

Kendall Square Initiative

Zoning Presentation
to the Cambridge City Council, Ordinance Committee
February 26, 2013



AGENDA

1. Introduction

2. Zoning Review

- FAR
- Height
- Open Space
- Active Uses
- Parking
- Built Form

3. Discussion

BROAD COMMUNITY SUPPORT

- The advancement of Kendall Square as a premiere center of innovation
- The emergence of a vibrant destination for retail, restaurants, and entertainment
- The creation of a truly mixed-use district where people live, work, and play

ZONING PETITION OVERVIEW

	2011 Petition	2012 Petition	2013 Refinements	Planning Board
Commercial Max.	980,000 SF			✓
Residential Min.	120,000 SF	240,000 SF		✓
FAR	3.8	3.9		✓
Height	150' - 250'		Additional review over 200'	✓
	Up to 300' may be allowed	Required middle income	Entire building subject to inclusionary and moderate	✓
Floorplates	None	Smaller floorplates at higher height		✓
Open Space	15%			✓
	0.9 office, 0.5 residential & retail			✓
Parking Ratios	0.9/lab	.8/lab		✓
	1/2 hotel rooms	1/4 hotel rooms		✓
Signage	No limitations	Commercial sign regulations apply	Subject to all Business, Office and Industrial District standards	✓
Innovation Space	Not included	5% of office space in district	Added specific space characteristics Only 50% exempt from FAR	✓
Sustainability	Not addressed	New Commercial Buildings LEED Gold	All buildings LEED Gold except non-traditional high-tech academic labs	✓
Community Fund	Not addressed	Contribution to Community Fund of \$10 psf of commercial development		✓
Active Uses	Minimum 60,000 SF	75% of ground level space along Third St., Main St., and Broad Canal Way	Limits retail exemption to 5,000 SF with exception for grocery/pharmacy	✓
Low & Moderate Income Housing	42,000 SF	48,500 SF		✓
Incentive Zoning Payment	Not included	Up to \$4.3m contribution to Affordable Housing Trust		✓

GENERAL ALIGNMENT WITH KENDALL PLANNING

	MIT	K2	CBT	PB
Heights	✓	✓	✓	✓
Floorplates	✓	✓	✓	✓
Total SF	✓	✓	✓	✓
Residential SF	✓	✓	✓	✓
Commercial SF	✓	✓	✓	✓
Active Ground Floor Use	✓	✓	✓	✓
Parking Ratios	✓	✓	-	✓
Open Space Network	✓	✓	✓	✓
Public Realm	✓	✓	✓	✓
Moderate Income Housing	✓	✓	-	✓
Sustainability	✓	✓	-	✓
Setbacks	✓	✓	-	✓
Innovation Space	✓	✓	-	✓
Community Benefits	✓	✓	-	✓

COMMUNITY REQUESTED INVESTMENTS

Affordable/Moderate Housing	Approximately 48,500 SF
Other Housing	Approximately 240,000 SF
Total Housing	Approximately 290,000 SF
Retail Space	100,000 SF
Innovation Space	50,000 SF
Other Required Spaces	150,000 SF
Incentive Zoning Payment	\$4.3 million
Community Fund	Approximately \$10 million
Total Community Benefit Payments	Approximately \$14.3 million

PUD-5 Zoning Petition

FAR

Height

Open Space

Active Uses

Parking

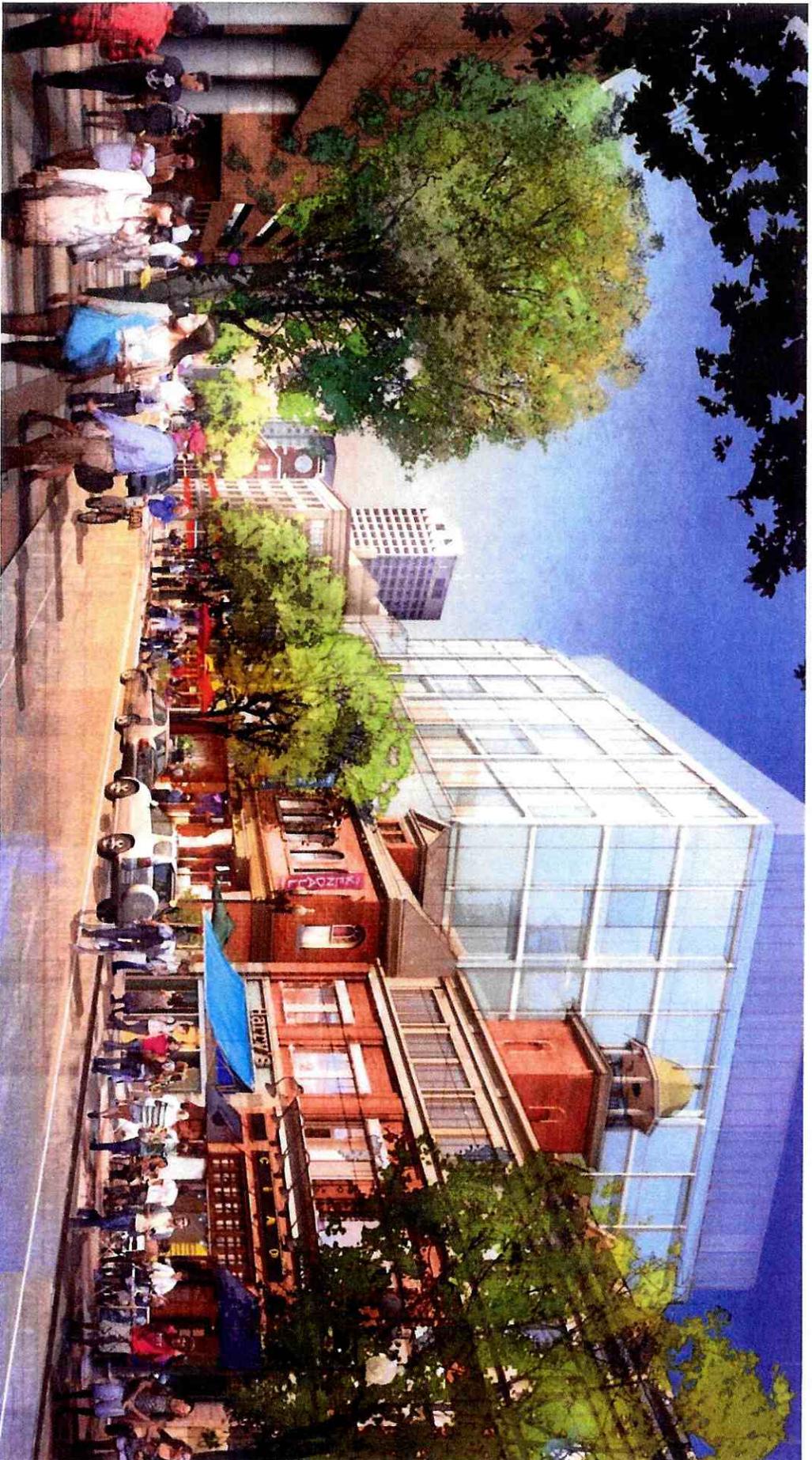
Built Form



Aerial by : www.lesvants.com

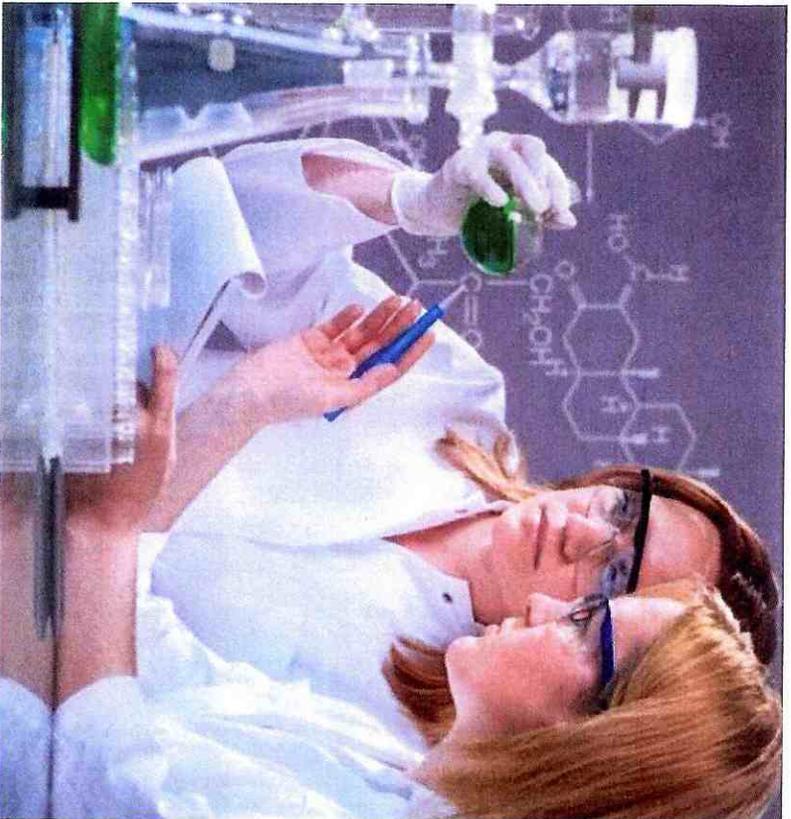
FAR

POSSIBLE VIEW FROM AMES AND MAIN



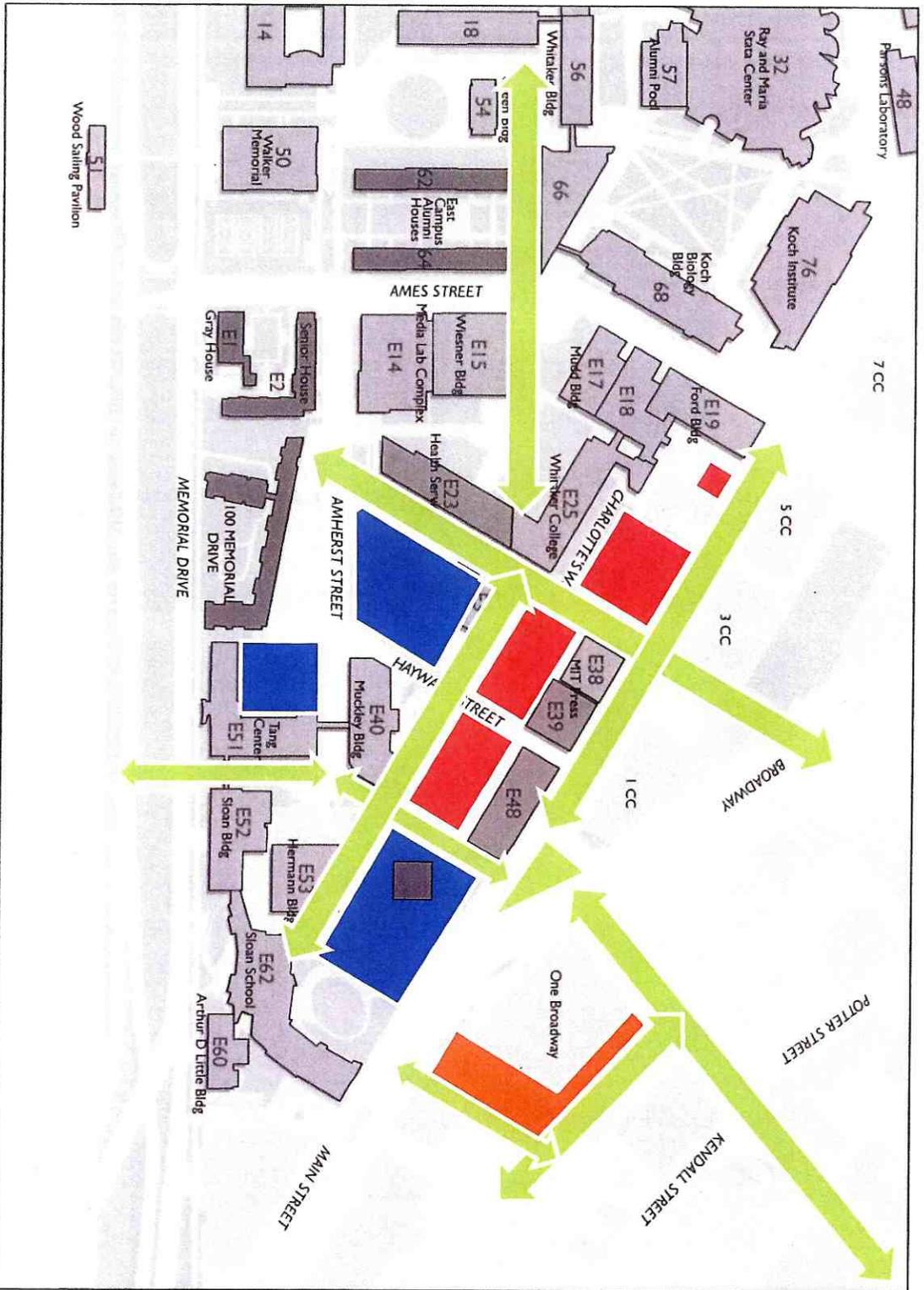
FAR

INNOVATION SPACE



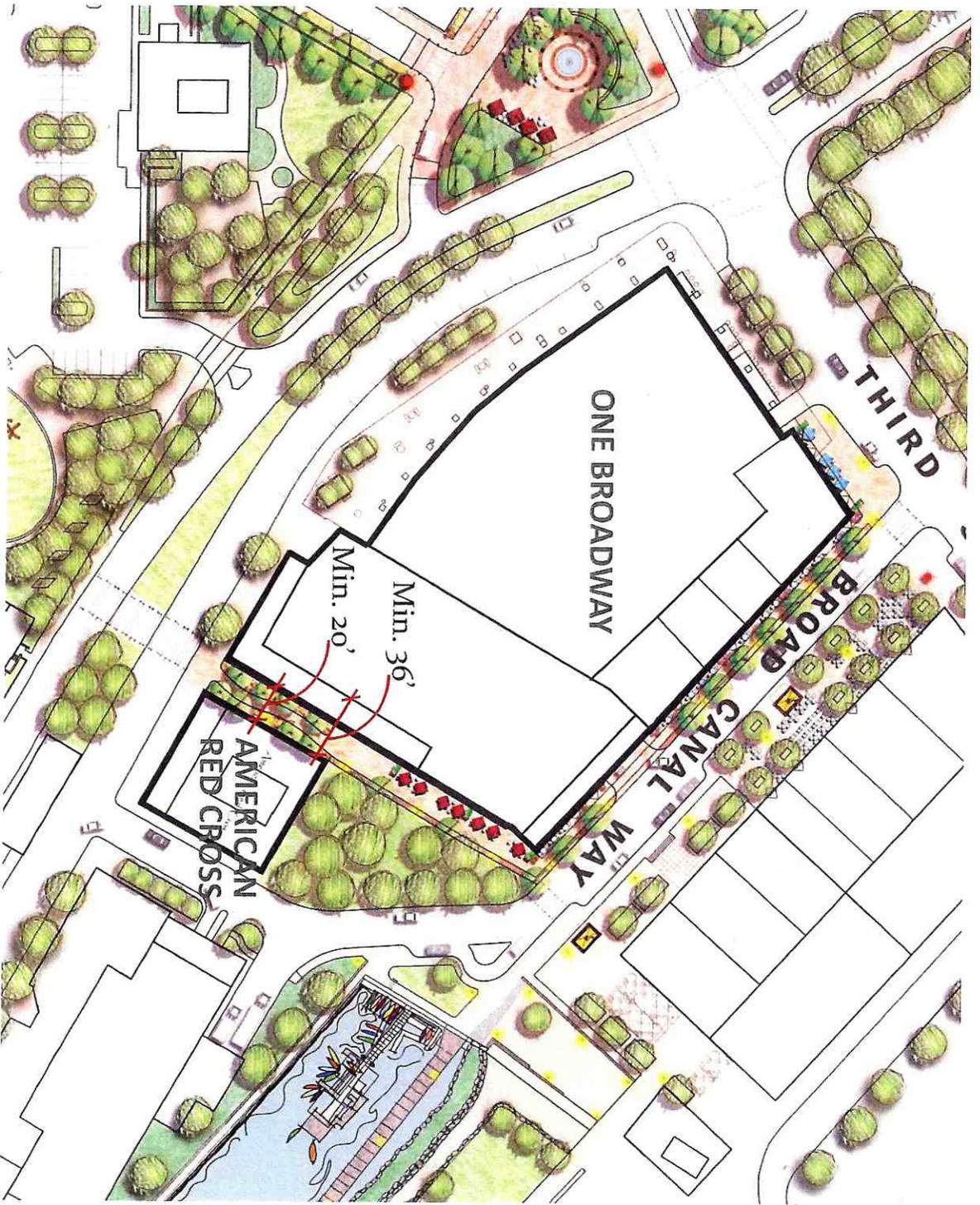
Cambridge Innovation Center
One Broadway

FAR - CONCEPTUAL DEVELOPMENT PLAN

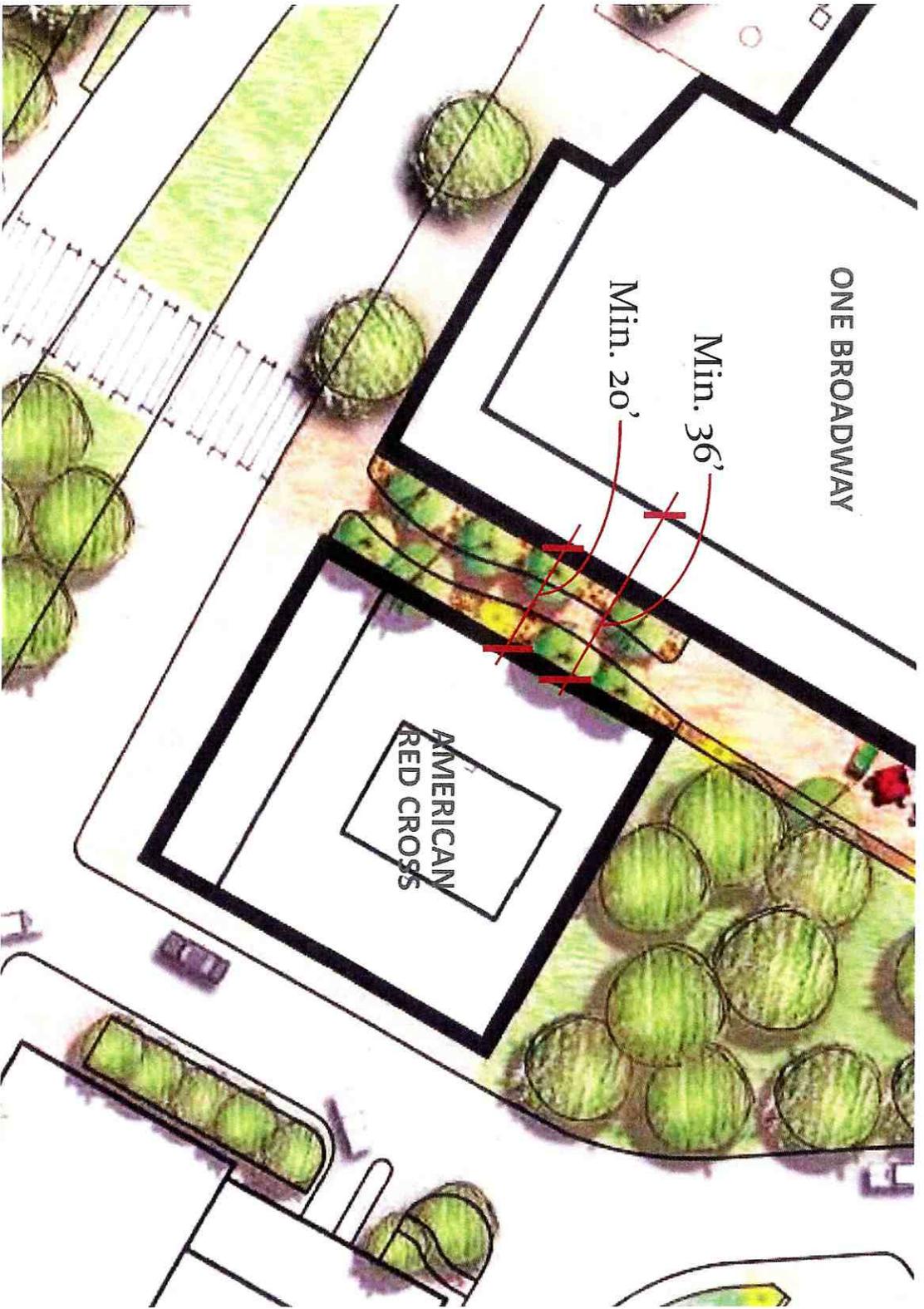


- COMMERCIAL
- RESIDENTIAL
- ACADEMIC

FAR - SETBACKS



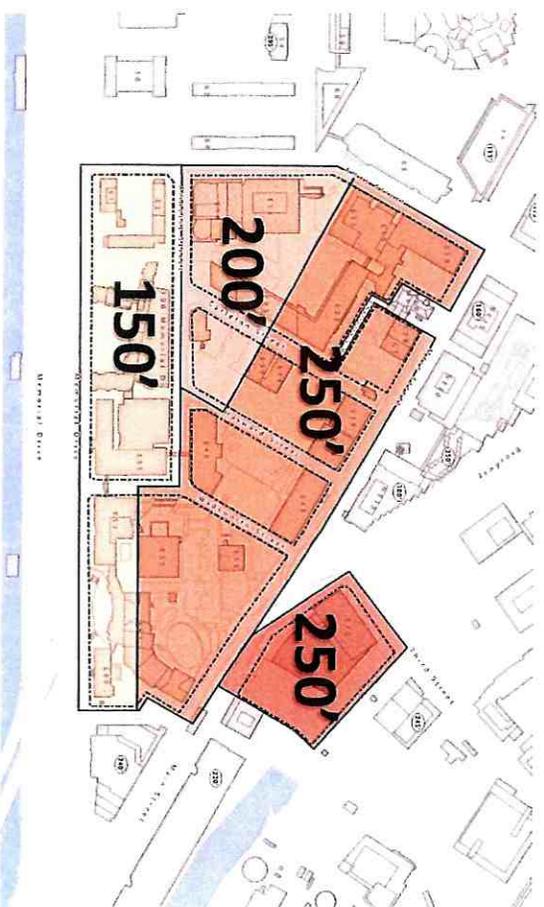
FAR - SETBACKS



HEIGHT

SECTION 13.86.1

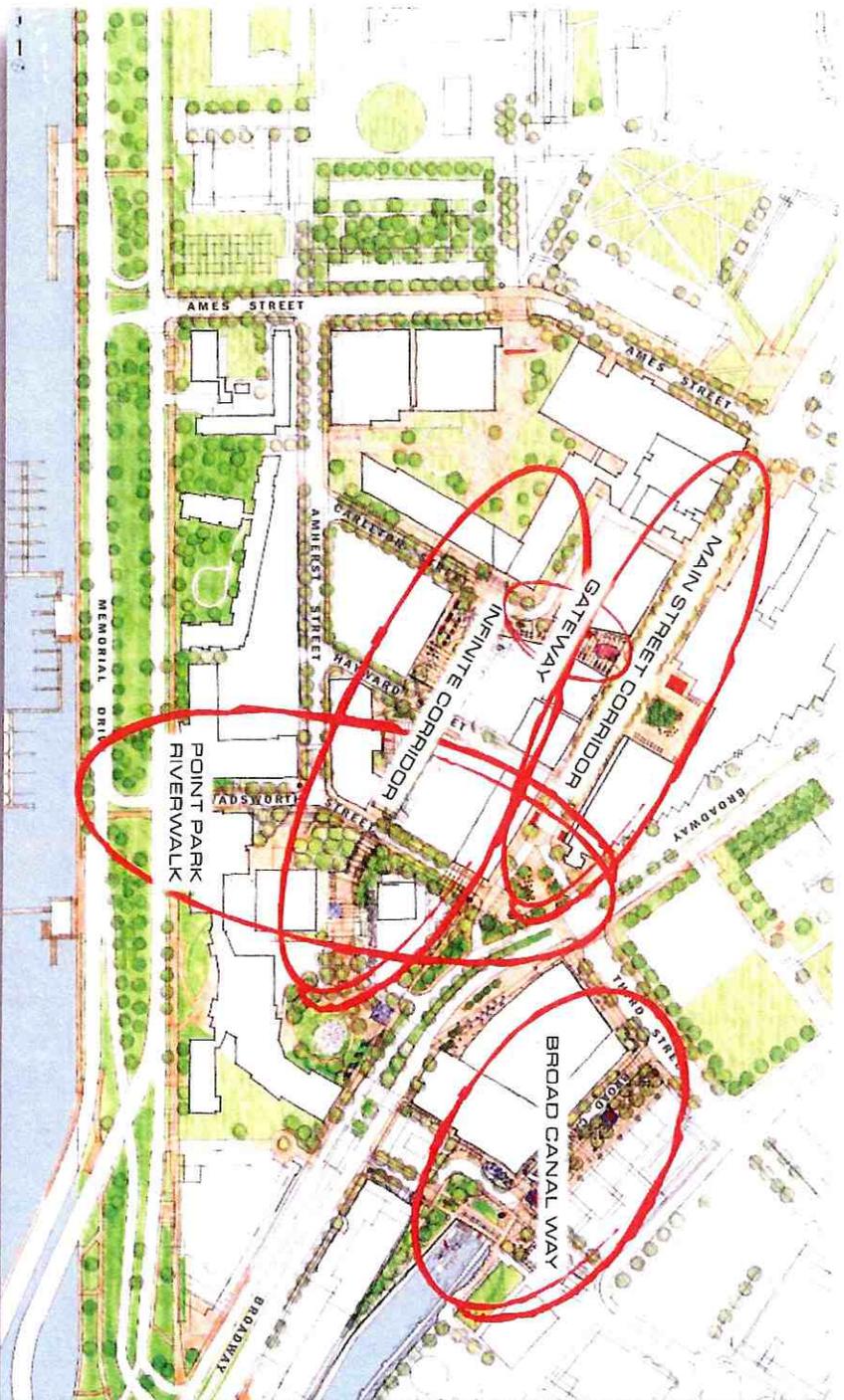
- One new building in the Main Street Subdistrict and another in the Third Street Transition Subdistrict is allowed to a height of 300' if the use above 250' is residential
- Additional residential square footage above 250' is subject to a moderate income housing requirement



OPEN SPACE

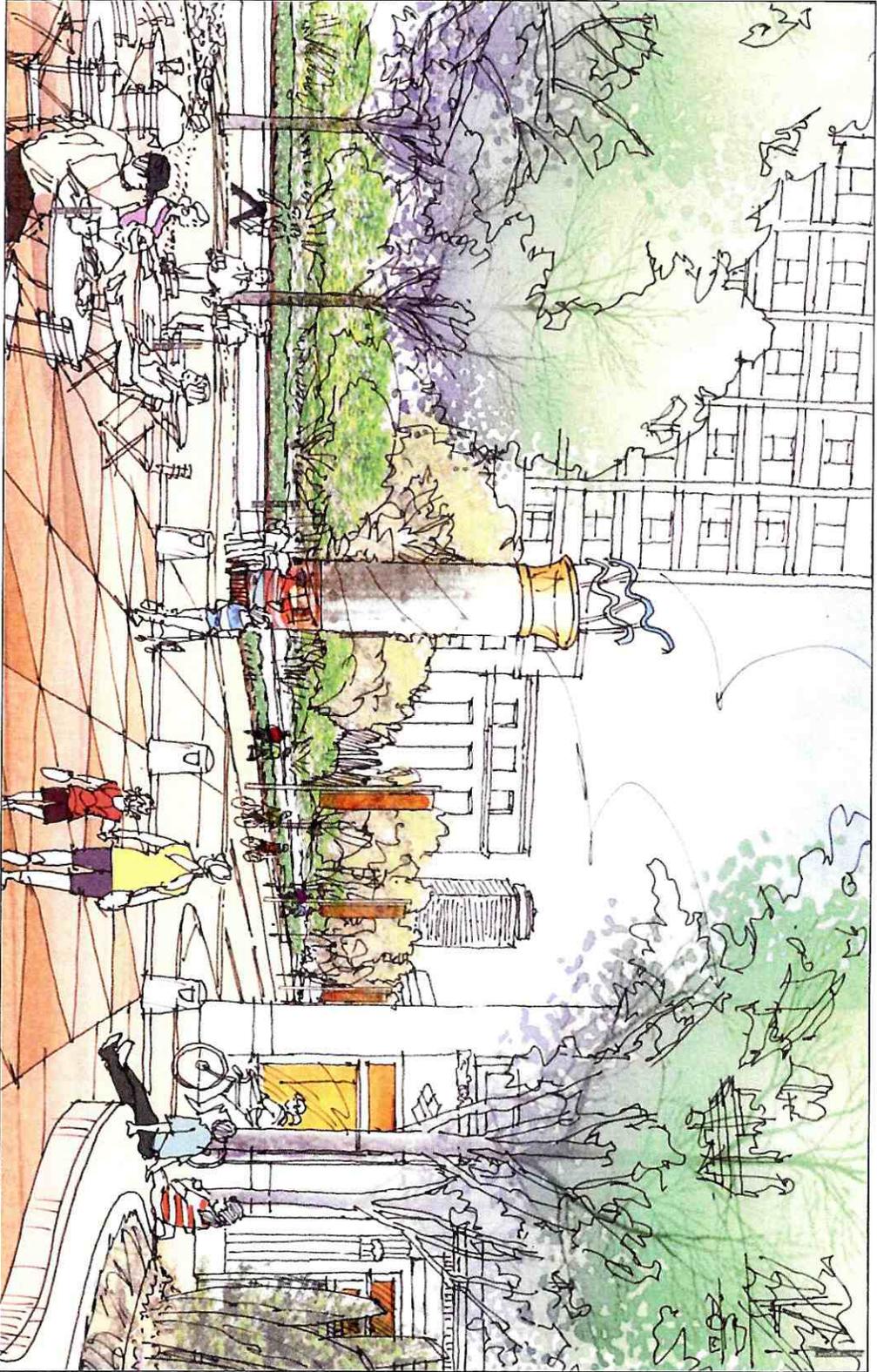
SECTION 13.87

- Minimum Open Space 15% across the PUD-5 district



OPEN SPACE

POSSIBLE VIEW TOWARD CHARLES RIVER



ACTIVE USES

POSSIBLE VIEW FROM BROAD CANAL

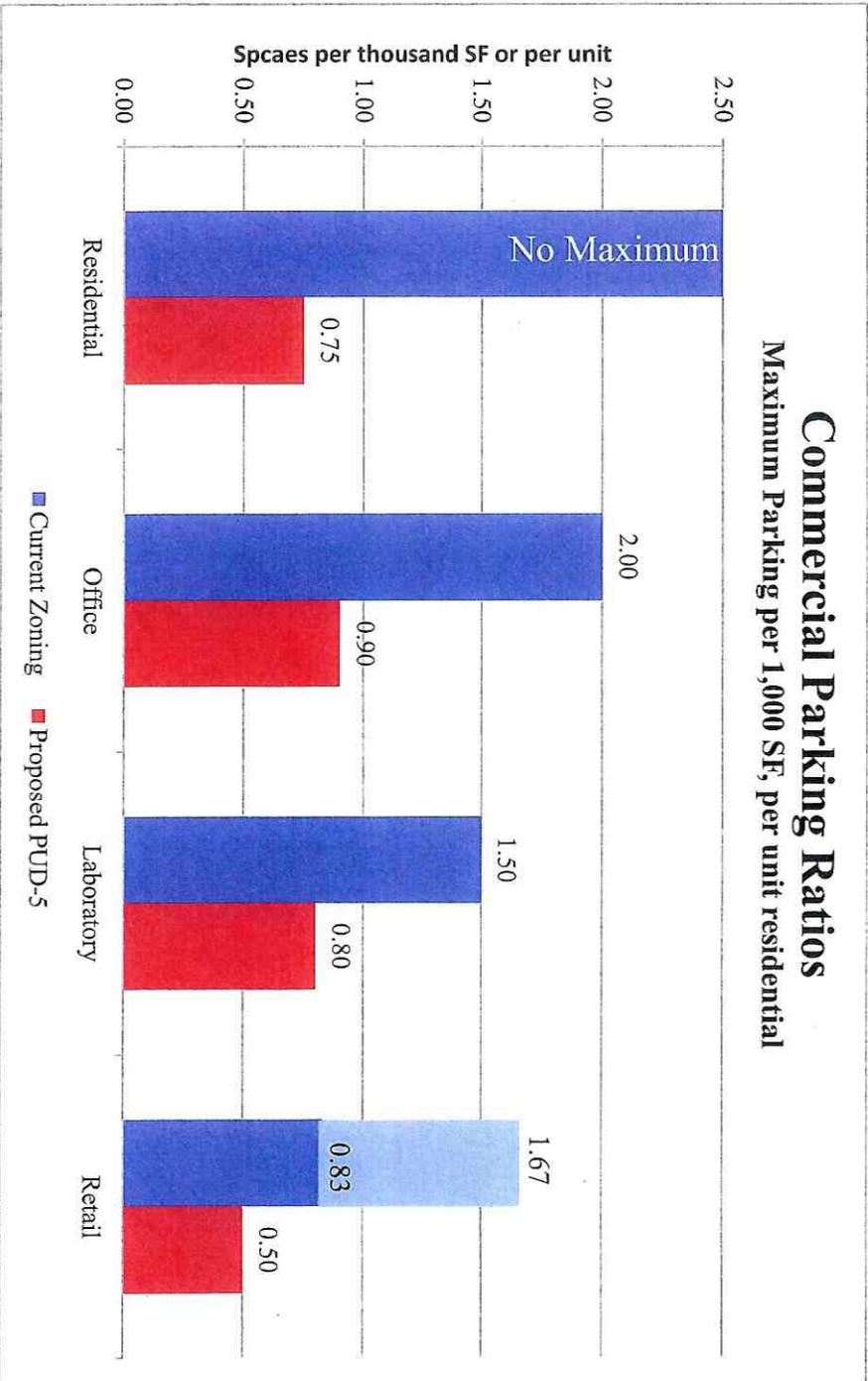


PARKING

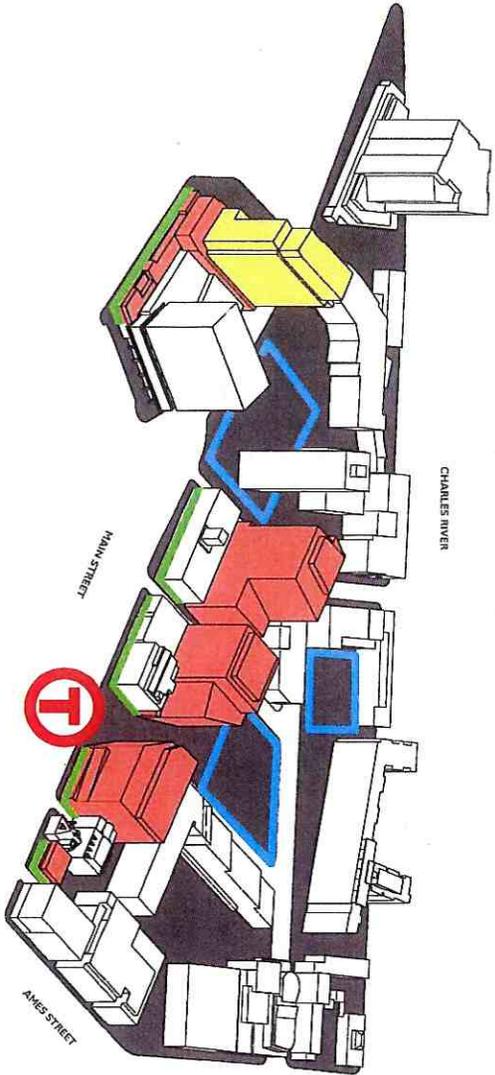
SECTION 13.88

Commercial Parking Ratios

Maximum Parking per 1,000 SF, per unit residential

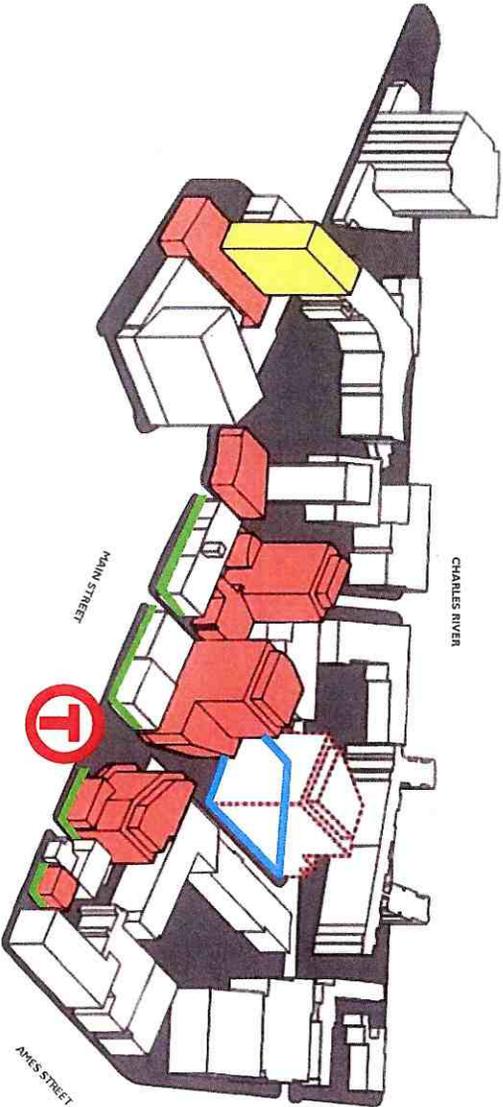


BUILT FORM



MIT DIAGRAM

Residential	Office/Lab/ Retail	Academic
240,000 sf	980,000 sf	800,000 sf



K2 DIAGRAM

Residential	Office/Lab/ Retail	Academic
200,000 sf	1,000,000 sf	800,000 sf

**KENDALL SQUARE DESIGN GUIDELINES:
SUMMARY OF URBAN DESIGN RECOMMENDATIONS**

DRAFT VERSION
Revision Feb 25, 2013

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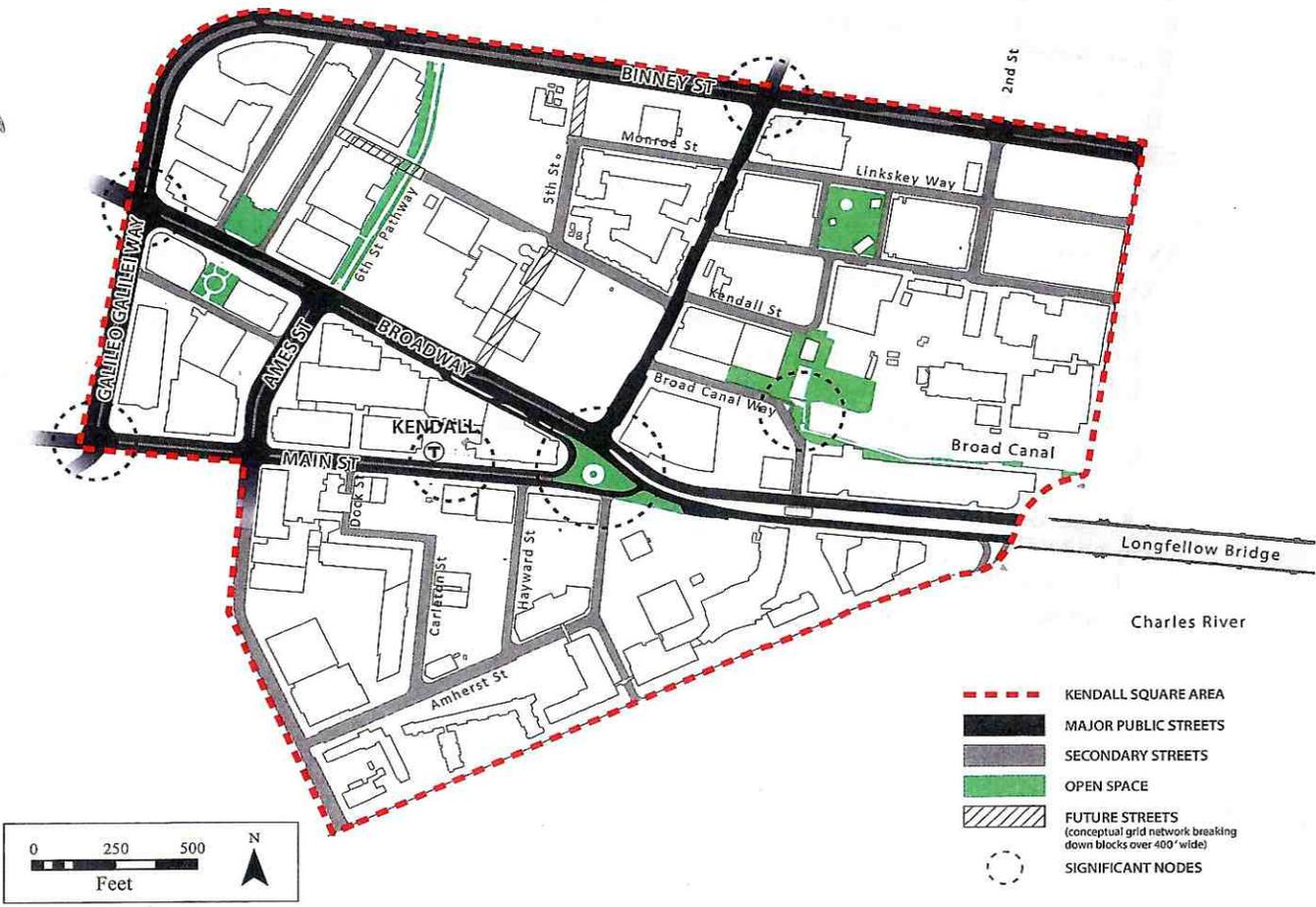
1. Introduction

The Kendall Square Design Guidelines are created as part of the City of Cambridge's comprehensive Kendall Square - Central Square Planning Study (K2C2) to inform property owners, business owners, developers, and the general public about the desired form and character of development in Kendall Square. These guidelines will help guide development activities in this area, aiming to create consistently high-quality public environments, and to ensure that development contributes to the character and vitality of the surrounding community. The guidelines will be referenced in the City's Zoning Ordinance in the Project Review Special Permit section and in the PUD texts where applicable and will be used by the Planning Board in their review of all discretionary permits such as special permit and PUD applications for projects in the Kendall Square area.

The Kendall Square Design Guidelines guidelines articulate the design and site planning **goals** for Kendall Square, and **measures** to achieve them. The guidelines aim to create a positive mixed use district where tall buildings with large floorplates can be good neighbors to public spaces, smaller existing buildings, and adjacent residential neighborhoods. Therefore, the guidelines are particularly geared to sensitively manage the impacts of bulk and height and animate the major streets and public spaces through encouraging active ground floors.

However, the guidelines are not intended to impose a strict limitation on the building form and style. Other creative design solutions, or measures, not noted here may also be utilized to achieve the same goals at the discretion of the Planning Board, especially in the interest of enhancing architectural diversity in the area.

A major goal of the *Kendall Square Central Square Plan 2012* is to enhance the quality of public street and park spaces. Buildings and private open spaces adjacent to streets and parks have a significant impacts on adjacent public spaces through their physical design and internal uses, particularly at ground level. Therefore, the design guidelines focus heavily on relationships between private buildings/open spaces and public streets/parks. Four distinct types of streets and edges deserve different criteria, addressed separately in the guidelines:



- **Major Public Street** – Street with block edges where the most intensive, and highest-priority, active ground level uses are present and desirable. These typically include locations where retail uses are most viable from a market standpoint. In the study area, major public streets include Main Street, Broadway, Third Street, Ames Street, Binney Street, and Galileo Galilei Way. Major public street edges should create a well-defined streetwall to help frame Kendall Square’s major public streets as public spaces. They should also provide adequate space along sidewalks for outdoor activity associated with active ground level uses. Major public street edges are intended to engage a high volume of pedestrian traffic, and to support public activity throughout the day and evening.
- **Secondary Street** – Street with block edges where active ground level uses are present or desirable, but may require more time to mature. This may depend upon stronger market conditions or development of more appropriate spaces, where ground-level residential or other uses can support an attractive and walkable public space network. Secondary streets are intended to engage a moderate to high volume of pedestrian traffic and to support public activity throughout the day and evening, now and in the future. They should also provide adequate space along sidewalks for compact residential stoops, porches and gardens, and outdoor uses associated with retail or institutional uses.
- **Campus streets** have a different character and urban form than the mixed-use commercial uses and densities anticipated and desired for Main Street, Third Street, and Broadway. The Campus Streets include Ames south of Main, Carleton, Hayward, Amherst and Wadsworth. At the block corners with Main Street, it is anticipated that the retail use fronting Main Street will wrap 30 to 40 feet around the corner onto Ames Street, Hayward and Wadsworth Streets but is not expected to continue down the streets in academic buildings. It is also not expected that retail will front academic buildings on Carleton and Amherst Streets. In addition, the fact that the campus is under single ownership helps make it possible to create an attractive pedestrian experience, through providing street trees and other planting, providing transparent glazing with direct views between the sidewalk and interior building spaces, limiting the length of blank walls, differentiating the sidewalk level of buildings with signage, furniture, materials, seating opportunities, awnings and transparency and locating courtyards and open spaces to maximize sun exposure. For building facades along the lot lines, it may be possible to use building stepbacks and horizontal breaks to differentiate and enliven the building wall, respecting existing building heights and setbacks on the streets to create a more gracious pedestrian scale environment along the sidewalk.
- **Park Edges** – Throughout Kendall Square, there are parks and plazas that need to be better designed, managed, and connected to each other. Where new buildings abut these open space resources, special attention should be paid to activating the ground floors of the building. Furthermore, the scale and massing design should be carefully considered to minimize negative impacts to the nearby parks and plazas.

2. Environmental Quality

Goal: Kendall Square is a highly urbanized smart growth center, and, as new development is added, there will inevitably be increases in shadows, wind, noise, etc. as is the case in any new urban development. However, new projects should be carefully designed to avoid unnecessary environmental impacts. The goal is to evaluate each design decision to find outcomes that balance the positive aspects of building near a transit hub with the changes in the environment that result from more housing, retail, and business uses in relatively dense new structures located in close proximity to one another.

– Shadow

Measure: Locate and shape buildings to minimize shadows on existing public parks and plazas such as Point Park, the North and South Plazas at Cambridge Research Park, and the Broad Canal area. On the Volpe site, create a master plan that configures the required new park space with a view towards maximizing solar access, while balancing the need for logical pedestrian circulation and spatial organization of new buildings.

– Wind

Measure: Design new buildings and open spaces to minimize negative wind impacts on streets and public spaces. Proponents should explain how proposals have been conceived with regard to prevailing winds and any strategies to avoid excessive wind impacts on pedestrians, to the extent practicable.

– Vegetative Cover

Measure: To deal positively with each site, development should be designed to provide vegetative cover, improve stormwater infiltration, and reduce heat island effect. It is understood that, in this urban setting, not all projects will be able to achieve all these measures. Projects should be considered for the feasibility of both at-grade and rooftop interventions.

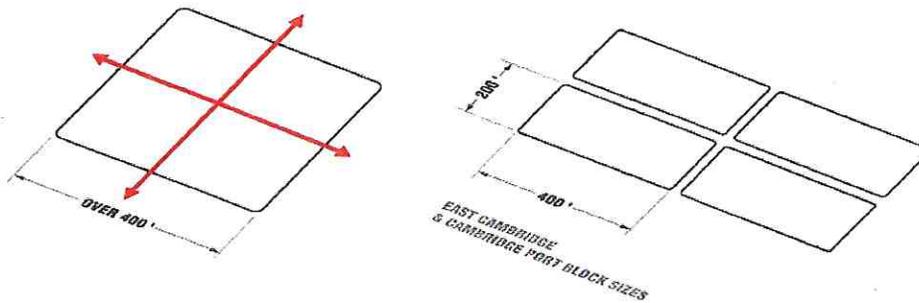
– Noise

Measure: Projects should attempt to minimize noise generated from rooftop mechanical equipment. In particular, mechanical equipment on buildings near residential uses should be designed, selected, located, and acoustically-screened to protect neighbors from noise impacts.

3. Walkability

- Connections / Block Sizes

Goal: New development and redevelopment of sites should break up large blocks and increase permeability by creating pedestrian and bicycle connections through the site.



- Loading and Servicing

Goal: Loading and service are critical elements that need to be accommodated for the functioning of the district. They should be located and designed to support the walkability of the area and minimize dead zones, particularly away from major public streets and pedestrian corridors wherever possible.

Measures:

- Locate loading and servicing areas away from major public streets and significant promenades; use secondary streets or, preferably, internal alleyways for loading and service.
- Encourage consolidated off-street loading areas serving multiple buildings. Avoid creating loading/servicing areas exceeding two bays or 30 feet wide. Occupied ground level spaces with windows should occur between loading/servicing areas wherever possible to help diminish their impact.
- Loading/servicing bays should be provided with architectural doors designed to complement the overall façade composition. Doors should be customarily closed when loading/servicing bays are not in use.
- Driveway turnaround and vehicle drop-off facilities along public streets are discouraged to avoid disrupting the continuity of the sidewalk space.

– **Street Activity**

Goal: The vision for Kendall Square includes an emphasis on activation of the district beyond the work day. Site planning and building design should support pedestrian flow throughout the district and provide access to outdoor and indoor public spaces that allow people to gather, and encourage public activity throughout the day and evening.

Measures:

- a. Locate courtyards and open spaces to maximize sun exposure.
- b. Connect outdoor public realm with indoor public spaces.
- c. Streets and other public spaces should feel safe in the evening. Appropriate design of lighting and wayfinding is encouraged.
- d. Design to accommodate diverse retail and service offerings that serve current and future Kendall Square residents as well as workers in the neighborhood.

4. Universal Access

Goal: The design of buildings and outdoor spaces (public and private) in and around Kendall Square merits special emphasis on universal access. As the theme of innovation is at the core of Kendall Square's identity, demonstrating innovations in universal access will enhance Kendall's identity. Exemplary accessibility is an area where Kendall has particular opportunity to stand out regionally, and perhaps nationally and internationally. Kendall's flat topography and its existing infrastructure already promote accessibility and provide a strong basis for further accessibility enhancements that will set Kendall apart from its peer communities and enhance opportunity for the interpersonal collaboration important to its success.

Measures:

- a. Ensure that outdoor spaces provide comparable facilities for all people regardless of their ability to climb steps. Use technology to help compensate for limitations in sensory abilities.
- b. Ensure that parks and plazas provide activities and facilities serving people of all ages.
- c. Improve wayfinding signage throughout Kendall Square, and create more direct accessible connections, to make mobility among destinations more convenient and efficient.
- d. Provide audible and tactile information beyond existing requirements at crosswalks and in building elevators.
- e. Ensure that streetscape elements do not conflict with accessible parking.

5. Built Form

The existing Kendall Square embraces various styles of developments, each symbolizing the predominant economy of different eras: industrial and manufacturing, R&D, and now, the knowledge economy. Recently, companies are increasingly seeking buildings with large floor plates to allow greater flexibility to accommodate multiple disciplines, and to provide opportunities for interaction, collaboration, and creativity.

a. Architectural Identity of Kendall Square

Goal: Architectural composition should particularly emphasize a distinct identity for the building as well as for Kendall Square. This identity should be legible from adjacent streets and critical viewpoints, as well as within the overall Kendall Square skyline when seen from a distance.

Measure: Methods of creating a distinct architectural composition include use and proportioning of materials, colors and shapes that differ from those of adjacent buildings.

Goal: Design buildings to help create streetwalls, where appropriate, to help frame the sidewalks, plazas, and other public spaces in Kendall Square.

Measures:

- a. Align new facades with existing ones if doing so helps give a sense of spatial cohesiveness to the sidewalks.
- b. Allow breaks in the streetwall if needed to help define entryways to buildings.
- c. Streetwall design should take into account the need to provide active ground floor uses.

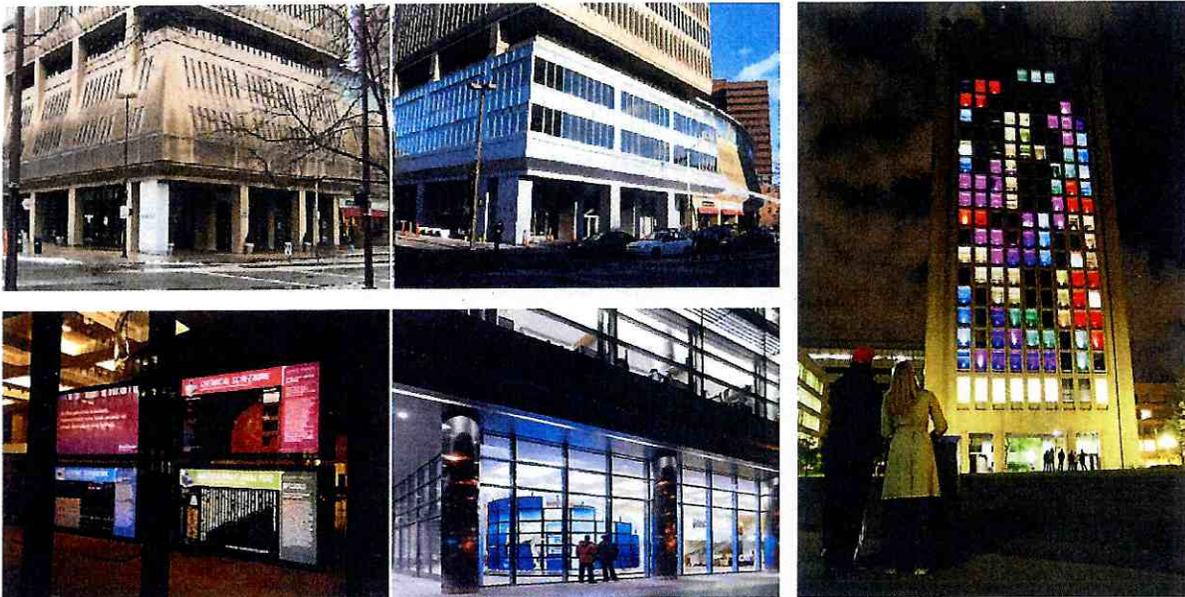


Examples of a distinct architectural composition of Kendall Square (left: view from Watermark plaza near Broad Canal walk, right: view from One Kendall Square plaza, Cambridge)

Goal: Convey the act and spirit of innovation in Kendall Square through transparency that directly reveals activity and displays visual media.

Measures:

- a. Use transparent building materials.
- b. Install media displays that show the works being done inside the buildings; avoid “advertising” imagery
- c. Install interactive media to bring cutting-edge technology closer to the public, directly revealing the scene of innovators at work



From top to bottom, left to right:

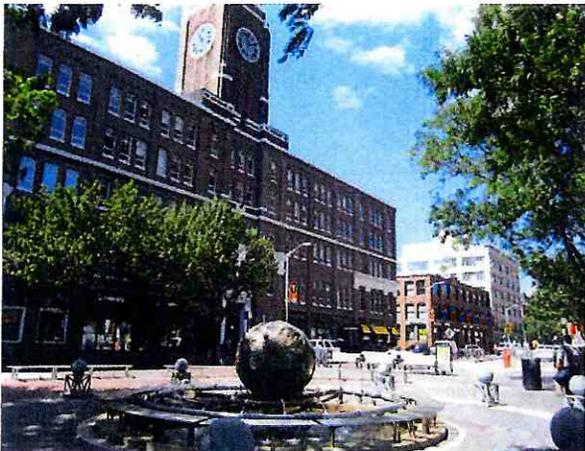
- One Broadway represents an effort to convey the spirit of innovation by rehabilitating an old concrete building facade into a transparent and modern one.
- The Broad Institute in Kendall Square installed media displays in the lobby to present the research being done by the Institute. Usage of TV screens need careful consideration because screens are hard to read during daytime.
- MIT students hacked a campus building for active media display. Building facades could be utilized to accommodate high technology and creative ideas, which will bring the public closer to the knowledge economy of the twenty-first century. (Copyright: ©Chris Pentacoff)

b. Scale and Massing

Goal: Encourage building forms and site planning that relate to the surrounding context. New buildings should create sensitive transitions to neighboring uses, especially to existing residential buildings, historical structures, and public parks.

Measures:

- a. Include setbacks to create transitions to adjacent low-scale buildings
- b. Design and locate public and private open space to be responsive to adjacent uses
- c. Use sensitive site planning and building design to reduce impact on significant view corridors from public spaces

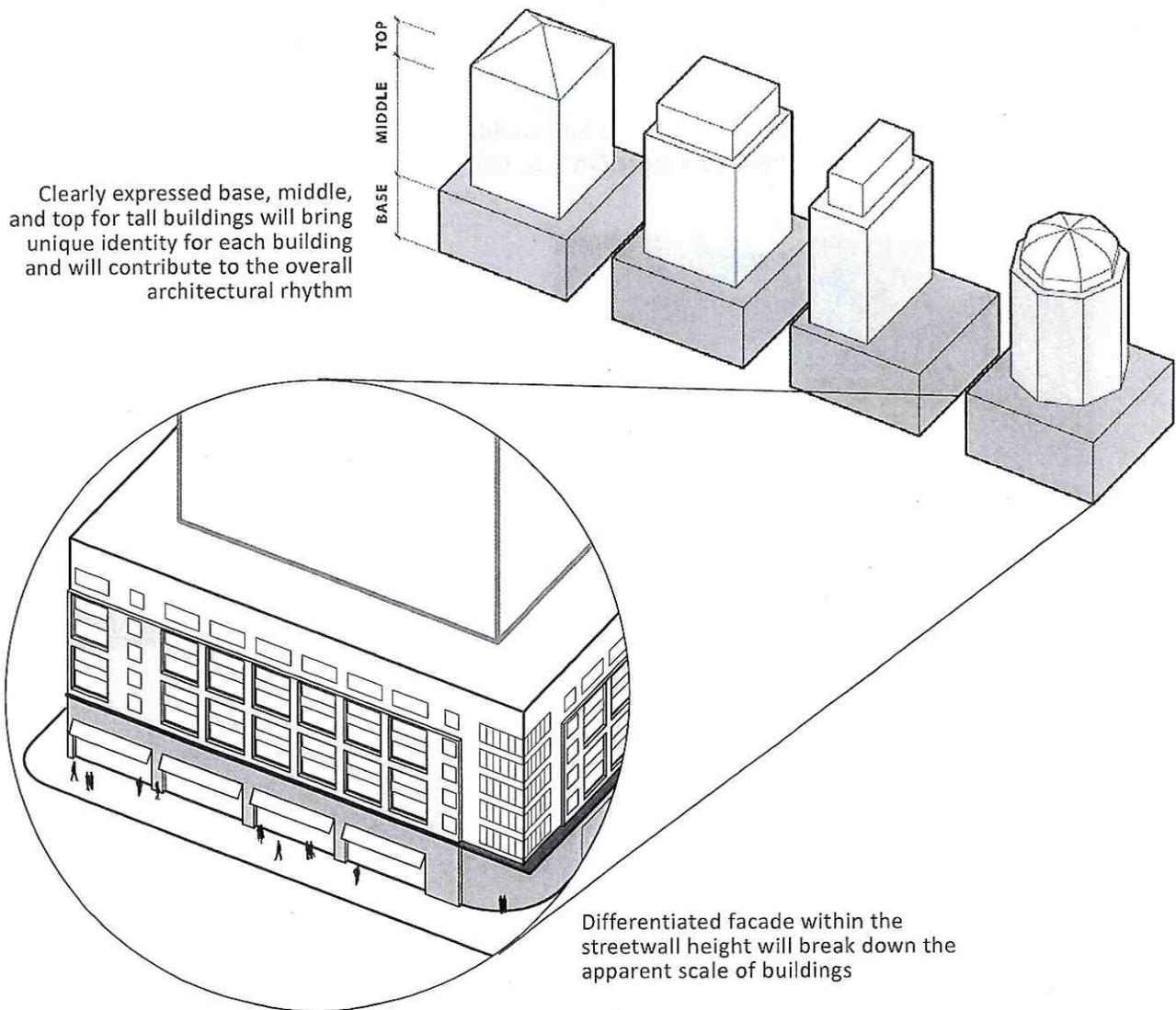


Examples of existing low-scale historical structures in Kendall Square

Goal: Design buildings to minimize monolithic massing and break down the scale of large buildings

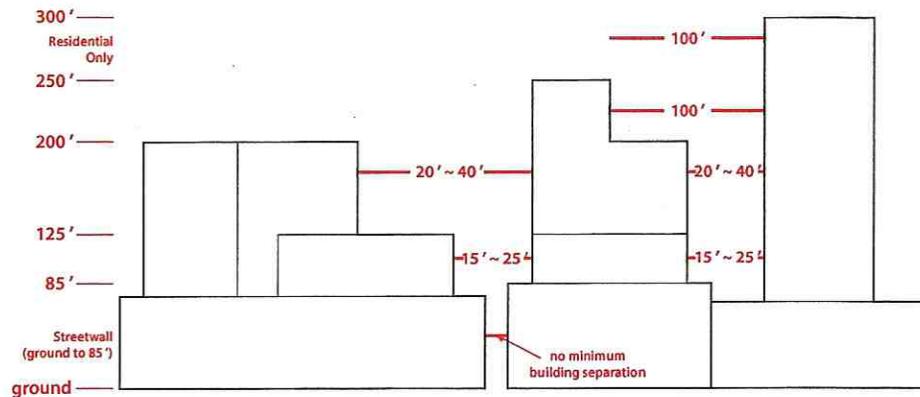
Measures:

- a. Generally, buildings should have a clearly expressed base, middle, and top. This division should be expressed within the streetwall height zone as well as for buildings exceeding streetwall height.
- b. Pay special attention to the first floors (bottom 20 feet) of buildings, where buildings relate the most to the street and pedestrians. Different design guidelines may be applicable depending on location and uses of buildings.

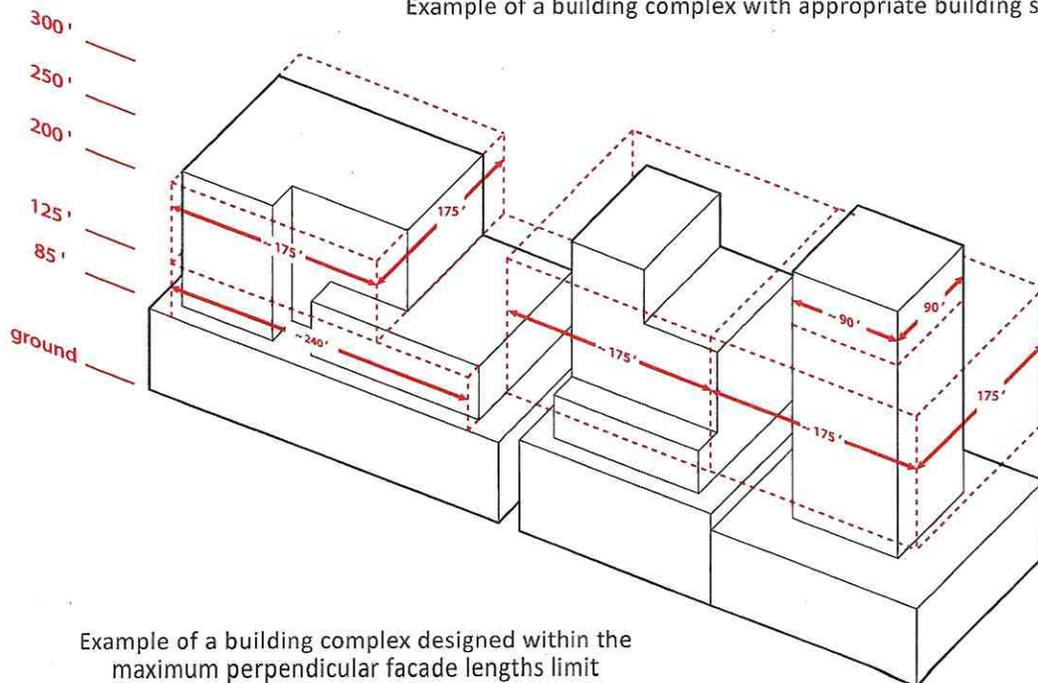


The following maximum façade lengths and minimum building separation are suggested to limit the impact of tall buildings both at the street level within the district and from nearby areas.

Height Range (feet)	Minimum building separation	Maximum length of plan dimension
251' to 300' (for residential use only)	100'	160' x 65' or 90' x 90'
201' to 250'	100'	175' x 175'
126' to 200'	20-40'	175' x 175'
85' to 125'	15-25'	240' x 175'
Streetwall (ground to 85')	None	None



Example of a building complex with appropriate building separation



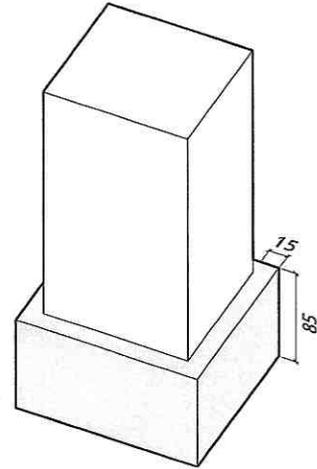
Example of a building complex designed within the maximum perpendicular facade lengths limit

– Major Public Streets

Goal: Create a strong datum by setting back the building at upper floors to create a strong edge to the street and to limit the sense of height at street level.

Measures:

- a. Set back approximately two-thirds of the building façade above 85 feet from the principal façade by a depth of about 15 feet; flexibility will be considered when street/ground floor setback is provided.
- b. Façade areas without setback may be appropriate at corners or in specific locations to create architectural variety.
- c. In instances of infill development on constrained sites, provide distinct horizontal articulation at the datum height that relates to the façade of adjacent or facing buildings through means other than a setback (significant change in material, projecting cornice/fin/shade etc.)

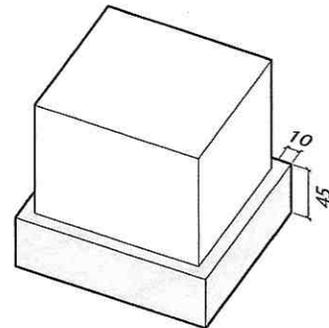


– Secondary Streets

Goal: Create a strong datum by setting back the building at upper floors to create a strong edge to the street and to limit the sense of height at street level.

Measures:

- a. Set back any portion of the building above 45 feet by approximately 10 feet from the principal façade. Where appropriate, design these setbacks to include balconies and rooftop terraces.
- b. Create a strong horizontal definition line on the façade at a height of 45' through means other than a step-back if it successfully expresses a scale distinctly more intimate than a major public street (such as significant change in material; projecting cornice, fin or shade etc.).

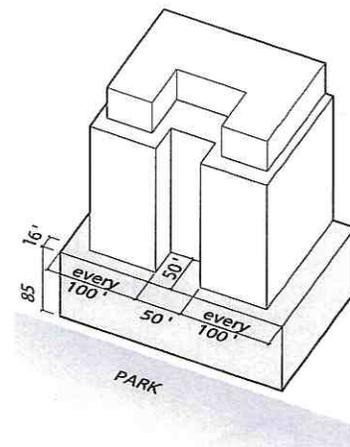


- Park Edges

Goal: Development around parks and plazas should support an environment that is active, safe, and welcoming to a wide spectrum of users throughout the day, week and year.

Measures :

- a. Pay special attention to scale and shadows of buildings along park edges.
- b. Set back about two-thirds of the building façade above 85 feet from the principal façade depth of approximately 15 feet
- c. Create vertical breaks for building volumes above 120' in height facing the park -- façades facing the park exceeding 100' in width should be separated from adjacent façades by a gap of approximately 50 feet, extending back 50 feet from the ground level façade. Residential balconies may project up to 4 feet into setbacks and gaps.
- d. Façade areas without setback may be appropriate at corners or in specific locations to create architectural variety.



Example of a building massing located at park edges



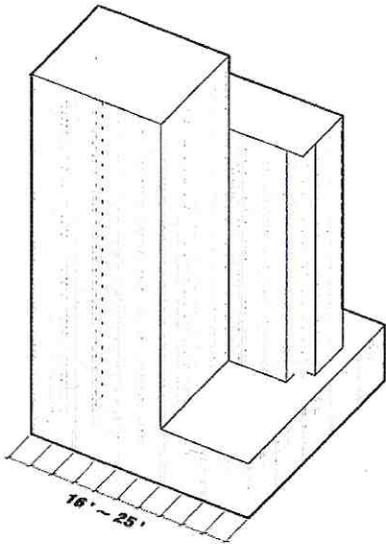
Along park edges, tall building volumes should be set back behind lower ones to reduce shadow impacts. Buildings should also be set back above 85 feet to create intimate walking experience by breaking down the scale of buildings. (left: University Park, Cambridge right: Marathon Landing, Coal Harbour, Vancouver)

c. Visual Interest

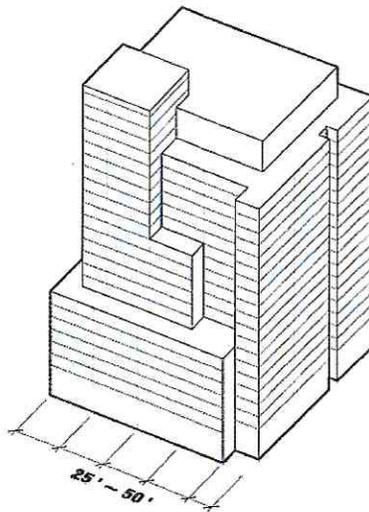
Goal: Buildings should reflect a rhythm and variation appropriate to the urban context.

Measures:

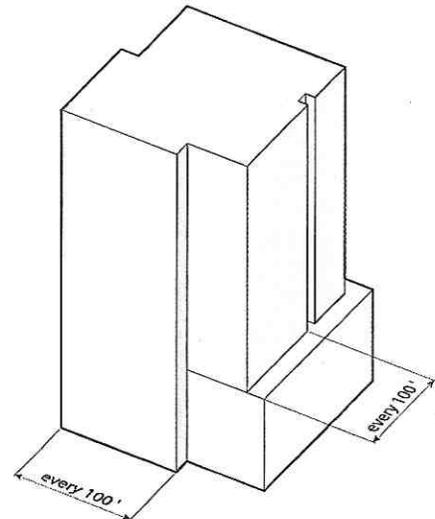
- a. Express bay widths of 16 to 25 feet in predominantly residential areas and 25 to 50 feet along edges where commercial and institutional uses are prevalent.
- b. Establish an urban rhythm by creating a major vertical break for every 100' of façade length with a displacement of approximately 8' in depth or that divides building form into major distinct massing elements.



a. Bay widths of 16 to 25 feet for residential uses



a. Bay widths of 25 to 50 feet for commercial and institutional uses

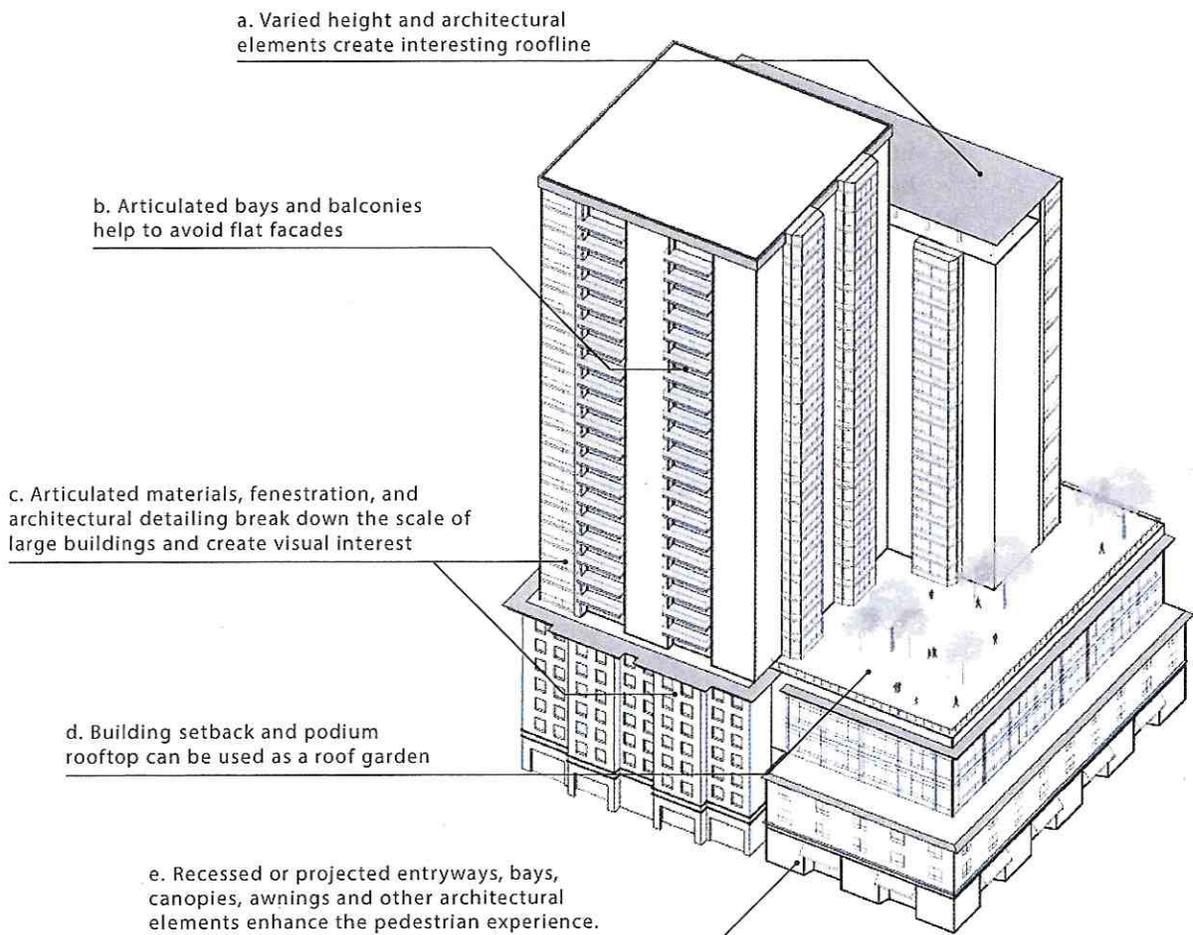


b. Example of a vertical break

Goal: Where appropriate, vary the architecture of individual buildings to create architecturally diverse districts.

Measures:

- a. Use variations in height and architectural elements such as parapets, cornices, passive shading devices, illumination and other details to create interesting and varied rooflines.
- b. Avoid flat façades and create visual interest.
 - Articulate bays and balconies.
 - Utilize architectural articulation such as changes in material, fenestration, architectural detailing, or other elements to break down the scale.
- c. Where buildings are set back at upper stories, use lower roofs as green roofs, balconies, terraces, and gardens.



d. Tall Buildings

Goal: Buildings over 200 feet tall should be designed with particular attention to the architectural character of the top of the building, which will be visible from significant public spaces and from some distance. Tall buildings could potentially enhance the identity of Kendall Square by defining edges or serving as landmarks.

Measures:

- a. During design, consider the variety of vantage points from which tall buildings may be seen, especially from significant public spaces and nearby low-scale residential neighborhoods.
- b. Tall buildings should be articulated to avoid a monolithic appearance, and should emphasize slender, vertically-oriented proportions.
 - Emphasize corners using taller elements such as towers, turrets, and bays.
 - Consider the use of at least two distinct finish materials and colors on each building.
 - Consider variation in forms that present different profiles to different vantage points, if appropriate.
- c. Avoid broad “slab” volumes that make the building appear bulky. Point towers expressing vertical volumes are encouraged.
- d. Consider legibility of the building top both by day and night, while demonstrating responsible use of lighting and energy consistent with sustainability requirements.



b. MIT's Eastgate graduate housing is one of the tallest buildings in Cambridge. However, due to its small floorplate and slender volume, the presence of the building is not obtrusive to the surrounding neighborhood.

c. Vertical proportions, recessed breaks between bays, varied materials, and distinct building tops lend these tall buildings unique identities and reduce their apparent scale (left: 100 Lansdowne Street, Cambridge; right: Waterplace housing, Providence, RI)

d. Use of lighting to increase the legibility of building tops at night (Amgen Building, Cambridge)

Buildings over 200 feet tall are likely to become landmarks with strong presence. Therefore, views from significant public spaces should be considered when designing such tall buildings. Images on this page are some vignettes of the Kendall Square study area from significant vantage points. These images are to help designers understand how tall buildings will be perceived in the existing context.



left: view along Broadway looking towards the Cambridge Center area
right: view along Third Street looking towards the Volpe site



view along Main looking towards the Cambridge Center area



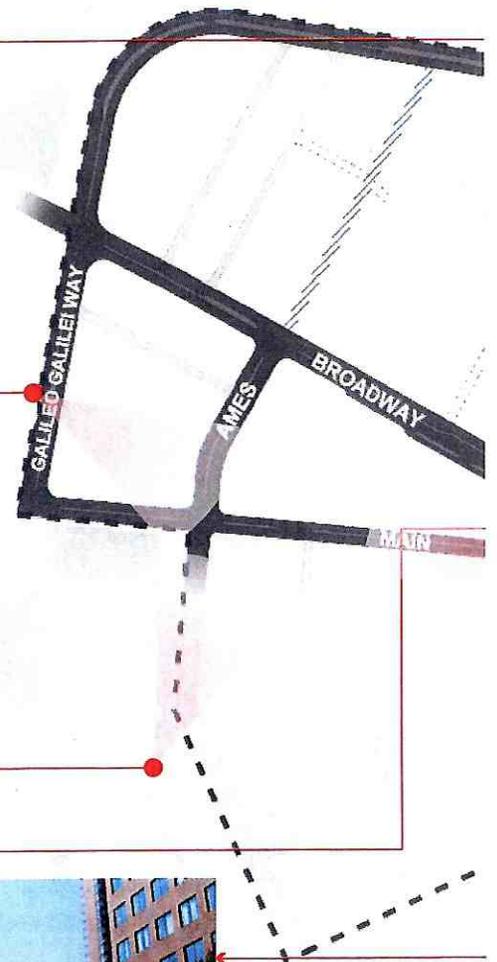
view along Ames looking towards the Cambridge Center area and Volpe site



view from Point Park looking towards the Volpe site



view from MIT/Kendall station looking towards the Cambridge Center Area



view along Third Street looking towards the Volpe site



view along Third Street looking towards south of Main Street



view along Broad Canal looking towards Cambridge Research Park



view along Broadway East looking towards south of Main Street and Cambridge Center



view along Broadway East looking towards the One Broadway site, Volpe site and Cambridge Center



view from Point Park looking towards the One Broadway site



view from the Longfellow bridge looking towards south of Main Street and Cambridge Research Park

e. Connectors

Goal: In general, connectors over public ways are not encouraged in the heart of Kendall Square to avoid internalizing activity that is needed to achieve the essential goal of a more animated square. In Kendall Square, upper-floor connections should be considered only in circumstances where tenants need large floorplates that might otherwise result in excessive apparent building mass. Such connectors should be designed to provide architectural interest, maintain permeability, and continue to allow light and views of the sky. Connectors may be more acceptable over minor streets internal to the quieter parts of the MIT campus, such as Carlton or Hayward.

Measures:

- a. All connectors should be recessed from public spaces and made highly transparent.
- b. Within blocks
 - Set back approximately 35' from public street façade
 - Provide ground level public passage at selected locations
- c. Over promenades or pedestrian walkways
 - Set back approximately 35' from public street façade
 - Provide approximately two stories clearance above ground
 - No more than 35' wide and 2/3 of building height (aggregate)
 - Space multiple connections apart by double their greatest width
- d. Corridors that allow connections between multiple tenants/uses in different buildings are not encouraged in order to ensure that the streets and ground plane remain active.
- e. In instances where multiple connectors are provided, they should be placed so as to create architectural interest and to allow a reasonable amount of light to reach the ground.



Connections should be recessed from public spaces, made highly transparent, architecturally interesting and allow light and views of the sky. (Binney Street development by Alexandria, Cambridge)

f. Rooftops

Goal: The design of rooftops, including mechanical equipment and cellular installations, should be conceived as integral to the rest of the architecture of the building.

Measures:

- a. Rooftop mechanicals may be designed to stand out as machinery, in which case it needs to be carefully arranged to give a pleasing visual image.
- b. Screening may be used to conceal rooftop mechanicals, and in this case, the screening should be in the same idiom as the rest of the architecture.
- c. It may be possible to use both techniques listed above.
- d. To the extent possible, provisions should be made so that future cellular installations may be placed upon the building without detriment to the architecture, e.g. a blank wall of a mechanical screen may be conceived as such a location.



Examples of rooftop designs that are well integrated with the rest of the architecture of the building.
(Left: Biogen, Cambridge, Right: 600 Memorial Drive, Cambridge)

5. Ground Floor Design Guidelines

a. Retail or Mixed-use Ground Floors

– Uses

Goal: First floors of the buildings should be actively used.

Measures:

- a. **Along Major Public Streets** - Approximately 75 percent of the street frontage should be occupied by retail uses such as cafes, restaurants and shops.
- b. **Along Secondary Streets** - Approximately 75 percent of the street frontage should be occupied by active uses. Active uses include:
 - retail (i.e. cafes, restaurants, shops)
 - educational and cultural venues
 - services for the public or for commercial offices (fitness centers, cafeterias open to the public, daycare centers, etc.)
 - community spaces (exhibition or meeting space)
 - art/information exhibition windows; live/work spaces
- c. Lobbies for office, research and residential uses are discouraged from occupying extensive ground floor frontage.
- d. Carefully designed residential stoops and entries that meet ADA requirements are encouraged.

Goal: Retail and services should serve local communities as well as people who work in the area.

Measures:

- a. Leasing of space to small, locally-owned businesses is encouraged.
- b. Diverse retail and service offerings that serve current and future Kendall Square residents and surrounding neighborhoods (e.g. pharmacy, greengrocer, bakery, drycleaner, and convenience store) are encouraged.
- c. Street frontage allocated to bank uses should be limited to approximately 50 feet. Larger floor areas can be devoted to bank uses when fronted with other active retail uses.

Goal: Where retail is not provided, ground floor spaces should be designed to accommodate retail in the future.

Measures:

Standards for spaces convertible to retail include:

- a. Adequate floor-to-floor height (e.g. 15-20 feet) to allow food-oriented uses, with ventilation etc.
- b. Leasable ground floor depth from façade should average about 40 feet
- c. Ground floor level flush with or easily accessible from sidewalk
- d. Ground floor façade readily convertible to retail-style storefront
- e. Designed to accommodate venting and exhaust needs of food service uses
- f. Services such as interior power and HVAC zoned or easily convertible to enable convenient division and sublease of interior spaces to retail tenants.

– Setbacks

Goal: Create space at the sidewalk level to allow for interaction between activities on the ground floor of the buildings and the public sidewalk.

Measures:

- a. Ensure that the sidewalk includes ample space for walking, street furniture, street trees, bicycle parking and other plantings, and is designed to accommodate a high level of access for all users, including those in wheelchairs or pushing strollers.
- b. Provide a small setback (5 to 15 feet) from the right-of-way for café seating, benches or small open spaces.

Goal: Buildings should be directly engaging to the public and create a well-defined streetwall to help frame Kendall Square's streets and public spaces.

Measures:

- a. Setbacks exceeding 10 feet should be provided with caution.
- b. Setbacks used exclusively for ornamental landscaping are not encouraged.



Good examples of adequate sidewalk width directly associated with ground floor uses. (left: Tavern in the Square, right: Flour Bakery, Cambridge, MA)

– Façades

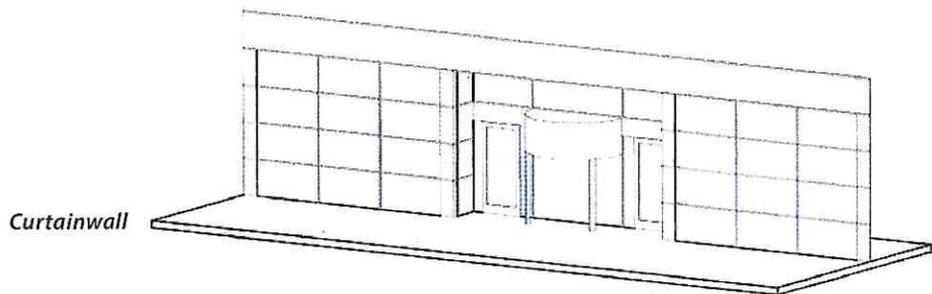
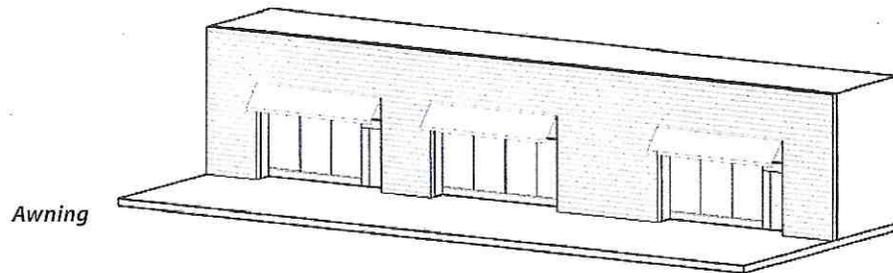
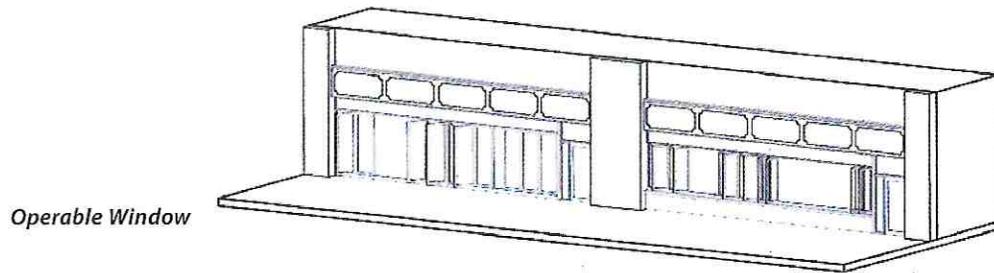
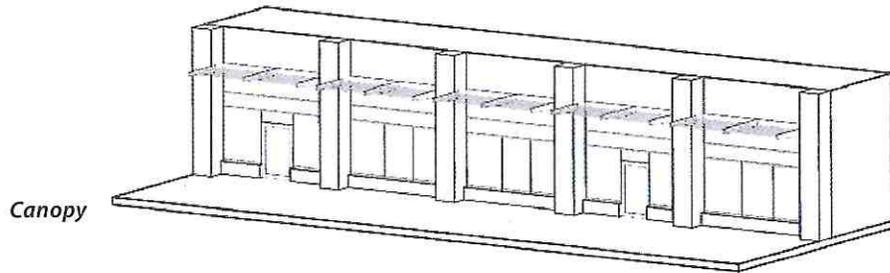
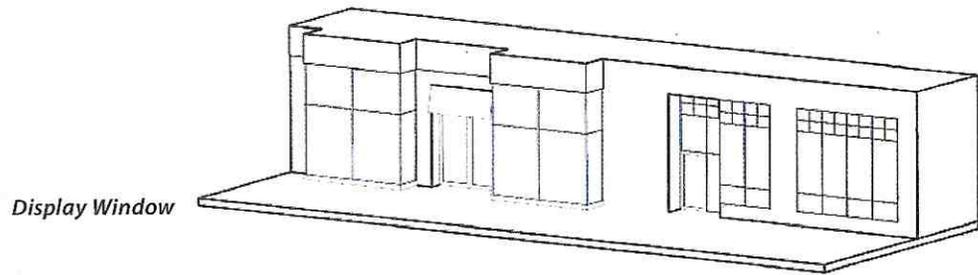
Goal: Design ground floor façades of building to reduce the distinction between exterior and interior space to extend the effective public realm indoors and reveal indoor activity on the street.

Measures:

- Transparent materials and interior lighting should be used to maximize visibility of street level uses. Transparency is most important in the portion of the facade between about 2 feet to about 10 feet above the sidewalk level, i.e. where people are likely to look in. Incorporate 60 to 75 percent transparent glazing in the ground level façade **along major public streets** and 40 to 60 percent transparent glazing in the ground level façade **along secondary streets**.
- Active ground level spaces should have strong, interactive connections with adjacent public sidewalk/plaza space using strategies such as extensive transparent glazing, interactive media or public art, large operable doors and windows, or associated outdoor seating.
- Blank walls exceeding 20 feet in length should be avoided.
- Awnings and canopies are encouraged to provide shelter and enliven ground floor facade.
- Mechanical/utility rooms and service/loading areas are not appropriate along the major streets and should be located on secondary streets.



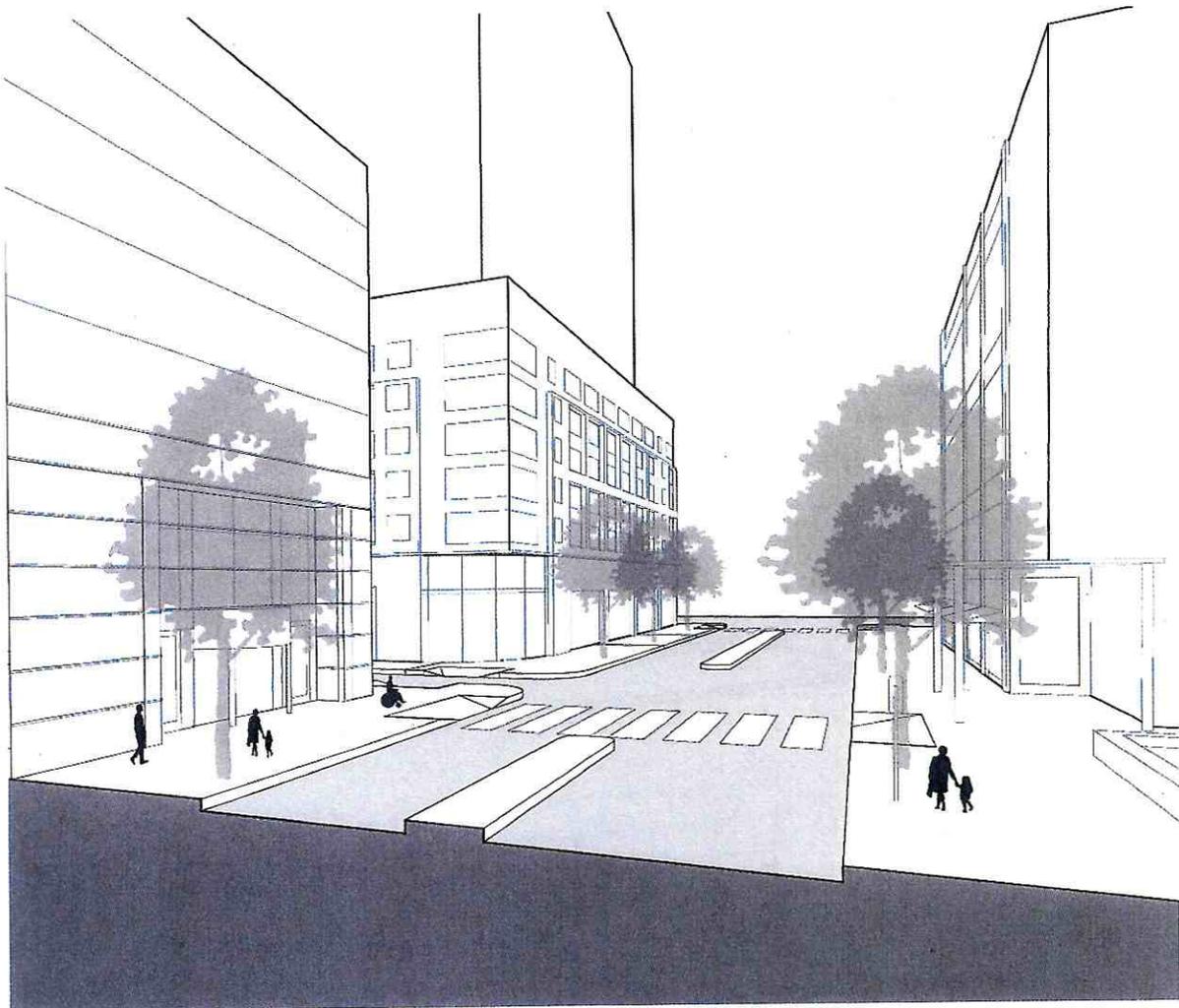
b. Effective strategies include combining highly transparent facades with prominent interior media (left: Apple store, Back Bay, Boston), installing large operable windows connecting indoor and outdoor (middle: Dwelltime, Cambridge) and outdoor seating (right: Lafayette Square, Cambridge).



Examples of well-designed building facades for the ground floor (bottom 20 feet) of buildings

– **Entrances**

Goal: Major entrances should be located on public streets, and on corners wherever possible. If appropriate, entrances should relate to crosswalks and pathways that lead to bus stops, transit and bike stations.



b. Residential Use Ground Floors

– Setbacks

Goal: Contribute to a pedestrian-friendly environment with residential character that includes ample space for walking, street trees and other plantings, and significant access to direct sunlight and sky views.

Goal: Create a consistent residential edge, with a setback from the sidewalk for compact front stoops, porches, and gardens, while ensuring compliance with state and federal access regulations.

– Entrances

Goal: Ensure that ground floor residences meet and exceed access needs of all users and incorporate ‘visitability’ measures. Providing fully accessible front entrances, beyond code requirements, is strongly encouraged, while balancing need for interior privacy. Consider strategies including:

Measures:

- a. Accessible raised ramps lining the façade (with a continuous accessible passage as well as defined semi-private areas)
- b. Ground-level entrances with added privacy elements such as 3- to 4- foot high walls, screens or vegetation, projecting trellises, or similar elements marking a transition to private space

– Façades

Goal: Wherever appropriate, design buildings with individual units and front doors facing the street, including row house units on the lower levels of multi-family buildings to create a rhythm of entrances and create a residential feel. Where residential lobbies face the street, doors should generally be spaced no more than 75 feet apart.

Goal: Residential buildings should also attempt to accommodate active uses that will enliven pedestrian activities.

Measures:

- a. In parts of the street level façade that do not include residential units (e.g. common places and lobbies), incorporate 40 to 60 percent transparent glazing in the ground level façade with direct views between sidewalk and interior building spaces to expand the apparent width of public space at ground level.
- b. Blank walls exceeding 20 feet in length should be avoided along all streets and pedestrian walkways.

6. Academic Buildings

Predominantly academic buildings should provide ground-level retail and services in the areas along public streets to foster positive connections among the academic, research, commercial, and residential communities.

However, academic buildings often have particular requirements that may make it difficult to meet these design guidelines. While academic buildings along major public streets should be held to the same standards as other commercial buildings, it is appropriate that there be greater latitude in ways to address the intent of the guidelines in the interior of the campus along Ames Street south of Main, Carleton, Hayward, and Amherst Streets.



The Koch Center on the MIT campus attempted to engage the public and convey the spirit of innovation through transparent ground floor facade that reveals public art gallery. However, the building is not actively used by the public. This attempt could have been improved by welcoming the public more directly with ground floor uses such as cafe or hosting events that are open to the public.

Academic Buildings Along Major Public Streets



Academic buildings along major public streets should be held to the same standards as other commercial buildings

Left: Academic buildings along major public streets should, like commercial buildings, devote 75% of their ground floor frontage to retail. 3401 Walnut St. inside the University of Pennsylvania's campus is a successful precedent of introducing ground floor retail in an academic building.

Right: Educational and cultural facilities open to the public encourage the public to experience institutional buildings while also helping to anchor destination retail and public places. The University of Pennsylvania's Institute of Contemporary Art, which is located adjacent to the retail and plaza space at Sansom Common welcomes the public by hosting programs open to the public (Copyright: Institute of Contemporary Art/ University of Pennsylvania. Photo by J. Katz).

Academic Buildings Interior to the Campus



Highly transparent ground floor spaces can bring life to institutional building edges.

Left: Hamilton Public Library and Farmer's Market in Hamilton, Ontario features interior graphics that are designed to be seen from outside (Copyright: Tom Arban).

Right: Massachusetts College of Pharmacy and Health Science on Longwood Avenue, Boston, displays lab spaces to show innovators at work at the pedestrian level. This street frontage creates an interesting walking experience for the passerby and helps to break down the perceived barrier between academic institutions and the general public.



Academic building lobbies could be welcoming to the public while maintaining private and quiet environments for academic uses.

Left: The Carl Ichan Lab building at Princeton University has ample seating with artworks in a wide open lobby. Visitors and people from outside of the university find this place comfortable and agreeable to sit and rest.

Right: The temporary exhibition space at the Harvard Graduate School of Design is also a good example of an academic building lobby. The space is reconfigured occasionally to feature works of the GSD community. This gallery space is well-known by the visitors of the campus and became a platform to introduce what is being done inside the institution (Copyright: Yan Da).

Memo

To: Cambridge Ordinance Committee
Cc: Donna Lopez, Interim City Clerk, for the Official Record
Fr: Carol O'Hare, Magazine St. near Memorial Drive
Date: February 26, 2013
Re: MIT's PUD-5 Proposal, continued

ATTACHMENT C

City officials, with input from staff, MIT reps and constituents, and the public have many significant concerns, issues and problems to analyze, digest and resolve before they decide to adopt MIT's revised, 26-acre PUD-5 zoning amendment.¹ Here are some that concern me.

A. Minimum Building Setbacks: Insignificant or None

Even after MIT's minor revisions, only "new commercial buildings" on only 3 streets - Main St., Third St. and Broadway - would surely be subject to only minimal building setback requirements.

So, the **following buildings** would be **exempt** from any absolute, building-setback requirements:

- Existing buildings, of course, and future renovations;
- The first 9± stories (0' - 85' up) of all buildings, including new ones; above 9 stories, 1/3 of the façade length may also be exempt;
- Existing and new buildings along all other streets, including 1/3-mile along Memorial Drive, hardly a minor thoroughfare;²
- Existing and new non-commercial buildings, including residential and institutional uses;
- New institutional buildings that include up to 25% of commercial space, not even counting any 1st-floor commercial space;³

Referring minimum setback requirements to the volunteer, changing-composition Planning Board and a set of *Design Guidelines* seems very risky, especially for a long-term build-out of such a large area.

B. Memorial Drive 150'-Height Subdistrict: Too High and Too Massive

Do you want to allow this >8 1/2-acre, 1/3-mile stretch along Memorial Drive (from MIT's Sloan School to Gray House at Ames St.) to have 150'-tall/13±-story buildings with no minimum yards or setbacks and no maximum FAR?

What about the 100 Memorial Drive apartment complex (owned by New England Mutual, not MIT) located smack-dab in the middle of this Subdistrict? Does this rezoning mean they'll have the right to increase the height and bulk of their structures?

C. So-Called "Mitigation" for Proposed Rooftop Mechanical Noise

The "mitigation" proposed is actually less restrictive than the City's existing City Noise Standards for Industrial Districts having residential uses.

¹ CDD's helpful analysis, comparisons with the K2 recommendations, and suggestions are posted @ <http://www.cambridgema.gov/CDD/zoninganddevelopment/Zoning/Amendments.aspx> > CDD Memo January 11, 2013 and > CDD Memo February 15, 2013.

² At a Planning Board hearing, an MIT presenter said that setbacks were required from all "major" streets. Per CDD: "K2 Design Guidelines recommend a setback along all streets (not just major streets) and an additional 10-foot step-back above 45 feet."

Note: Per a recent change, the Red Cross Building will have some "breathing space."

³ So, for example, there would be no setback requirement from any street for a new 17-story building having 5 floors of commercial use, including the 1st floor, even above its 9th floor.

MIT's proposal would impose "commercial district noise standards" for all new buildings in its 26-acre PUD-5 District. Although they call this "mitigation," their noise standards would be less restrictive than the noise standards currently imposed in both (i) residential zoning districts and (ii) industrial zoning districts having residential uses, which require noise to be reduced at night. That makes no sense, especially because significant housing is proposed or contemplated for the new PUD District! See attached Cambridge "Table of Zoning District Noise Standards."

Residents, including graduate students, should be protected at least as much as residents are in industrial zoning districts from disturbing, extraneous noise that intrudes, whether they open their windows or not.⁴ I assume that's why Councillor vanBeuzekom proposed her Policy Order Resolution⁵ to strengthen the City's Noise Ordinance so it "successfully protects the health of the residents of the city and successfully keeps the volume of noise pollution to appropriate levels within our city's residential neighborhoods."

This is a quality of life issue: the increasing noise pollution that disturbs the quiet enjoyment of our residential neighborhoods. Yes, we live in an urban environment, but that doesn't mean residents should have to endure louder, more frequent and more persistent noise intrusion or "pollution" any more than we're expected to endure air or water pollution. Noise pollution can be as psychically harmful as air and water pollution are physically harmful.

CDD's memo says of this leeway: "This requirement is not specifically discussed in the K2 study, but is consistent with requirements in other parts of Kendall Square." This comment implies that that's ok, which it most definitely is not.

If, for cost-savings, developers choose to install noisy equipment on their roofs instead of inside their buildings, they should be required to use state-of-the-art equipment to eliminate or reduce all negative impacts, whether to air quality or life quality.

C. Graduate Student Housing Insufficient - Listen to Their Pleas!

D. Conceptual Master Plan Should Be Required

CDD staff has wisely suggested this.

E. 15% "Publicly Beneficial Open Space" Requirement

Is there a risk that the potential "Publicly Beneficial Open Space" be nibbled away bit by bit unless it is identified up-front, as suggested by CDD, so that City officials can see what's being nibbled as MIT presents projects serially in the future?

⁴ A reasonable and understated member of the Cambridgeport Neighborhood Assoc. list serv recently wrote:

"Again, to propose housing (for whatever income) cheek-by-jowl with lab uses without amending the Noise Ordinance is a threat to public health.

Current permitted levels fail to protect people who live and sleep nearby. The sound of the HVAC machines never, ever stops, not through the night, not on a Sunday morning after a blizzard when all else is silence.

The developers of these buildings wouldn't put up with that for 5 minutes. Would any of our elected or appointed officials?"

⁵ This was Policy Order Resolution 14 at yesterday's City Council meeting.

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CBOMemo.doc

Cambridge Noise Control Ordinance
TABLE 8.16.060
TABLE OF ZONING DISTRICT NOISE STANDARDS
Maximum Allowable Octave Band Sound Pressure Levels

Octave Band Center Frequency Measurement (Hz)	Residential Area		Residential in Industrial*		Commercial Area	Industry Area
	Daytime	Other Times	Daytime	Other Times	Anytime	Anytime
31.5	76	68	79	72	79	83
63	75	67	78	71	78	82
125	69	61	73	65	73	77
250	62	52	68	57	68	73
500	56	46	62	51	62	67
1,000	50	40	56	45	56	61
2,000	45	33	51	39	51	57
4,000	40	28	47	34	47	53
8,000	38	26	44	32	44	50
Single Number Equivalent (dB(A))	60	50	65	55	65	70

**These noise standards are set to protect residential uses situated in Industrial Zoning Districts.
[Note & color added by C. O'Hare]*

ATTACHMENT D

As community representative on the Kendall Square Advisory Board, I

attended meetings twice or three times a month over a year to discuss

with all the developers how Kendall Square could be redeveloped. *successful*

During the process I asked CBT Architectural Firm to meet with a

subcommittee of East Cambridge Planning Team members to help us

understand how best new development could serve the residential as

well as business community. We did finalize a design that I presented at

a KSA meeting and at the Kendall Square Advisory Committee. It

included those aspects which were most important to us: open space

throughout the area in the form of interactive spaces; active ground

floor retail; (no big box) and, housing of various kinds. We wanted the

streets to become vibrant around the Kendall Station and to use the

central portion of Kendall as a large gathering space for outdoor

activities. We hoped to develop the other side of the Broad Canal to

invigorate that retail that is there. Yes, we included graduate housing in

and around Kendall and Central. Our plan did just that. It was a win-win

plan well accepted by the Planning Board. *accepted*

Many of our ideas were incorporated into the present Kendall Square

plan. We have seen MITIMCO come a long way in changing their design

to include those aspects we felt most important to the long-term

survival and vitalization of Kendall Square. *we* ~~I fully support their efforts~~

and look forward to working with them in the future. MITIMCO will be

coming to the East Cambridge Planning Team tomorrow evening to

share their plan.

Point of Order:

City Council adapts both ends of the road? both ends of the road?

Barbara Formosa

~~MITIMCO will be~~

~~MITIMCO will be~~