

KENDALL SQUARE PLAN: SUMMARY OF ZONING & URBAN DESIGN RECOMMENDATIONS – PART 2

KENDALL SQUARE DESIGN GUIDELINES

The **Kendall Square Design Guidelines** are created as part of the Kendall Square-Central Square Planning Study to inform property owners, business owners, developers, and the general public about the desired form and character of development in Kendall Square and will guide development activities in this area. The aim is to create consistently high-quality public environments, and to ensure that development contributes to the character and vitality of the surrounding community. These guidelines will be referenced in the City’s Zoning Ordinance in the Project Review Special Permit section and in the PUD text 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 Overlay District. The guidelines articulate the design and site planning goals for Kendall Square, and measures to achieve them, while recognizing that other creative design solutions 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.

The Kendall Square Design Guidelines provide ideas on site design and building form to support the vision and goals for Kendall Square and to create a district where the tall buildings with large floorplates that are needed by the twenty-first century knowledge economy are designed to be good neighbors to public spaces, small existing buildings, and residential uses that will create a positive, mixed use district; where the impacts of bulk and height are sensitively managed, and where all buildings interact positively with public space and create active ground floors that animate the major streets and contribute to creating a vibrant public realm.

BUILDING DESIGN & SITE PLANNING

1. Shadow Impacts

Goal: Locate and shape buildings to minimize shadows on public parks and plazas – particularly Point Park, the North and South Plazas at Cambridge Research Park, Broad Canal area, and the anticipated Volpe public park(s).

2. Wind Impacts

Goal: Design new buildings and open spaces to minimize negative wind impacts on streets and public spaces.

3. 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.

4. Universal Design (Human Centered Design)

Goal: Development should enhance accessibility for all and aim to exceed state and federal accessibility laws and regulations. Practices such as universal design / human centered design that improve the environment for all people are highly encouraged to shape the built and public space environments to be welcoming and usable by everyone including children, adults, people with and without disabilities, individuals of different height and sizes, etc..

Measures:

- a. Design spaces for equitable use so that they are useful and marketable to people with diverse abilities.
- b. Accommodate a wide range of preferences and abilities by designing for flexibility in use.
- c. Facilitate ease of use regardless of the user's experience. Permit efficient and comfortable use with low physical effort and provide appropriate size and space for approach and use.
- d. Communicate necessary information effectively regardless of user's sensory ability
- e. Minimize hazards and unintended consequences

Specific examples such as:

- f. One zero-step entrance
- g. Interior doors, including bathrooms, with 32 inches or more of clear passage space
- h. At least a half bath (preferably a full bath) on the main floor

5. Relationship to the Context

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. Development should respond to these adjacencies through sensitive site planning and building design.

Measures:

- i. include height setbacks to create sensitive transitions to adjacent low-scale buildings
- j. design and locate public and private open space to be responsive to adjacent uses
- k. Use sensitive site planning and building design to reduce impact on significant view corridors from public spaces

6. Vegetative Cover

Goal: All development should make a positive contribution to increasing vegetative cover, improving stormwater infiltration, and reducing heat island effect.

7. 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 and bikeability of the area and minimize dead zones, particularly along major public streets and pedestrian corridors.

Measures:

- l. Locate loading and servicing areas away from major public street and significant promenades; use secondary streets or, preferably, internal alleyways for loading and service.
- m. Avoid creating loading/servicing areas exceeding two bays or 30 feet wide. Occupied ground level spaces with windows should occur between loading/servicing areas.
- n. 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 in use.

8. Academic Buildings Interior to the MIT Campus

Goal: Academic buildings should provide ground-level retail and services in the areas at the edge of the campus to foster positive connections between the academic, research, commercial, and residential community. However, they often have particular requirements that may make it difficult to meet the full range of these design guidelines. While academic buildings along major public streets should be held to the same standards as other commercial and institutional 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 Carleton, Hayward, and Amherst Streets, and on Ames Street south of Main.

9. Architectural Character

Goal: Buildings should have a clearly expressed base, middle, and top. This division should be expressed within the streetwall height zone as well as, for those buildings exceeding streetwall height. This may be achieved through changes in material, fenestration, architectural detailing, or other elements.

Goal: Create a well-defined streetwall to help frame Kendall Square's streets and public spaces. Ground floors of buildings should be engaging, should include active uses, and should provide adequate space along sidewalks for outdoor activity associated with active ground level uses.

Measures:

- a. 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.

Along major public streets (Main Street, Broadway, Binney Street, Third Street between Broadway and Binney, and Ames Street between Broadway and Main) create a datum at 85 feet

- i. Set back approximately two-thirds of the building façade above 85 feet from the principal façade by a depth of about 15 feet.
- ii. Façade areas without setback may be appropriate at corners or in specific locations to create architectural variety.
- iii. 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.)

Along Secondary Streets create a datum at 45 feet

- iv. Set back any portion of the building above 45 feet by at least 10 feet from the principal facade. Where appropriate, design these setbacks to include balconies and rooftop terraces.
- v. 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.).

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

Measures:

- a. Ensure that the sidewalk includes ample space for walking, street trees and other plantings, and significant access to direct sunlight and sky views and is designed to accommodate a high level of access for all users, including those in wheelchairs or pushing strollers.
- b. Awnings and canopies are encouraged to provide shelter and enliven the ground floor facade.

Along Major Public Streets (Main Street, Broadway, Binney Street, Third Street between Broadway and Binney, and Ames Street between Broadway and Main)

- c. Locate the facade at the property line or provide a small setback (5 to 15 feet) from the right-of-way for café seating, benches, or small open spaces directly engaged with interior uses.
- d. Setbacks used exclusively for ornamental landscaping are not encouraged.

Along Secondary Streets: Commercial & Institutional Buildings

- e. Contribute to a pedestrian-oriented street character, distinctly more intimate than a major public street, that includes ample space for walking, street trees and other plantings, and significant access to direct sunlight and sky views.
- f. Incorporate 60 to 75 percent transparent glazing in the ground level facade, with direct views between sidewalk and interior building spaces, to expand the apparent width of public space at ground level.

Along Secondary Streets : Residential Buildings

- a. Create a consistent residential edge, with a setback from the sidewalk for compact front stoops, porches, and gardens. Ensure that ground floor residences meet and exceed access needs of all users and incorporate ‘visitability’ measures.
- b. Contribute to a pedestrian-oriented street character that includes ample space for walking, street trees and other plantings, and significant access to direct sunlight and sky views.
- c. In parts of the street level façade that do not include residential unit entrances, incorporate 60 to 75 percent transparent glazing in the ground level facade, with direct views between sidewalk and interior building spaces, to expand the apparent width of public space at ground level. Include ground-level uses acceptable along Mixed Use Active Edges with commercial/institutional emphasis.

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 approx. 8’ in depth or that divides building form into major distinct massing elements.
- c. Use variations in height and architectural elements such as parapets, cornices, passive shading devices, illumination and other details to create interesting and varied rooflines and to clearly express the tops of buildings.
- d. Taller 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.

Goal: Buildings over 200 feet tall should place particular emphasis on architectural character of the top of the building which will be visible from afar and use design and architectural composition to create a distinct identity for the building and for Kendall Square.

Measures:

- a. Compose tall buildings to be seen from significant public places, enhancing them by defining their edges and/or serving as landmarks. Pay particular attention to views from public places.
- b. 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.

- c. Consider legibility of the building top both by day and night, while demonstrating responsible use of lighting and energy consistent with sustainability requirements. Methods of creating a distinct architectural composition include use and proportioning of materials, colors and/or shapes that differ from those of adjacent buildings.
- d. Avoid a monolithic appearance within a given building, and among adjacent buildings by using at least two distinct finish materials and/or colors on each building, and/or creating a dynamic shape(s) that presents different profiles to different vantage points.
- e. Emphasize vertical proportions in the architectural composition. Point towers expressing horizontal volumes are encouraged. Avoid broad “slab” volumes that are prominent from vantage points along major public streets including Main, Broadway and Third Streets, and from points in adjacent neighborhoods.

Goal: Vary the architecture of individual buildings to create architecturally diverse districts.

Measures:

- f. Where buildings are set back at upper stories, use of lower roofs as green roofs, balconies, terraces, and gardens.
- g. Convey the act and spirit of innovation in Kendall Square through transparency that directly reveals activity, and/or active media
- h. Create varied architecture and avoid flat facades by using:
 - recessed or projected entryways, bays, canopies, awnings, and other architectural elements in non-residential buildings
 - bays, balconies, porches, stoops, and other projecting elements in residential buildings

Goal: Minimize the perception of lengthy facades and increase articulation to break down the scale to create visual interest

Measures:

- i. Above 85 feet, set back significant sections of the building façade from the principal façade by sufficient depth to create a strong break in the form and reduce the perception of height on the ground (approx. 15 feet)
- j. At least one major vertical break – a displacement of approx. 8’ in depth, 16’ in width and 2/3 of building height – is recommended per 100’ of façade length.

10. Scale and Massing

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

Measures:

- a. 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 long views from nearby areas.

Height Range (feet)	Minimum building separation	Maximum length of perpendicular facades*
251' to 300' (this height is available 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

Goal: Upper-floor connections that include useable space can be used to straddle secondary streets, pedestrian and bicycle connections, and space within a block in order to connect buildings and allow opportunities for tenants needing larger floorplates than permitted by zoning. Such connectors should be designed to provide architectural interest, maintain permeability and physical connections, and continue to allow light and views of the sky.

Measures:

- a. Connections should be recessed from the facades facing streets and public spaces.
- b. They should be made highly transparent.
- c. Connectors should be designed to emphasize the distinct appearance of each building.
- d. Corridors that allow connections between multiple tenants/uses in different buildings are discouraged in order to ensure that the streets and ground plane remain active.
- e. Ground plane circulation should not be impeded and generous clearances of 35 feet or more should be provided.
- f. In instances where multiple connectors are provided, they should be placed so as to create architectural interest and to allow reasonable amount of light to reach the ground.

CREATING ACTIVE STREETS

Goal: Streets, sidewalks, and connections through large blocks should be designed to encourage pedestrian and bicycle use.

Measures:

Street and streetscape design, including trees and other plantings, street furniture, lighting, bike racks etc. should be utilized to create an identity for Kendall Square that speaks to its innovative, mixed-use, and bike, pedestrian, and transit oriented character.

A consistent wayfinding system for Kendall Square should be developed and utilized to assist people using all modes to safely and effectively navigate the area

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:

- b. Locate courtyards and open spaces to maximize sun exposure.
- c. Leasing of space to small, locally owned businesses is encouraged.
- d. 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.
- e. Driveway turnaround and vehicle drop-off facilities along public streets are discouraged.
- f. Street frontage allocated to bank uses should be limited to approx. 50 feet. Larger floor areas can be devoted to bank uses when fronted with other active retail uses.

Along Major Public Streets (Main Street, Broadway, Binney Street, Third Street between Broadway and Binney, and Ames Street between Broadway and Main)

- g. Create active ground floors in these areas and create strong connection between activities on the ground floor uses and the public realm. Mechanisms to accomplish this include the following:
 - i. Approx. 75 percent of the street frontage should be occupied by retail uses such as cafes, restaurants and shops. In general, minimum depth of retail should be 40 feet.
 - ii. 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, and/or associated outdoor seating.
 - iii. Major entrances should be located on public streets, and on corners wherever possible. Entrances should relate to crosswalks and pathways that lead to bus stops, transit and bike stations.

- iv. Transparent materials and interior lighting should be used to maximize visibility of street level uses. 60 to 75 percent of the ground floor façade area should consist of unobstructed transparent material that permits clear views between the sidewalk and interior building space.
- v. Blank walls exceeding 20 feet in length should be avoided.
- vi. Service/loading areas are not appropriate along the major streets and should be located on secondary streets.

Along Secondary Streets: Commercial & Institutional Buildings

- h. Design ground floors to support public activity throughout the day and evening, now and/or in the future. Mechanisms to accomplish this include the following:
 - i. Approx. 75 percent of the street frontage should be occupied by active uses. In general, minimum depth of retail should be 40 feet.
 - ii. Where retail is not provided ground floor spaces should be designed to accommodate retail in the future. Active uses include retail (i.e. cafes, restaurants, shops); educational and/or 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; commercial lobbies and front doors
 - iii. Standards for spaces convertible to retail:
 - a. 18-20 foot floor-to-floor height
 - b. Leasable ground floor depth from façade should average at least 40 feet
 - c. Ground floor level flush with and/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
 - iv. Incorporate 60 to 75 percent transparent glazing in the ground level facade, with direct views between sidewalk and interior building spaces, to expand the apparent width of public space at ground level. Include ground-level uses acceptable along Mixed Use Active Edges with commercial/institutional emphasis.
 - v. 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, and/or associated outdoor seating.
 - vi. Office and research uses are discouraged from occupying extensive ground- floor frontage. Where these uses do occur, they should occupy no more than 200 to 240 feet of continuous frontage along public streets.
 - vii. Major entrances should be located on public streets, and at or near corners wherever possible. Entrances should relate well to crosswalks and pathways that lead to bus stops, transit and bike stations.

- viii. Transparent materials and interior lighting should be used to maximize visibility of street level uses. Ground floor facades should consist of at least 40 to 60 percent transparent materials to permit clear views between the sidewalk and interior building space.
- ix. Blank walls exceeding 20 feet in length should be avoided.
- x. Loading/service areas are acceptable per the standards outlined below.

Along Secondary Streets: Residential Buildings

- i. 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.
- j. Providing fully accessible front entrances, beyond code requirements, is strongly encouraged, while balancing need for interior privacy. Consider strategies including; 1) accessible raised docks lining the façade (with a continuous accessible passage as well as defined semi-private areas); and 2) ground-level entrances with added privacy elements such as 3- to 4- foot high walls, screens or vegetation, projecting trellises, and/or similar elements marking a transition to private space.
- k. Blank walls exceeding 20 feet in length should be avoided along all streets and pedestrian walkways.
- l. Loading/service areas are acceptable per the standards outlined in the 'Loading and Service' section.

Along Park Edges

- m. Development at the edge of parks and plazas should, in addition to satisfying the active edge criteria identified above, support welcoming and active park spaces. Mechanisms for accomplishing this include the following:
 - i. Pay special attention to surrounding the parks, plazas, and public spaces with uses that create an active environment throughout the day and evening and increase safety for park users through.
 - ii. Set back about two-thirds of the building façade above 85 feet from the principal façade a depth of at least 16 feet. In addition, create vertical breaks for building volumes above 120' in height facing the park -- facades facing the park exceeding 100' in width should be separated from adjacent facades by a gap of at least 50 feet, extending back 50 feet from the ground level facade. Residential balconies may project up to 4 feet into setbacks and gaps. Façade areas without setback may be appropriate at corners or in specific locations to create architectural variety.