

EAST CAMBRIDGE PLANNING TEAM
KENDALL SQUARE
PLANNING STUDY
cbt

AGENDA

- **ECPT Objectives**
- **ECPT Study Area**
- **Kendall Square Today**
- **Urban Design Vision – ECPT Asks**
 - Pearl Necklace
 - Smart Intensification
 - People First
- **Recommendations and Next Steps**



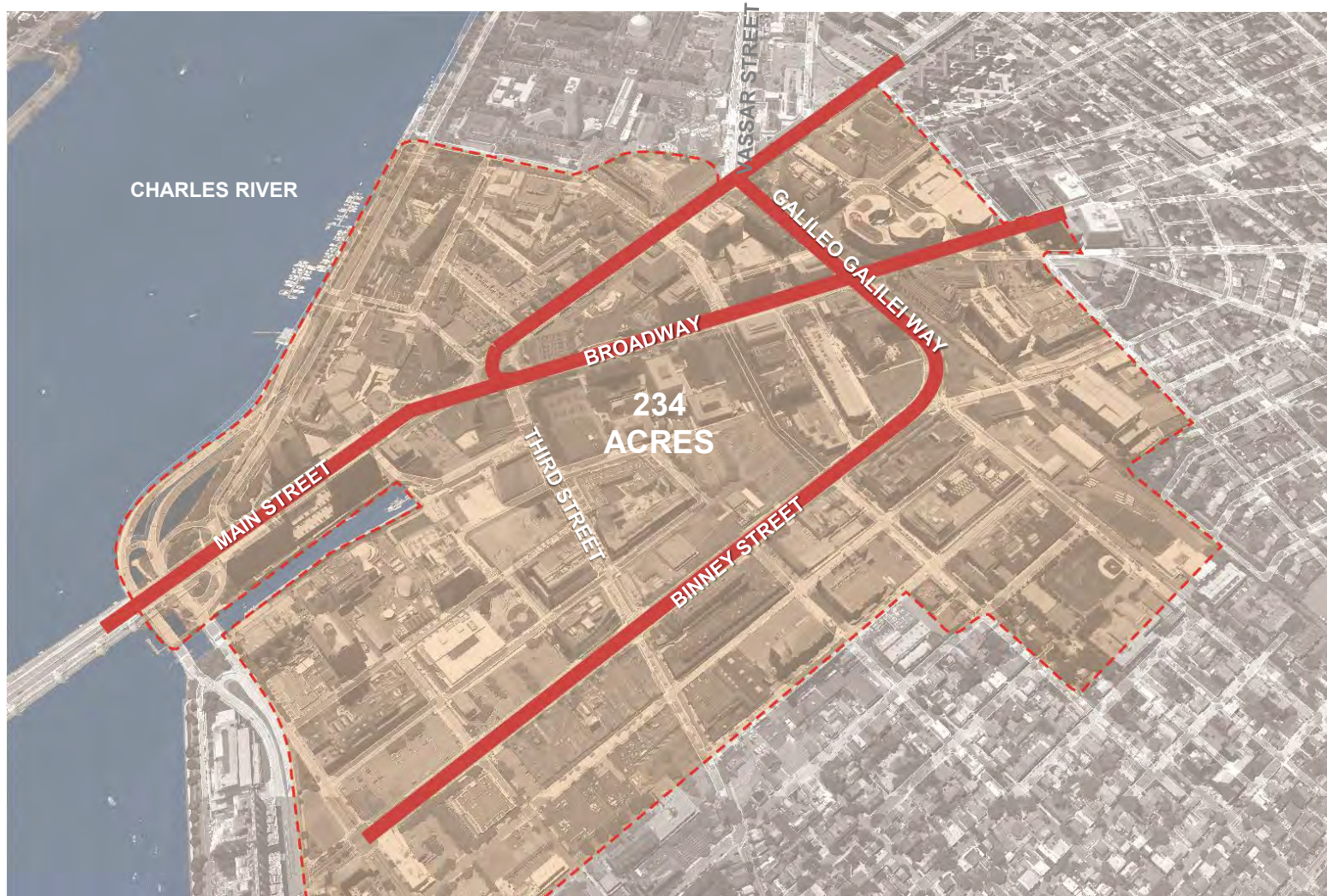
ECPT OBJECTIVES: KENDALL FOR ALL

- **Develop a holistic vision for Kendall Square Area that can be shared by multiple constituents**
- **Enhance the vitality and viability of Kendall Square for all users**
 - A legible public realm strategy
 - A robust retail strategy and organization
 - Balance commercial development with housing
 - Enhance pedestrian, vehicular, bus and bicycle circulation
 - Focus on accessibility
- **Create a vision that is credible with the development industry**
- **Study MIT proposal and make recommendations**
- **Improve access to Charles River**
- **Develop mechanisms for implementation**



STUDY AREA

OFFICE/R&D	7.7 MN
RESIDENTIAL	2.6 MN
RETAIL	0.2 MN



STUDY AREA AND PLANNED PROJECTS

OFFICE/R&D	7.7 MN
RESIDENTIAL	2.6 MN
RETAIL	0.2 MN



KENDALL SQUARE TODAY

A PROBLEM OF SUCCESS

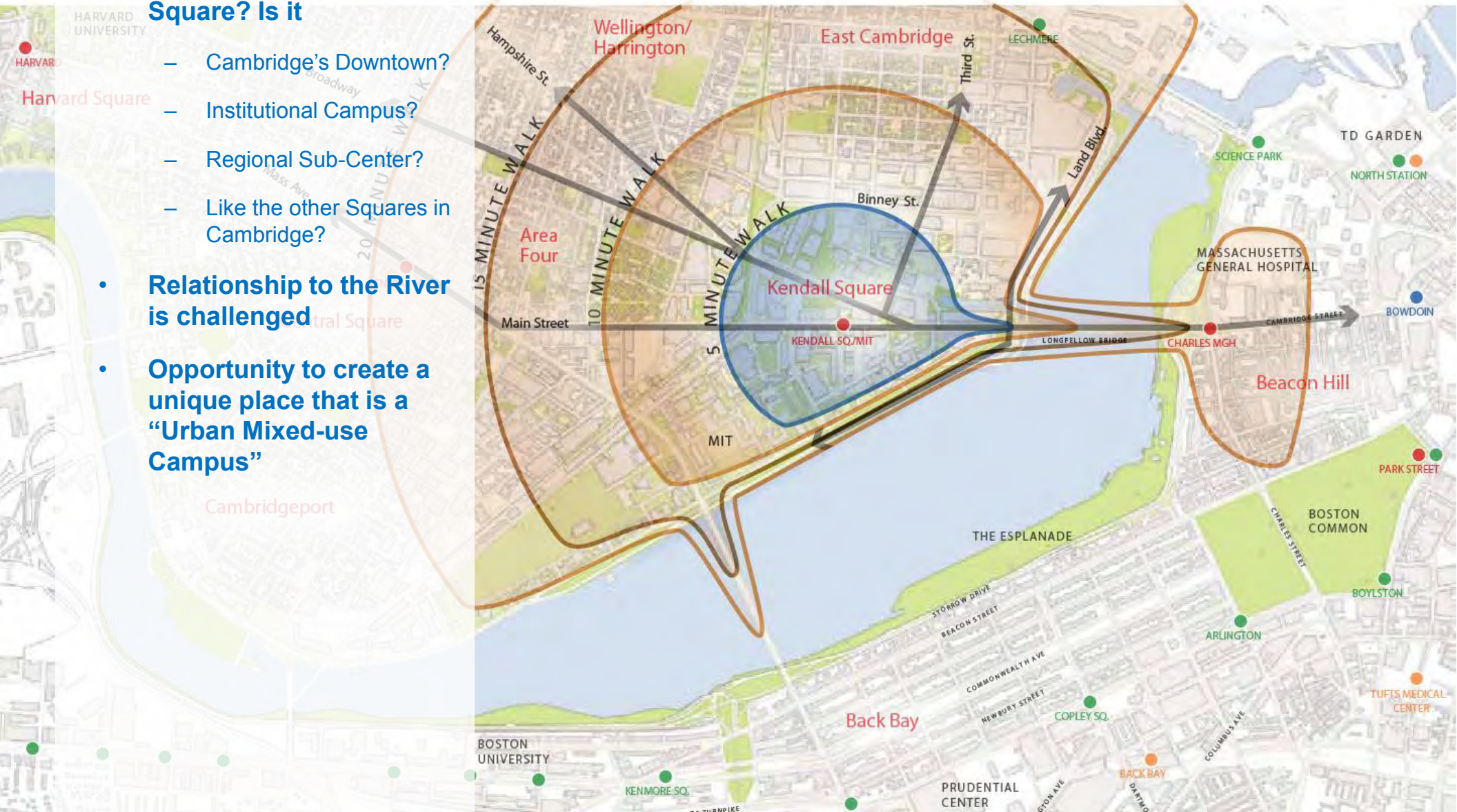
WHAT IS KENDALL SQUARE?

Identity of Kendall Square? Is it

- Cambridge's Downtown?
- Institutional Campus?
- Regional Sub-Center?
- Like the other Squares in Cambridge?

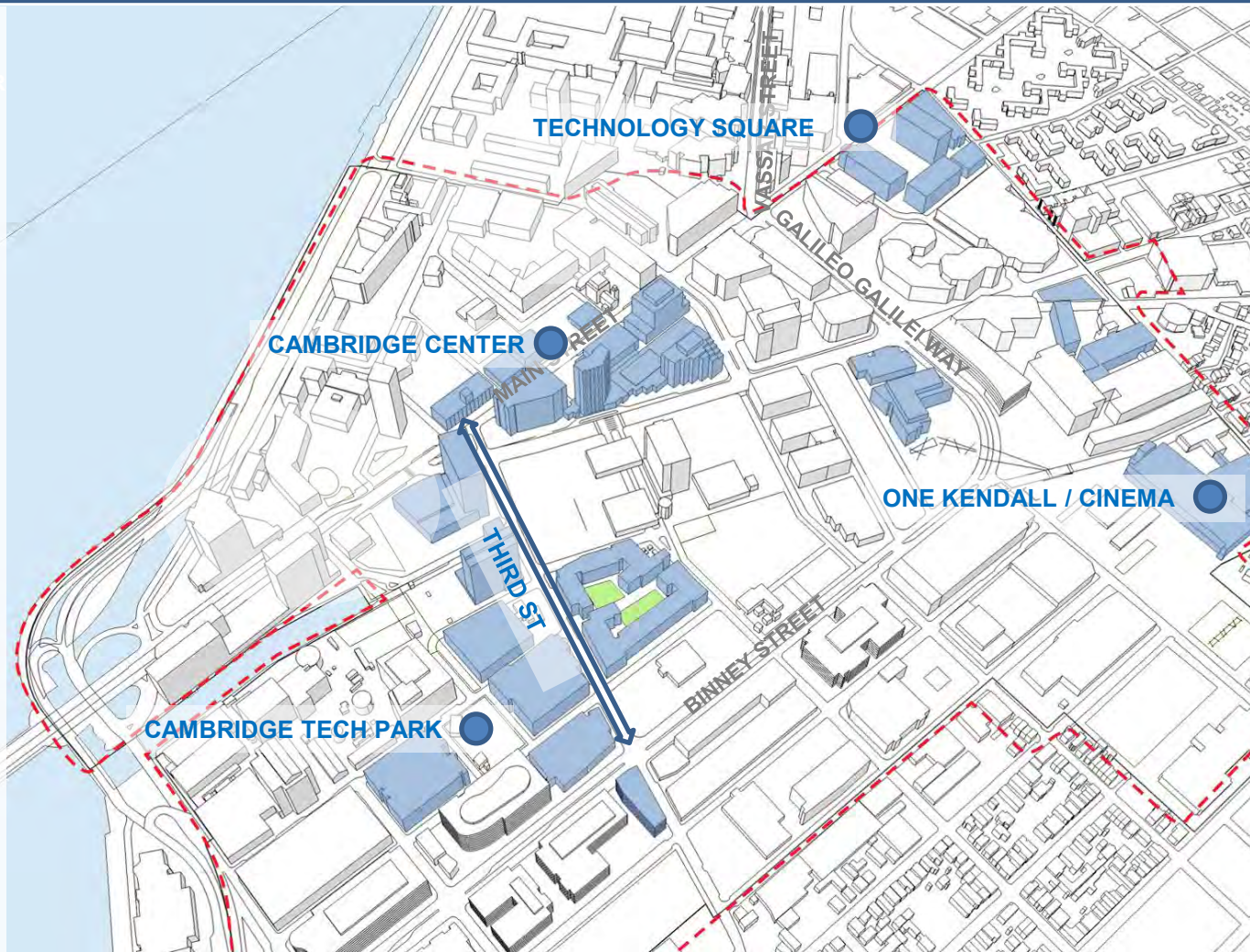
Relationship to the River is challenged

- Opportunity to create a unique place that is a "Urban Mixed-use Campus"

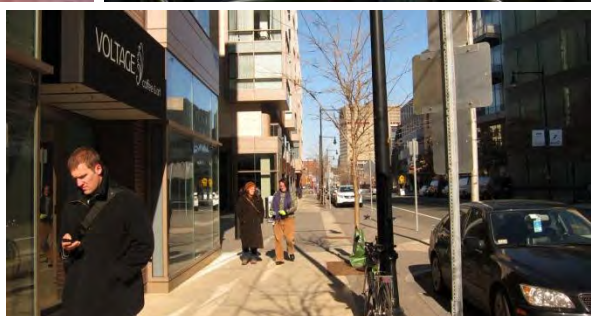


POCKETS OF PUBLIC ACTIVITY

- **High density urban concentration by the day**
 - Kendall 115,000/SQM
 - Manhattan Island 70,000/SQM
- **Future of Retail?**
 - Lack of cohesive strategy
 - Upwards of 550,000 SF. Existing potential
 - Relationship to Galleria Mall
- **Need to enhance vibrancy**
 - Life beyond workday
 - 18X7 Life
- **How do you humanize Kendall?**



RETAIL RENAISSANCE

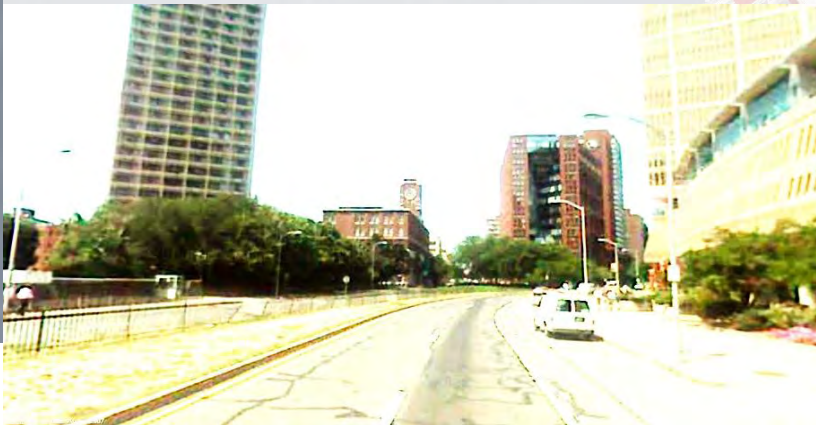


NEW HOUSING



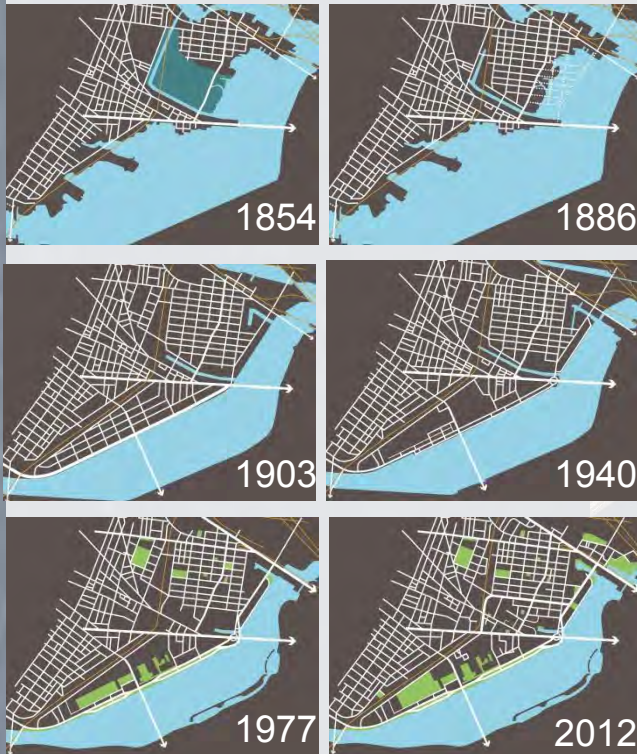
THE SQUARE

- **Where is Kendall Square**
 - Main/3rd/Broadway Intersection
 - Lack of Legibility (not just connectivity)
 - Balance Travel Patterns
- **Main Street overwhelmed by transportation**
- **Auto-dominant transport networks**



LARGE BLOCKS AND SILO DEVELOPMENT

- Large blocks with monotonous land uses
- Result of historic development patterns and ownership



PEDESTRIAN LIFE



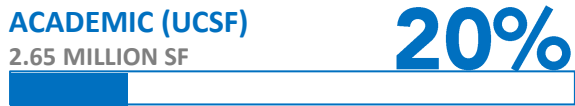
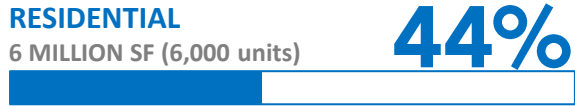
LAND USE IMBALANCE

	Existing	MIT Planned	Alexandria Planned	Total	Percentage
Office and R&D	7,788,687	880,000	1,533,200	10,201,887	68%
Residential	2,670,707	120,000	220,000	3,010,707	20%
Hotel	522,972			522,972	3%
Industrial	778,147			778,147	5%
Institutional	244,926			244,926	2%
Retail	190,327	100,000	11,000	301,327	2%
TOTAL	12,195,766	1,900,000	1,764,200	15,059,966	

* Source: GIS information- City of Cambridge, Retail from ECAPS study-page 2.14; MIT Plans, Alexandria Plans

LAND USE IMBALANCE

MISSION BAY, SAN FRANCISCO 303 acres



HAFENCITY, HAMBURG 311 acres



KENDALL SQUARE, CAMBRIDGE 234 acres



KENDALL SQUARE TOMORROW
URBAN DESIGN VISION

APPROACH AND PRINCIPLES

1. **Push beyond the conventional regulatory tools and create a shared story**
2. **Encourage great stewardship and ownership**
3. **Find synergies and connect the assets**
4. **Resolve programmatic, transportation and planning/morphological issues simultaneously**
5. **Develop a combination of big moves with fine grained moves**
6. **Attract a diversity of players**

- 1 **CREATE LEGIBILITY AND IDENTITY:
■ PEARL NECKLACE**
- 2 **ACHIEVE LAND USE BALANCE:
■ SMART INTENSIFICATION**
- 3 **MAKE KENDALL SQUARE HUMANE:
■ PEOPLE FIRST**

EXISTING CONDITIONS



PROPOSED VISION



CHARLES RIVER

1 PLANNING PRINCIPLES

PEARL NECKLACE

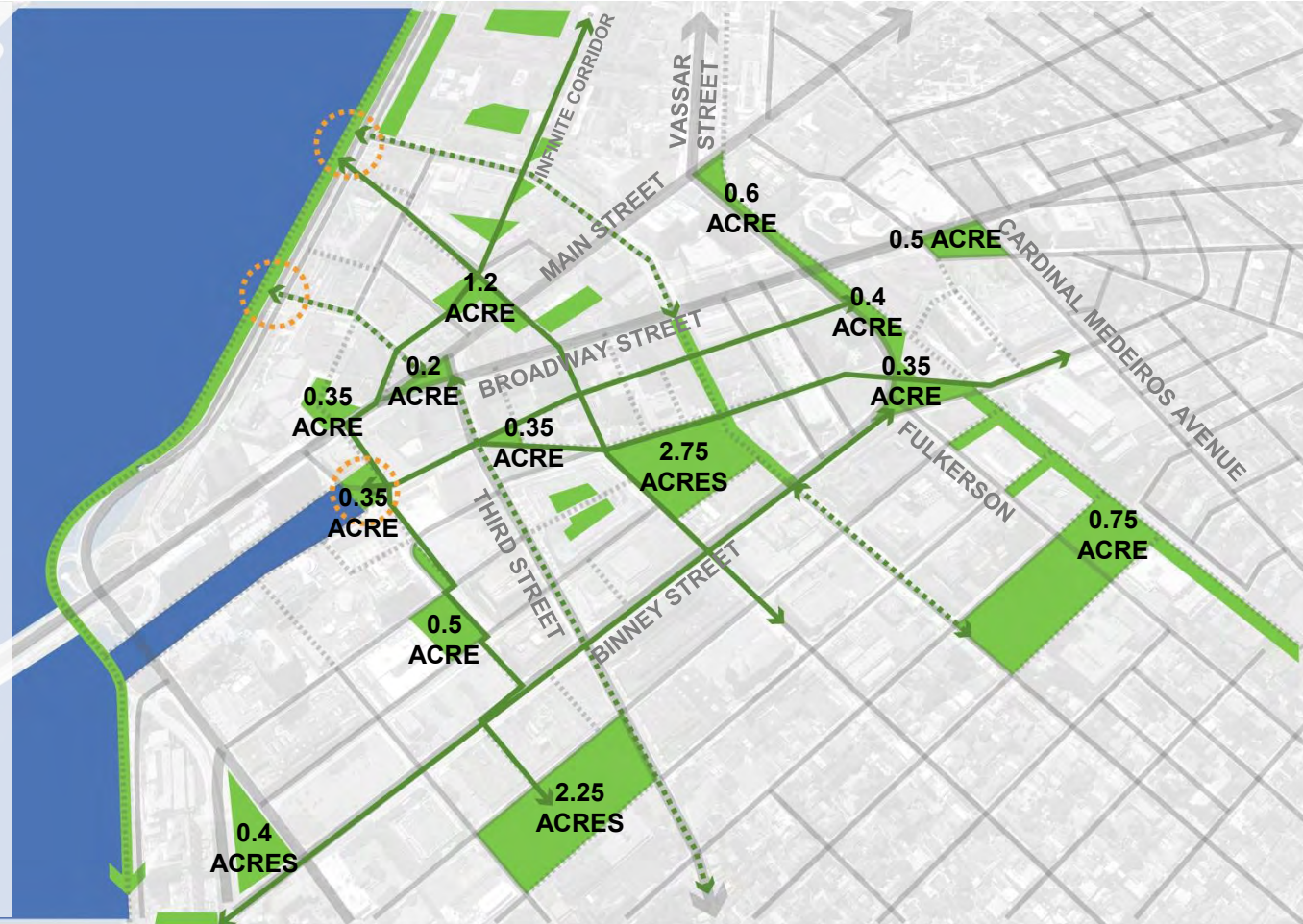
PUBLIC REALM NETWORK: PEARL NECKLACE

- Create a multi-centered network with special places
- Develop a combination of Streets, pedestrian ways and indoor spaces/pathways as a legible network
 - 5th Street, Marriot Lobby, MIT Development, Charles River
 - Broad Canal, Volpe Site, Biogen Site, Binney Street and Wellington/Harrington
 - Infinite Corridor, Kendall Square, Cambridge Landing
 - Third, Wadsworth and Charles River
 - Third and Maine
 - Winter Garden at Marriot and a three-dimensional opportunity



PUBLIC REALM NETWORK: PEARL NECKLACE

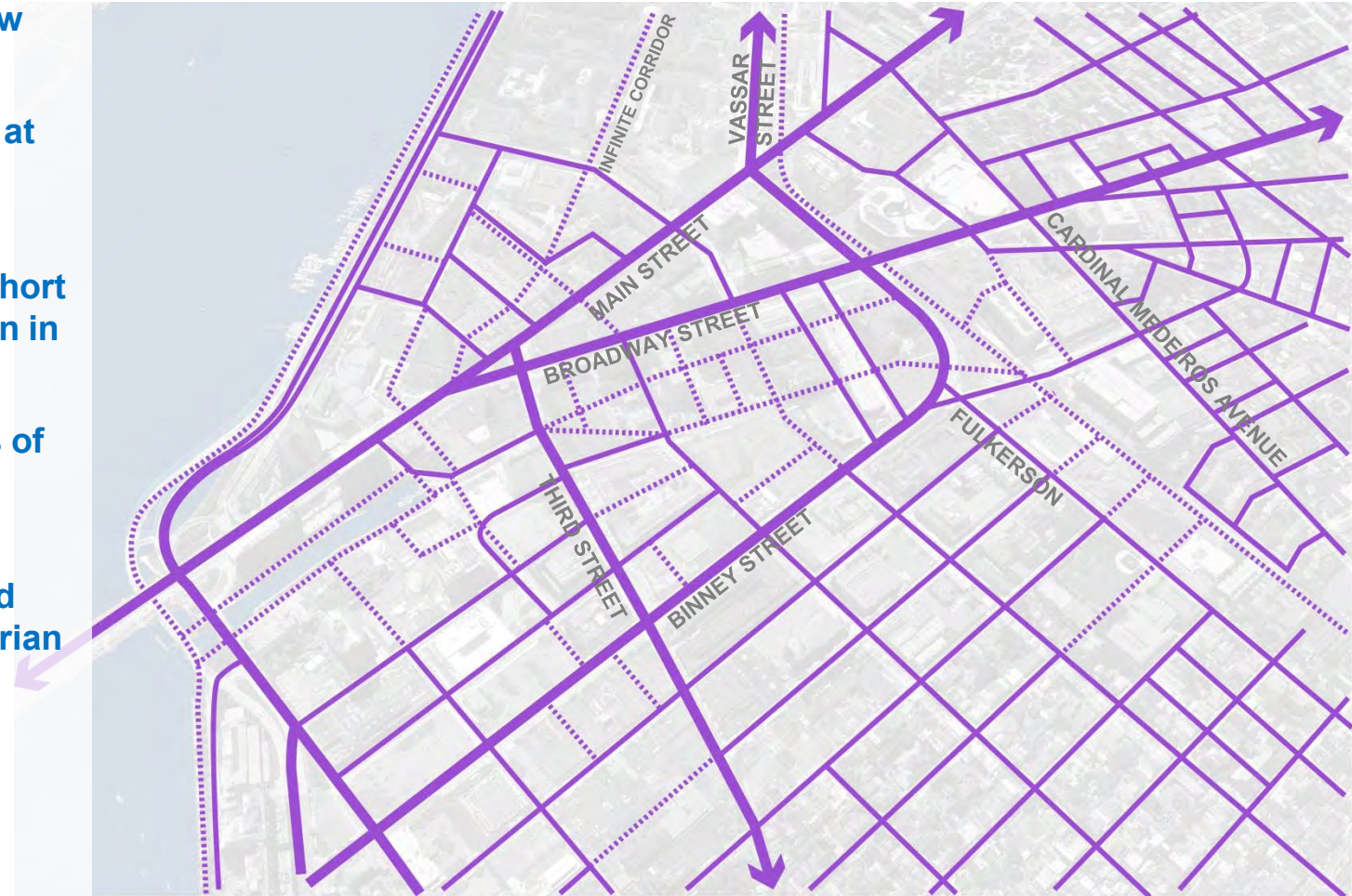
- Develop a series of smaller scale public spaces
- Establish a 1.2 acre open space South of Main Street
- Establish a short term approximately 2-acre open space at Volpe Center on Third Street
- Establish a large open space at Volpe Center
- Establish a new Plaza at Binney and Fulkerson
- Rework Memorial Drive to create a waterfront park



TOTAL NEW OPEN SPACE:
10.95 ACRES

TRANSPORTATION NETWORK

- Connect Main to Long Fellow Bridge directly
- Create a paved intersection at Kendall Square
- Relocate Buses out of Main Street to Broadway in the short term and 5th Street extension in the long term
- Widen south side sidewalks of Main Street and remove the median
- Mitigate traffic at Binney and Fulkerson to make a pedestrian place



RETAIL NETWORK

- Make all of the ground floors available for retail
- Retail beyond restaurants – provide neighborhood services (pharmacy, grocer, electronics, convenience, hardware, food etc.)
- Provide owner operated retail opportunities – affordable retail strategy?
- Promote other creative, indoor, two-story and street activating retail typologies



THE FRAMEWORK



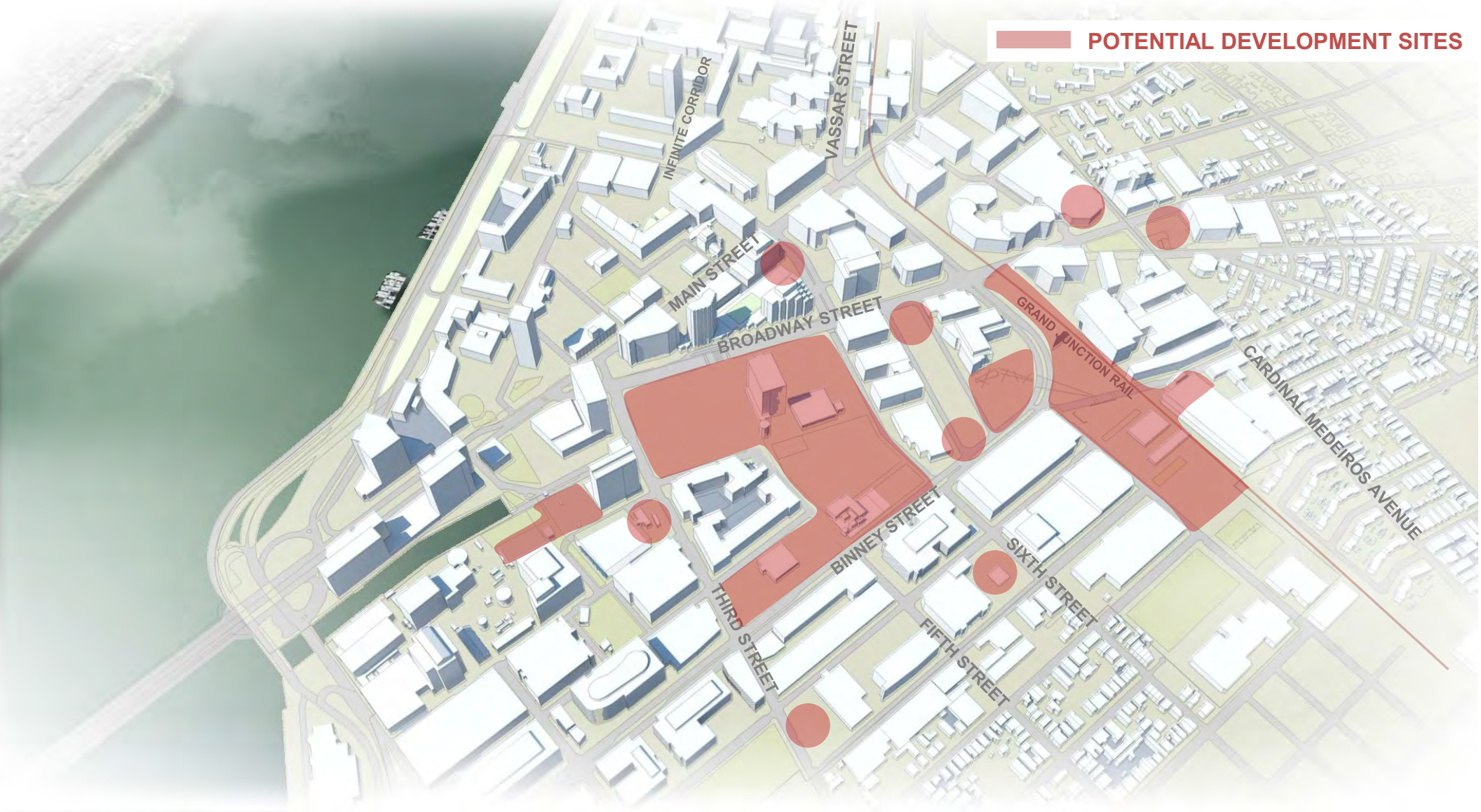
2 PLANNING PRINCIPLES

SMART INTENSIFICATION

EXISTING CONDITIONS



SELECT SITES



PUBLIC REALM NETWORK



LARGE SITES WITH A GREAT MIX OF USES



LARGE SITES WITH A GREAT MIX OF USES



Total New Development:
7.4 MILLION sf

OFFICE/R&D	2.7 MILLION SF	37%
RESIDENTIAL	4.2 MILLION SF	57%
RETAIL	407,885 SF	5%

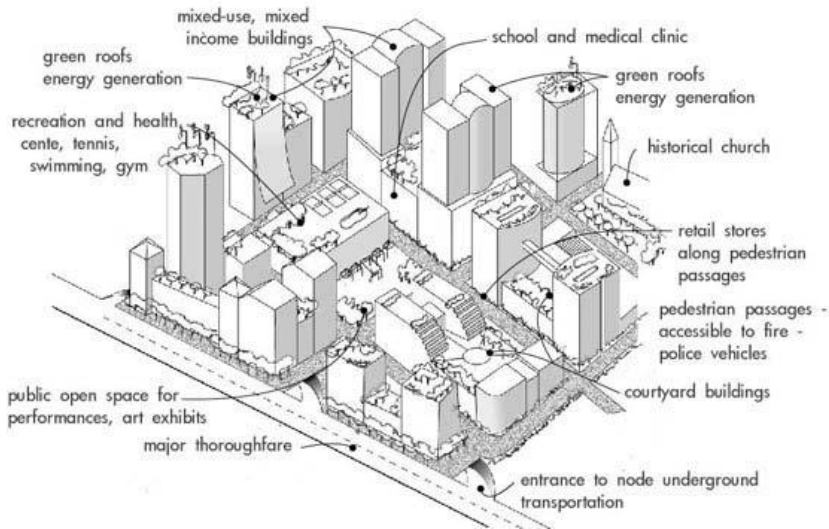
Overall Development:
22 MILLION sf

OFFICE/R&D	12 MILLION SF	58%
RESIDENTIAL	7 MILLION SF	32%
RETAIL	709,212 SF	3%

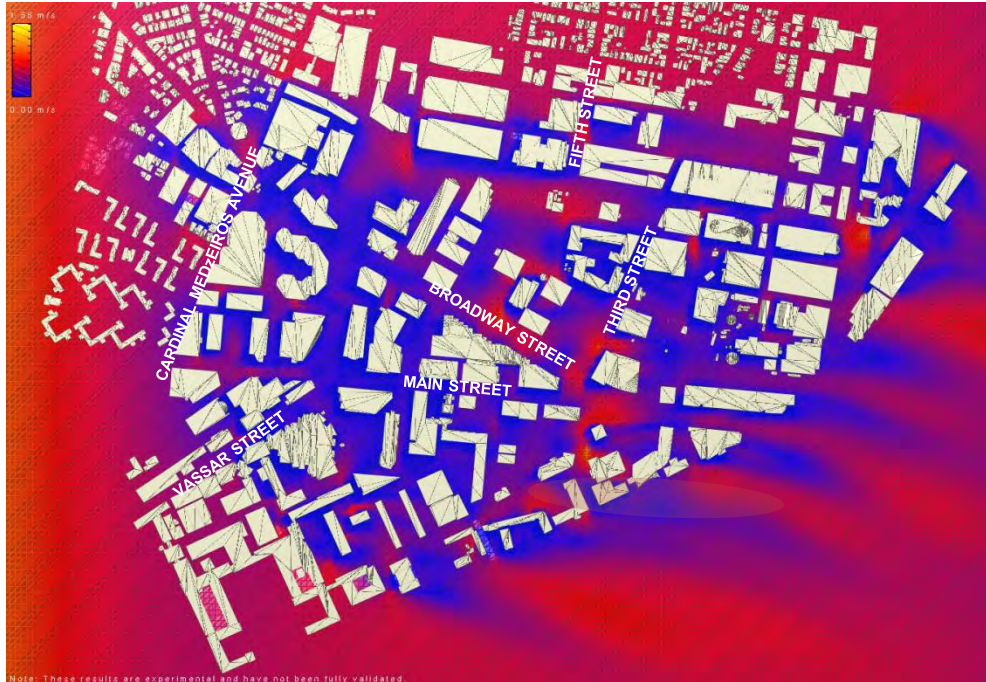
SMART BLOCKS – MIX OF USES AND DENSITY



SMART BLOCKS: DENSE, TALL/LOW, MIXED

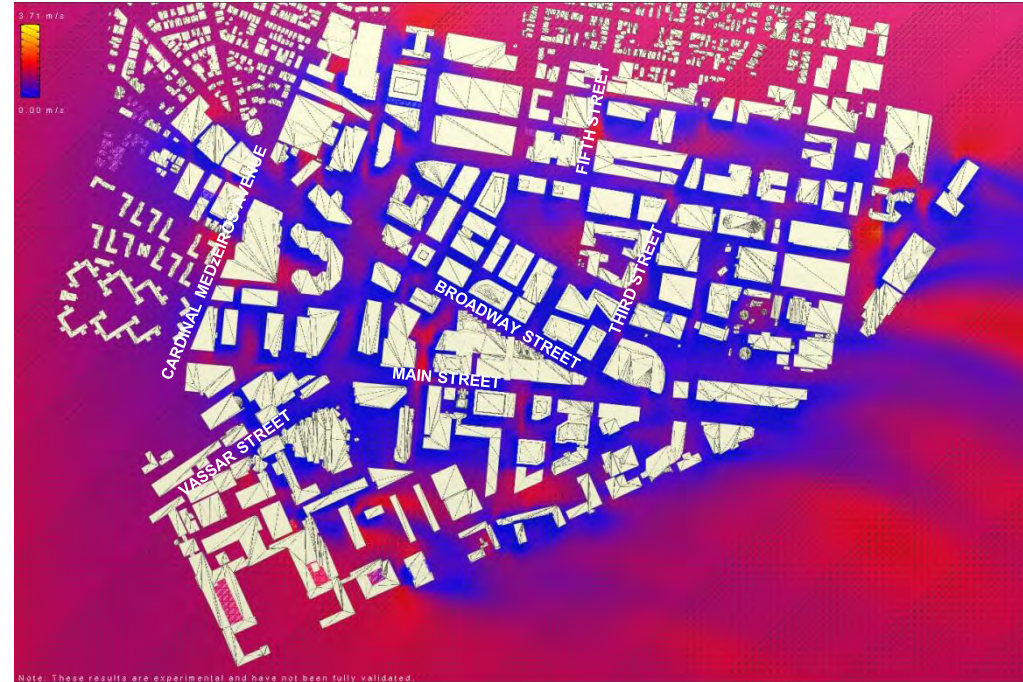


ENVIRONMENTAL COMFORT

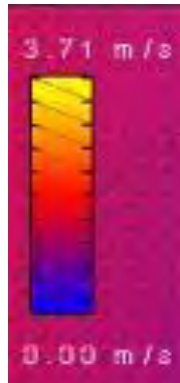


Wind Analysis with existing conditions

- Analysis done for the prevailing winds in winter
- Design analysis studies like this to be undertaken as part of the design process and to be incorporated for any future developments to study environmental effects on open spaces



Wind Analysis with proposed massing



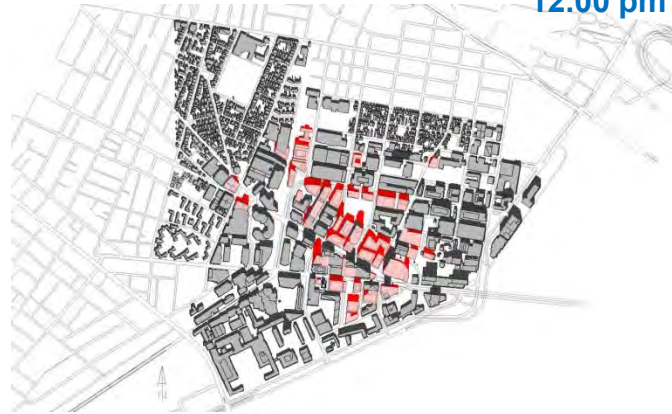
ENVIRONMENTAL COMFORT

March

9.00 am



12.00 pm



3.00 pm

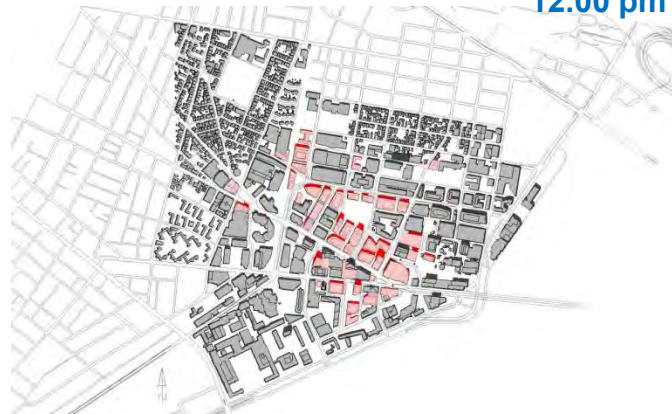


June

9.00 am



12.00 pm



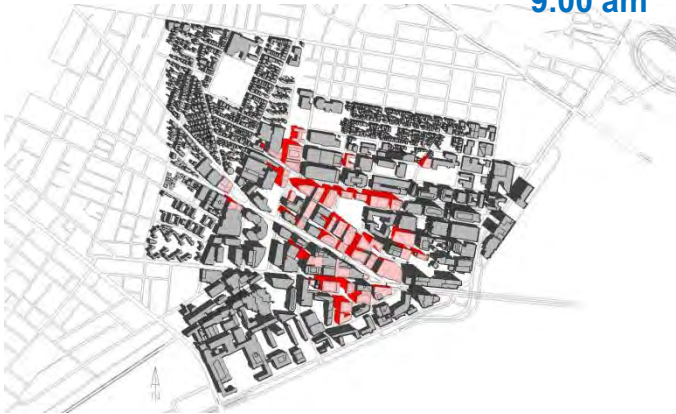
3.00 pm



ENVIRONMENTAL COMFORT

September

9.00 am



12.00 pm



3.00 pm

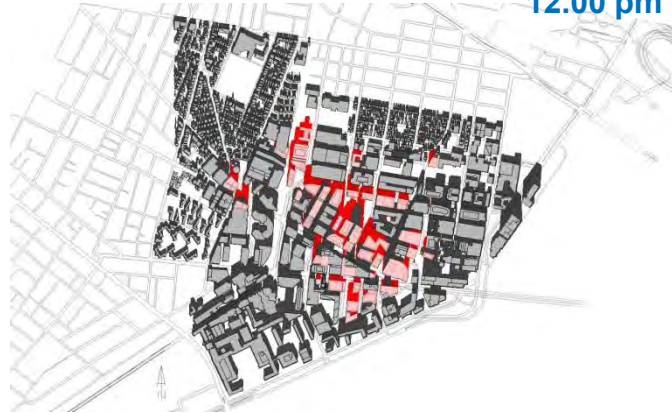


December

9.00 am



12.00 pm



3.00 pm



3 PLANNING PRINCIPLES

PEOPLE FIRST

FOUR CHARACTER AREAS

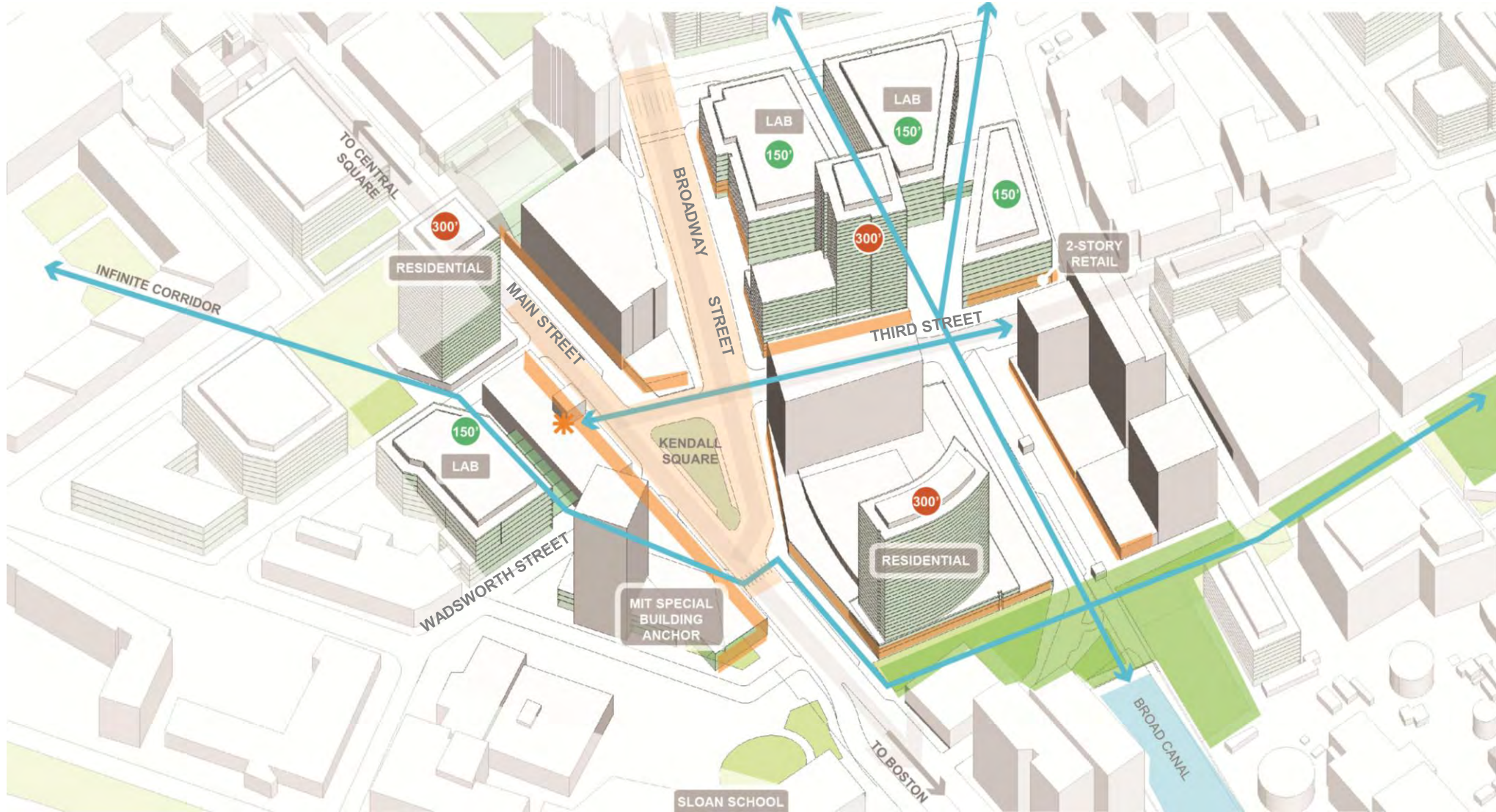


KENDALL SQUARE

MAIN
STREET/CAMBRIDGE
CENTER AND MIT

BINNEY AND
FULKERSON

KENDALL SQUARE



PUBLIC REALM

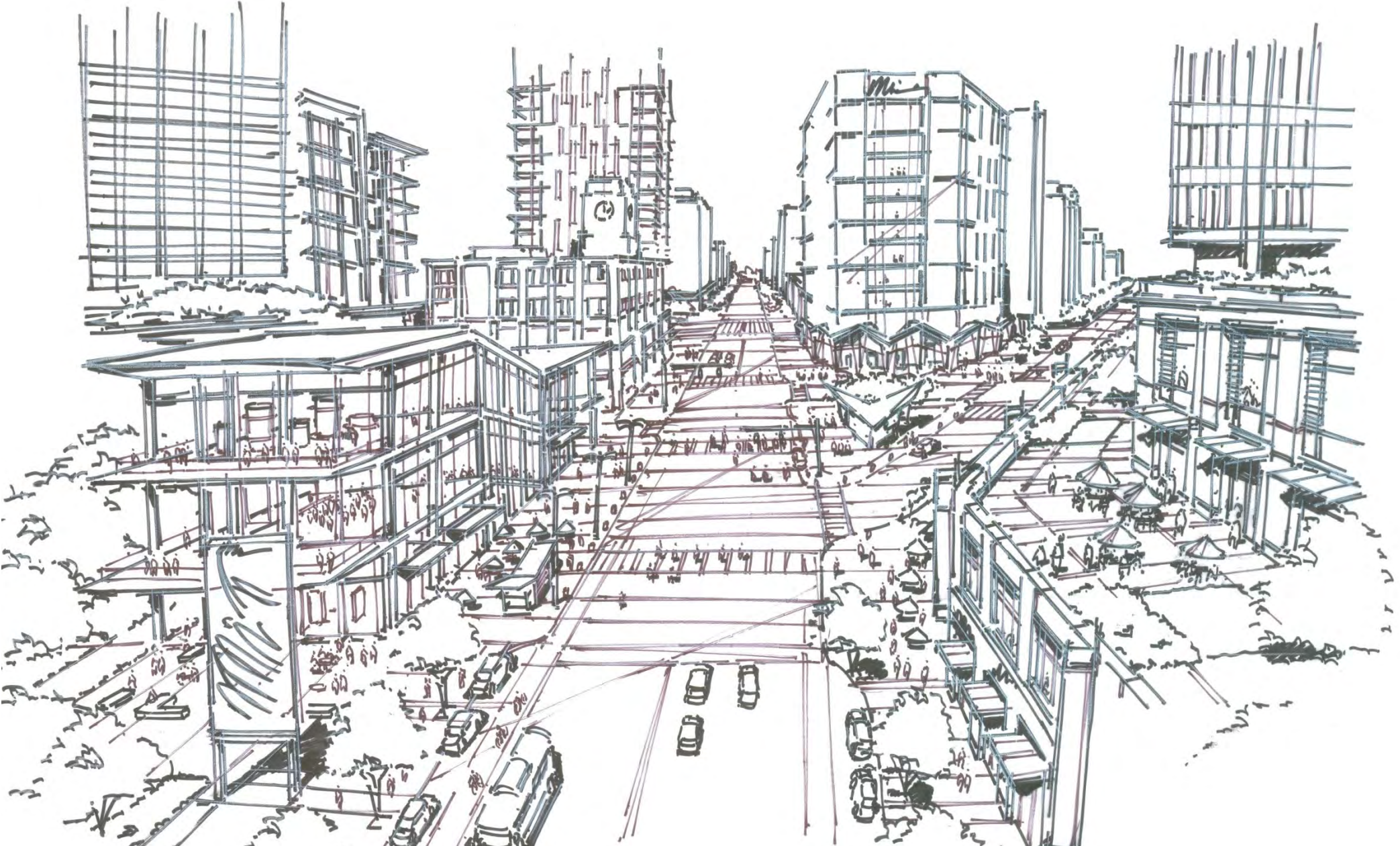
ESTABLISH A LEGIBLE INTERSECTION AND CREATE A SQUARE AT THE INTERSECTION OF MAIN, BROADWAY AND THIRD STREET WITH AN URBAN PLAZA AND STRONG RETAIL EDGES AROUND

CREATE CONNECTIONS/TRAILS FROM BROAD CANAL TO THE EAST CAMBRIDGE AND WELLINGTON HARRINGTON NEIGHBORHOODS

TRANSPORTATION

ESTABLISH A SYNCHRONIZED TRAFFIC INTERSECTION WITH WIDENED SIDEWALKS AND EASE TO CROSS PEDESTRIAN CROSSINGS THAT CONNECTS THE SQUARE

KENDALL SQUARE



KENDALL SQUARE INTERSECTION



KENDALL SQUARE INTERSECTION

Overlay of the existing intersection at Hampshire and Broadway on Kendall Square



KENDALL SQUARE PRECEDENTS



HARVARD SQUARE



NYC STREETS PLAN



MADISON SQUARE PARK, NYC



NYC STREETS PLAN

KENDALL SQUARE RETAIL ACTIVATION



EATALY, TURINO ITALY



POTSDAMER PLATZ, BERLIN



SANTA CATERINA MARKET, BARCELONA



STEVEN STREET, TORONTO

KENDALL SQUARE RETAIL ACTIVATION



NOKIA PLAZA, LOS ANGELES



LA LIVE



BEIJING, CHINA



LIBERTY WHARF, SOUTH BOSTON

KENDALL SQUARE GATEWAY TO MIT



MIT at Massachusetts Avenue



MIT at Main Street??

MAIN STREET, CAMBRIDGE CENTER AND MIT



PUBLIC REALM

REMOVE MEDIANS AND WIDEN SIDEWALKS ALONG MAIN STREET AND CREATE A CONTINUOUS STREET WALL WITH RETAIL

CREATE A VERTICAL CIRCULATION PUBLIC ACCESSWAY FROM THE NEW WINTER GARDEN TO THE EXISTING ROOF GARDEN NEXT TO MARIOTT

CREATE OPPORTUNITIES FOR CONNECTIONS/VIEWS TO THE CHARLES RIVER FROM MAIN STREET

TRANSPORTATION

RELOCATE BUS TERMINAL FROM MAIN STREET TO THE NEWLY EXTENDED 5TH STREET

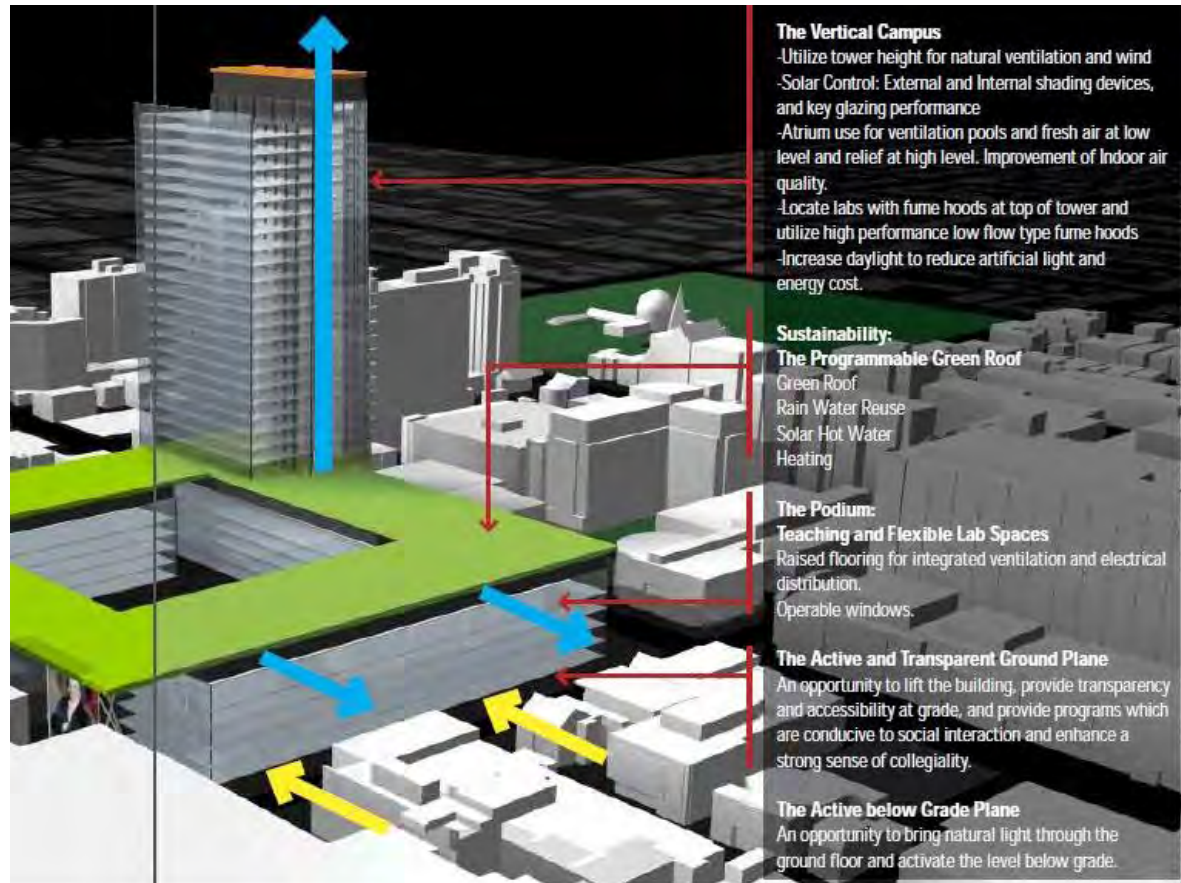
MAIN STREET, CAMBRIDGE CENTER AND MIT



PARIS, FRANCE



SANTANA ROW



The Vertical Campus

- Utilize tower height for natural ventilation and wind
- Solar Control: External and Internal shading devices, and key glazing performance
- Atrium use for ventilation pools and fresh air at low level and relief at high level. Improvement of Indoor air quality.
- Locate labs with fume hoods at top of tower and utilize high performance low flow type fume hoods
- Increase daylight to reduce artificial light and energy cost.

Sustainability:

The Programmable Green Roof

- Green Roof
- Rain Water Reuse
- Solar Hot Water Heating

The Podium:

Teaching and Flexible Lab Spaces

- Raised flooring for integrated ventilation and electrical distribution.
- Operable windows.

The Active and Transparent Ground Plane

- An opportunity to lift the building, provide transparency and accessibility at grade, and provide programs which are conducive to social interaction and enhance a strong sense of collegiality.

The Active below Grade Plane

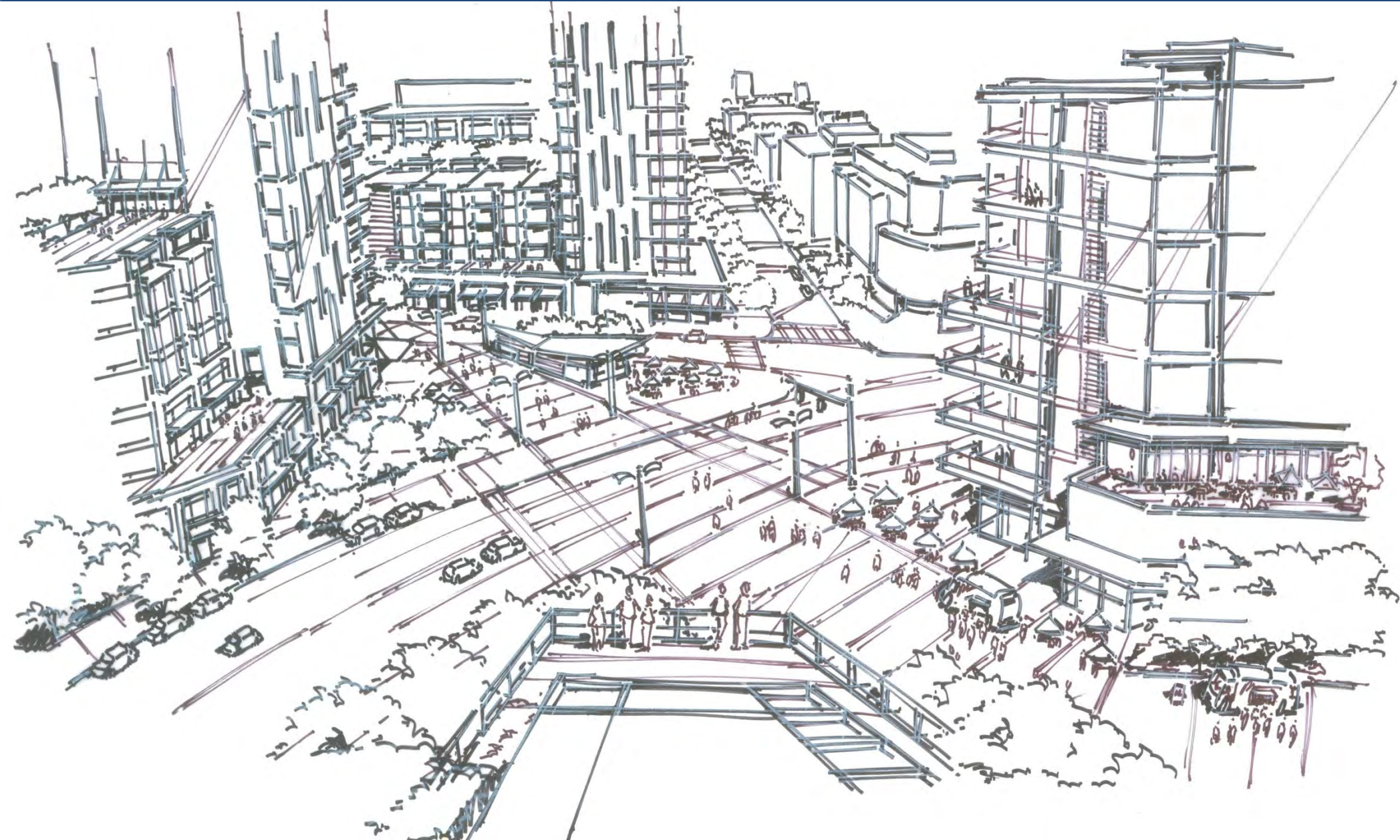
- An opportunity to bring natural light through the ground floor and activate the level below grade.

TORONTO, CANADA

MAIN STREET, CAMBRIDGE CENTER AND MIT



BINNEY AND FULKERSON



DISCUSSION AND NEXT STEPS

- **Public Realm Strategy**
- **Housing Strategy**
- **Retail Strategy**
- **Zoning Mechanism**



APPENDIX – AREA SUMMARY



CHARLES RIVER

APPENDIX – AREA SUMMARY

Building	Gross Area	Residential	Office/Lab	Retail
A1	244,078	234,078		10,000
A2	109,365	109,365		
A3	336,648		331,648	5,000
A4	143,991	128,991		15,000
A5	196,346	184,346		12,000
B1	11,434			11,434
B2	204,328		194,328	10,000
B3	216,534	208,534		8,000
B4	281,808		269,808	12,000
B5	197,902	189,902		8,000
C1	155,412	141,412		14,000
C2	155,412	141,412		14,000
C3	322,088		307,088	15,000
C4	174,237	164,237		10,000
C5	265,872	251,872		14,000
C6	223,960		213,960	10,000
C7	181,873	176,873		5,000
C8	224,800		214,800	10,000
C9	339,639	324,639		15,000
C10	213,512		198,512	15,000
	131,984		123,984	8,000
C11	236,000		225,000	11,000
C12	449,982	439,982		10,000

Building	Gross Area	Residential	Office/Lab	Retail
D1	76,008	76,008		
D2	86,642	78,642		8,000
D3	71,904	63,904		8,000
E1	155,748	147,748		8,000
E2	84,000	78,000		6,000
E3	150,396	140,396		10,000
F1	177,810	165,810		12,000
F2	154,744	142,744		12,000
G1	222,408	216,408		6,000
G2	3,951			3,951
H1	13,974			3,500
H2	240,872		222,872	18,000
H3	225,324	217,324		8,000
H4	232,664		222,664	10,000
H5	225,230		215,230	10,000
H6	26,000			26,000
H7	257,942	241,942		16,000
TOTAL	7,478,822	4,264,569	2,750,368	407,885

TOTAL NEW DEVELOPMENT: 7.4 MN SF

RESIDENTIAL: 4.2 MN SF

OFFICE/LAB: 2.7 MN SF

RETAIL: 407,885 SF