

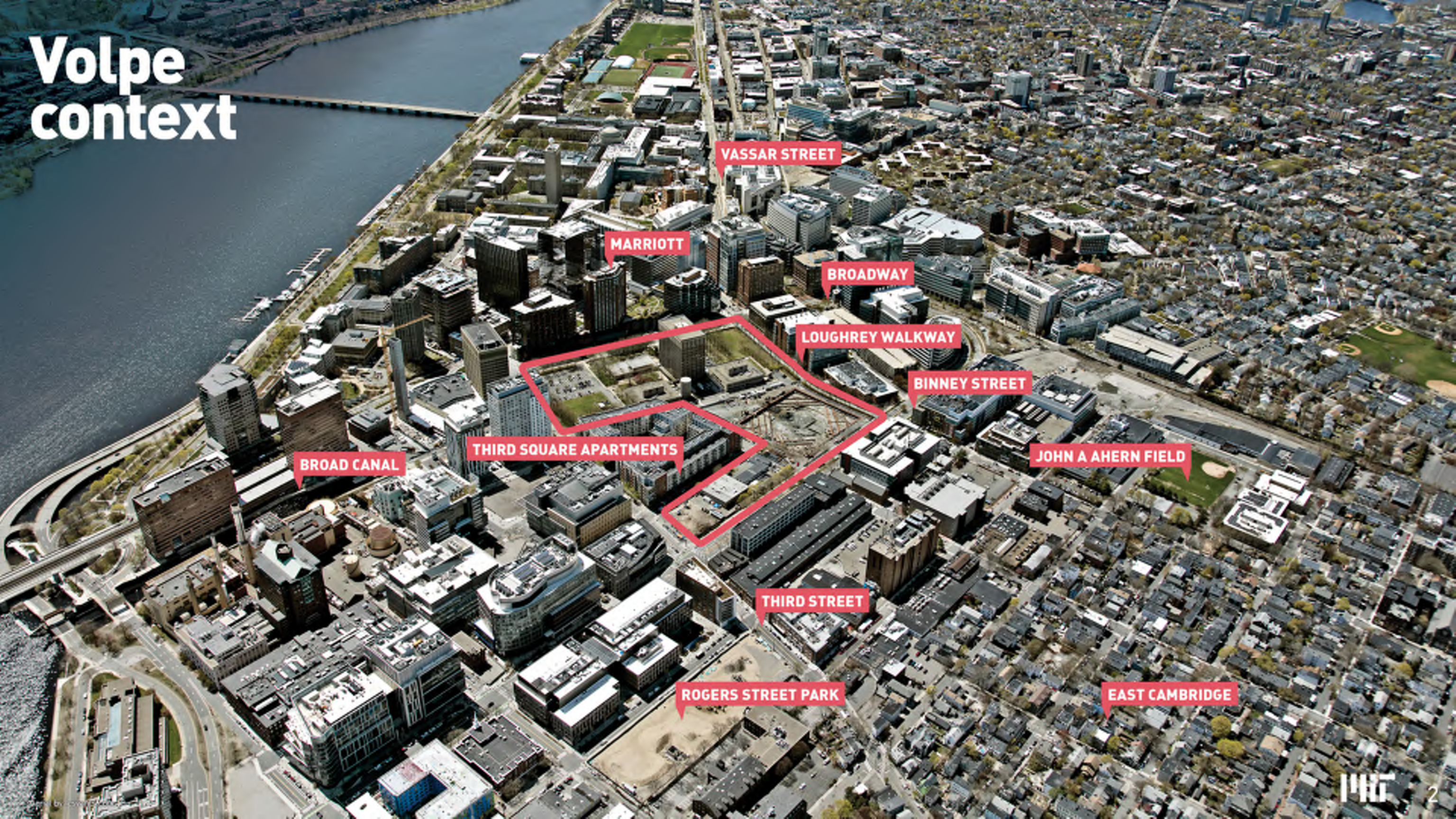


MIT Volpe Redevelopment Project

Planning Board Pre-Application Conference 10/27/20



Volpe context



VASSAR STREET

MARRIOTT

BROADWAY

LOUGHREY WALKWAY

BINNEY STREET

JOHN A AHERN FIELD

BROAD CANAL

THIRD SQUARE APARTMENTS

THIRD STREET

ROGERS STREET PARK

EAST CAMBRIDGE

MIT Volpe Redevelopment Project Team

REED-HILDERBRAND



BUROHAPPOLD
ENGINEERING



ELKUS | MANFREDI
ARCHITECTS



REDGATE



atelier ten



*goulston&storr*s

GRAFFITO *gp*

Path to Volpe

Path to Volpe: MIT's Kendall Square Planning

- **2008**
Exploratory and brainstorming meetings with City Councillors, City staff, Planning Board, Historical Commission and community members
- **2010 - 2012**
Multiple community meetings and open houses
MIT Faculty Taskforce on Community Engagement
Graduate Student Housing Working Group report
- **2013**
K2 Final Report published
Kendall Square PUD-5 Zoning passed
- **2016**
PUD-5 Final Development Plan approved



Shy Bird At One Broadway



Retail along Broad Canal Way

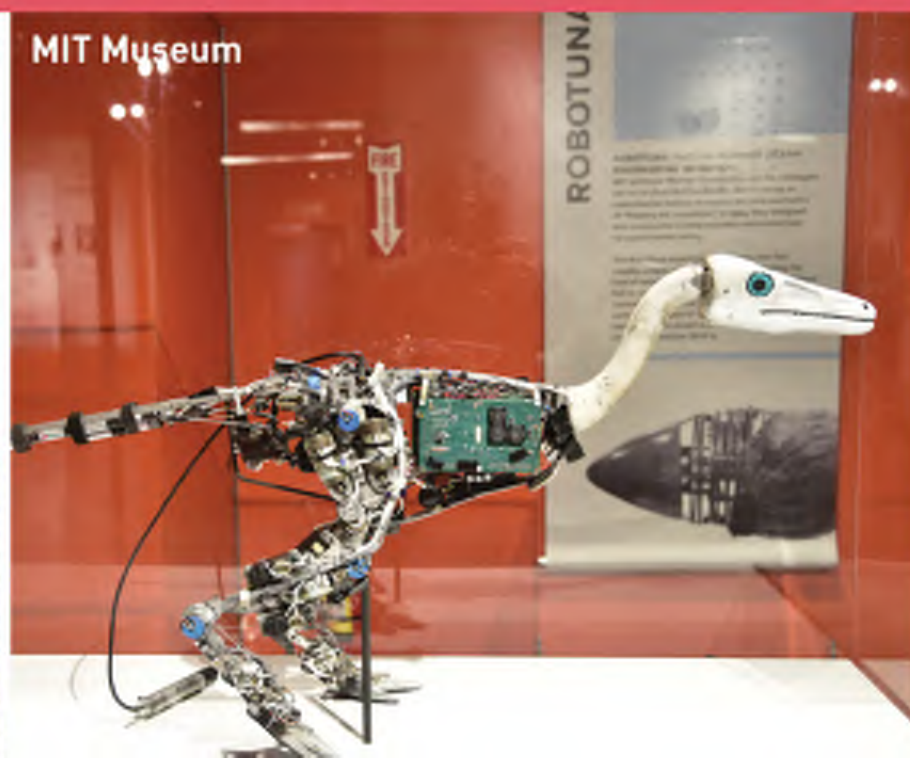


Graduate Student Housing

Path to Volpe: MIT's Kendall Square Project



Kendall Square MbtA Headhouse



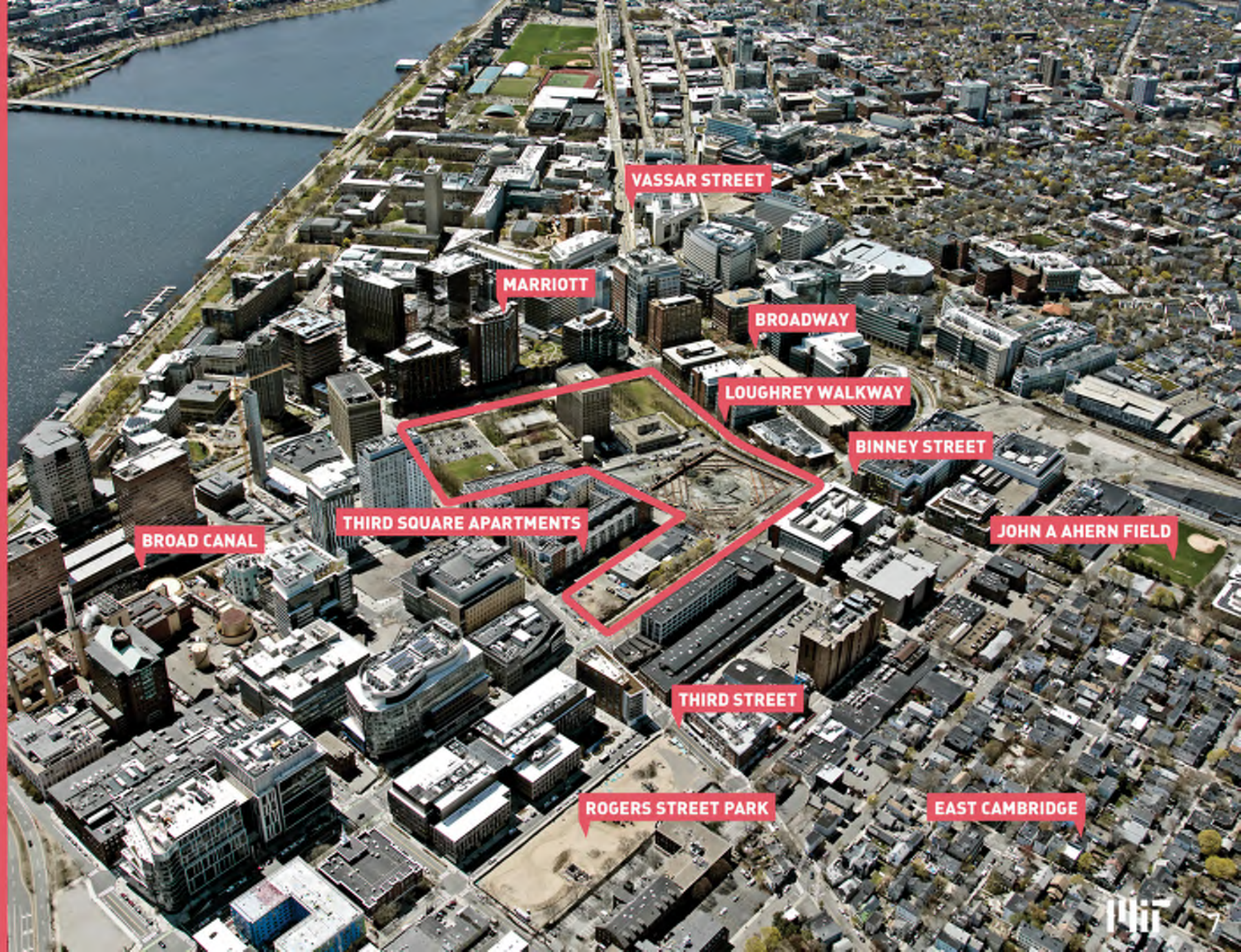
MIT Museum



165 Main

Path to Volpe: Volpe Zoning

- **2014**
PUD-KS Proposal developed with discussions at Planning Board
- **2015**
PUD-KS Petition Filed
Planning Board Public Hearings
Volpe Site Community Outreach
PUD-KS Refiled
Petition Hearings
- **2016**
The City appoints the Volpe Working Group to develop planning and urban design principles
- **2017**
PUD-7 Zoning Amendment passed





Grand Junction Multi-Use Path



MIT Pumpkin Patch



The Engine Built by MIT

MIT in the Community



MIT Winter Family Day 2020



MIT Winter Family Day 2020



Cambridge Science Festival



Volpe Block Party 2019



Volpe Block Party 2018



CVS on Main Street

MIT in the Community



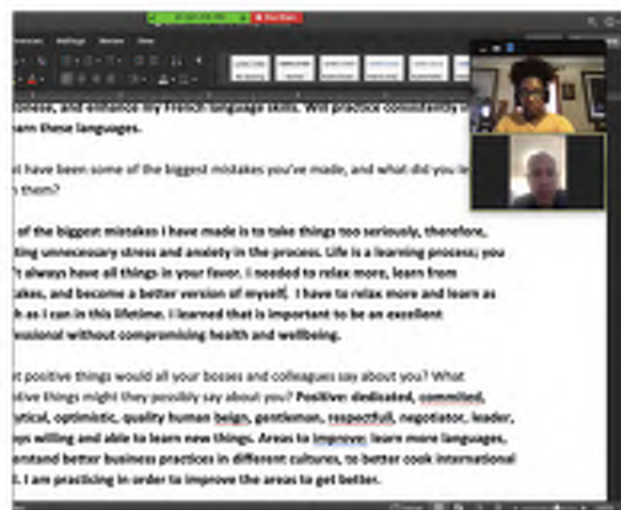
Volpe Block Party 2017



Brothers Marketplace

Job Connector by MIT

- Job training should be provided to ensure that Cambridge residents can benefit from, and be a part of, the innovation economy in Kendall Square.
- The Job Connector by MIT is a **free workforce development hub** for Cambridge residents. Connect with us to explore opportunities for job readiness, skill training, internships, apprenticeships, and to get a read on the changing career landscape in Cambridge.



2017 Community Center Program



**Recreational
Lap Pool**



Flex Fitness Space



Job Connector



Flexible Court

Values for a Connected Innovation Community



**Retail + Active
Ground Floors**



**Sustainability +
Resilience**



Racial Equity + Inclusion



Science + Research



Open Space



Housing

Zoning and Commitments

Volpe Zoning: Master plan

- The PUD-7 zoning district was ordained **October 23, 2017**.
- Purpose is to create a **vibrant mixed-use district**.
- Zoning requires that the Planning Board shall grant a **PUD Special Permit** approving the final development plan for a master plan area.
- **Pre-application conference required** with the City Council or Ordinance Committee as well as the Planning Board to discuss the site plan before application is filed.

Volpe Zoning: Master Plan Requirements

Development parcel of at least 5 acres may be designated as master plan area for PUD Special Permit approval with:

- Site Development Plan
- Site Massing Plan
- Parking and Loading Plan
- Connectivity Plan
- Open Space Plan
- Ground Floor Activation Plan
- Housing Plan
- Phasing Plan
- Sustainability Plan
- Transportation Plan
- Environmental Comfort Plan
- Architectural Character Plan

Volpe Zoning: District Dimensional Regulations/ Gross Floor Area (GFA)

- **Maximum GFA** is 3,250,000 sf, includes 400,000 sf for new GSA building.
- Gross Floor Area exemptions:
 - Active space up to a max of 5% of the GFA
 - 50% of innovation space to a max of 5% of non-residential GFA
 - Private decks and balconies up to 8% of Building GFA
 - Community center if it is free standing
- **40%** of permitted GFA shall be devoted to **residential** use.
- A minimum of 20% subject to Inclusionary Housing requirements (approximately 280 affordable units out of a total of 1,400 units).

Residential Phasing

- Non-residential development must not exceed 60% of permitted GFA until substantial construction activity of a significant portion of the required residential GFA has commenced.
- Full completion of all non-residential GFA shall not be allowed before substantial construction has commenced on all residential buildings.

Volpe Zoning: Height

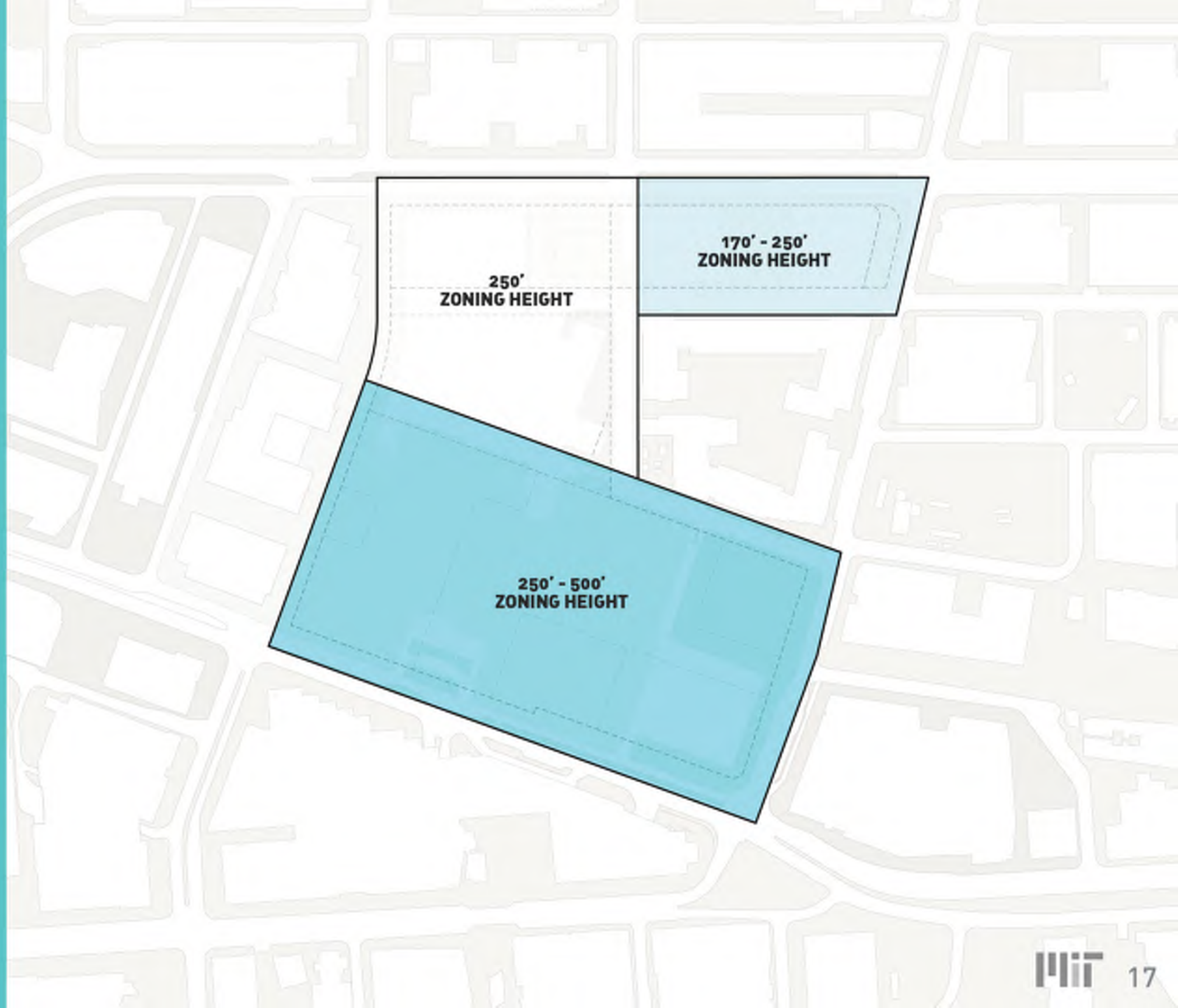
**Baseline maximum
building height: 250 ft**

North of Munroe: 170 - 250 ft

- Maximum height for non-residential buildings is 170 ft

South of Potter: 250 - 500 ft

- Floor plates must be less than 15,000 sf on buildings above 250 ft
- Floor plates above 250 ft cannot occupy more than 10% of land area
- Only residential can go above 300 ft
- One residential building may be above 350 ft, but less than 500 ft



Volpe Zoning: Open Space Requirements

- Minimum of 25% of total land area will be Publicly Beneficial Open Space.
- Must include at least 2 acres of Open Space that is permanently guaranteed for public use.
- Requires a 10 ft buffer along Loughrey Walkway.
- Freestanding community center counts as Publicly Beneficial Open Space.

Volpe Zoning: Parking and Loading

Parking Maximums:

- **Office:** 0.8 spaces per 1,000 sf of GFA
- **Lab and Technical Offices:** 0.8 spaces per 1,000 sf of GFA
- **Residential:** 0.75 spaces per dwelling unit
- **Retail:** 0.5 spaces per 1,000 sf of retail
- **Hotel:** 1 space per 4 sleeping rooms

Development Proposal will include **a shared parking study** to find opportunities to reduce the total number of spaces.

Volpe Zoning: Activation and Innovation

- At least 65% of interior ground floors that are within a minimum depth of 20 ft from a Principal Front Wall Plane directly fronting **Broadway** or **Third Street** shall be Active Space.
- At least 25% of required Active Space shall be devoted to **Independent Retail** Operators (do not own and operate more than 10 retail locations in Massachusetts), each occupying no more than 3,000 sf.



Volpe Zoning: Sustainability

- All buildings LEED Gold or better.
- Integrated design approach must incorporate best practices in:
 - Energy and emissions
 - Urban site and landscaping
 - Cool roofs
 - Monitoring

Required Financial Contributions

- Commercial linkage requirements that would generate approximately \$36 million (\$20.10 psf) to the Affordable Housing Trust
- Contribution of \$10 psf of non-residential GFA
 - 50% to transit improvements
 - 50% to community fund

Current plan estimates total cash contributions to exceed \$53 million



\$36M to Affordable Housing Trust



\$8.5M for Transit Improvements



\$8.5M to Community Fund For Non-Profits

Volpe Commitment Letter: Housing



Student Housing

950 new graduate student beds



Middle Income Housing

20 middle income units
(80% -120% AMI)



Innovation Housing

5% of dwelling unit net floor area

Volpe Commitment Letter



Community Center

\$22 million on design and construction of a Community Center and a \$3.5 million dollar endowment for programming



Grand Junction Multi-Use Path

\$8.5 million to support the Grand Junction Path



Job Connector

To be initiated within 18 months of zoning. Zoning required \$125k annually and \$1.5 million when community center opens

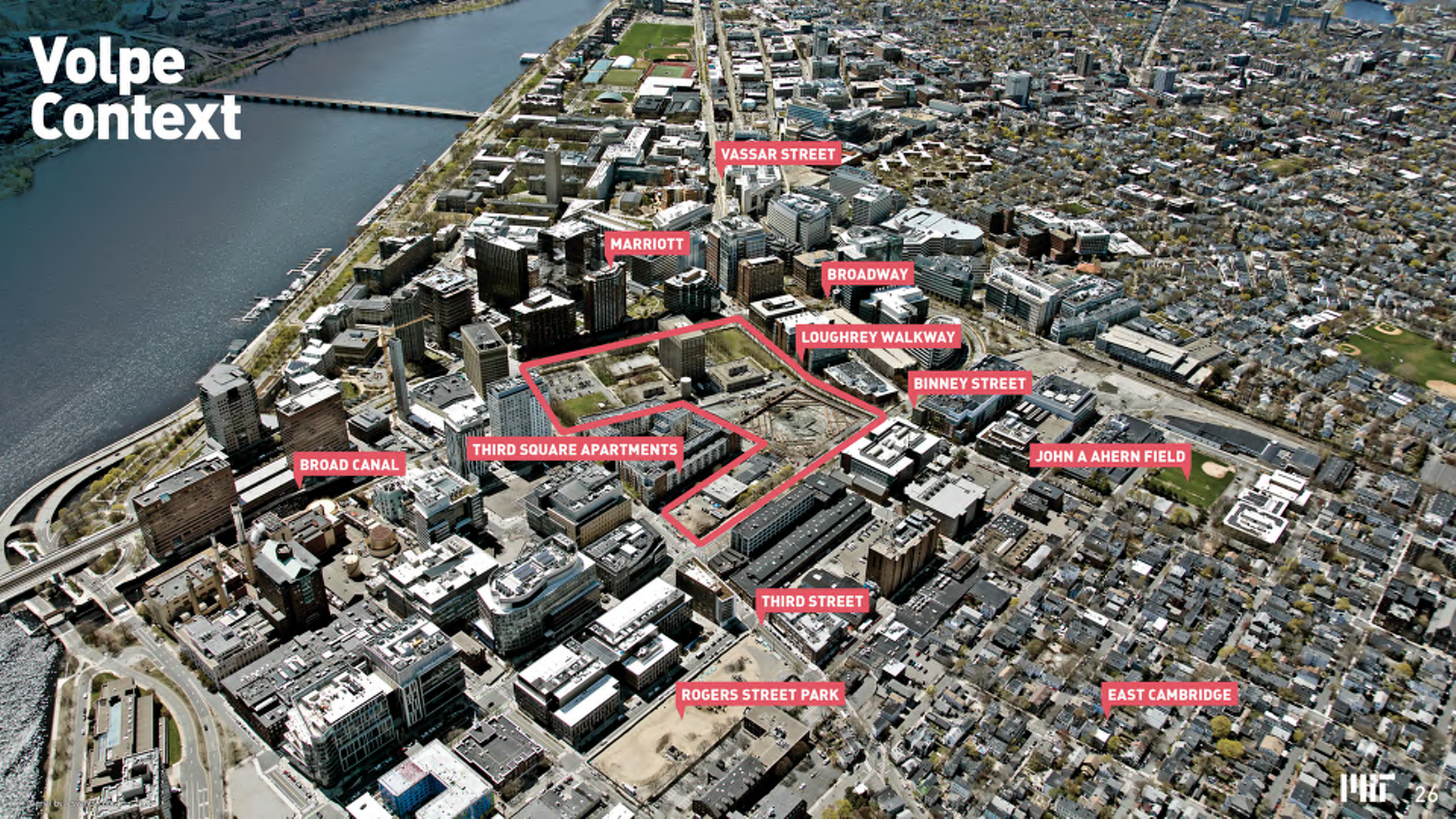


Additional Commitments

Related to advisory roles, event planning, protecting tax contributions and arts programs in Kendall Square

Volpe Context

Volpe Context



New DOT Federal Facility

- **October 2018**
Commenced utility site work
- **September 2019**
Commenced construction
of new building
- **December 2023**
Target completion of new building



Four Options from PUD Zoning

EXAMPLE 1



EXAMPLE 2



EXAMPLE 3



EXAMPLE 4 *



Volpe Working Group Planning Principles

The Volpe Site should be a welcoming and lively mixed-use district, and a place of innovation, possibility, and creation.



Civic Life



Activation



Inclusiveness



Comfort



Sustainability



A Place for Opportunity



Connectivity and Permeability

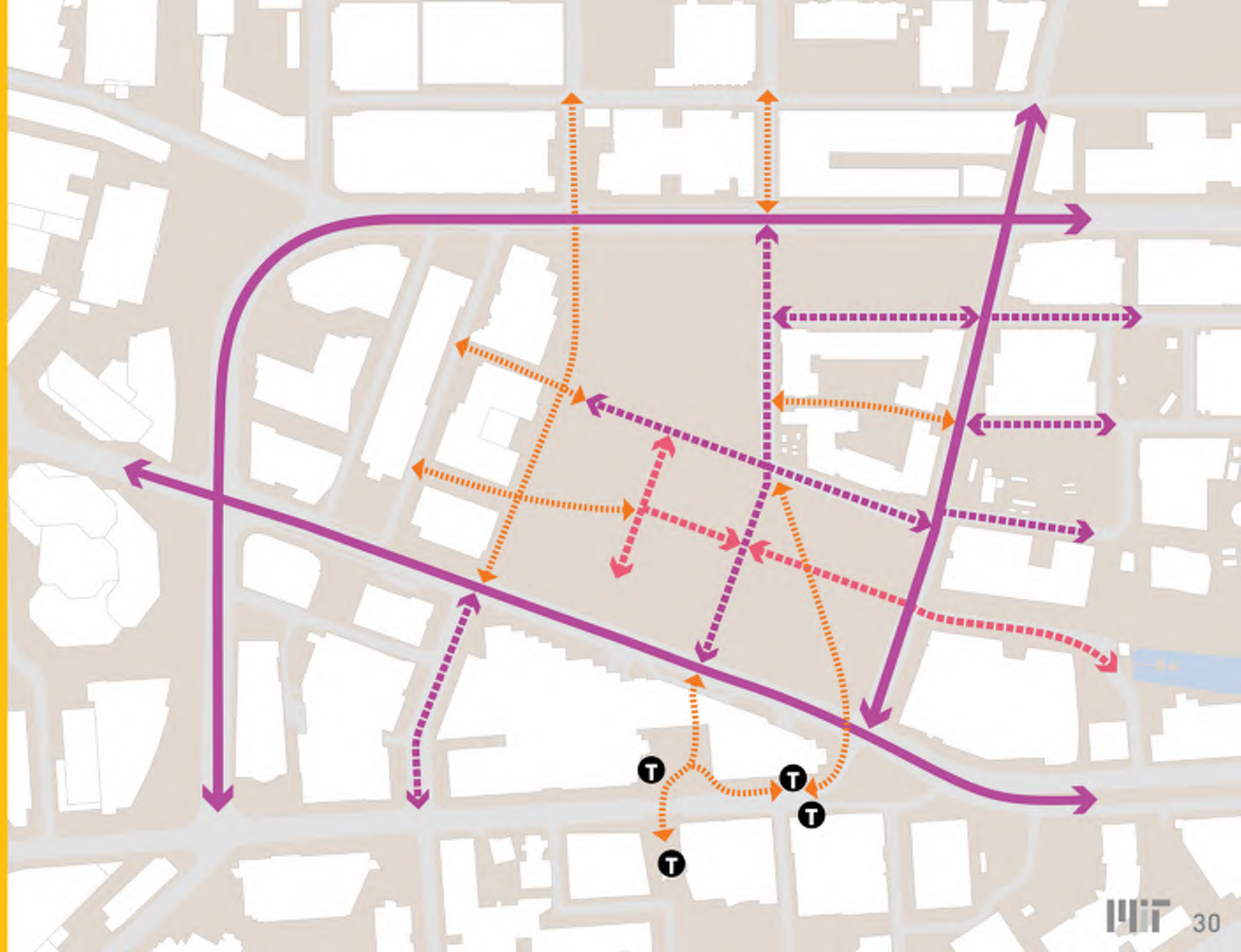
Site Circulation

Physical Changes

- 5th Street to connect Binney to Broadway while prohibiting traffic on 5th through neighborhoods to the north
- Extend Broad Canal Way to link Loughrey Walkway and Kittie Knox Bike Path to the Broad Canal and Charles River
- Proposed signaled intersection at Potter and Third

Interconnectivity - Bike Lanes, Pedestrian Crossings

- PRIMARY VEHICLE ACCESS ROUTES
- SECONDARY VEHICLE ACCESS
- SHARED ACCESS
- PEDESTRIAN AND/OR BIKE ONLY



Tree Mitigation Strategy

- Integration/ preservation of street and open space trees
- Tree removals will be offset by significant quantities of new trees planted on the Volpe property
- 84 net new trees
- Future canopy will be diverse and resilient with long-term benefits in terms of carbon sequestration, stormwater management and air quality
- Additional mitigation will be achieved through off-site tree planting and/or payment into the tree fund

DEVELOPMENT PLAN REMOVALS

+/- 132 TREES



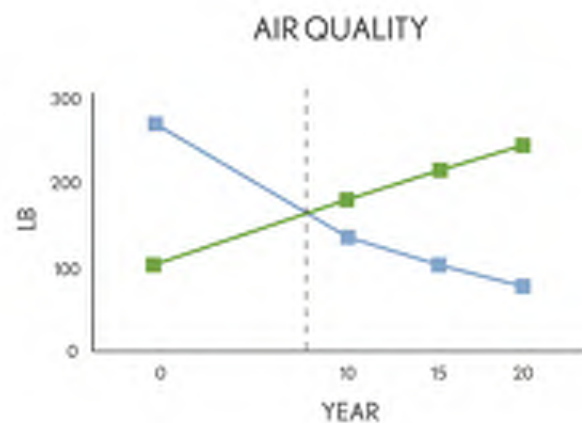
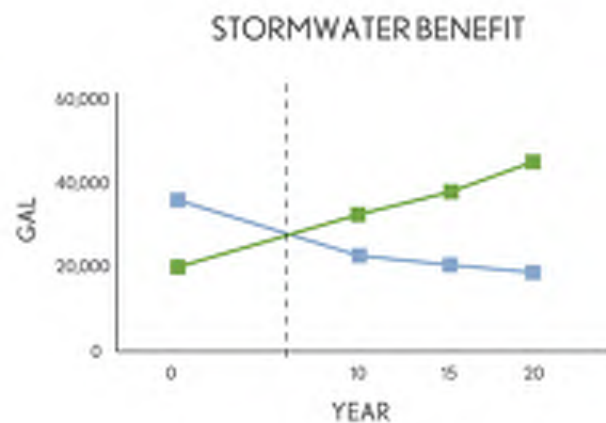
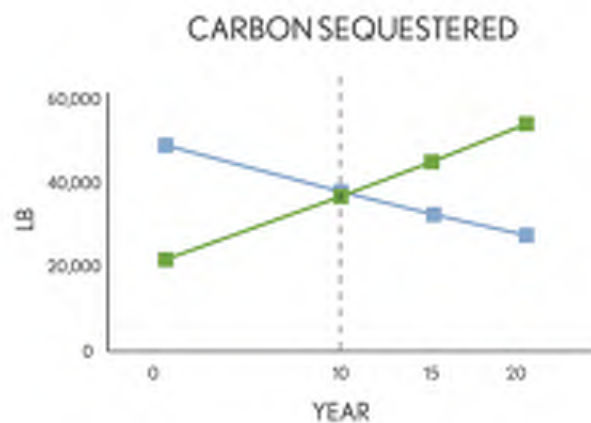
MAXIMIZE VOLPE PROPERTY PLANTING

+/- 214 TREES







New Trees

+84



Leadership in Sustainability

Integrated Pathways

-  Efficiency, electrification, and path to net zero carbon
-  Exemplary on-site water treatment and resiliency approach
-  Design for the future of transportation
-  A sustainable community

Leadership in Sustainability



Zero Emissions Residential Buildings

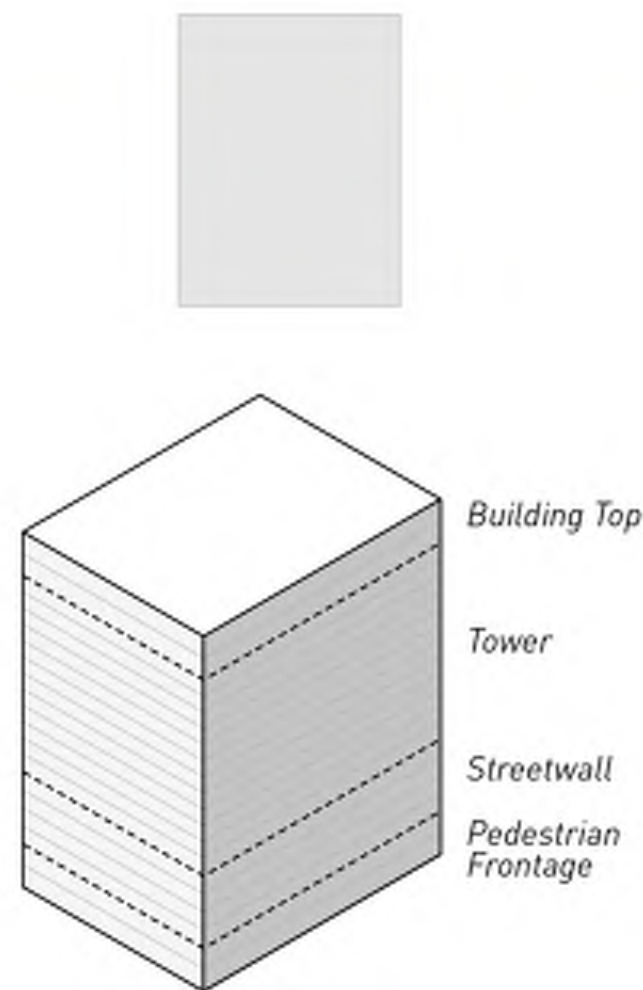
Largest all electric residential development in the region with zero on-site emissions from fossil fuels



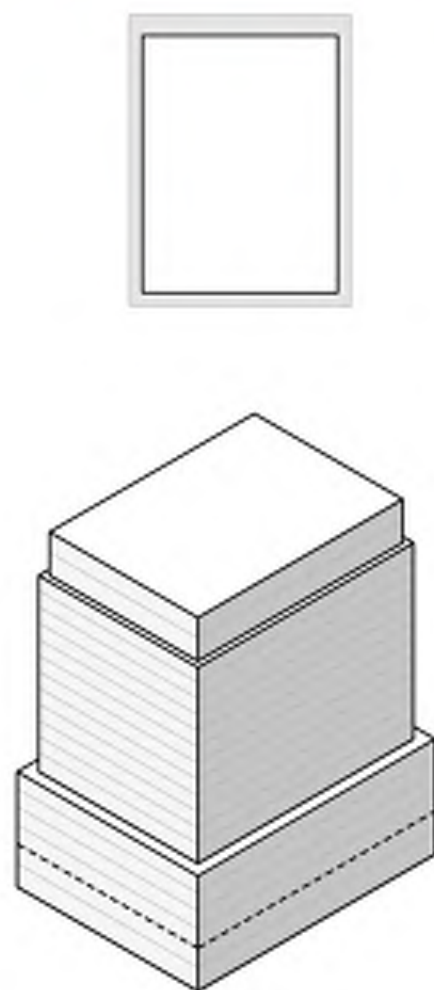
100% Water Reuse

On-site blackwater treatment to reuse all non-lab sanitary flow

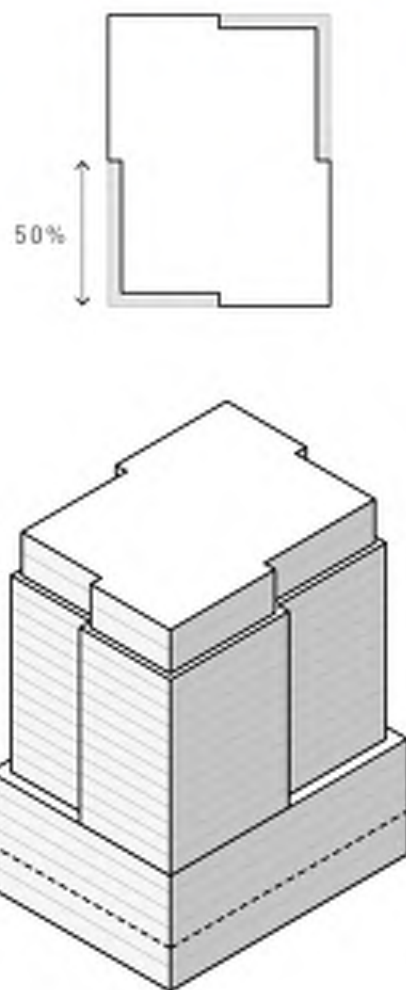
Volpe Design Guidelines



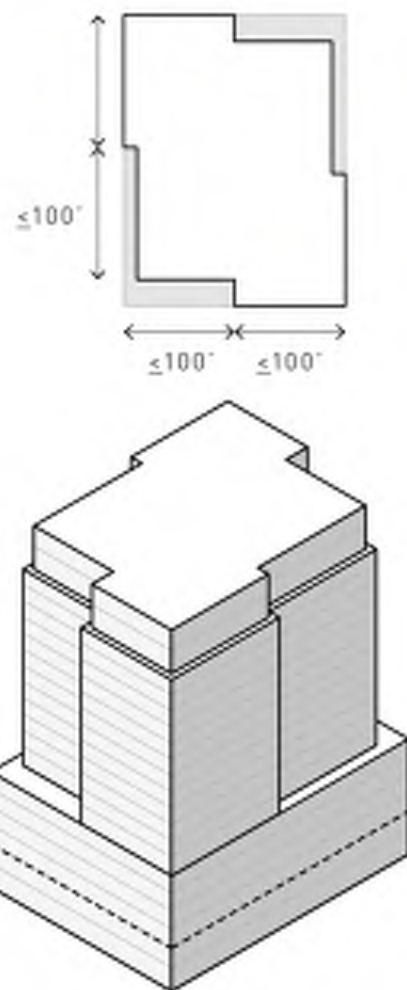
Buildings should consist of up to four different, but integrated zones - the pedestrian frontage zone, the streetwall, the tower, and the building top.



Tower frontage should be set back 8 - 10 ft from the streetwall. Building Tops should be stepped back a minimum of 5 ft from the plane of the tower façade.



50 - 80% of tower frontage should be set back 8 - 10 ft from the streetwall.



On towers greater than 100 ft in horizontal length, create vertical zones, differentiated by changes in plane of at least 8 ft.

Site Organization and Massing

From 2017 to Today

EXAMPLE 4



PROPOSED PLAN



Fully-Integrated Public Realm

A range of open spaces offer places for community gathering, play, socializing, and respite, in inclusive, diverse and attractive settings.

6TH STREET PARK

LOUGHREY WALKWAY

BROADWAY COURT

5TH STREET PROMENADE

BINNEY STREET

BINNEY STREET COURT

BINNEY STREET PLAZA

5TH STREET PROMENADE

VOLPE ART LAWN

5TH STREET

THIRD STREET

POTTER STREET

COURT

BROAD CANAL WAY

BROADWAY

THIRD STREET PARK

Broad Canal Way



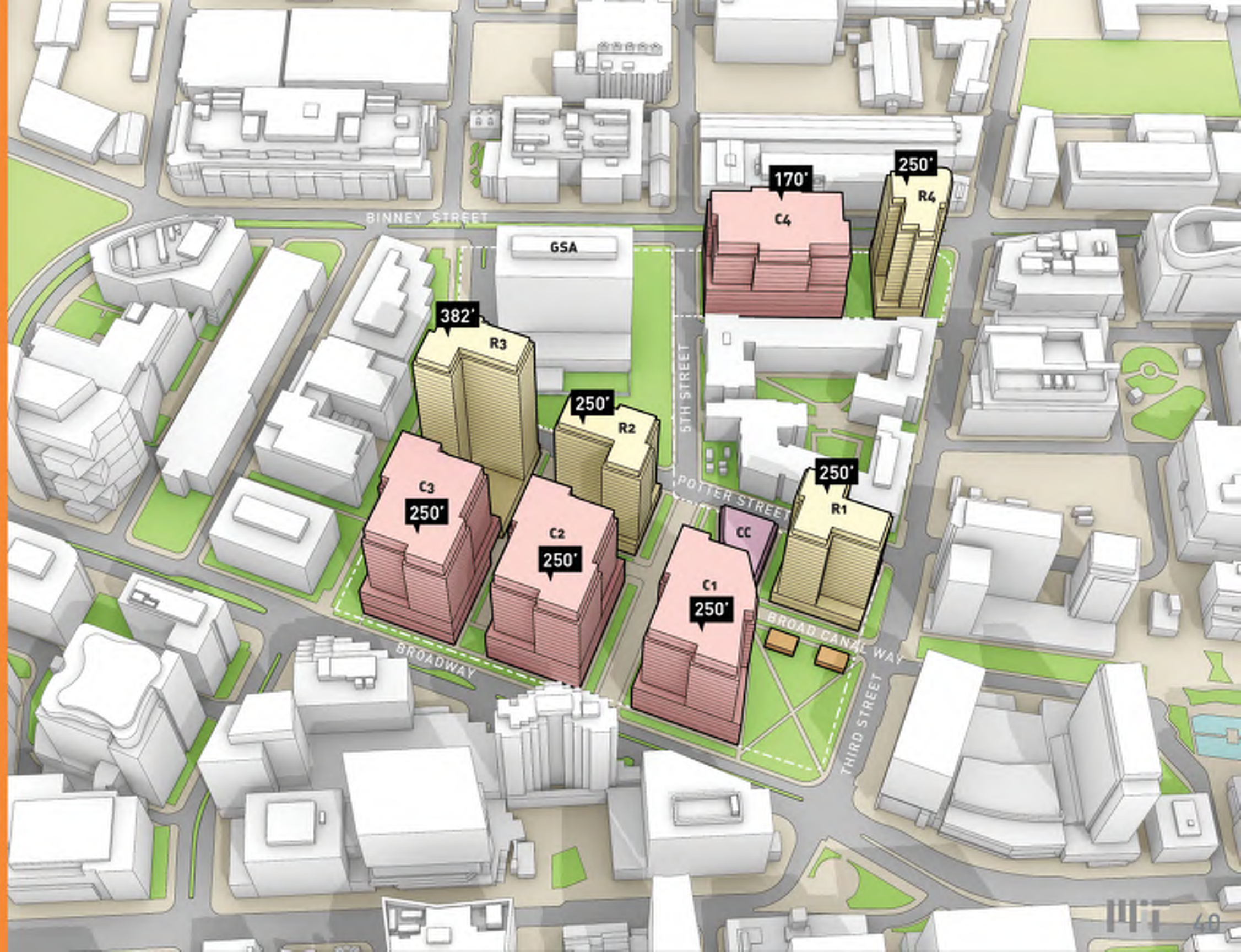
5th Street



Site Massing

Plan prioritizes

- Connectivity to surrounding land uses, existing open space, streets and pathways and networks
- Location, usability, flexibility, and attractiveness of open space
- Adjacency and continuity with existing and planned active public realm
- Environmental impact, view corridors, site permeability, solar exposure of open space
- Maximum long-term tree canopy



Zoning Program

1,692,000 sf

Commercial (60% GFA)

1,128,000 sf

Residential (40% GFA)

95,000 sf

Retail, dining, entertainment,
and the arts

> 2.5 acres

Open space



5th Street at Binney





MARRIOTT

BROADWAY

BROAD CANAL

LOUGHREY WALKWAY

THIRD SQUARE APARTMENTS

BINNEY STREET

5TH STREET

THIRD STREET

Visualization by Elkus Manfredi Architects
Preliminary, not proposed architecture



Open Space

Thoroughly Connected Network

The Volpe Redevelopment is organized and given identity by the form and activity of its many civic open spaces — its streets, squares, and parks.

NEIGHBORHOOD CONNECTIONS



NODES



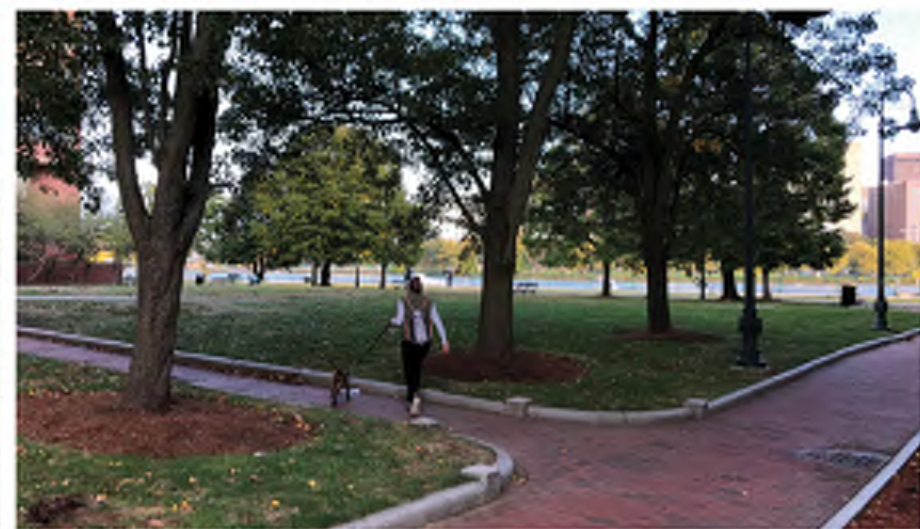
Third Street Park



Third Street Park Scale Comparisons



New Riverside Park
0.7 Acre



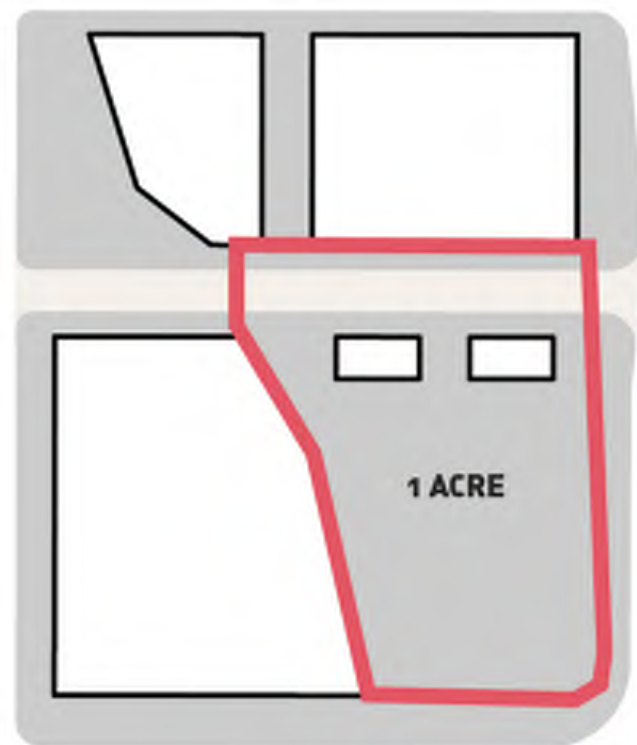
Front Park
Approx. 1.0 Acre



Post Office Square
Approx. 1.5 Acre



Winthrop Square
Approx. 0.3 Acre



Third Street Park
Approx. 1.0 Acre

6th Street Park



Ideas for a New 6th Street Park



DOG PARK



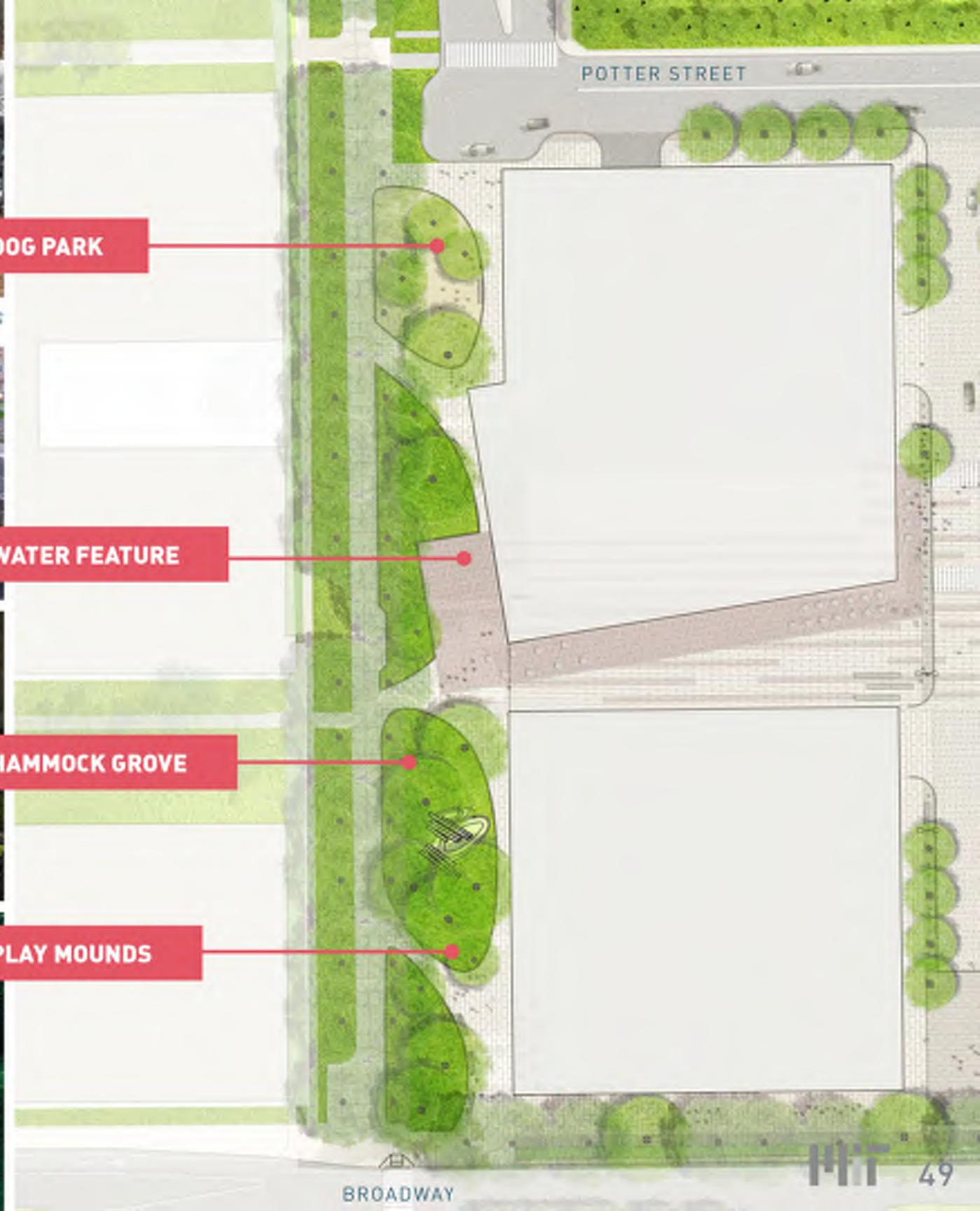
WATER FEATURE



HAMMOCK GROVE



PLAY MOUNDS



Ideas for a New 6th Street Park



PLAY SPACE



GAME GROVE



PLAY LAWN



BASKETBALL COURT



POTTER STREET

BROADWAY

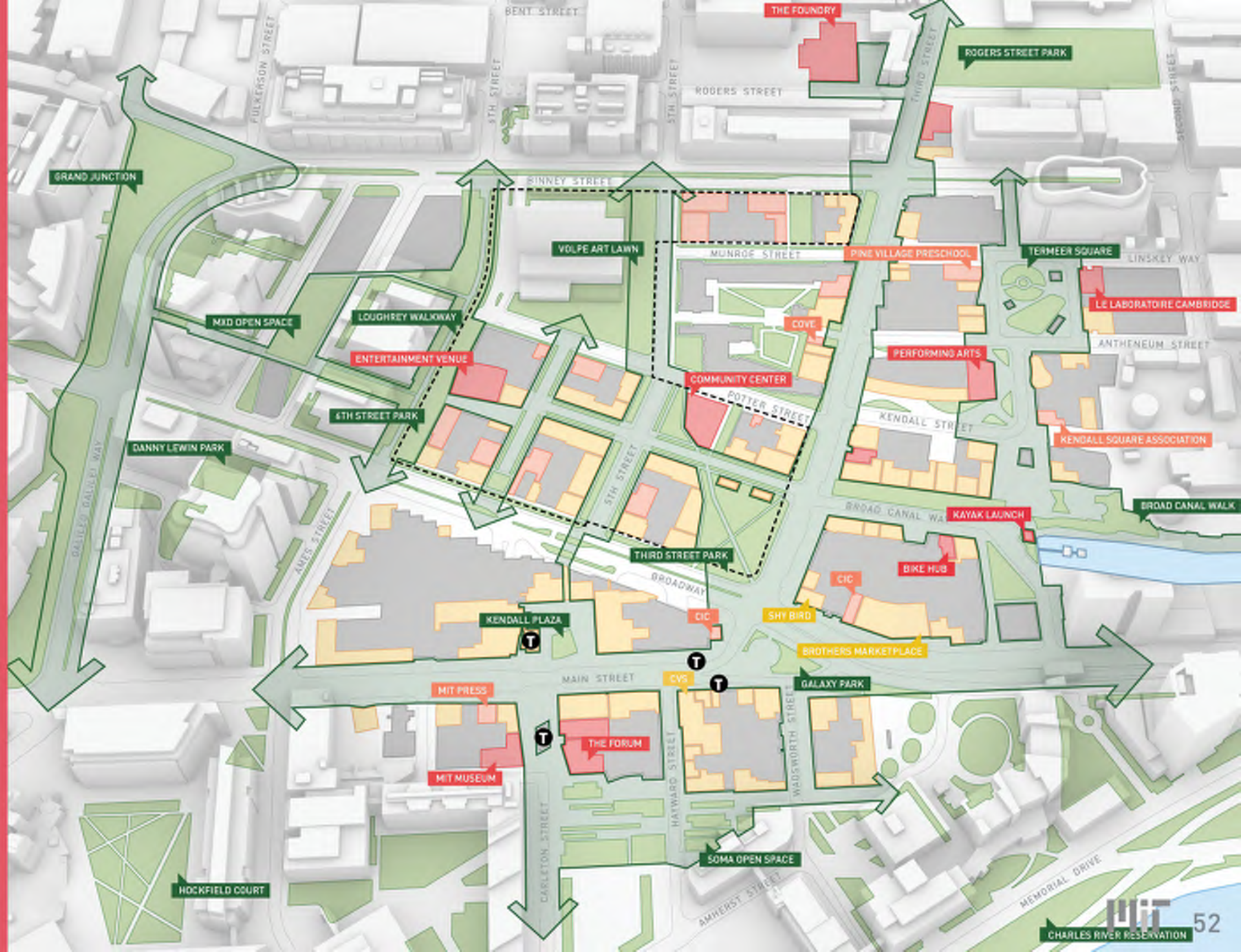
Activation

Activation Goals

Volpe's ground floors will be anchored by:

- Programmed and Activated Open Spaces
- Recreation, Community, Arts and Creative Enterprise Spaces
- Interesting, Accessible and Inventive Retail

- RETAIL AND F&B
- OTHER ACTIVE USE
- ARTS AND RECREATION
- OPEN SPACE
- BOH/ MECHANICAL



All Sides Activated

Various venues for gathering, the arts, entertainment, recreation, innovation, inventive retail, creating an inclusive place that fosters community and opens social and economic opportunities.

- ▲ ENTRANCE
- ▲ PARKING ENTRANCE
- ▲ LOADING ENTRANCE
- RETAIL BUSINESS
- OTHER ACTIVE USE
- LOBBY
- ENTERTAINMENT VENUE
- RECREATION
- MECHANICAL/ BOH



Community Center



Entertainment Venue





Recreation, Community, Arts & Creative Enterprise



Open Space Activation

WEEKDAY LUNCH

(APPROX. 230 PEOPLE)



WEEKEND MARKET

(APPROX. 450 PEOPLE)



COMMUNITY FESTIVAL

(APPROX. 1,055 PEOPLE)





Programmed and Activated Spaces





CVS on Main Street



University Stationery



Veggie Galaxy

Accessible, Inventive, Interesting Retail



Brothers Marketplace



Shy Bird At One Broadway



Cambridge Bikes

Street Level as Part of Public Realm

GREEN SPACE



MAKER SPACE



FOOD



SHOPS



COMMUNITY SPACE



FAMILY-FRIENDLY FOOD



ENTERTAINMENT VENUE



DINER



BOOKSTORE



FOOD



BIKE SHOP



TECHNOLOGY



CIVIC GATHERING



Broadway



Request for Community Input

Community Zoom Charettes

- Open Space Design and Programming
- Community Center Programming
- Retail Diversity
- Housing Equity
- Job Equity

Details and presentation at <https://volpe.mit.edu>

Thank You. Questions?



Public Benefits

- Approximately **1,400** units of housing, including approximately **280 affordable units** and **20** middle income units
- **\$25.5 million** for design and construction of an on-site **community center** and endowment to support operations and ensure ongoing affordability
- Over 2 acres of permanently guaranteed **public open space**
- Active ground floors with retail including **independent and small retail**
- **Job Connector** open at 792 Main Street in **The Port** neighborhood, including **\$1.5 million** operations fund
- Approximately **\$36 million** to the Affordable Housing Trust for commercial linkage payment (\$20.10 psf)
- **\$8.5 million** for **transit improvements** to reduce vehicular traffic
- **\$8.5 million** to community fund to be distributed to Cambridge **non-profits**
- Convey rights and contribute **\$8.5 million** for design and construction of the **Grand Junction path**
- **\$1 million** for innovation **arts** program to recognize innovation and entrepreneurship in Kendall Square
- Approximately **\$23 million annually** in taxes when built-out on a currently tax-exempt site