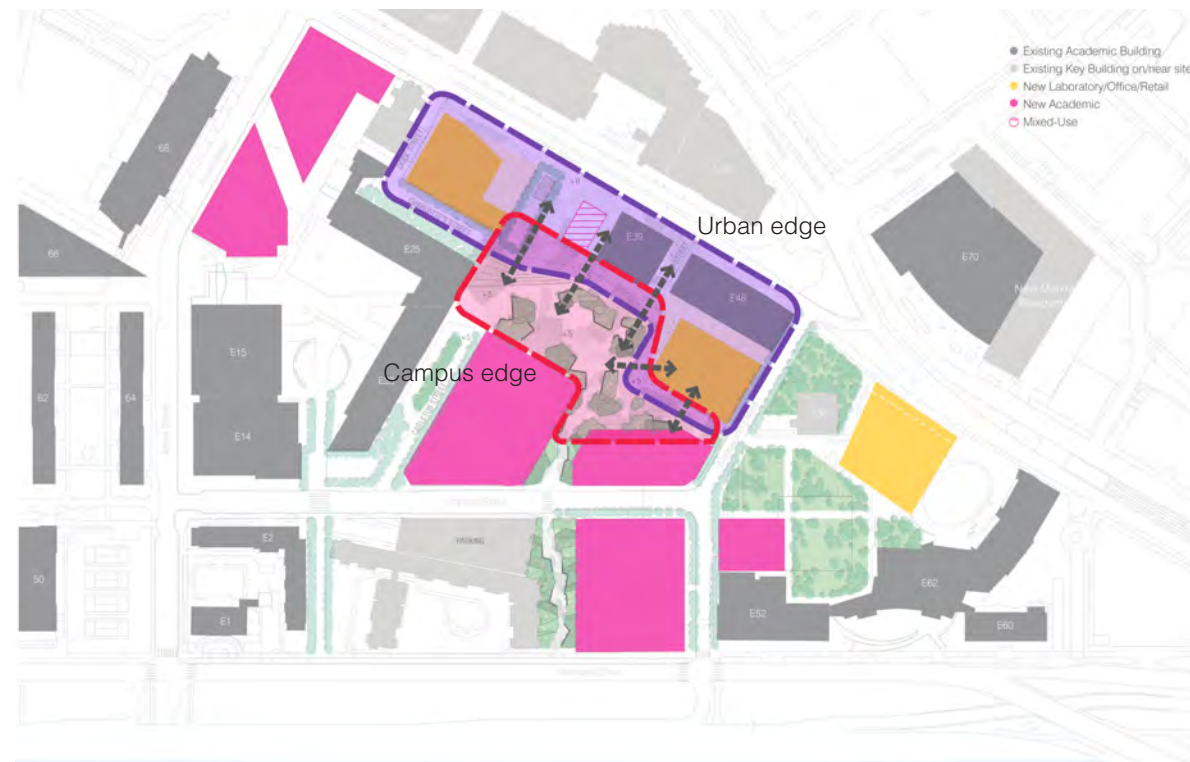
Long Term Plan, Approach 2 Enhanced Option

## Approach 2 (shown with Scheme B) Diagrams

The “Enhanced Option” of Approach 2 creates both a strongly figured public open space, which will serve as a mixing chamber on the Infinite Corridor, and a connection to Main Street, the Sloan School, the river and the surrounding academic and commercial buildings. It also creates a more porous and lively edge between the campus and city south of the historic buildings on Main Street.



Mixing Chamber on the Infinite Corridor



Increased Urban Porosity

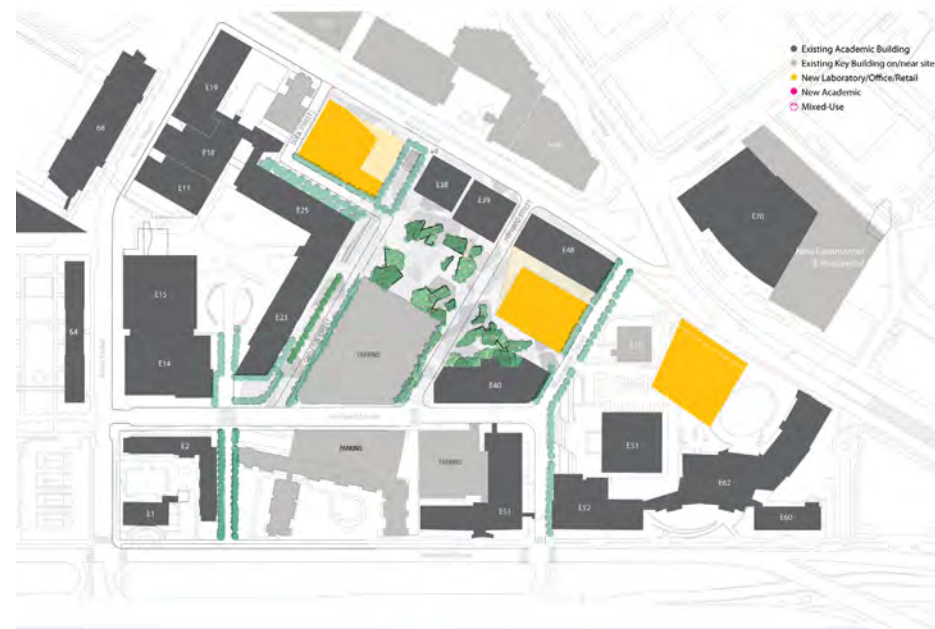
## Approach 2 (shown with Scheme B) Phasing Diagrams

Approach 2 allows rapid development of the central landscape space and urban gateway plaza in the first 5 years of the project. This will give the East Campus an early and stable core. The pedestrian and landscape improvements to Carleton and Wadsworth Streets can be made in this phase too. Temporary surface parking can be established on the future academic site on Carleton and Amherst, and the future commercial site on Wadsworth Street.

Approach 2, Phase 1: 5 years



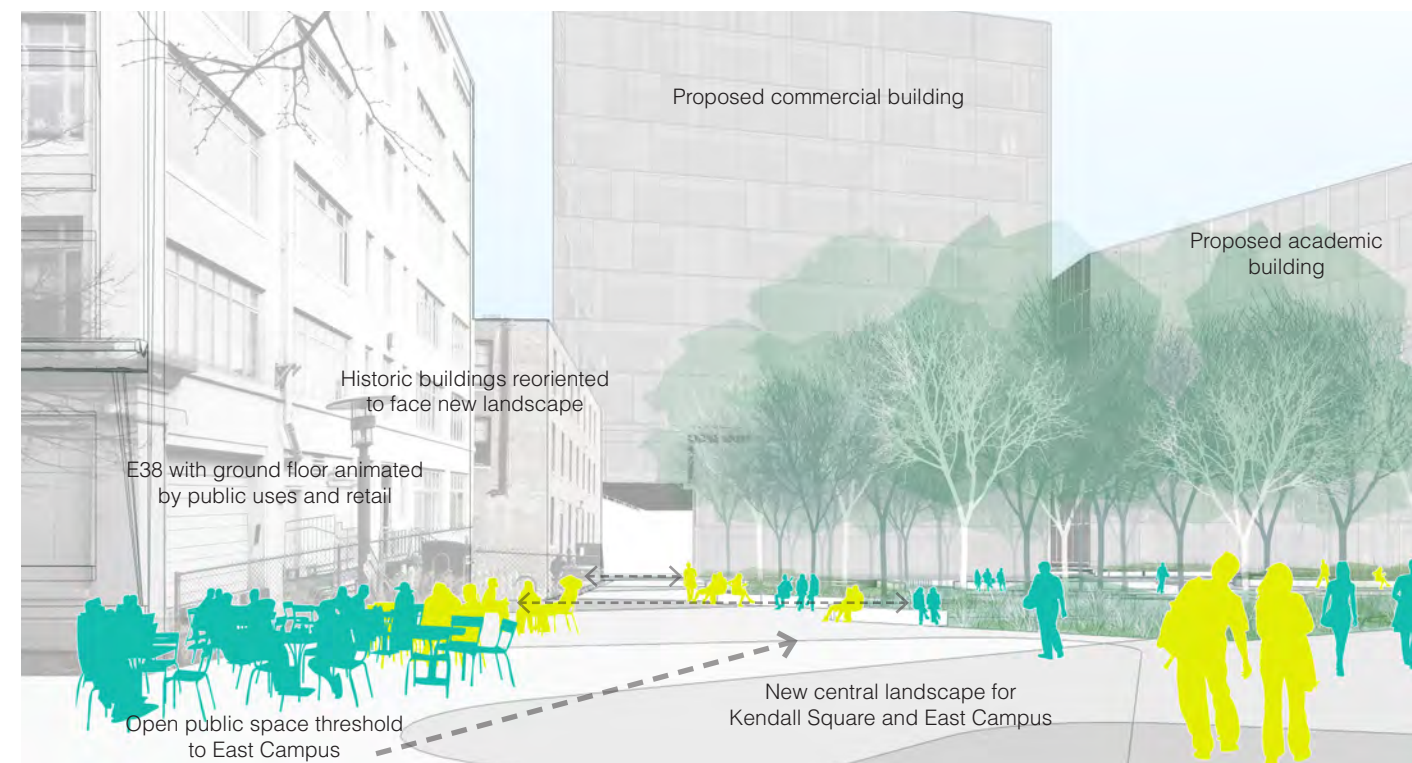
Approach 2, Phase 2: 10 years



Approach 2, Long Term Plan



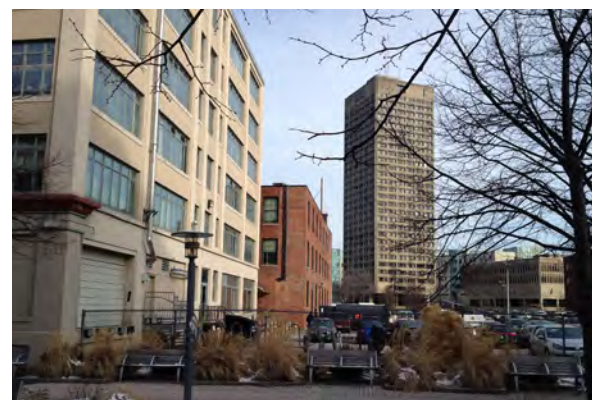
### Approach 2 (shown with Scheme B) Vignette 1 - Landscape



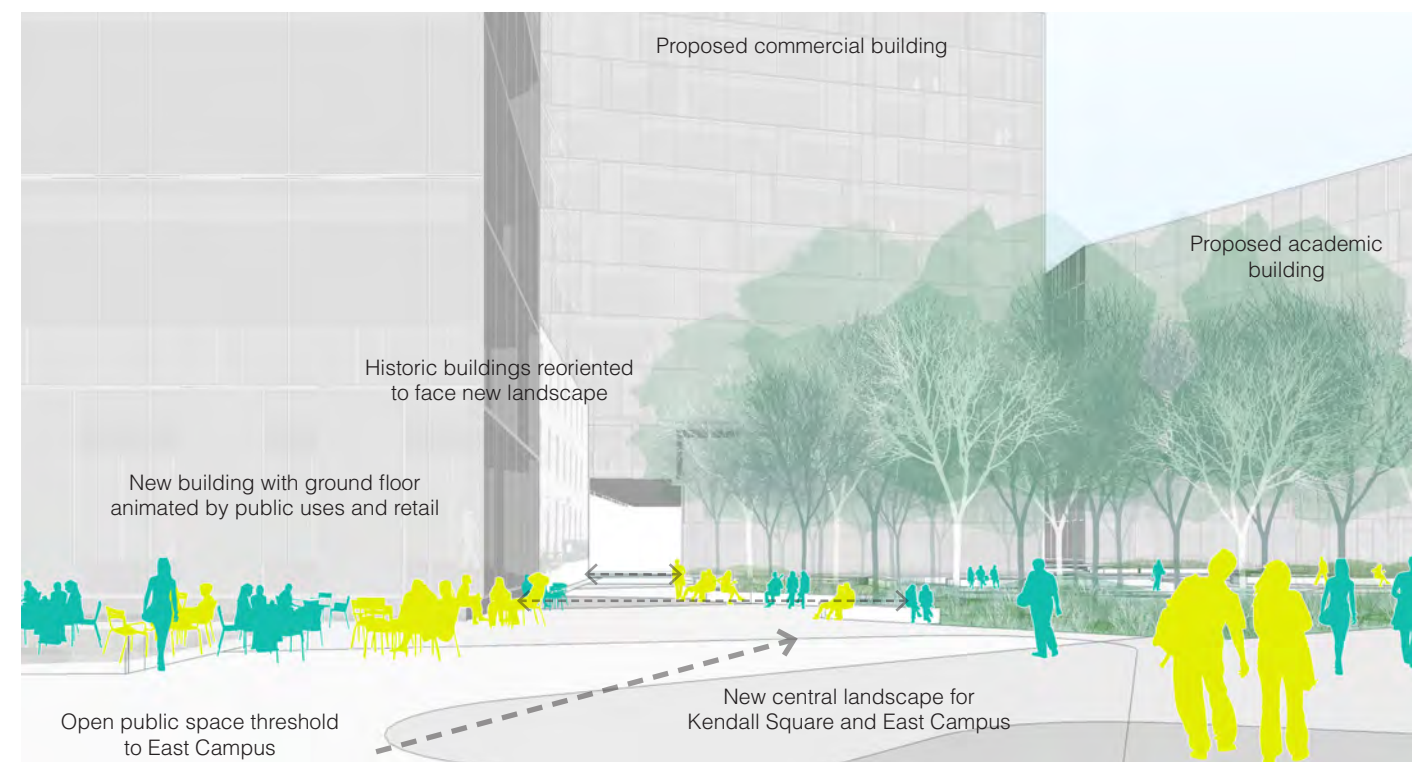
Proposed



Key Plan



Existing



Proposed

### Approach 2 (shown with Scheme B) Vignette 2 - Landscape



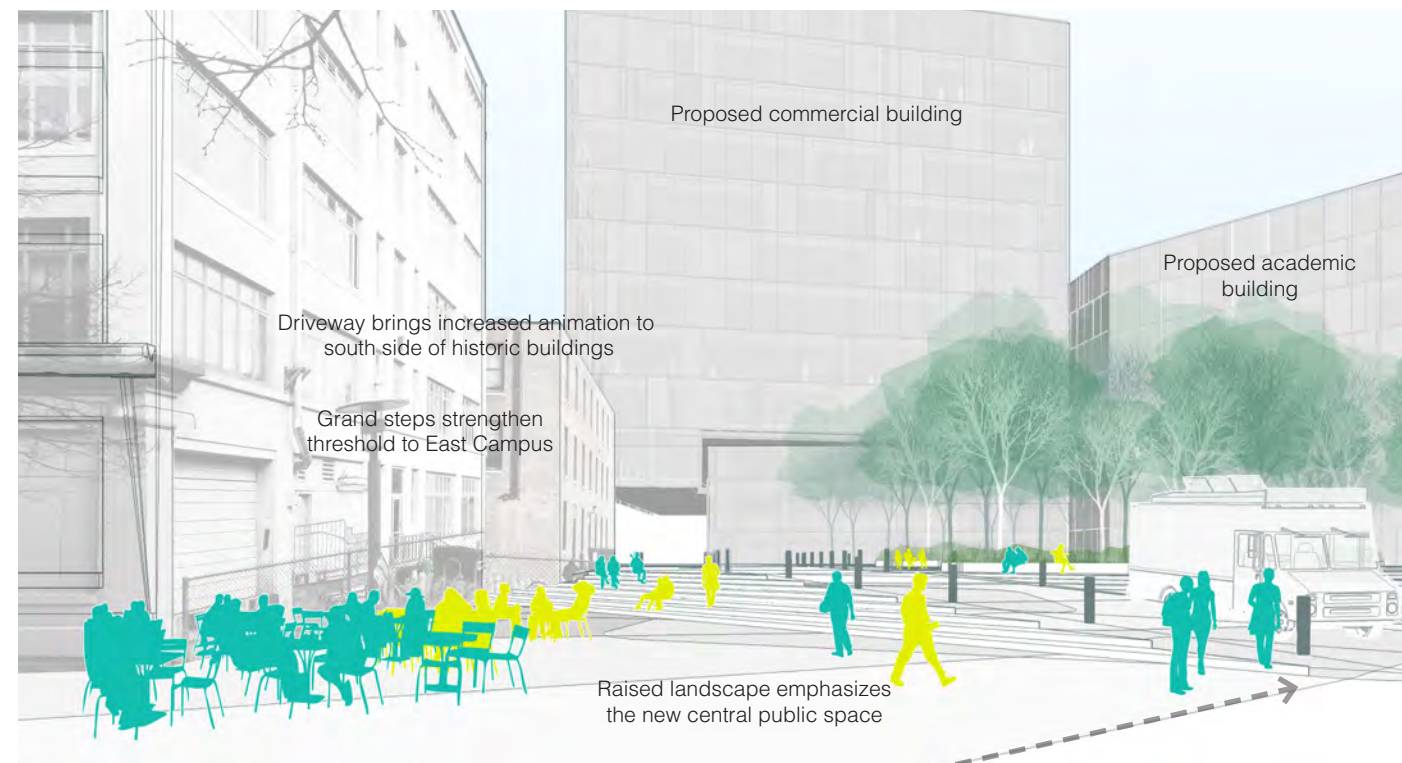
Existing



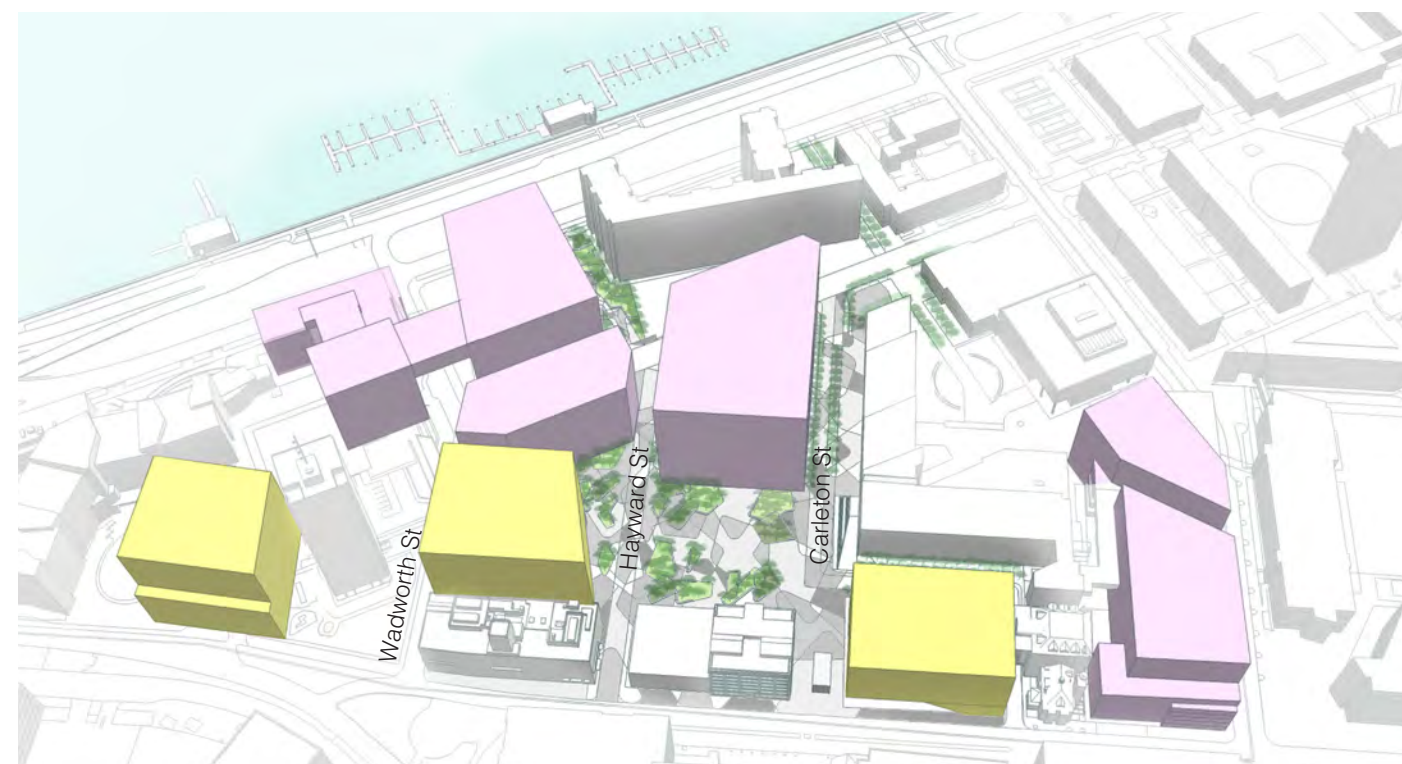
Key Plan



Existing



Proposed

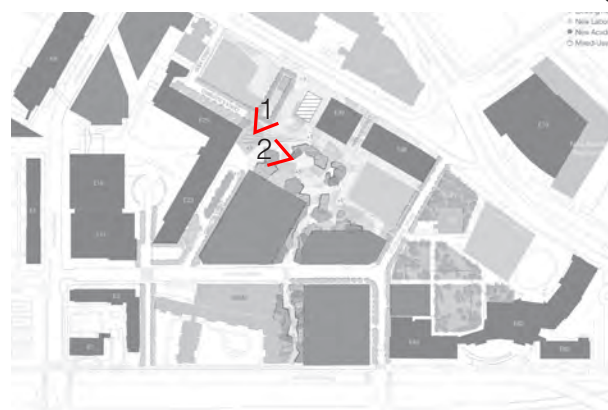


Proposed

### Approach 2 (shown with Scheme B) Vignette 3 - Landscape



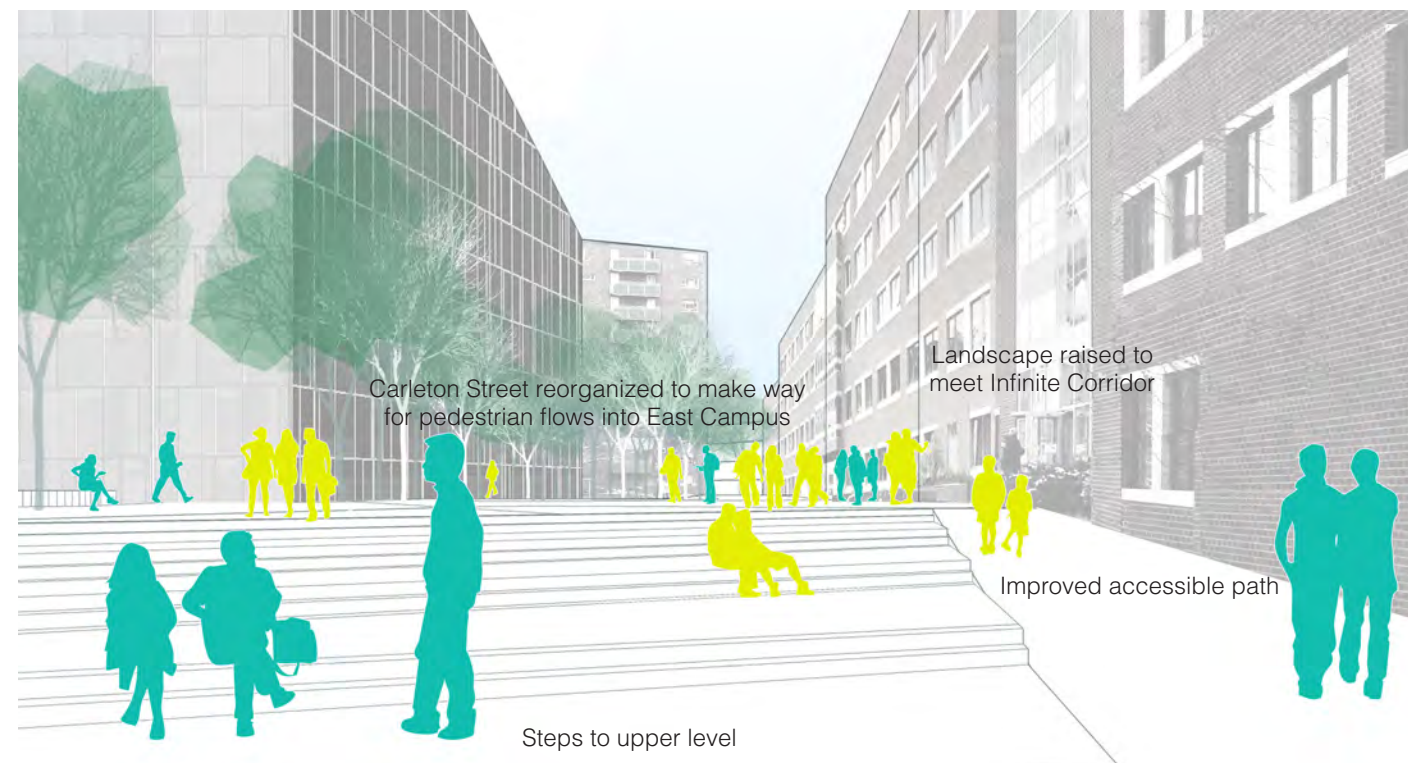
Existing



Key Plan



Existing



Proposed



Proposed

### Approach 2 (shown with Scheme B) Vignette 4 - Landscape



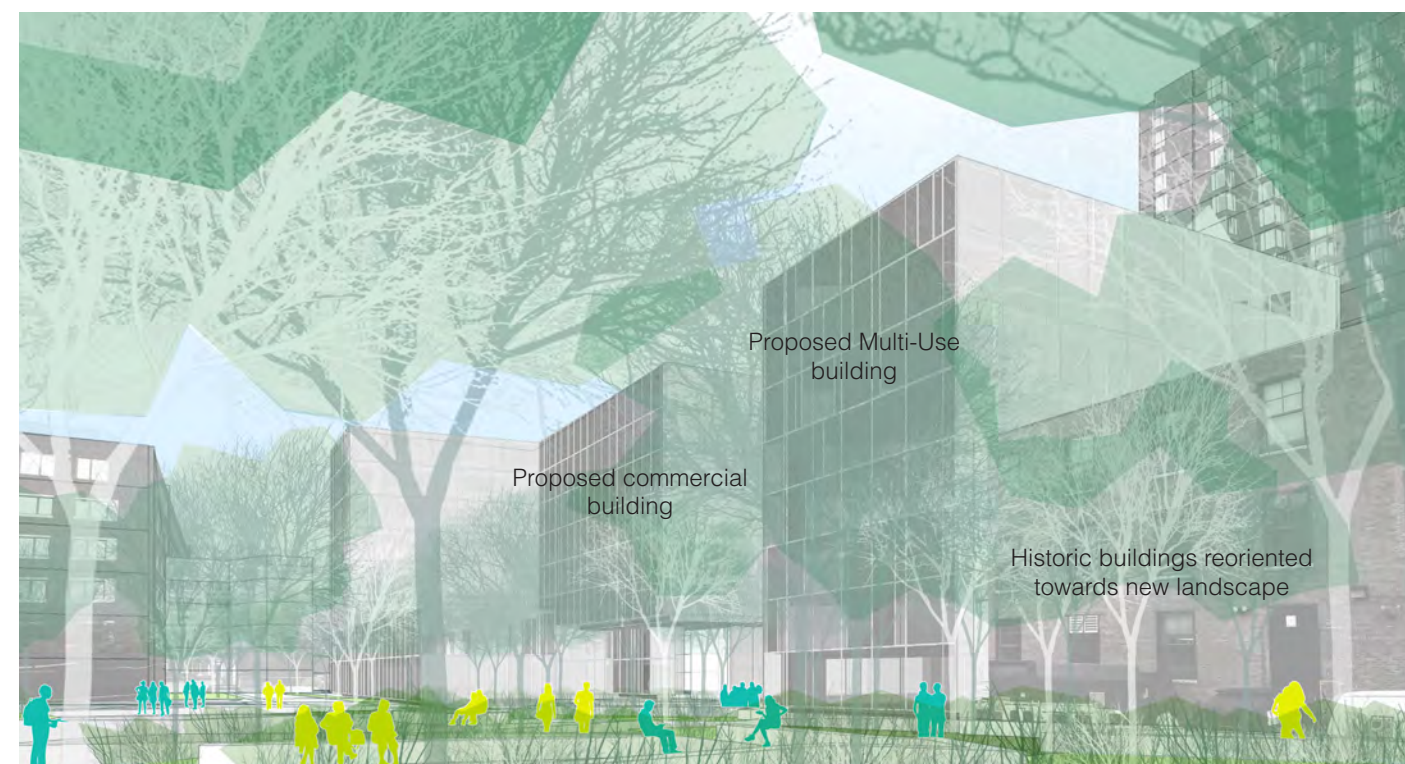
Key Plan



Existing



Proposed



Proposed



### Approach 3 (shown with Scheme C) Landscape Diagrams

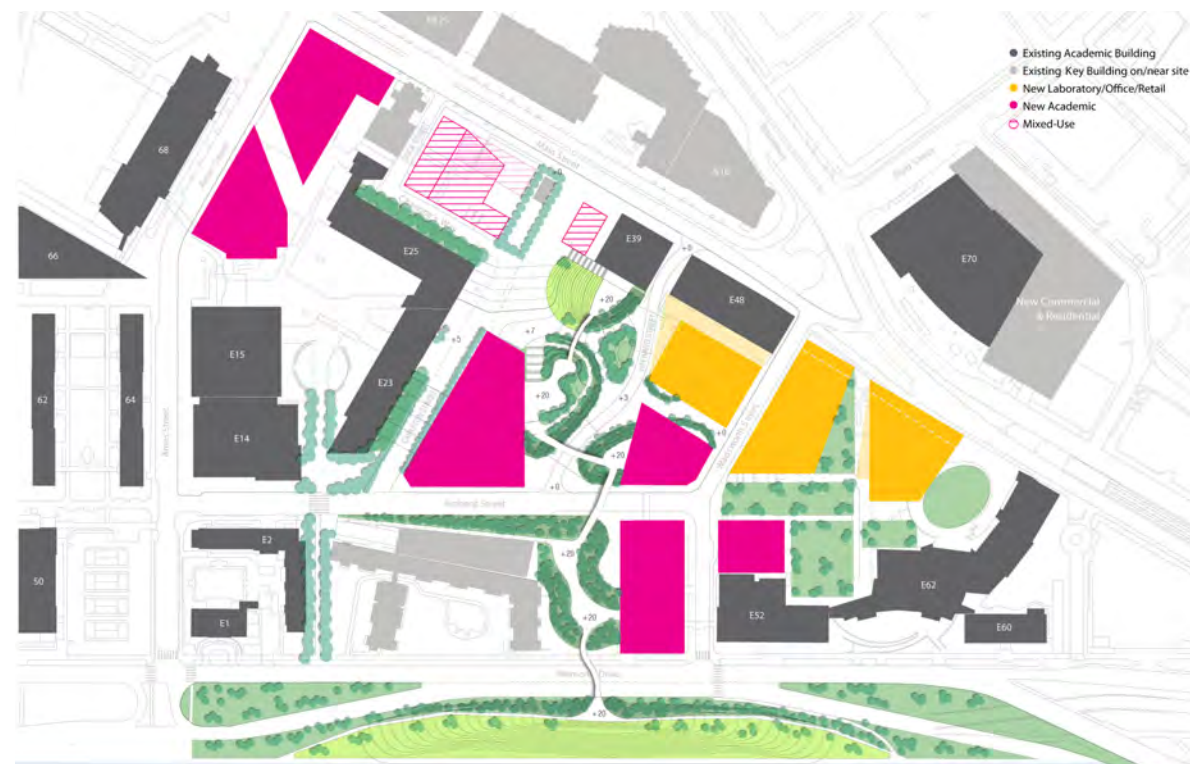
As with Approach 2, Approach 3 allows the urban gateway plaza around the T headhouse to be directly connected to the central landscape space behind E38 and E39, but in this case a much stronger connection is made through the center of East Campus to the river, creating an open south-facing landscape core around which the commercial and academic buildings can develop.

In this plan, increased porosity between the academic and urban realms is created by developing a dual-level landscape with an open and contiguous ground level, allowing urban spaces to flow through the campus, and an upper level connected to program within the buildings. Having these two levels of activity connected visually and through accessible routes in the landscape and inside the buildings creates a level of programmatic intensity and interaction that would be like no other place on the MIT campus or in Cambridge.

In the “Enhanced Option”, a much more ambitious connection to the river is imagined, where Memorial Drive is reconfigured to yield a larger and more useable landscape space next to the river. Upper level connections are made through a series of bridges all the way from Main Street to the river. This vision would transform and anchor the East Campus to the same extent that Killian Court anchors the central campus. In this option Carleton Street is transformed into a shared pedestrian and vehicular driveway and raised to connect at grade with the Infinite Corridor at E23.



Long Term Plan, Approach 3



Long Term Plan, Approach 3 Enhanced Option



South Facing Landscape Connection to the River

### Approach 3 (shown with Scheme C) Phasing Diagrams

Approach 3 allows rapid development of the central landscape space and urban gateway plaza in the first 5 years of the project. The pedestrian and landscape improvements to Carleton and Wadsworth Streets can be made in this phase too. Limited temporary surface parking can be established on the future academic site on Carleton and Amherst Streets.

The strong connections to the river can not be created until the Long Term Plan, as they require the replacement of E40 and the alteration of E51.

Approach 3, Phase 1: 5 years



Approach 3, Phase 2: 10 years



Approach 3, Long Term Plan



### Approach 3 (shown with Scheme C) Vignette 1 - Landscape Core



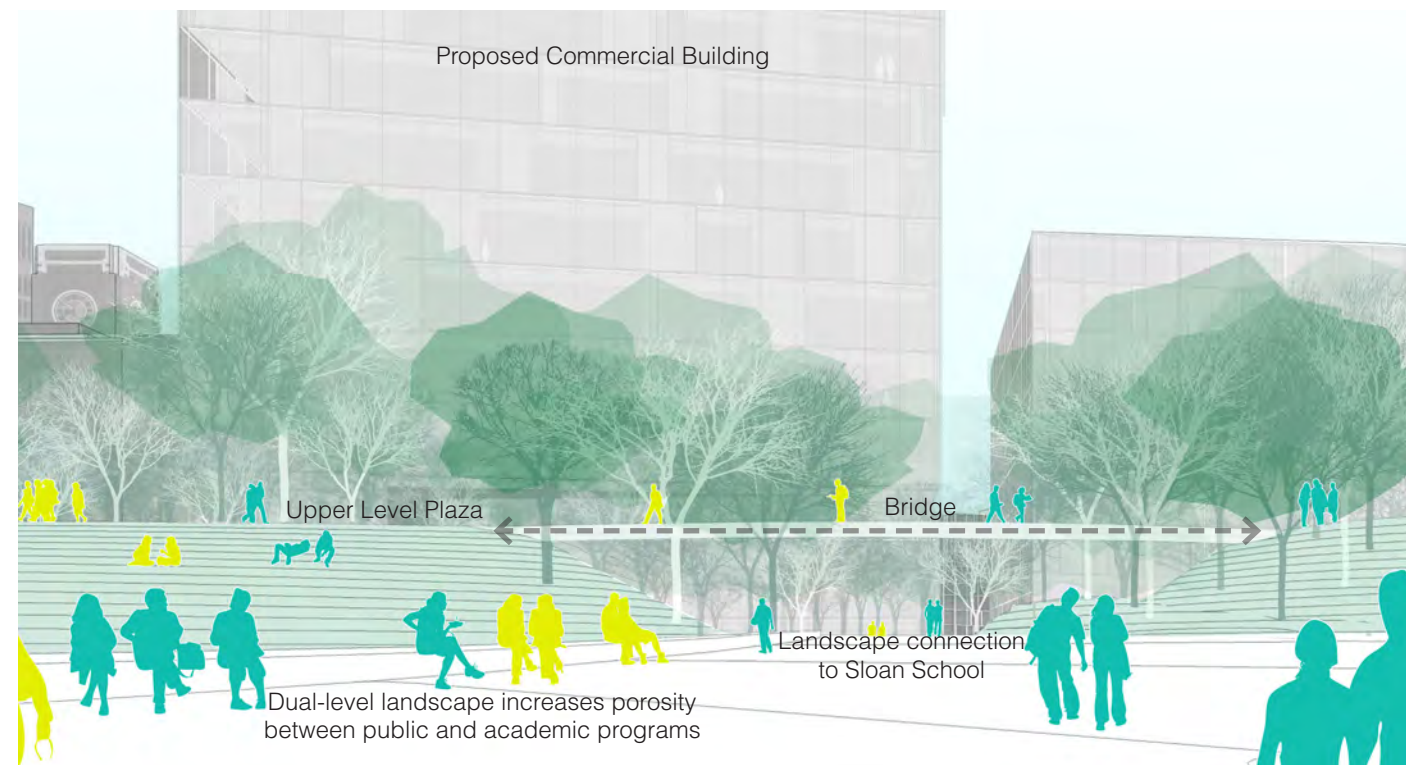
Existing



Key Plan



Existing



Proposed



Proposed

### Approach 3 (shown with Scheme C) Vignette 2 - Connections



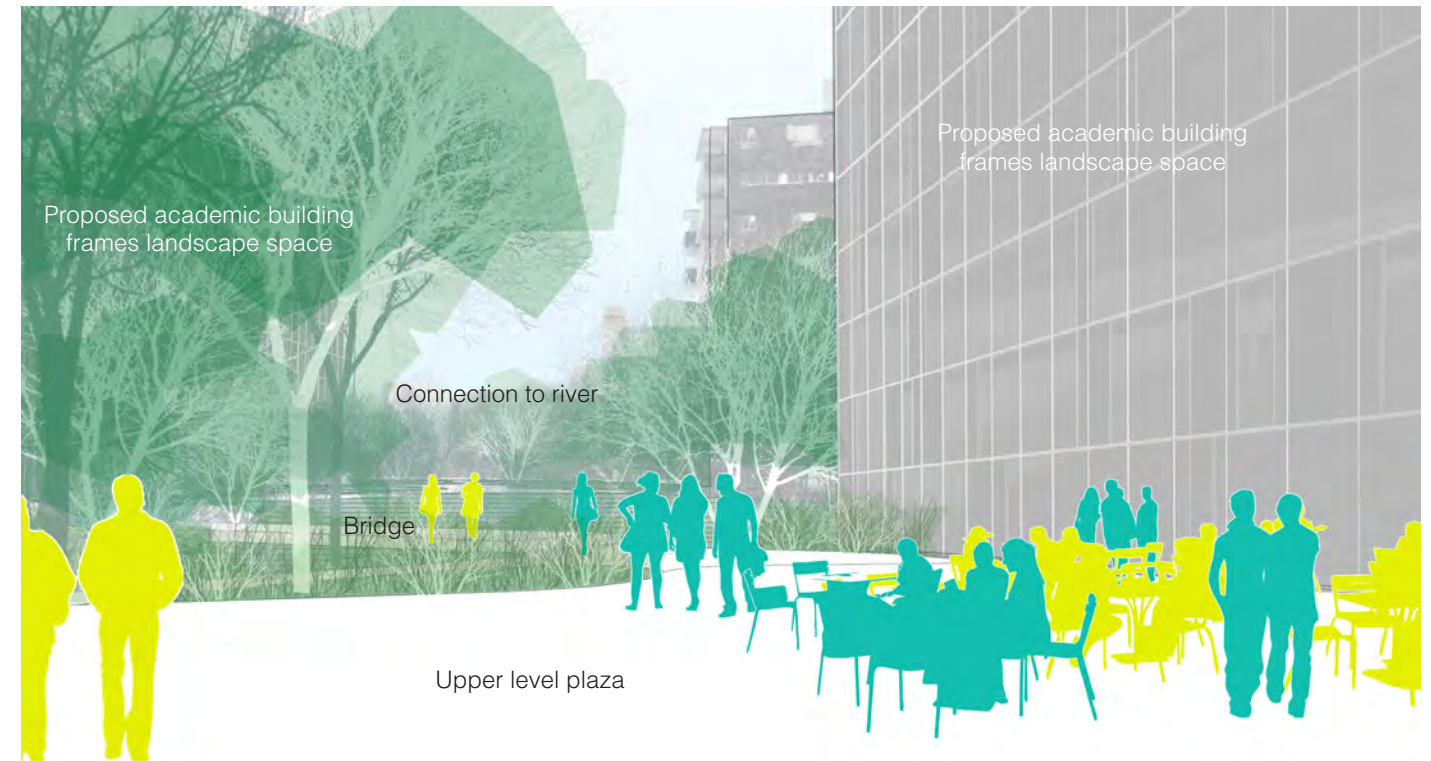
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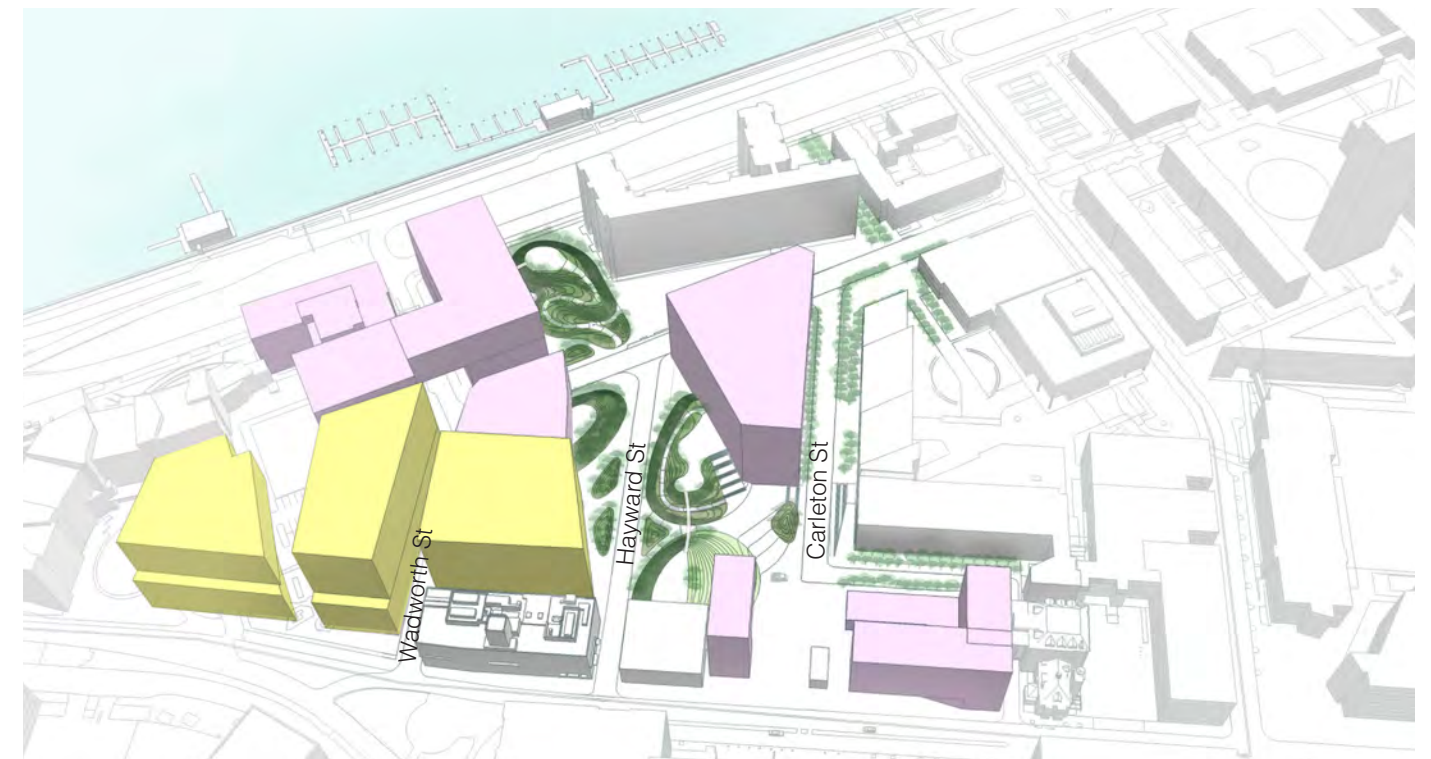
Key Plan



Existing



Proposed



Proposed

## Sustainability Analysis Overview

Sustainability in the East Campus area is an integral part of the growth and improvement of Kendall Square and its relationship to MIT's campus. The growth of East Campus embraces sustainability by furthering existing and emerging Institute and Cambridge sustainability goals. It will improve MIT's connection to the community, enhance open space, manage and conserve water, reduce energy and emissions, manage material streams responsibly, and connect social sustainability and the community. The sustainability strategies employed on East Campus will serve as a regional model of how sustainability can integrate into urban existing context to educate residents, workers, students, and visitors, and demonstrate that high performance and sustainable goals are possible on a multiple-site scale.

A framework for the East Campus has been developed that will create an exemplary sustainable urban neighborhood, going beyond best practice and local standards, to incorporate a whole system, integrated design approach. This framework will create an exemplary sustainable urban neighborhood, integrating private and public spaces, vibrant streets with advanced research and technology hubs, and energy efficient buildings. Pedestrians will experience a streetscape that incorporates seating, bike parking, vegetation, and ground-level public spaces and services, while providing pedestrian comfort, natural habitat, storm-water management, and showcases of sustainability research advancements. Below the streetscape, service corridors will facilitate energy distribution, utilities, and waste handling. Opportunities will be explored for scalable, on-site district energy systems. The East Campus vision includes a layered approach that embraces sustainability from the district scale down to the individual building. It will enhance the way students, faculty, staff, visitors, local researchers, and commercial users will engage with the MIT campus, the local Kendall Square culture, and the connections to greater Cambridge, Boston and Somerville communities. As advancements in strategies and technologies are developed, this vision will be continually revisited and re-evaluated in order to be at the forefront of adopting environmental principles.



## Websites

East Campus Urban Design Study:

<http://web.mit.edu/mit2030/projects/eastcampusgateway/forums.html>

Faculty Design Committee Report:

[http://capitalprojects.mit.edu/sites/default/files/imce/MIT\\_east-campus\\_gateway\\_rpt\\_07-2013.pdf](http://capitalprojects.mit.edu/sites/default/files/imce/MIT_east-campus_gateway_rpt_07-2013.pdf)

Design Team Request for Proposal:

<http://capitalprojects.mit.edu/sites/default/files/imce/MIT-east-campus-Request-for-Proposals-08-2013.pdf>

November Community Forum Presentation:

[http://web.mit.edu/mit2030/documents/2013-1114\\_MIT\\_Community\\_Forum\\_.pdf](http://web.mit.edu/mit2030/documents/2013-1114_MIT_Community_Forum_.pdf)

Community Forum Ideas from MIT Forum:

<http://web.mit.edu/mit2030/projects/eastcampusgateway/ideas-nov-mit.html>

Community Forum Ideas from Cambridge Forum:

<http://web.mit.edu/mit2030/projects/eastcampusgateway/ideas-nov-cambridge.html>

December Community Forum Presentation:

[http://web.mit.edu/mit2030/documents/2013-1211\\_MIT\\_Community\\_Forum\\_EC.pdf](http://web.mit.edu/mit2030/documents/2013-1211_MIT_Community_Forum_EC.pdf)

December Community Forum Ideas:

<http://web.mit.edu/mit2030/projects/eastcampusgateway/ideas-dec.html>

February Community Forum Presentation:

[http://web.mit.edu/mit2030/documents/2014-0212\\_MIT\\_Comm\\_Forum\\_EC.pdf](http://web.mit.edu/mit2030/documents/2014-0212_MIT_Comm_Forum_EC.pdf)

City of Cambridge Website:

<https://www.cambridgema.gov/>

The Cambridge Historical Society:

<http://www.cambridgehistory.org/>

MIT Admissions Information:

<http://mitadmissions.org/discover/facts>

MIT Wiki:

[http://wiki.mitadmissions.org/Main\\_Page](http://wiki.mitadmissions.org/Main_Page)

MIT Libraries:

<http://libraries.mit.edu/>

MTBA Kendall Square Schedules and Maps:

[http://www.mbtta.com/schedules\\_and\\_maps/subway/lines/stations/?stopId=12412&lat=42.362427&lng=-71.086058](http://www.mbtta.com/schedules_and_maps/subway/lines/stations/?stopId=12412&lat=42.362427&lng=-71.086058)

## Studies/Surveys

Kendall Square Initiative, Elkus-Manfredi

MIT East Campus Urban Design Study, SA+P Faculty

Report of the Task Force on Community Engagement in 2030 Planning on Development of MIT-Owned Property in Kendall Square, Task Force

Kendall Square History and Landmarks, Cambridge Historical Commission

Kendall Square Advisory Committee Final Presentation (01/19/2012), Kendall Square Advisory Committee