



DESIGN GUIDELINES FOR MULTIFAMILY HOUSING **DRAFT APRIL 2025**

CITY OF CAMBRIDGE
COMMUNITY DEVELOPMENT DEPARTMENT

Prepared by the City of Cambridge Community Development Department 2025

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1. INTRODUCTION

These multifamily design guidelines are meant to help designers and developers of multifamily buildings across the City of Cambridge. Multifamily housing is a mode of living where individual homes share the same building. It is one of the features that distinguishes dynamic urban communities. The vast majority of people in Cambridge live in multifamily housing. A “multifamily” building is a building that contains three or more dwelling units, meaning a space intended for living – in other words, it has space for sleeping, and a kitchen and a bathroom.

Regardless of the size or location, all multifamily buildings are important in shaping our City – both in terms of the design or architecture of the building, and also how it fits within all of the buildings on the street and what it might feel like to walk by it on the sidewalk. Buildings on a street form blocks and blocks form neighborhoods, and as you know our neighborhoods (and squares and corridors) together make Cambridge feel like Cambridge. Whether a new building needs special permission or not to be built, we hope that these guidelines can make a difference...because the details do matter.

Lastly, whether or not you dig deeply into these guidelines, the City’s Urban Design staff in Community Planning & Design would invite anyone seeking guidance to meet and discuss a proposed project.

How to Use this Document

This document is broken into four separate sections and starts with higher-level issues in design, and gradually zooms in to finer-grained details of multifamily buildings:

- **Site Design** – Site layout, open space, large site development, circulation, parking, lighting, and art.
- **Building Design** – Context, massing, facades, tall buildings, and historical buildings.
- **Sustainability** – Green building, resiliency.
- **Principles in Practice** – Putting it all together.

The final part of this document includes a section called “Principles in Practice”, which illustrates how the sections outlined above work together and apply to different types of buildings in different parts of the City.

Each section consists of key elements of that topic area, with individual bits of design advice that are most important to designing buildings the right way. No building can meet every guideline, and that’s okay. What guidelines are most important might change depending on the project, its location and context. However, developers and designers should strive to achieve most of these guidelines where possible and appropriate. Buildings have a responsibility to contribute positively to the places where they are built. When that happens – we are all better served.

Some Housekeeping

These guidelines were originally created as the “Affordable Housing Overlay Guidelines”, when the City first adopted its Affordable Housing Overlay zoning in 2020. Reflecting on the original purpose of these guidelines, it became clear that good multifamily design is not limited to affordable housing. Similarly, the design guidance that applies to affordable housing should otherwise apply to all multifamily development. In early 2025, the City updated its Zoning Ordinance to permit multifamily buildings citywide. Thus, this document has evolved to generally apply to all multifamily development, whether or not it occurs under the Affordable Housing Overlay in Section 11.200 of the Zoning.

This document is meant to be used wherever design guidelines for affordable housing or other types of housing are applicable

1.1 PRINCIPLES OF GOOD MULTIFAMILY DESIGN

Being a good building means being a good neighbor. Here are overarching principles to be followed for every development, regardless of its size or location:

- **Context** – In neighborhoods with a clear, established architecture, new buildings should consider reflecting common design elements. In more diverse areas, new buildings can stand out more.
- **Enhance the City** – New buildings should be pleasant, safe and interesting to walk by and interact with.
- **Neighborly Massing – Arrange the building massing and layout to be sensitive to privacy and solar access for neighbors where possible.**
- **Attention to Detail** – Incorporate architectural details, like string courses, lintels, sills, and trim to add richness to building facades.
- **Ground to Sky** – Pay special attention to the design of ground floors and how passersby will experience the building. Design the tops and roofs of buildings to make the skyline interesting to see from up close and far away.
- **Common Spaces** – Add areas of shared space (either open or inside the building) so that neighbors can get to know one another.
- **Harmonize with History** – Pay homage to historical buildings by letting them be the stars of the block.
- **Climate Resilient** – Make new buildings energy efficient and safe from future climate conditions, like flooding and heat.

1.2 UNDERSTANDING NEIGHBORHOOD CONTEXT

Design should begin with reviewing existing city plans for the area - including citywide plans - as well as an analysis of the site and its context.

The analysis should address:

- The project's consistency with City's relevant planning documents
- The characteristics of the public realm: the form and character of adjoining and nearby streets, squares, parks, and other open spaces
- Surrounding land uses and building types, including parks, retail, community services and other amenities
- Pattern of the neighborhood's urban blocks
- Building siting and the relationships of buildings to the public realm
- Building height, massing, and scale
- Architectural details
- Colors and textures of building materials
- Distances to nearby public parks and their features
- The vehicular, transit, bicycle, and pedestrian circulation network
- Vehicular and bicycle parking
- Aspects of architectural and landscape design that contribute to neighborhood character

2. SITE DESIGN

Good site design means fitting in to the existing neighborhood context. Projects do this by thinking carefully about where buildings are located and positioned on the site, as well as important site elements - like open spaces and landscaping, entrances and exits, and parking.

2.1 SITE LAYOUTS: RESPONSE TO CONTEXT

OBJECTIVES

Harmonize with the neighborhood context, including the surrounding urban patterns of streets and blocks, building setbacks, travel paths, and open spaces. In existing neighborhoods with established patterns of development, responsive and context-sensitive site design will help enhance the character of the built environment. In evolving areas of the city, new developments should help achieve the city's goals for urban character.

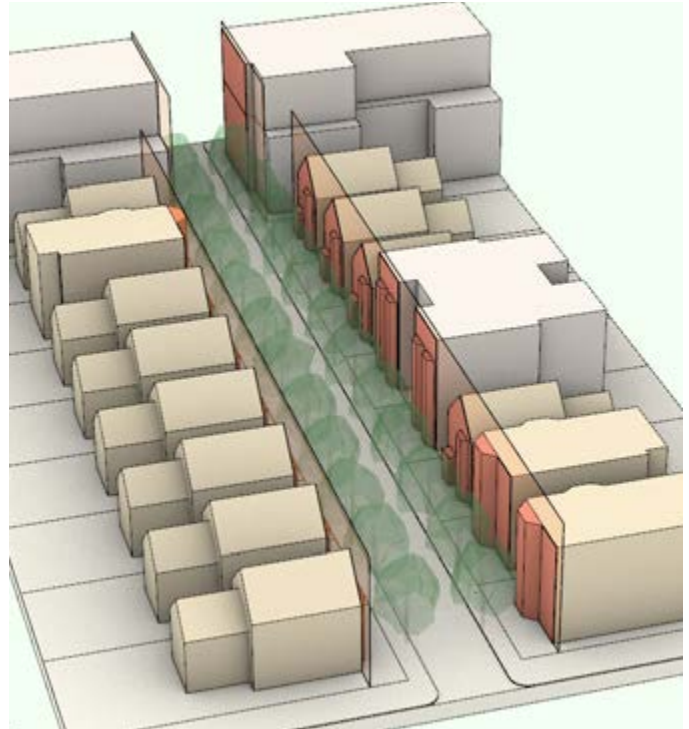
GUIDELINES

- a. In existing well-developed areas, where urban patterns are relatively uniform and stable, site buildings and design landscapes for compatibility with existing urban patterns of building siting and street character.
 - Front yard setbacks should generally align with those of the neighboring buildings.
 - Reference the prevailing pattern of building orientations, and the location of entrances as much as possible.
 - Exceptions may be desirable where they reinforce the larger pattern of the city's civic structure, for example, where a residential street meets a retail corridor street that has a zero setback, the corner lot may appropriately have a zero setback on both streets.
- b. In areas where the patterns of development are diverse, locate buildings in relation to neighbors with the aim of creating a coherent streetscape while meeting other citywide objectives articulated in these guidelines.
- c. In evolving areas of the city, locate new buildings and site elements to support the planned streets and patterns of development.
- d. On streets primarily consisting of residential buildings, the streetwall facades of multifamily buildings should generally align with the front facades of their neighbors.
- e. In high-density areas, such as commercial corridors, multifamily buildings should frame streets and squares with streetwall facades aligned on the sidewalk.
 - Site new buildings to maintain the continuity of existing retail frontage while allowing for comfortable sidewalk width and creating opportunities for activation such as outdoor seating.
 - Side setbacks visible from the street should generally be avoided: streetwall facades should meet abutting buildings at a party-wall condition.
- f. Locate open space in relation to adjacent yards and residential units that would benefit from natural light and views.
- g. Where site dimensions allow, consider creating internal courtyards, and semi-enclosed courtyards open to rear yards.
- h. Where feasible, place buildings and design landscapes to minimize impacts on nearby existing buildings, respect the privacy of neighbors, maintain solar access, and to take advantage of views from the site.
- i. In siting new buildings, consider public views to nearby landmark buildings, public open spaces, public art, or other features of significant visual interest.

- j. Locate and design parking, trash storage, and mechanical equipment and its screening to minimize impacts on adjoining residences and on the public realm.



On retail corridors, locate the streetwall zone of the building facade at the back of the sidewalk.



On residential streets, provide a front yard setback compatible with that of neighboring buildings. Where a residential street meets a retail corridor with a zero setback, the corner lot may appropriately have a zero setback on both streets. .



A residential building's terrace that connects residents with the Charles River.



Residential forecourts that open onto a tree-lined street, connecting semi-public space within the site with the public street.

2.2 OPEN SPACE AND LANDSCAPE DESIGN

OBJECTIVES

Give opportunities for residents to enjoy nature, interact with each other, relax, and play. Provide additional environmental benefits and minimize impacts on neighbors, while contributing to the City's beauty.

Minimize the impact of on-site parking, building services, and utilities on the public realm.

Respond to the natural characteristics of the site, including tree cover, topography, hydrology, and sea level rise and storm surge levels (SLR/SS).

GUIDELINES

- a. Maximize vegetation—particularly canopy trees—to shade and enrich streets and other public open spaces.
- b. Provide gathering places, green spaces, and other types of outdoor spaces, as appropriate to the site, context, and building form: yards, entry forecourts, interior courtyards, play areas, decks, patios, open lawns, porches, loggias, balconies, roof terraces, and upper-level decks.



Provide open spaces with amenities to serve the diverse needs of residents.

- c. Where possible in dense residential neighborhoods and on corridors, provide landscaped forecourts and inner courtyards to create transitional space between the public street and the building lobby, to provide light and air to unit interiors, and to enrich the site with plantings.
- d. Consider locations for seating at building entrances, courtyards, and along paths.
- e. In residential neighborhoods, design front yards to frame the street and sidewalk and to enhance the privacy of building interiors. Consider organizing front yard landscape elements—low walls, low planting or hedges, fences, trees, ground cover, foundation planting, etc.—as a series of layers parallel to the sidewalk to frame the space of the street and to delineate thresholds of privacy as one moves from the sidewalk to the building entrance.
- f. Consider summer shading and winter solar access in the design of all communal open spaces.
- g. Support play and recreation. Where possible, integrate playful design elements and features throughout the site, rather than in insular locations. See the Cambridge's "Play in the Public Realm" and "Healthy Parks and Playgrounds" for additional recommendations.
- h. Where space allows, prioritize larger shade trees over smaller ornamental trees.
- i. Minimize the urban heat island effect by preserving existing mature canopy trees wherever possible and by planting new ones to shade buildings, open spaces, and paved surfaces.



Forecourts and courtyards in block interiors should be conceived as integral components of the pattern of neighborhood streets and other open spaces.



Forecourts should celebrate building entrances. Where possible, provide amenities, including shade and places to sit.



Front yards should enrich the public realm, with plantings and other landscape features.



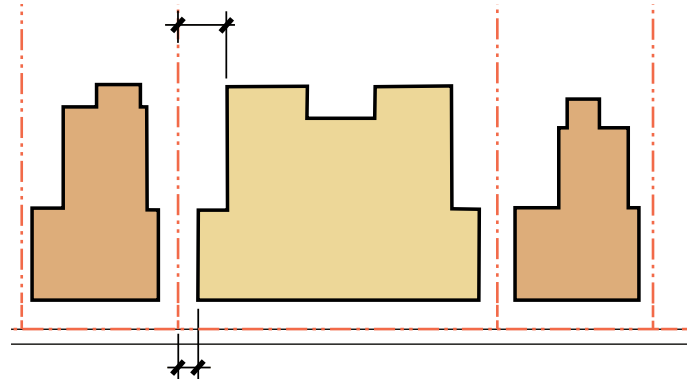
2. SITE DESIGN

- j. Consider the location, dimension, and orientation of open spaces to best promote healthy trees and other vegetation.
- k. When possible, improve adjoining public sidewalks, and plant curbside street trees.
- l. Follow the recommendations of the Department of Public Works and the [City's Urban Forest Master Plan](#) for species, planting standards, and care.
- m. Select species for plantings and ground cover that are appropriate for urban conditions.
- n. Minimize paved surfaces. Use permeable surfaces wherever possible for pedestrian pathways, parking areas, and other outdoor spaces.
- o. Use landscaping to screen surface parking and vehicular driveways from residential units and open spaces on and adjoining the site.



Courtyards are places of connection. They are venues for public events, casual meeting and relaxation, and play. As shared open spaces, they contribute to the identity of the project and help reinforce residents' sense of place.

- p. Screen loading and trash areas, meters, mechanical units, electrical transformers and switchgear, and utility equipment with plantings, fences, site walls, or other appropriate landscape elements.
- q. Consider providing side and rear setbacks, especially in residential contexts and for portions of multifamily buildings greater than 40 feet from the front facade to minimize impacts on adjoining existing buildings and on their rear and side yards.



Where possible, minimize impacts on neighbors with wider side yard setbacks at rear portions of new multifamily buildings.



Landscape design should provide shade, permeable surfaces, and offer the beauty of vegetation.

2.3 MULTIFAMILY DEVELOPMENT ON LARGE SITES

OBJECTIVES:

Design large multifamily residential complexes to contribute to the beauty, order, walkability, and comfort of their neighborhoods.

Developments consisting of multiple buildings and/or blocks should be integrated into the existing street and block network, and be compatible with existing building scale and public spaces in the neighborhood.

GUIDELINES

- a. Take advantage of opportunities to design internal streets, paths, and broader open spaces to connect with the surrounding urban pattern.
- b. In large developments, consider creating through-block pedestrian and/or vehicular connections.
- c. Where possible, divide large multifamily projects into separate buildings to enhance their compatibility with the typical scale of Cambridge's residential neighborhoods.
- d. Take advantage of opportunities to provide public parks and community spaces to serve the needs of the surrounding neighborhood.
- e. Improve the streetscapes of bordering streets with new trees and other plantings, pavement, and street furniture, etc.
- f. For large buildings, provide multiple entrances wherever possible.



Large multifamily project divided into a group of separate buildings organized around a shared courtyard, each addressing the adjoining public street.



Large multifamily project organized by its internal street system and connected to a neighboring residential complex. Courtyards, both fully enclosed and partially open, provide spaces for play and connection.



Multifamily housing project on a large site, integrated into the civic structure of its neighborhood. The buildings are arranged to continue the pattern of the context's urban blocks; the courtyard engages the neighborhood streets.



Street trees offer shade, beauty, and spatial definition to the sidewalk and street. Multiple building entrances enrich the sidewalk with visual interest and activation.



An internal pedestrian walk, activated by building entrances, organizes the layout of this multifamily housing project and connects it to the public street and park.



2.4 CIRCULATION

OBJECTIVE

Promote non-motorized mobility by prioritizing pedestrian-friendly and bike-accessible site design.

GUIDELINES

- a. Create direct, functional, and beautiful paths for pedestrians and bicycles from the public sidewalk to building entrances. Pedestrian access to the building and site should be clearly articulated and accessible to people of all levels of ability, and should take precedence over other mobility modes.
- b. Design and lay out path systems to provide intuitively clear routes for pedestrian and bicycle movement.
- c. Provide adequate signage to additionally clarify wayfinding and use of paths.
- d. Where possible, locate building entrances on public streets, or in forecourts directly visible from public streets. Secondarily, locate building entrances on interior courtyards or pedestrian streets.
- e. On corner lots with non-residential street-level uses such as retail, consider locating their entrances at or near building corners.
- f. Establish pedestrian path widths and select their materials in accord with their uses and locations on the site.
- g. Where appropriate, consider secondary elevated sidewalks, and streets and sidewalks that are raised in areas where flood risk is high and large-scale and multi-site development is expected to occur. In such cases, area-specific studies and guidelines apply and should provide additional details
- h. Minimize the number and widths of curb cuts and driveways.
- i. Where possible, utilize shared driveways to minimize the number of curb cuts. Otherwise, locate curb cuts on secondary streets rather than on primary streets.



Celebrate building entrances.



Prioritize the pedestrian experience.

2.5 PARKING

OBJECTIVE

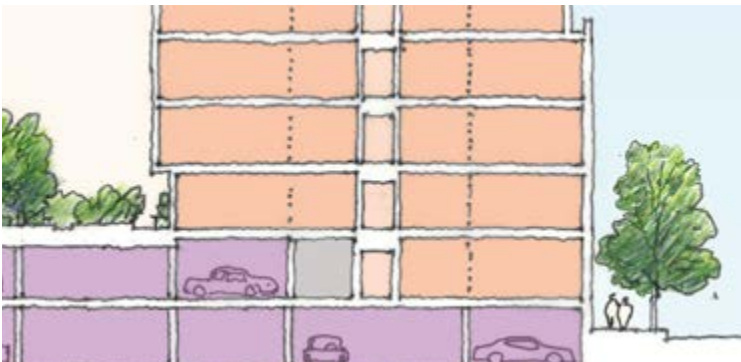
Minimize the impact of parking and driveways on residents, neighbors, and the general public.

GUIDELINES

- a. Arrange driveways and parking to avoid conflicts with pedestrian and bicycle movement.
 - b. Minimize the site area dedicated to driveways and parking and maximize its distance from neighboring properties.
 - c. Use green walls, hedges, art work, metal stencils, fences, louvers, sun shading elements, or other means to visually screen parked cars.
 - d. Provide canopy trees to shade surface parking lots where possible. Otherwise, consider shading structures or photovoltaic arrays.
 - e. Utilize permeable pavement where possible.
 - f. Consider light colored, solar-reflectant, or high SRI pavers or pavement.
 - g. Provide curb-side or off-street active curb spaces for short-term service needs, like pick-up/drop-off and loading and delivery.
 - h. Locate bicycle parking in accordance with the City's Bicycle Parking Guidelines.
 - i. Screen under-building parking and long-term bicycle storage from the public realm with residential units, common areas, retail, or other ground floor uses.
 - j. Avoid loading and servicing areas that exceed two bays or 30 feet.
- *See 3.7 Parking, Utilities, and Service Elements for architectural design guidance*



Shade parking areas and driveways and screen them from view.



Hide under-building parking from public view, or minimize its impact on the public realm.



2.6 UTILITIES AND SERVICES

OBJECTIVE

Minimize the visual, acoustical, and environmental impacts of essential utilities and services on residents, neighbors, and on the public.

GUIDELINES

- a. Locate utility functions such as gas, electric, and water meters, transformers, switchgear, and fire safety equipment where they will be least visible from the street. Where possible, conceal them within the building or in side or rear yard setbacks. They should be planned for early in the design process to minimize their impacts.
- b. Locate mechanical elements such as HVAC units, condensing units, ventilation outlets, mechanical exhausts, louvers, and similar elements to minimize their visibility from the

public realm and from neighboring sites and buildings. Screen them with plantings, fences or other materials that complement the site design and the building's architecture.

- c. Avoid locating air conditioning condensing units on the ground. They should be located on roofs wherever possible.
- d. Locate roof mounted air conditioning equipment, and mechanical penthouses away from roof edges and/or provide parapets with adequate height to screen them from adjacent properties and public areas.
- e. Minimize the noise impact of rooftop mechanical equipment with sound damping materials and screens and proper acoustic and sound isolation methods.
- f. Screen trash and recycling areas with landscaping and/or fencing and ensure that noise and odor-generating functions are fully enclosed.

**See 3.7 Parking, Utilities, and Service Elements for architectural design guidance*



To minimize their impacts on residents and the general public, utilities and service functions should be located sensitively. Screening should be designed as an integral element of the landscape design.

2.7 OUTDOOR LIGHTING

OBJECTIVE

Provide lighting for safety and functionality while minimizing energy use, light pollution, glare, and other negative impacts on neighbors, wildlife, the public realm, and the larger environment.

GUIDELINES

- a. Use lighting only for safety and functional purposes such as providing wayfinding along access/egress routes, allowing open spaces to be usable in the evening, illuminating signage, or subtly accentuating key architectural elements such as building entrances.
 - b. Avoid excessive contrast in lighting levels.
 - c. Provide lighting that is fully shielded, downlit, dark sky compliant, has a warm color temperature, and is at or below typical neighborhood
- d. Carefully consider lighting for pedestrian safety and aesthetic quality, including at first floors (lighting of stoops, entrances, and glazed retail spaces), covered parking areas with open sides, and the lighting of highly glazed interior spaces such as stairways.
 - e. Select lighting fixtures that minimize energy consumption.
 - f. Employ timers, automatic dimming, or other mechanisms to avoid excessive lighting.
 - g. Consider using solar powered lighting.
 - h. Shield lighting to prevent glare and minimize light trespass.



Design and locate lighting for functionality, safety, and aesthetics.

2.8 PUBLIC ART

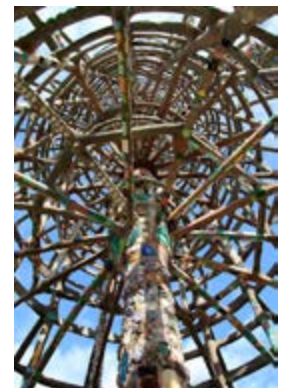
OBJECTIVE

Look for opportunities to enrich the visual environment and strengthen the sense of place by incorporating art.

GUIDELINES

- a. Consider incorporating public art as an integral component of the development's architectural and landscape design.

- b. Where possible, integrate arts-related uses such as artists' galleries, arts displays, or artists studios on the ground level of multifamily residential developments that are located on business and commercial streets.



Public art can create a unique sense of place.

3. BUILDING DESIGN

Multifamily projects should strive for design excellence regardless of their location, size, and type of housing they provide. They should frame the public realm, provide visual interest, relate to the human scale, enhance walkability, and be sensitive to their context.

In established areas, residential projects should relate to the architectural character and development patterns of nearby buildings by taking cues from the colors, materials, and details in the surrounding neighborhood. In evolving residential and commercial districts, multifamily buildings should anticipate planned conditions and set a high standard for future development.

Particular care should be taken if the building's height is more than twice that of the surrounding context. However, a project's perceived size is not only a matter of height but also of scale, shape, facades, materials, windows, and details.

The following guidelines offer strategies for designers of new residential buildings to ensure they contribute to the positive qualities of Cambridge and to the lives of its residents.

3.1 MASSING: DEFINE AND ARTICULATE THE PUBLIC REALM

OBJECTIVES

Residential projects should serve residents' needs, offer a sense of belonging to a meaningful place, and foster connections to the Cambridge community.

They should define, clarify, and articulate the Cambridge's public realm. Capitalize on opportunities to:

- Enhance the beauty and walkability of the city.
- Frame streets and squares as legible volumetric spaces.
- Engage significant visual axes and views.
- Emphasize significant corners of blocks and important intersections.

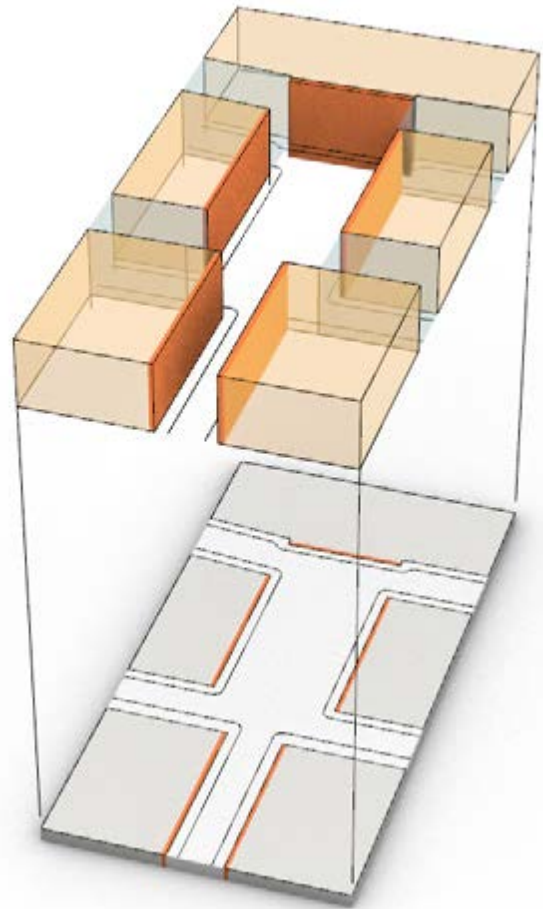
They should reinforce the existing or planned pattern of streets and blocks:

- In established neighborhoods, relate to the existing pattern of streets and other open spaces, and encourage compatibility with existing buildings.
- In evolving areas, configure new developments to help realize the City's vision for urban form.

Minimize detrimental impacts on neighbors and on the public realm.

GUIDELINES

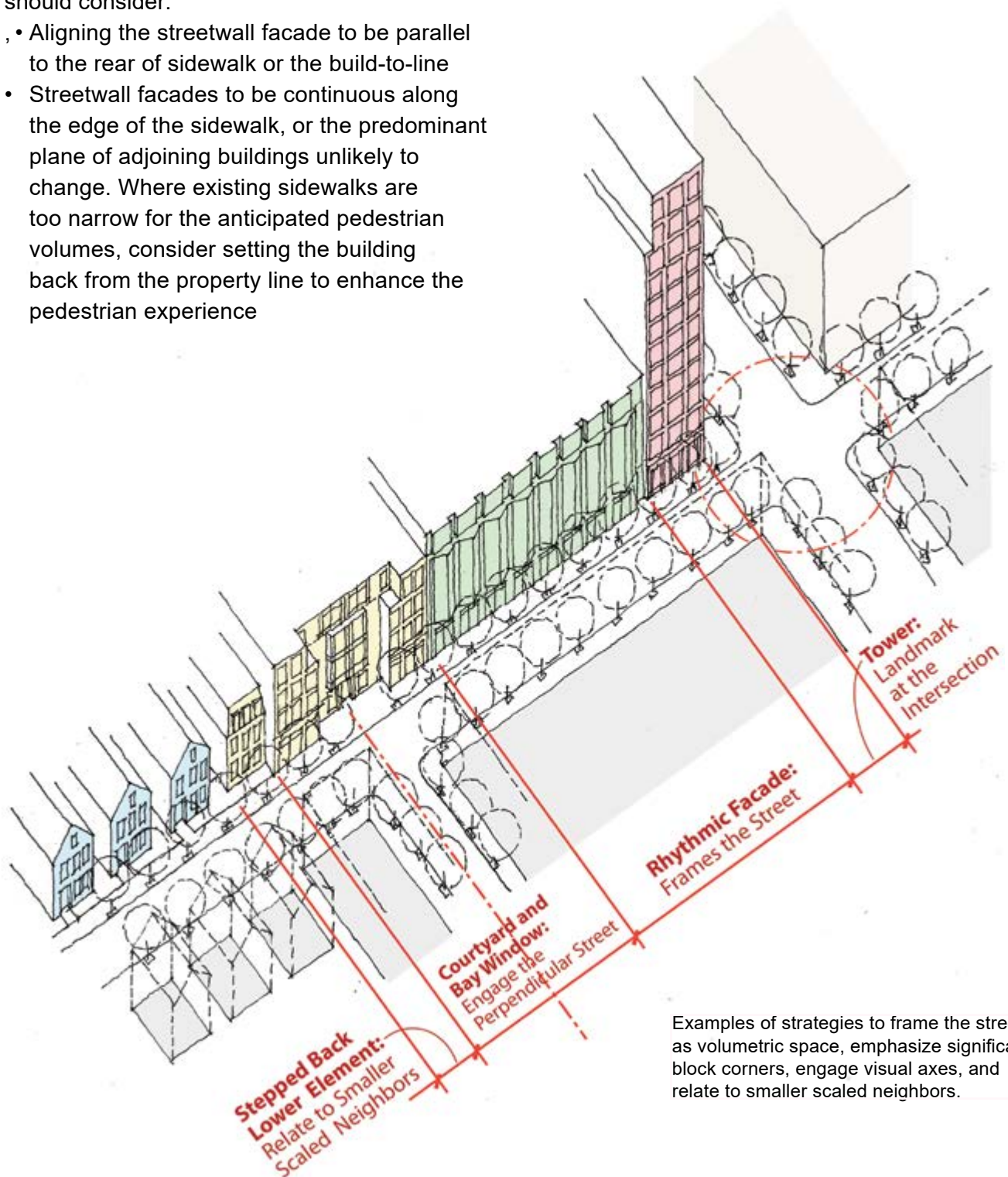
- Frame adjoining public spaces, including streets and sidewalks, with the building's mass and front facade.
- Arrange building mass to define the outer perimeters of blocks and, where possible, to preserve open space in the block interior.
- In lower scaled residential areas:
 - Align the streetwall facades of multifamily buildings with those of their neighbors.
 - Attempt to modulate the heights and articulate the massings of large buildings to create a sense of scale compatible with smaller neighboring buildings.
 - Consider providing courtyard spaces at building fronts or sides to reflect the character of nearby existing development, to divide long frontages into smaller scaled facades, and to enhance building entrances.



Frame streets and squares with building mass and facades.

d. In denser and larger scaled areas, such as retail corridors the building massing should consider:

- Aligning the streetwall facade to be parallel to the rear of sidewalk or the build-to-line
- Streetwall facades to be continuous along the edge of the sidewalk, or the predominant plane of adjoining buildings unlikely to change. Where existing sidewalks are too narrow for the anticipated pedestrian volumes, consider setting the building back from the property line to enhance the pedestrian experience



Examples of strategies to frame the street as volumetric space, emphasize significant block corners, engage visual axes, and relate to smaller scaled neighbors.

3.2 RESPONSE TO NEIGHBORING BUILDINGS

OBJECTIVE

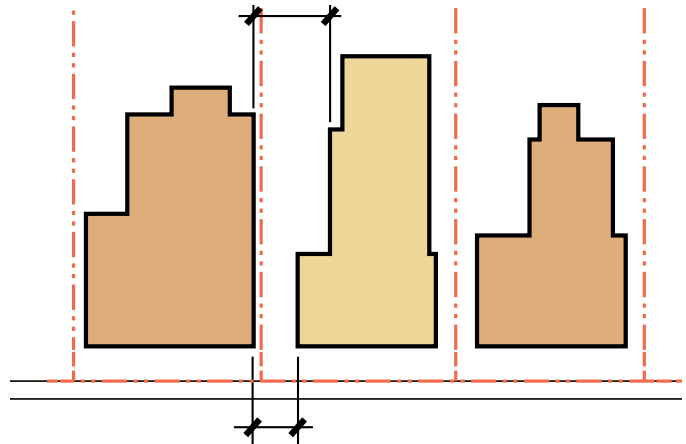
Minimize the impacts of bulk on neighbors.

Preserve open space on block interiors for solar access, ventilation, and vegetation.

Enrich residents' experience creating a unique inner world, more intimate in scale than the fully public streets outside the block, by breaking down building massing on block interiors.

GUIDELINES

- a. Make effort to relate the height, massing, scale, and form of new buildings to those of existing adjacent buildings.
- b. Where an existing neighboring residential building is located very close to the side or rear lot line, consider providing a wider area of open space on the interior of the block to maintain light, air, and privacy for both buildings.
- c. Where new buildings are constructed in rear yards of existing buildings, consider adjustments to massing, building siting, and other articulations to reduce the visual bulk of upper floors.
- d. Reduce the visual bulk of taller buildings by stepping back top floors, or by using mansard, gambrel, hipped, or gable roof profiles.
- e. Encourage adjusting building massing to maximize access to sunlight, air, and sky views from neighboring buildings and sites, and to maintain privacy.

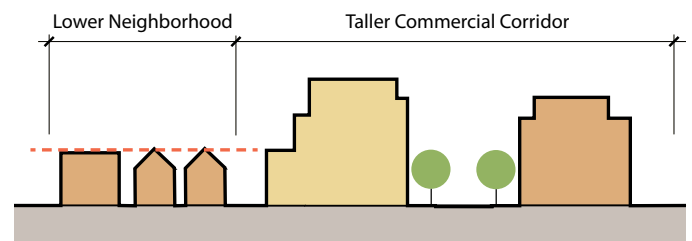
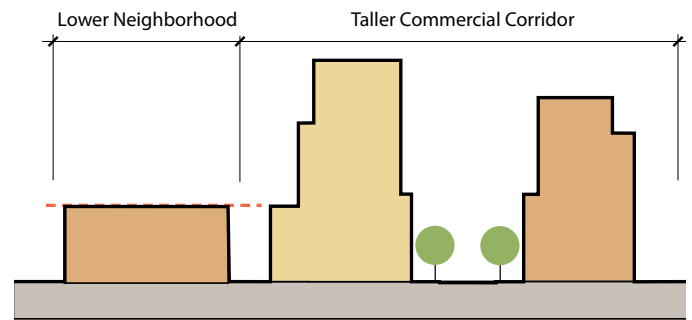


Respond to the form of neighboring buildings, defer to the privacy of their interior spaces, and minimize impacts on their open spaces.

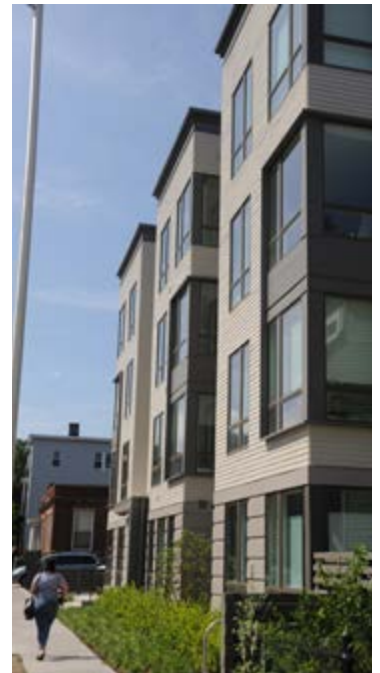


Consider reducing the mass of top floors to increase compatibility with smaller scaled neighbors or existing buildings on the site.

- f. Where a site along a commercial corridor adjoins a lower-scaled residential district, consider concentrating the project's taller elements near the taller context.
- g. Incorporate stepbacks to relate to the heights of adjoining buildings and the scale of the street; and to provide a transition between the height of taller buildings and lower surrounding buildings.
- h. Especially where multifamily buildings are both tall and broad, consider mitigating their bulk by breaking up their facades into smaller elements by means such as changes in plane, materials, or fenestration patterns.
- i. To minimize the building's sense of bulk, and to minimize shadow impacts on neighbors, try to avoid "slab" volumes and cantilevers for towers.



Adjust the massing of tall buildings to relate to lower neighbors and districts.

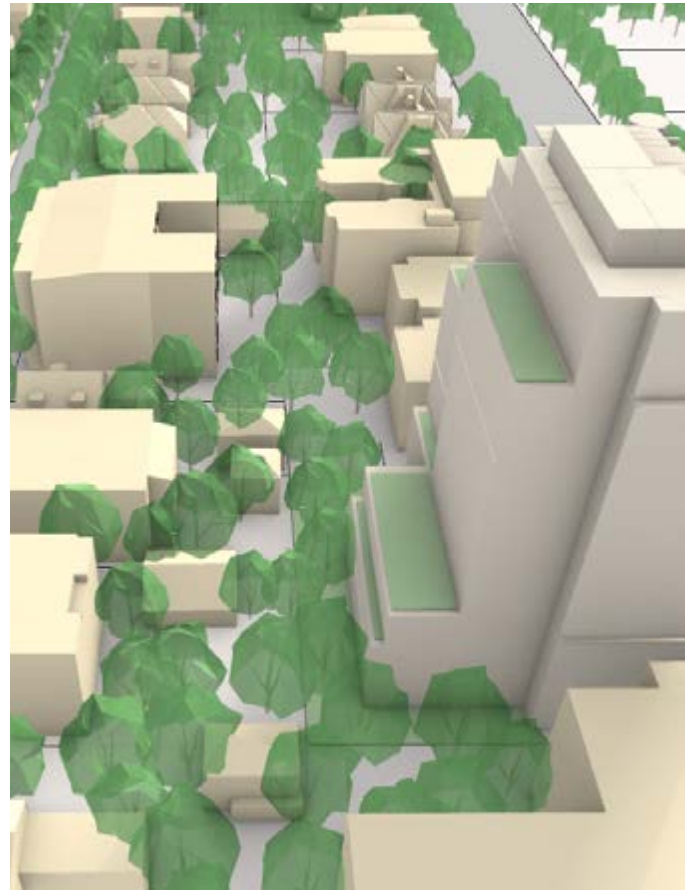


Articulate the massing of large buildings—both their overall massing and the three-dimensional form of facades—to engage adjoining spaces and relate to the scale of nearby buildings.

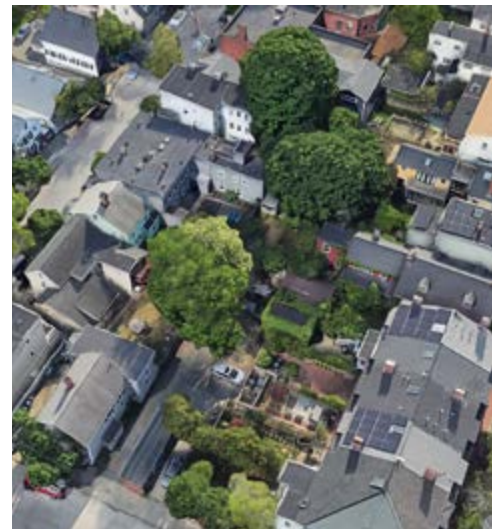
- j. Where feasible, provide stepbacks on the rear facades of towers facing the interior of the block, and on their side facades facing adjoining buildings.
- k. Consider smaller scaled massing articulations and more varied facades on block interiors than on block perimeters.



Freely composed rear elevations express individuality and the adaptability of built fabric, and respond to the semi-private scale of block interiors.



Stepping the massing of a tall building away from its side and rear property lines helps to reduce its impact on the neighboring buildings of its block by minimizing shading, respecting their privacy, and preserving open space in the block interior.



Smaller scaled massing articulations and varied facade treatments on block interiors emphasize the relative privacy and more intimate scale of the interior space.

3.3 ENGAGE THE VARIED SCALES OF THE URBAN ENVIRONMENT

OBJECTIVES

Engage the public realm at the scale of the pedestrian, the street, the block, the district, and the city:

- Activate streets with ground level uses and facade details that enrich the pedestrian's visual experience.
- Define the volume of the street as a legible public space.
- Respond to distant views.

GUIDELINES

- Organize building massing and facades into horizontal zones: Base, Middle and Top, (or Pedestrian Zone, Streetwall, Tower, and Top).
- Use building massing; articulation; changes in facade plane, color, materials; the design, organization, and proportions of fenestration; and architectural details to differentiate the zones as appropriate to the context.*

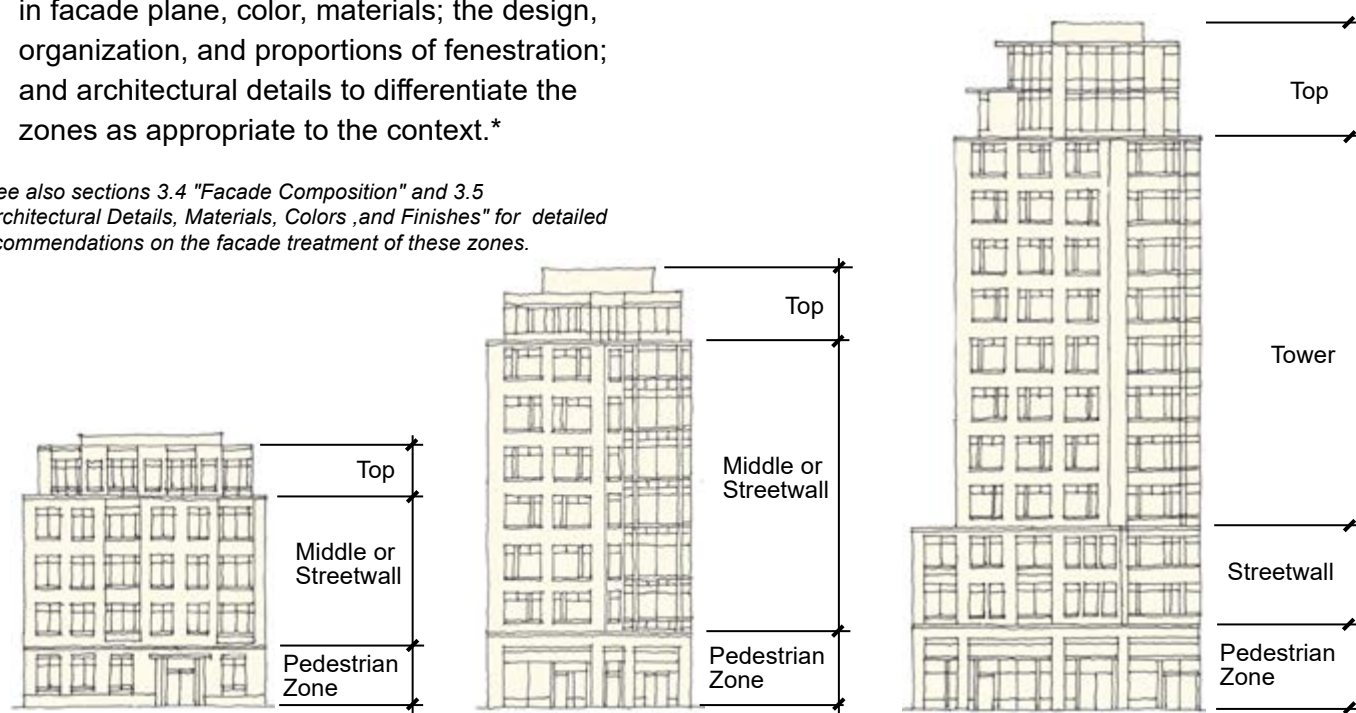
**See also sections 3.4 "Facade Composition" and 3.5 "Architectural Details, Materials, Colors, and Finishes" for detailed recommendations on the facade treatment of these zones.*

The Pedestrian Zone: The ground story, and occasionally second story, of a building facade fronting a street or open space, often including active uses oriented to engage the public realm.

The Streetwall: The portion of a building facade fronting a street or open space that extends from the Pedestrian Zone to a height typically equal to the width of the adjacent right of way.

Tower: The portion of a tall building that extends from the Streetwall Zone to the Top Zone. Not all buildings will have a tower zone.

Top: The uppermost portion of a building. Depending on building height, this may include cornices, roofs, mechanical penthouses or enclosures, and potentially one or more residential floors and/or common spaces



Organize building facades into a Base, Middle, and Top (or Pedestrian Zone, Streetwall, Tower, and Top).

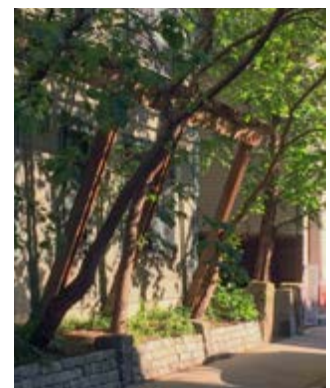
3.3.1 THE BASE OR "PEDESTRIAN ZONE"

OBJECTIVES

Contribute to the walkability, beauty, visual interest, and liveliness of Cambridge's streets and other open spaces. Create a safe, vibrant, visually rewarding, and welcoming pedestrian realm. Enrich the pedestrian experience and reinforce the pedestrian scale.

GUIDELINES

- a. Include architectural details - such as cladding, windows, proportions, and textures - to create lots of visual interest at the pedestrian zone. (See 3.5 "Architectural Details, Materials, Colors ,and Finishes")
- b. Provide shelter and shade at building entrances. Enhance entrances with features such as stoops, porches, recesses, canopies, awnings, low walls, arcades, landscaping, and seating areas.
- c. Where appropriate to context, incorporate ground level retail spaces and common areas to enliven the urban environment.
- d. In buildings on residential streets with ground floor units, provide individual entrances directly from the sidewalk to those units where possible.
 - Maintain privacy for first floor residential units by raising them above sidewalk level and/or by front yard plantings and other landscape features.
 - Visual transparency and direct access from the street should be considered for non-retail ground floor uses that have a public or semi-public role.



On residential streets, separate stoops to individual first floor residential units, front yard landscaping, and views into common spaces enhance the pedestrian scale of the street.

- e. On retail or commercial streets, ground floor uses should engage the public realm.
- Incorporate active ground floor uses if possible.
 - Where ground floors include retail, lobby, or community spaces, maximize views into the building interior from public streets by using clear (preferably low iron) glass in windows and storefronts.
 - Provide sufficient ceiling heights (an 18 foot floor-to-floor dimension is recommended) and in cases where ground floor active uses are not feasible at the time of construction, design facades to accommodate future active uses.
- f. In buildings on retail and commercial streets, clearly differentiate ground floor facades from those of upper floors.
- Ways to achieve this include a high percentage of glazing, architecturally emphasized building entrances, distinct materials and colors, a higher level of detail, shelter for the public from the elements, recessed entrances to ground floor uses, large operable windows, awnings or canopies, and variation in mullion patterns.



On retail streets, glazed pedestrian level facades and unique mullion patterns and materials provide visual interest.



Awnings or canopies emphasize pedestrian scale and protect pedestrians from the elements.

3. BUILDING DESIGN

- g.** Two-story-tall pedestrian zones may be appropriate for mid-rise and high-rise buildings located on wide streets.
- h.** In flood-prone areas, resilient design strategies such as raised first floors, waterproof materials, and flood-proof barriers should be incorporated early in the design process and should operate in conjunction with good pedestrian zone design. See also Chapter 4 - "Sustainability and Resilience".
- i.** Where first floors are elevated above sidewalk level, access is preferred to be provided through lobbies located at sidewalk level and provided with interior stairs, ramps, or elevators up to the elevated first floor level; or through exterior steps and ramps located in, or leading to, an elevated forecourt that gives access to an elevated lobby and other first-floor spaces.



A two-story-tall pedestrian zone, compatible in scale with a wide street.



Landscaped steps and ramp ascending to an elevated forecourt at the level of the building first floor.



3.3.2 THE MIDDLE OR "STREETWALL ZONE"

OBJECTIVES

Relate to the scale of smaller neighboring buildings and to Cambridge's architectural heritage.

On tall buildings, the streetwall facade should mediate between the pedestrian and tower zones.

GUIDELINES

- a. The streetwall zone generally corresponds to the pedestrian's cone of vision.
 - In Cambridge, the top of the streetwall zone generally ranges from approximately 30 feet to 60 feet above sidewalk level.
- b. In new buildings in well-developed areas of the city, streetwall zone height depends on the character and width of the street (generally equal to or somewhat less than the street's facade-to-facade width), and on the heights and designs of nearby existing buildings. In areas of the city that are in transition, its height should act as a precedent for the anticipated future character of the street.
 - On a wide street or broad open space, taller streetwalls are generally appropriate.
 - On narrower streets, lower streetwalls are generally appropriate.
- c. The streetwall should be generally continuous and parallel to the street it faces. Curved or angled shapes in plan that are at odds with the configuration of the street should generally be avoided.



The articulation of the streetwall by bay windows and other changes in plane, and by changes in color and textures, strengthens the building's relationship to its neighbors.

- d. Complement the facades of nearby buildings, with attention to detail, proportion, and fenestration patterns.
- e. The streetwall facade should have a primary plane to which recessed and projecting elements like bay windows, balconies, deeper windows, exterior trim, cornices and string courses are added. See also sections 3.4 "Facade Composition" and 3.5 "Architectural Details, Materials, Color, and Finishes"
- f. Consider providing elements that give a vertical grain to streetwall facades such as vertically proportioned windows and multi-floor tall bay windows.



Enrich facades with bay windows, changes in plane, and varied materials.



Enrich the facade with the color and scale of cladding materials and with unique details.

3.3.3 TOWERS

OBJECTIVES

Reduce large buildings' sense of bulk, especially that of mid-rise buildings in lower scaled contexts and high-rise buildings.

Define space at a larger scale than the streetwall.

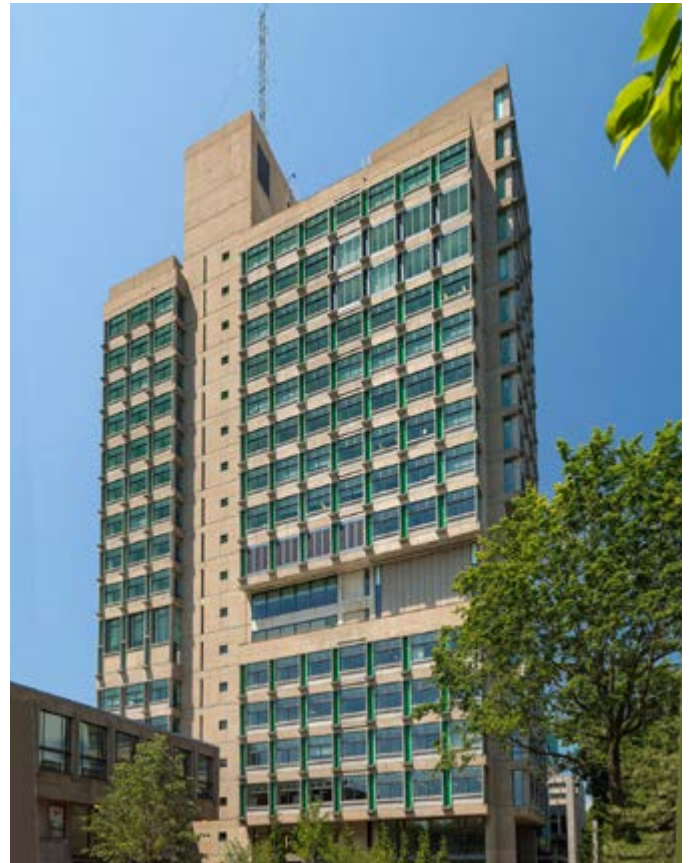
Create landmarks at significant locations in the public realm.

Minimize visual and microclimate (eg. sun, wind) impacts on the public realm and neighbors.

Minimize impacts on the night sky.

GUIDELINES

- a. Tower facades and massing should generally emphasize slender vertical proportions, with vertically repetitive facade designs. Cantilevers larger than balconies should generally be avoided.
- b. Consider providing different facade designs on towers' different sides in response to views from the building, solar orientation, and distant views of the building as an urban landmark.



Detail, articulated massing, and three dimensional relief in the design of towers enrich the public realm. Vertically grained facades help mitigate a sense of bulk.

- c. Consider emphasizing verticality in the massing and facade design of tall building's tower zones.
- d. Consider breaking up the massing and facades of large buildings into smaller elements, and arranging them asymmetrically in response to view axes along streets or paths, to mark significant intersections, to frame large open spaces, and to relate to smaller neighboring buildings.
- e. Develop the patterns created by the locations of window openings, the depth of fenestration relative to the wall surface, mullion patterns, operable vs. inoperable windows, spandrel panels, infill panels, trim, balconies, and other details and three dimensional elements, and the colors and textures of materials to create visually rich facades.
- f. Follow dark-sky and bird-safe principles in facade design and specifications. Avoid up lighting. Avoid exterior lighting above third floor level.



By asymmetrically combining a vertical tower element and a lower streetwall element, and by the use of different colors and materials, for different portions of its massing, the building responds to the intersection, frames the street, and reduces the sense of bulkiness that its height and breadth might otherwise have produced.



The vertical grain of the tower's facade breaks up the building's bulk and provides visual variety when seen obliquely.

3.3.4 "TOPS" AND ROOFSCAPES

OBJECTIVES

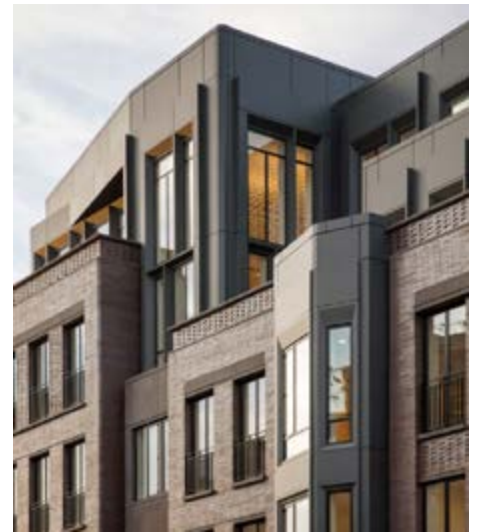
Contribute to the building's expressive identity as seen from a distance. Add visual interest to the city's roofscape.

Mitigate the scale of large buildings.

Attempt to minimize excessive shading of neighboring buildings and open spaces.

GUIDELINES

- a. Give special consideration to the design of top floor facades, particularly in residential neighborhoods, where existing buildings often have intricate massing, roof lines, or parapet walls.
- b. Distinct building tops may range from simple cornices, to occupiable volumes distinguished by string courses or changes in material, to stepped-back top floors, to repetitive or irregular groups of smaller elements.



Stepbacks, dormers, terraces, balconies, and sloped roofs can provide visual interest and programmatic amenity at building tops, as well as reduce the building's perceived bulk.

- c. Consider use of stepped-back top floors to help reduce the building's perceived bulk and height and its potential shading of neighboring buildings and open spaces.
- d. Multi-floor tops, irregular massing, and distinctive forms and roof shapes can contribute to the building's identity and visual interest.
- e. Consider providing rooftop terraces and gardens to add visual interest to the tops of buildings and provide outdoor spaces for residents.
- f. Consider light colored roofs, vegetated roofs, "blue" roofs, and "purple" roofs to reduce the urban heat island effect and to reduce stormwater runoff. See chapter 4 "Sustainability and Resilience"
- g. Consider photovoltaic arrays, or bio-solar systems, or make allowances for their installation in the future.
- h. Mechanical equipment should be visually screened when it is visible from the ground, and acoustically screened as appropriate to the context.
- i. Mechanical screening should be compatible in appearance with the facades below.



Distinct building tops break down the scale of tall buildings, contribute visual interest to the public realm, and reinforce the building's identity.



Rooftop and upper floor terraces can be gathering places and provide opportunities for gardening.

3.3.5 RELATIONSHIPS BETWEEN THE FACADE ZONES

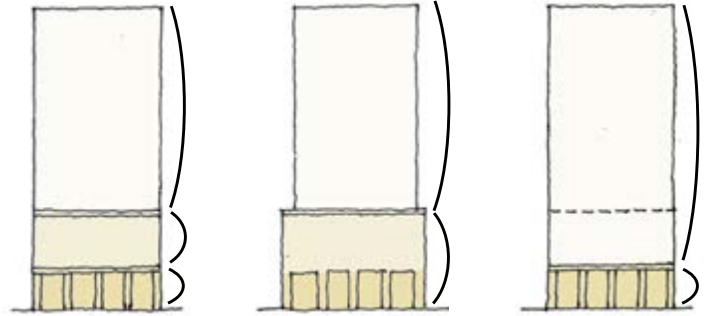
OBJECTIVES

In well-developed neighborhoods and streets, it is important to respond to the scale of the existing buildings.

In neighborhoods and streets that are in transition, create precedents for the anticipated future scale of its building's architecture and character of its public realm.

GUIDELINES

- a. For tall buildings in relatively low contexts, a wide variety of strategies may be appropriate to distinguish the streetwall zone from the tower zone, depending on program and context.
 - Different materials and colors.
 - Different proportions of windows and other facade elements.
 - Different window-to-wall ratios.
 - String courses or projecting cornices that divide the two zones.
 - Different materials and fenestration patterns.
 - Stepping all or portions of the tower's front facade back from the plane of the streetwall facade to emphasize horizontal continuity between the streetwalls of the existing buildings and the new building.
 - Expressing either the streetwall or tower as composed of smaller elements.



For tall buildings, a variety of relationships between the facade zones may be appropriate, depending on the design of neighboring buildings and the character of the street.



Setback towers create upper level roof terraces. Distinct streetwall zones relate to lower scaled neighbors.

- b.** In areas consisting of primarily tall buildings and without a consistent streetwall height, a distinct streetwall zone may be unnecessary.
- c.** In locations where vertical emphasis would enhance a unique sense of place, consider continuing a portion of the tower facade street-wall to grade.



In some contexts, a distinction between the facade's streetwall and tower zones may be unnecessary. In these examples, the facade's vertical proportions reduces the building's sense of bulk.



The continuation of a portion of the tower facade through the streetwall zone creates a welcome point of vertical emphasis in the streetscape.



The streetwall zone of tall buildings expressed as a group of discrete volumes that relate in height and width to the dimensions of smaller nearby buildings.



- d. For low-rise and mid-rise buildings with first floor active uses, the recommended transparency of ground floors, the character of shopfront fenestration systems, and contrasting first floor materials create strong distinctions between the pedestrian zone and the street wall zone.



- e. For low-rise and mid-rise buildings without first floor active uses, relatively subtle distinctions between the pedestrian zone and the streetwall zone may be appropriate.
- Means include changes in materials, string courses or other types of trim, distinct window arrangements, and porches and other ways of celebrating building entrances.



Distinctions between the first floor pedestrian zone and the upper floor streetwall zone in low rise buildings, created by changes in materials, string courses, porches, and changes in fenestration.

3.4 FACADE COMPOSITION

OBJECTIVES

Improve how new buildings fit in with neighbors.

Contribute to the beauty of the public realm.

Enrich the pedestrian experience.

GUIDELINES

a. Amongst the design tools to enrich facades and relate them to those of neighboring buildings, designers should consider:

- Window-to-wall ratios
- The articulation of long facades
- The use of rhythmic facades
- The use of proportional systems to organize windows and other features.
- The celebration of building entrances
- The use of vertically grained facades
- Asymmetrical compositions in response to context
- Distinctions between front and side facades
- The celebration of significant building corners



The civic-scaled order of the facade gives it an appropriate urban presence for a primary street. The domestically scaled variety enriches the public realm.



Its rich streetwall facade and varied ground floor retail shopfronts give this mixed-use building an appealing street presence. The vertical interaction between the pedimented residential entrances and the blank wall above them gives them visual prominence.



Human scaled and proportioned windows, recessed and projecting facade elements, a low base that relates to the height of the front yard plantings, and a welcoming entrance give this large building a residential scale.

3.4.1 WINDOWS

OBJECTIVES

Create a pedestrian-friendly appearance by providing transparency to active ground floor uses.

Attempt to maintain privacy of residents and neighbors.

Achieve requisite building energy performance.

GUIDELINES

- a. Windows should be designed and arranged to provide the greatest benefit to the building's front and the building's occupants, while minimizing impact on neighbors.
- b. In facades with low window-to-wall ratios, use strategies such as grouped windows, trim and detail, spandrel and other types of blank panels, and additional elements at head, jamb, and sills to expand the presence of the

windows on the facade.

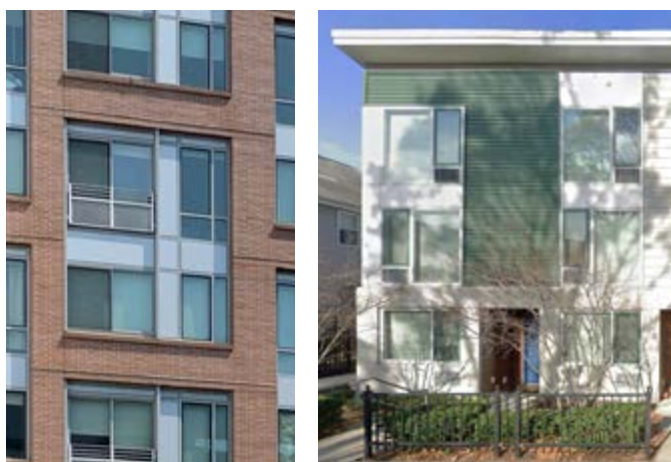
- c. In facades with low window-to-wall ratios, elements such as subdividing mullions; expressed window heads, jambs, sills; and other types of trim can expand the windows'



Example of the window-to-wall ratio of a residential building with first-floor dwelling units.



Example of the window-to-wall ratio of a residential building with non-residential uses in the first floor.



When window-to-wall ratios are low, consider grouping windows and other elements to create larger facade figures.



In this example, all the window openings have the same dimensions and constitute 20% of the total facade area, but in the left hand bays the windows seem undersized, while in the center and right hand bays they seem large enough to achieve a harmonious relationship with the solid wall surface around them.

3.4.2 LONG FACADES

OBJECTIVES

Enhance the compatibility of large multifamily buildings with smaller scaled neighbors.

GUIDELINES

a. Where new buildings present long facades to streets framed by smaller scaled existing

buildings, provide variety and create a sense of intermediate scale by incorporating features such as changes in color or material, recesses, projections, balconies, bay windows, porticoes, columns, pilasters, piers, or expressed structural bays.

b. Front facades of buildings in residential neighborhoods with frontages longer than 150 feet should generally be divided by forecourts or vertical recesses or projections.



A stepped-back top floor, changes in facade plane, varied facade treatments, a recessed entry forecourt, and bay windows help the long street-facing facade of the new building relate to the smaller scale and varied facade designs of its existing neighbors.



The vertically aligned balconies and recessed vertical notches divide this long facade into smaller scaled components.



The forecourt, bay windows and other changes in plane, and different materials and colors help mitigate the length of this building's facade.

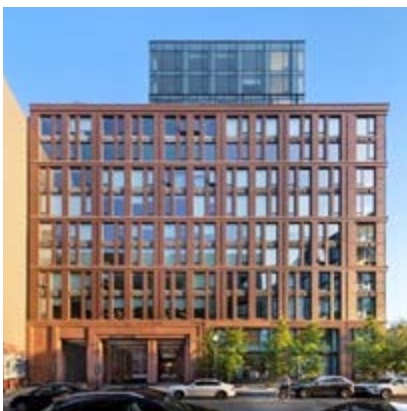
3.4.3 RHYTHMIC FACADES

OBJECTIVES

Rhythmic facades add visual harmony and create a sense of order and predictability to the landscape, and also help break down larger buildings into smaller, more relatable segments.

GUIDELINES

- a. Consider treating broad streetwall and tower facades as a series of detailed bays comprised of repetitive piers, pilasters, windows or groups of windows, projecting features, bay windows, or other such elements.



Repetitive facades: framing and enriching the spaces of the public realm while responding to both civic scale and the scale of the individual.

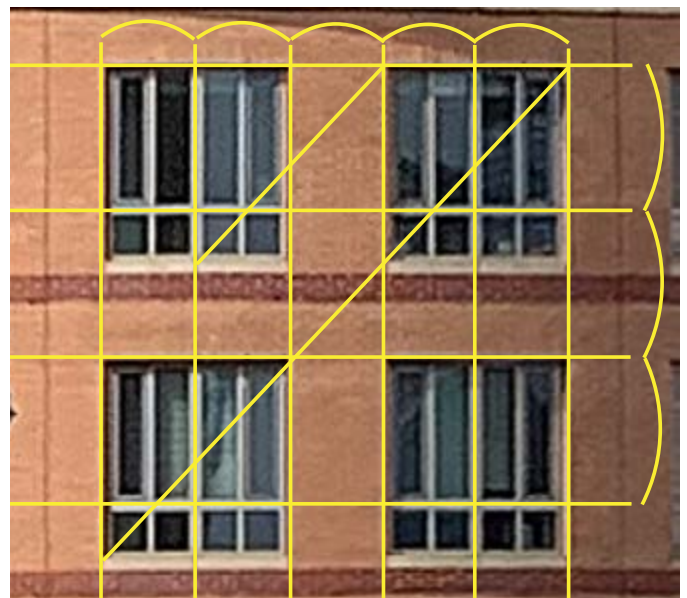
3.4.4 PROPORTIONAL SYSTEMS

OBJECTIVE

Celebrate the public realm with facades of beauty and organizational harmony.

GUIDELINE

- a. Organize facade elements with proportional systems.



The use of consistent proportions and a network of regulating lines to locate and dimension window and door openings, pier widths, spandrel heights, and mullion patterns can contribute to harmoniously designed facades.

3.4.5 RESIDENTIAL ENTRANCES

OBJECTIVE

Make the entrance to residences a distinguishing feature of the building facade.

Foster a sense of community for the building's residents.

GUIDELINES

- a. When possible, provide individual entrances to ground level units.
- b. Emphasize entrances with unique materials and details.



3.4.6 BUILDING FRONTS VS. SIDES

OBJECTIVES

Contribute to the integrity of the project's urban block by contributing to the distinction between the block's outer perimeter—its face to the public realm, and the block's more private interior spaces.

For buildings on corners, design the building to be compatible with adjacent open spaces.

GUIDELINES

- a. For buildings on corner lots:
 - Consider employing distinct facade and massing strategies on building fronts along the streets.
 - If possible, provide building entrances on both streets.
- b. Consider distinct treatments of front facades and side elevations that face adjacent lots. Possibilities include contrasting materials or colors; the presence vs. the absence of projecting bay windows or other three dimensional features; different types of trim and details; and different window to wall ratios, and types, sizes, and proportions of fenestration.



On corner sites, distinct treatments of front and side facades reinforce the different characters of the adjoining primary and secondary streets.



Distinct treatments on honorific street-facing front facades and side facades that face adjoining buildings emphasizes the civic role of the public street in contrast to the more private role of open spaces in the block's interior.

3.4.7 SIGNIFICANT CORNERS

OBJECTIVE

Celebrate significant intersections as memorable nodes in Cambridge's pattern of streets and other open spaces.

GUIDELINES

- Consider unique massing and facade strategies at corners of blocks.
- Where possible, provide corner entrances to ground floor retail spaces.



Unique architectural forms at the corners of blocks in response to significant intersections and squares.

3.5 FACADES: ARCHITECTURAL DETAILS, MATERIALS, COLOR, AND FINISHES

OBJECTIVES

Create an engaging, coherent, lively, and visually rich public realm.

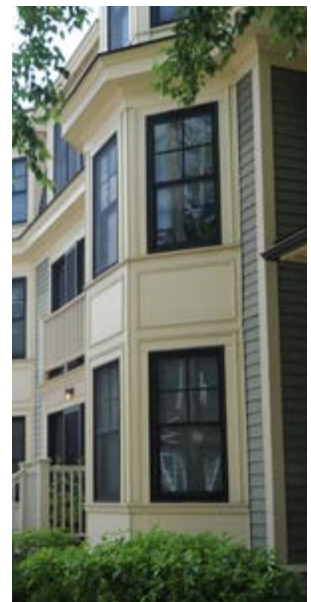
Complement neighborhood character.

Convey a sense of quality and of investment in the future of Cambridge.

Enhance building energy performance.

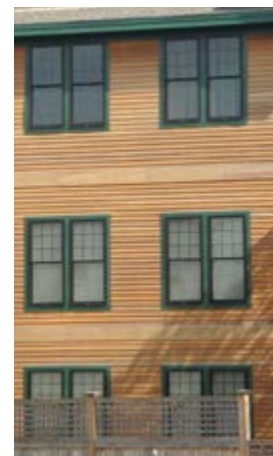
GUIDELINES

- a. Add interesting details to the building facade and entrances, including bay windows, balconies, sun shades, terraces, and dormers.
- b. Include design details such as lintels, sills, and other window trim, railings, string courses, cornices, and rake and eave details.
- c. Visually enrich glazed areas with carefully considered mullion and muntin patterns and profiles, operable windows, window trim, and sun-shading devices.
- d. Design bay windows with windows on the sides, as well as front facing.
- e. Spend extra focus and detail on building entrances, corners, stepbacks, top floors, and roofscapes.
- f. Scale, materials, and level of detail should be compatible with the context. Window-to-wall ratios and the proportion and rhythm of doors and windows should match with the neighbors on the block.
- g. Use materials that are warm, inviting, and compatible in color, finish, and texture with surrounding buildings and the neighborhood context.



Facade elements such as trellises, stoops, bay windows, and dormers, as well as the details of trim and cornices, can relate new buildings with their existing contexts.

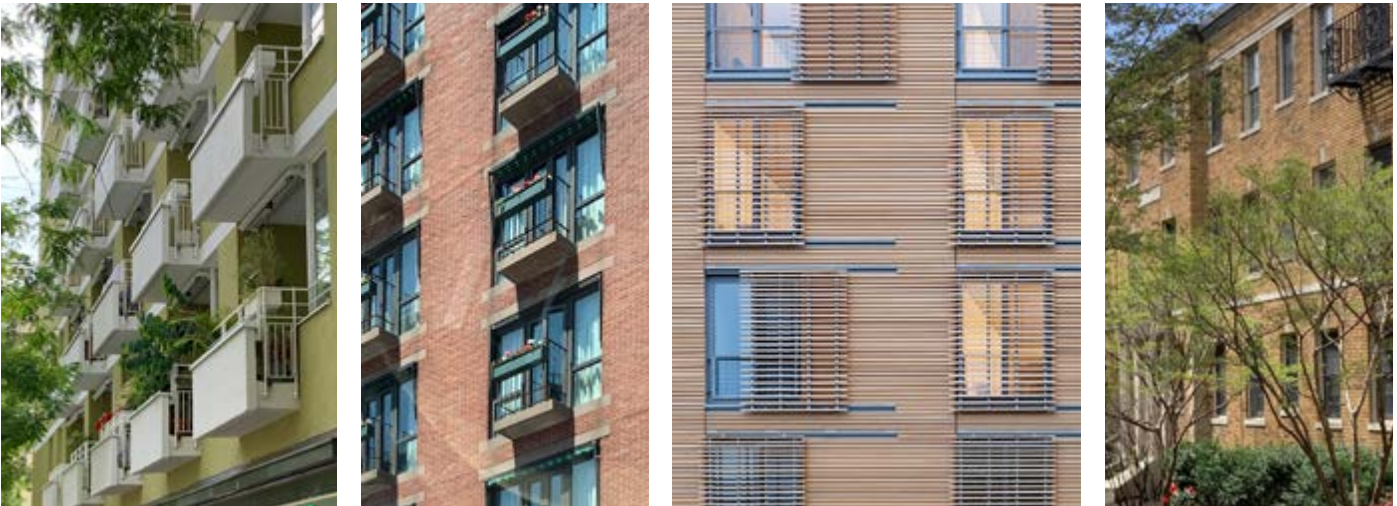
- h.** Use high-quality and durable construction materials with proven records of long life-cycle and low environmental impacts.
 - Natural and durable materials such as brick, concrete masonry, and stone are preferred.
 - Other optional materials include pre-manufactured panels of cementitious, concrete, or composite materials.
- i.** Avoid low-quality materials, such as:
 - Thin cementitious panels, especially large panels and large areas of them.
 - Exterior insulation and finish systems (EIFS)
 - Mirrored materials.
 - Colored glazing.
- j.** Light colors are encouraged to minimize heat absorption and the consequent heat load on building systems, and to minimize the urban heat island effect.
- k.** Vision glass should be clear, with high transparency and low reflectivity. Low iron glass is preferred for ground floor retail and common spaces.
- l.** For residential units, strive for divided light or multiple pane windows. Avoid large single-light windows.
- m.** Avoid horizontal strip windows.
- n.** Minimize bird collisions with glazing. Consider a wide range of high- and low-tech solutions as appropriate to the specific installation, such as:
 - Bird-safe materials.
 - Glass coatings visible to birds, but not to human vision.
 - Frit patterns.
 - Limiting the size of glazing units,
 - Shading devices, screens, and recessed balconies.
- o.** Panelized cladding systems should be constructed of durable and dimensionally stable materials, assembled with elegant details. Joints should be precise and consistent and arranged in a pattern that complements the layout of openings and enriches the pattern of the facade. Large panels are discouraged.
- p.** Consider vegetated facade systems.
- q.** Cornices should generally be crisp and slim. Avoid excessively large or boxy profiles.
- r.** Consider providing either full depth or "juliette" balconies.



A building's windows; their construction details; subdividing mullions; framing elements at their heads, jambs, sills, and spandrel panels; and other associated trim and framing elements organize the facade and offer visual interest to the public.

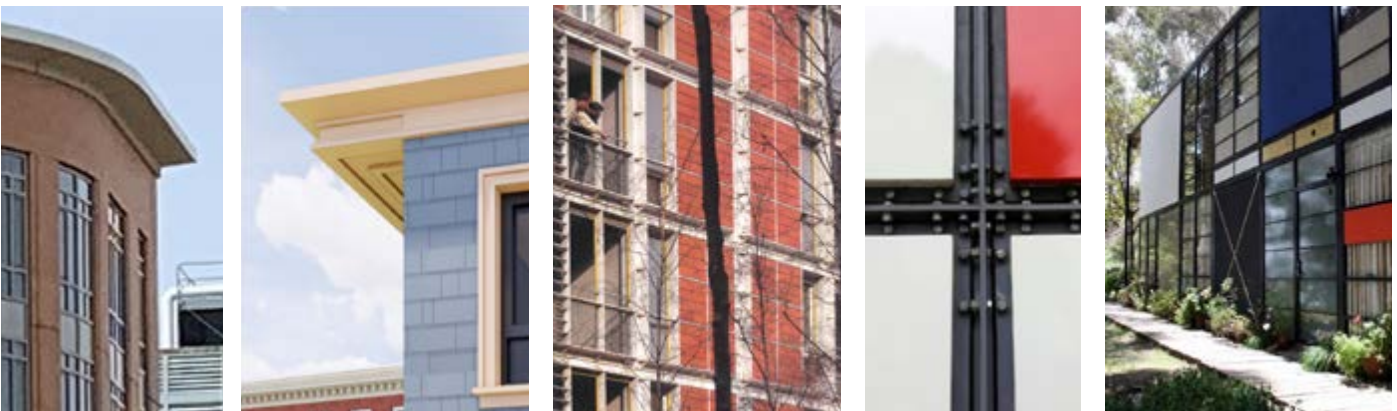


A wide variety of fenestration types and cladding materials can organize and enliven the facade.



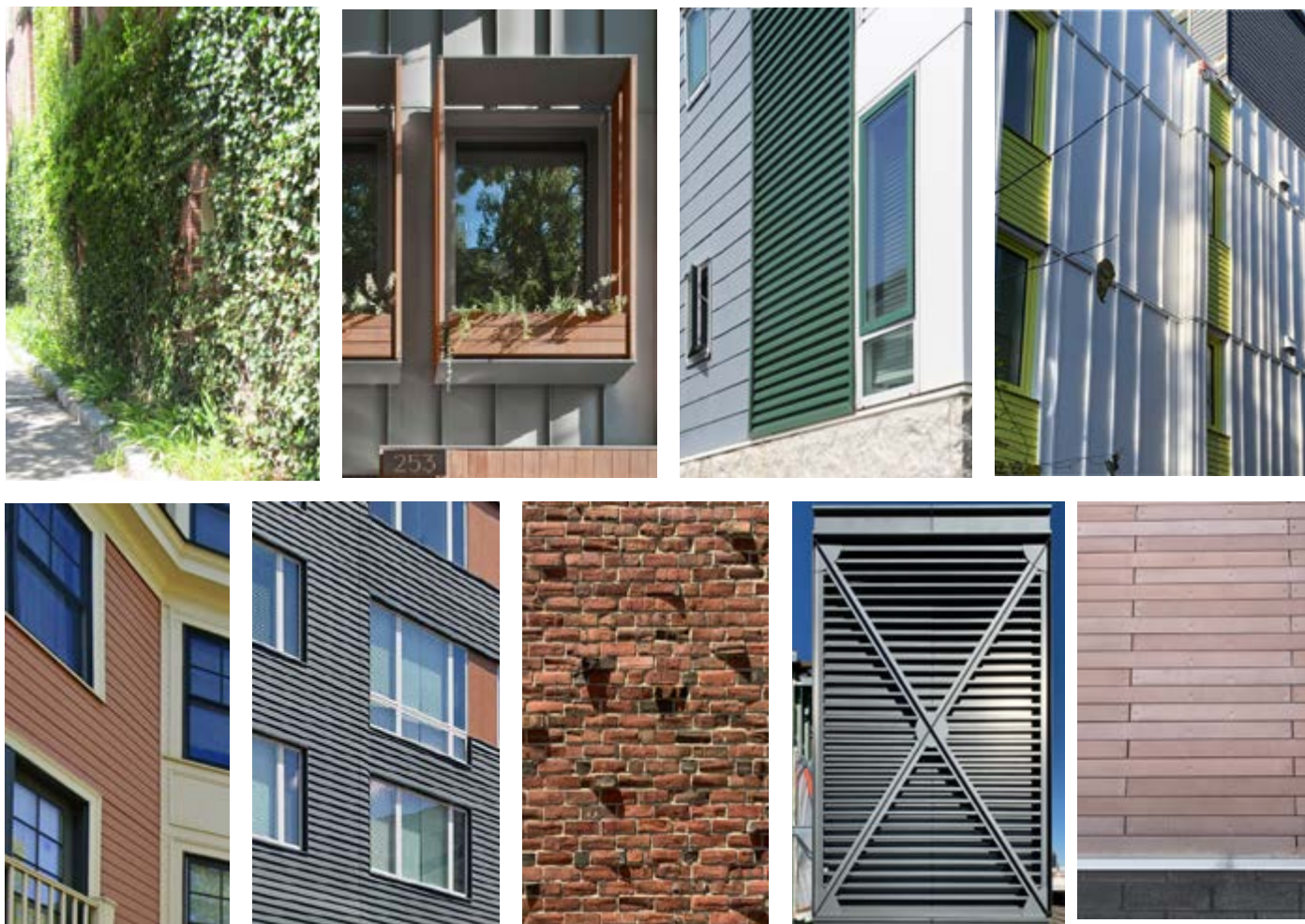
Where possible, provide balconies, both as amenities for residents and to enliven the facade.

Walls with low window-to-wall ratios depend on framing elements, trim, subtle three dimensional relief, and the details and textures of cladding materials for visual interest.

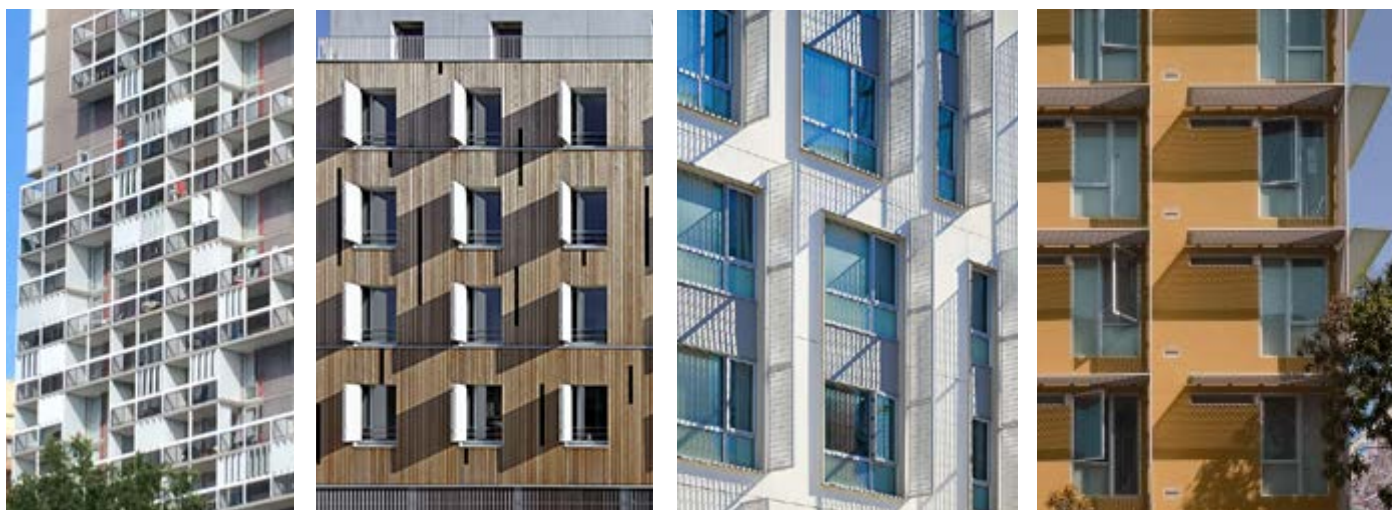


Cornices should be crisp and slim.

Panelized cladding systems should be elegantly detailed and proportioned.



A wide variety of materials and details are compatible with Cambridge's existing buildings. The scale of joint patterns, textures, the proportions of elements, construction details, and color should all contribute to the harmony of a new building with its context.



Sunshades can provide detail and shadow, in addition to preventing excessive solar gain.

3.6 HISTORICAL BUILDINGS

OBJECTIVE

Respond to Cambridge's architectural heritage and character by sensitively adapting and adding to existing historical buildings that are parts of multi-family projects.

GUIDELINES

- a. Use best practices in restoration and maintaining historic structures. Consultation with the Cambridge Historical Commission is recommended, especially for developments in Historic and Neighborhood Conservation Districts.
- b. In renovating or adding to an existing architecturally or historically significant building, or where original materials or components need to be replaced, using traditional building elements with the same architectural features, material quality and craftsmanship is encouraged. If not feasible, substitute with style-neutral high-quality components and materials compatible with the architecture and historic character of the building and district.
- c. Where new units are proposed on an existing lot shared with a historic structure, the new building should, if possible, be detached from the historic structure and distinguish itself as new construction through materials, architectural details, and form.



Additions to historical buildings that are distinct from the original structure and also are compatible with it.

3.7 PARKING, UTILITIES, AND SERVICE ELEMENTS

OBJECTIVE

Minimize the impact of parking, service elements, and utilities on the public realm and on the experience of residents.

GUIDELINES

- a. Wherever possible, wrap structured parking with active uses on street facades.
- b. Where parking spaces are immediately behind the ground floor street facade or facing neighbors, screen the parking with architectural elements that provide depth and visual interest, such as decorative louvers, green walls, artwork, or grilles. Avoid wire mesh screening.
- c. Consider landscaped terraces to cover structured parking.
- d. Design parking entries, loading bays, trash/recycling storage areas, and servicing entrances as integral components of building facades.
 - Use architectural doors, or louvers that complement the building's facade design.
 - Use doors that remain closed when vehicles are not actively entering or exiting.
- e. Avoid blank walls on ground floor facades. Where spaces such as utility rooms, fire control centers, etc. require windowless walls, other means of creating visual interest should be provided, such as changes in plane, materials, surface textures, details, and plantings.
- f. Organize through-wall vents, rooftop overflow scuppers, fire department connections and signage, meters, service doors, and other functional features as intentional elements of the facade's composition.



Provide visually appealing treatments of blank walls, and of doorways and ventilation for utility spaces.



Through-wall vents located in coordination with window openings.

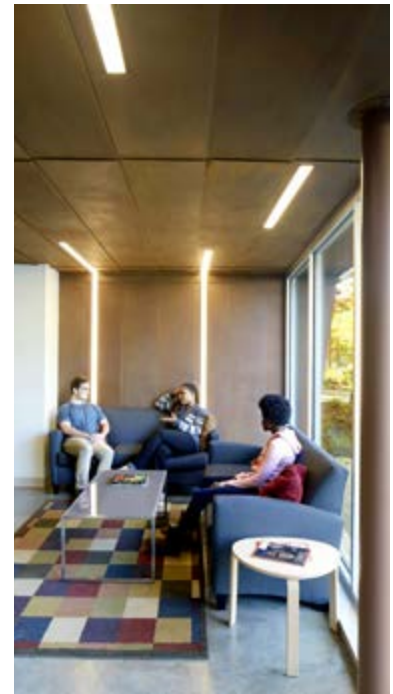
3.8 BUILDING INTERIORS

OBJECTIVE

Multifamily projects should serve the needs of their residents while contributing to the character of the neighborhood.

GUIDELINES

- a. Provide a mix of unit types and sizes that will support and contribute to the diversity of housing in the neighborhood. The inclusion of a significant number of units that are suitable for families with children is preferred except in special cases where housing will serve populations with different housing needs, such as housing for seniors.
- b. Consider one or more of the following strategies to make interior living spaces more comfortable:
 - Include adequate interior living space, common storage, and access to natural light and air.
 - Size bedrooms to accommodate standard bedroom furniture and include access to natural light.
 - Provide ample counter space and storage in kitchens.
 - Provide access to laundry facilities in residential units or elsewhere in the development.
- c. In larger projects, provide interior common spaces for shared amenities, services and facilities such as storage, recreation and



Provide flexible common spaces, suitable for large gatherings, and smaller more intimate ones.

gathering space, or in larger buildings areas that can serve residents in the event of extreme weather or power outages. Consider providing amenities that serve the broader community.

- d. Consider providing common spaces at ground level, visually connected to outdoor space, whether on building frontages or addressing the interior of the block.
- e. Consider providing common spaces at upper levels, taking advantage of rooftop terraces for views.
- f. Use operable windows for residential units and common spaces to provide passive ventilation and improve indoor air quality.
- g. Provide convenient long-term bicycle parking.



Connect common spaces to the outdoors.

4. SUSTAINABLE AND RESILIENT DESIGN

Follow the City's overall sustainable development practices in the design of multifamily residential projects. Maximize energy efficiency and performance to reduce greenhouse gas emissions and be resilient to the effects of climate change.

These guidelines supplement the City's zoning requirements and other applicable policies, including the "Net Zero Action Plan" and the "Resilient Cambridge: Climate Change Preparedness and Resilience Plan".

4.1 SUSTAINABLE DESIGN

OBJECTIVE

Strive to provide measures to maximize energy efficiency and to minimize health impacts on residents and the public.

GUIDELINES

- a. Employ renewable and low-carbon energy features where feasible, such as solar photovoltaic systems, solar heating systems, or geothermal heating and cooling systems.
- b. Consider operational and embodied energy in material selection.
- c. Select and design building systems and equipment within units to facilitate future conversion to all-renewable energy systems.
- d. Consider embodied carbon in the selection of construction materials. Where possible, use and integrate recycled content materials without compromising durability and material quality.
- e. Select materials with products certified to be non-toxic, that are low in volatile organic compound (VOC) emissions, that are recycled and/or renewable. Consider product life-cycles.

- f. On large projects, consider providing "shelter-in-place" facilities that are passively protected from flooding and extreme heat and are suitable as shelter during emergencies. Consider providing emergency medical and other supplies, back-up electric power for critical loads, and back-up communications capacity.

**Review the Zoning Ordinance for required sustainable design standards.*



Provide photovoltaic systems, or allow for their future installation.

4.2 HEAT MITIGATION

OBJECTIVE

Protect residents from excessive heat, both inside residential buildings and on their sites.

Help reduce the urban heat island effect on the city, including buildings and the public realm.

GUIDELINES

- a. Preferably shade open spaces and buildings with trees. Where trees are not feasible consider the use of shading devices such as canopies, awnings, or pergolas to provide shade on exterior paved areas and/or to reduce solar heat gain on building facades.
 - b. In site design, building orientation, and facade design, minimize the demand for heating and cooling by considering the effects of solar gain on different sides of the building. Design interior spaces for passive heating, cooling, and ventilation.
 - c. Provide operable windows, including operable upper sashes or transoms.
 - d. Incorporate sun shading devices or shutters with positive ventilation, solar screens, canopies, porches, or brise-soleils to shade strongly sunlit facades.
 - e. On roofs, exterior walls, and paved surfaces, use materials with high solar reflectivity to minimize heat absorption and localized heat island effect. As an alternative, employ vegetated coverings such as green roofs or green walls.
 - f. Incorporate strategies to capture, reuse, and filter water on-site through natural features like green roofs and bioswales or mechanical methods like capture tanks.
 - g. Use vegetation and solar reflective materials to reduce heat absorption.
- *Review the Zoning Ordinance for required sustainable design standards.*



Consider sunshading for windows and allow cross-ventilation.



Provide vegetative shading



Take advantage of rooftops to address stormwater and provide on-site energy sources.



4.3 FLOOD RESILIENCE

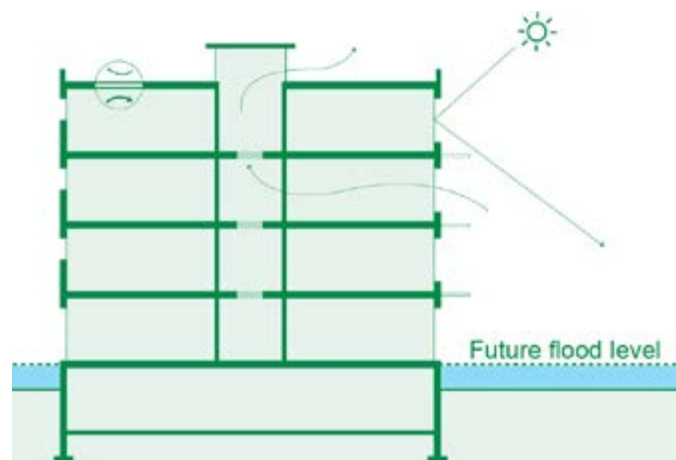
OBJECTIVE

Protect residents and building systems from flooding.

GUIDELINES

- a. Use the City's most up-to-date projections for anticipated future flood elevations, including the City's Floodviewer information and dashboard, Seek guidance from the City of Cambridge Department of Public Works (DPW) regarding peak stormwater runoff and on measures to build and protect to the 2070 10% flood level and recover from the 2070 1% flood level.
- b. Where front yards are elevated above sidewalk level, utilize features such as low walls, curbs, hedges, steps, ramps, to create the grade change and to provide accessible routes. Unplanted or grass berms that slope up directly from sidewalk level are discouraged.
- c. Avoid locating sensitive uses such as critical building functions, emergency equipment, or residential bedrooms in areas that are at risk of future flooding.

**Review the Zoning Ordinance for required sustainable design standards.*



Raise residential spaces above anticipated flood level.

**For more information, see "[Resilient Cambridge - Climate Change Preparedness and Resiliency Plan](#)"*

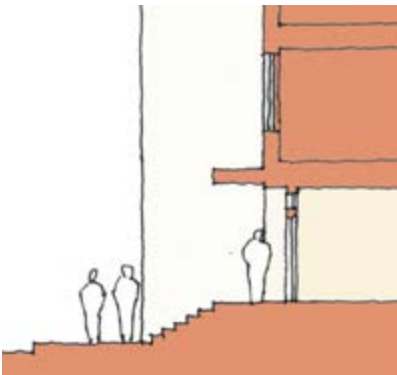
- d. In buildings with elevated ground floors, consider strategies that can provide ready public access to lobbies and other active or community uses on ground floors, such as:

Internal circulation

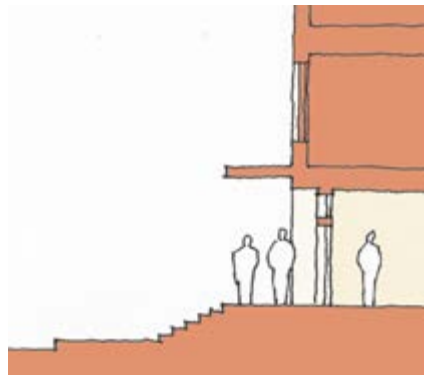
- Locate lobbies and other entrance spaces at sidewalk level. A sidewalk level entry with internal circulation provides the strongest visual connection between the public realm and the building interior.
- Use steps and ramps or elevators inside lobbies to provide access up to ground floor level and to general building circulation.
- Construct street level lobbies and other spaces with flood-tolerant materials and/or flood-proof exterior walls, and design such spaces to be protected by passive flood barriers.

Elevated forecourts

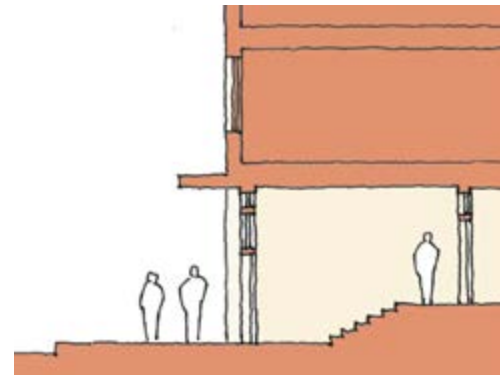
- Use exterior ramps and steps to provide access from sidewalk level up to a forecourt at the same level as the building's elevated ground floor.
- Design ramps and steps as integral parts of the project's architectural and landscape design: e.g. as elements of a forecourt or other feature that is open to the street.



Lobby and first floor elevated above flood level, with exterior steps and ramp in the building's forecourt.



Lobby and first floor elevated above flood level, with continuous exterior walkway that is accessed by steps and ramps from the sidewalk.



First floor elevated above flood level, with steps and ramp inside the building's lobby.

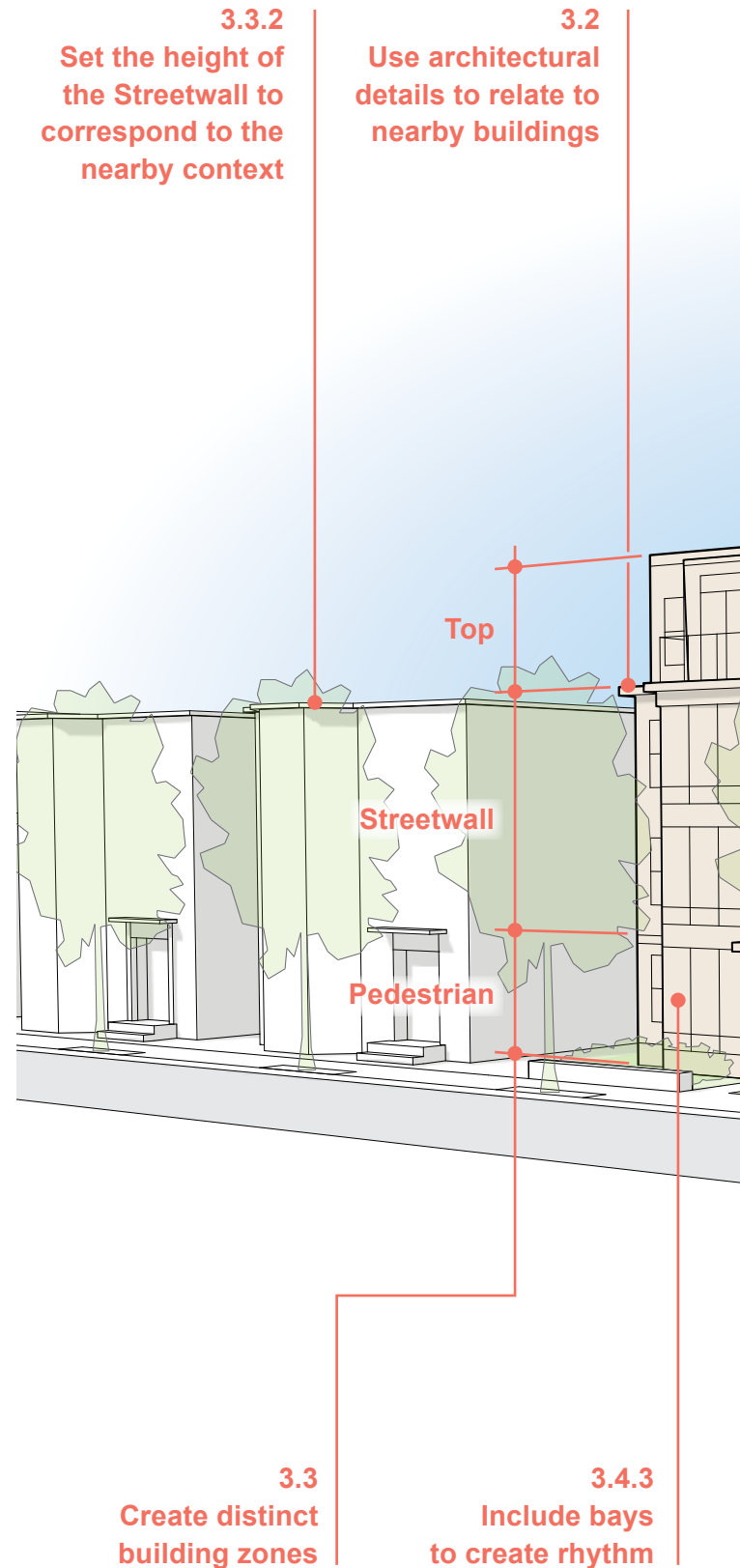
5. PRINCIPLES IN PRACTICE

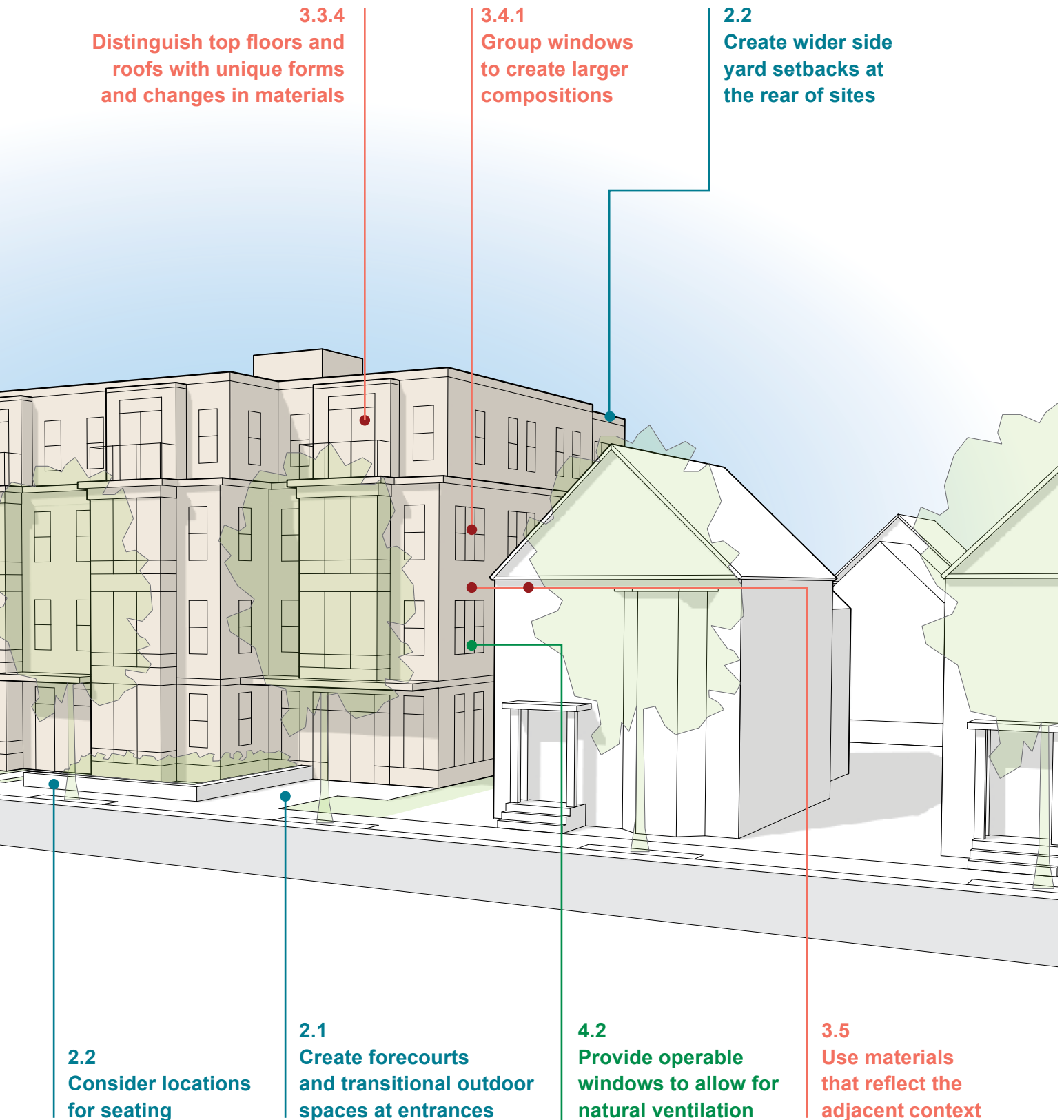
The guidelines and strategies in the previous chapters are intended to ensure that new housing complements and enriches Cambridge's existing neighborhoods. Some of these principles are universal and should be applied to all types of housing in all locations; others are more relevant to specific scales, locations, or contexts. The following chapter provides examples of how the design guidance found in this document can be employed to address different building scales in varied locations. They offer visual illustrations of how proposed developments can best integrate themselves into their surrounding context.

Each example has been chosen to represent conditions commonly found throughout Cambridge; however, they aren't intended to replicate a specific place. They are also not meant to preference a particular style or design language, but rather depict one possible successful outcome.

5.1 EXAMPLE: 4-STORY BUILDING IN A RESIDENTIAL NEIGHBORHOOD

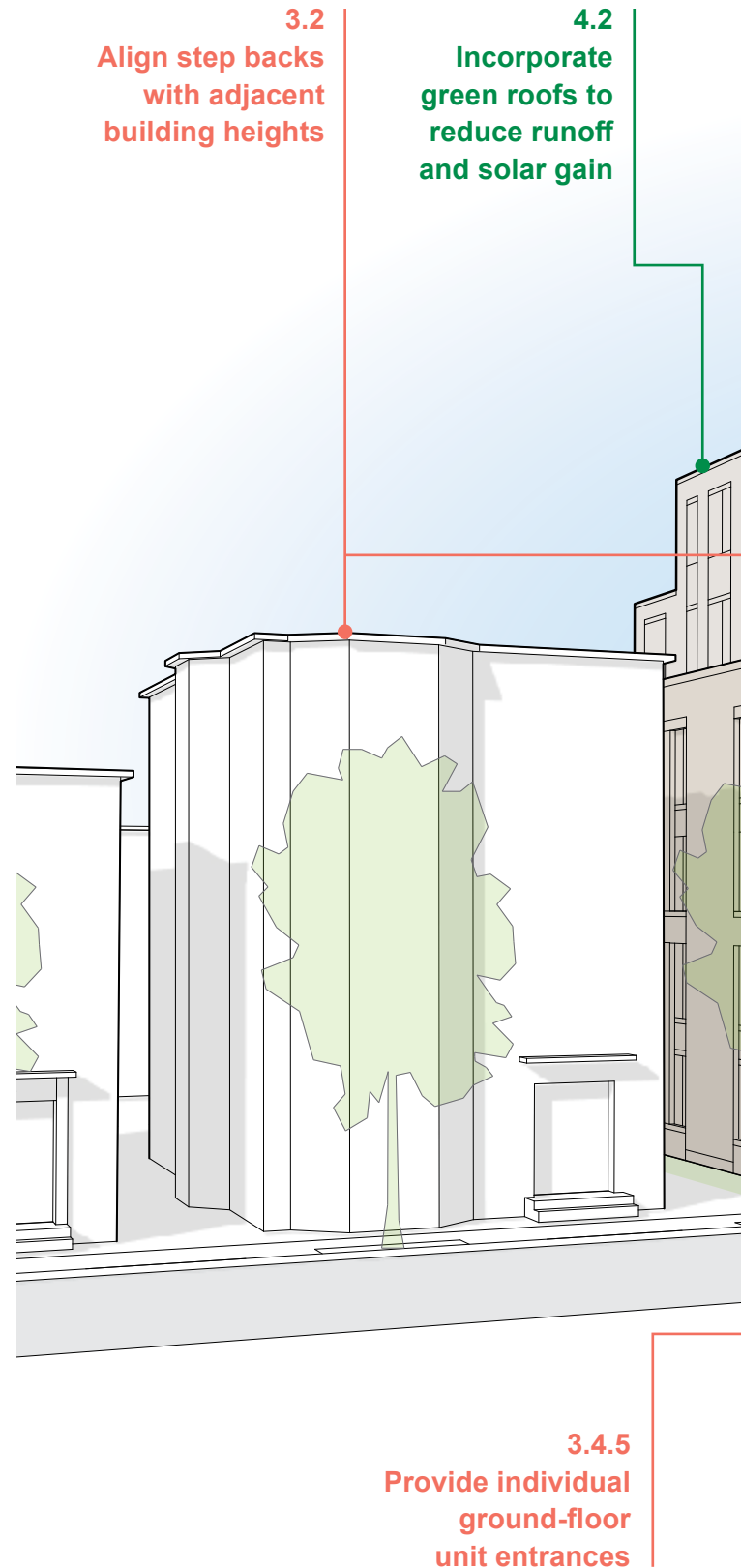
Four-story multifamily buildings are now permitted in all residential districts throughout Cambridge. Since buildings of this height and scale are commonly found throughout the City, new development should take cues from Cambridge's rich existing context regarding massing, materials, and architectural elements. Ground level units should ideally have their own entrances to activate the street.

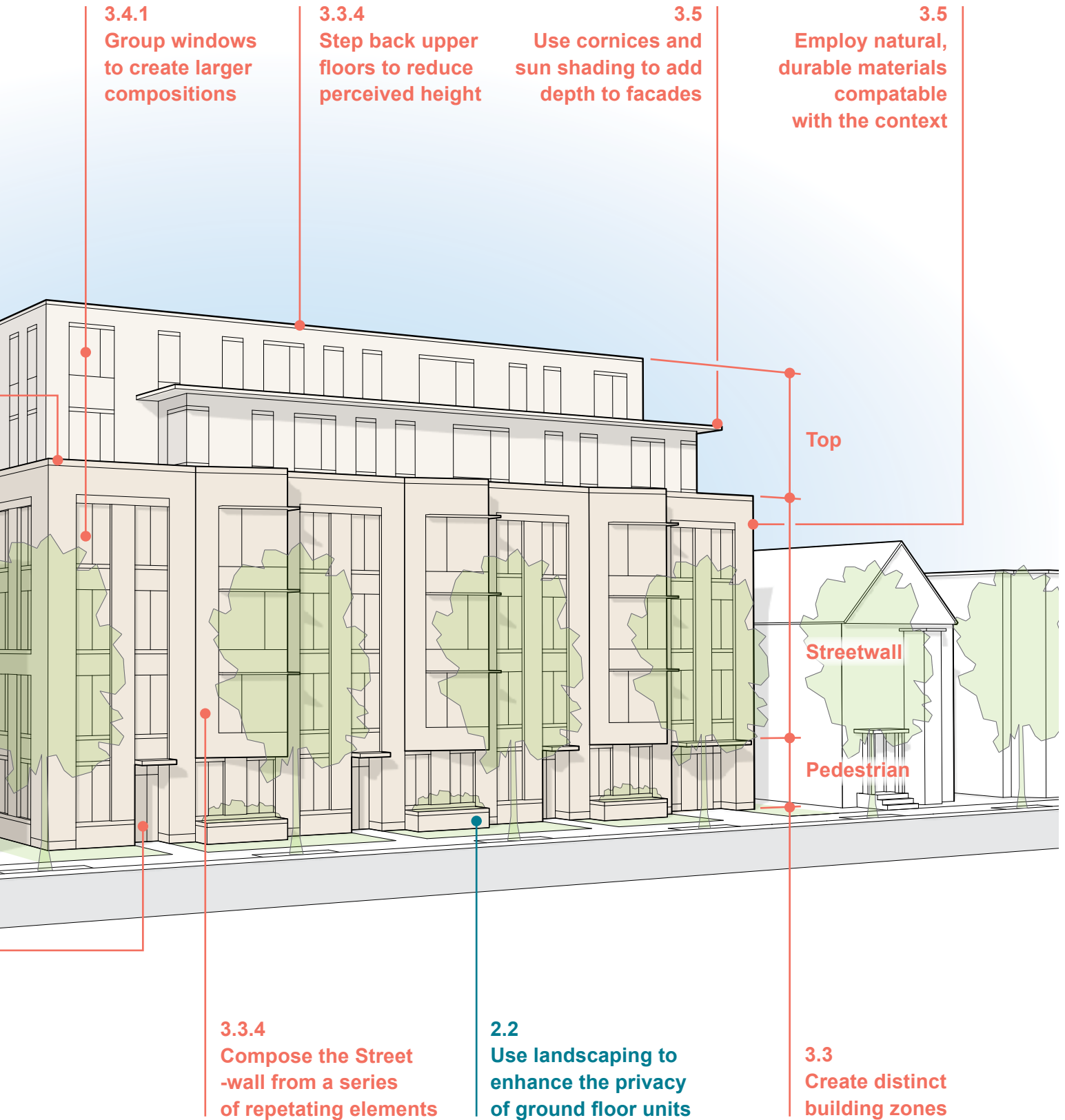




5.2 EXAMPLE: 6-STORY BUILDING IN A RESIDENTIAL NEIGHBORHOOD

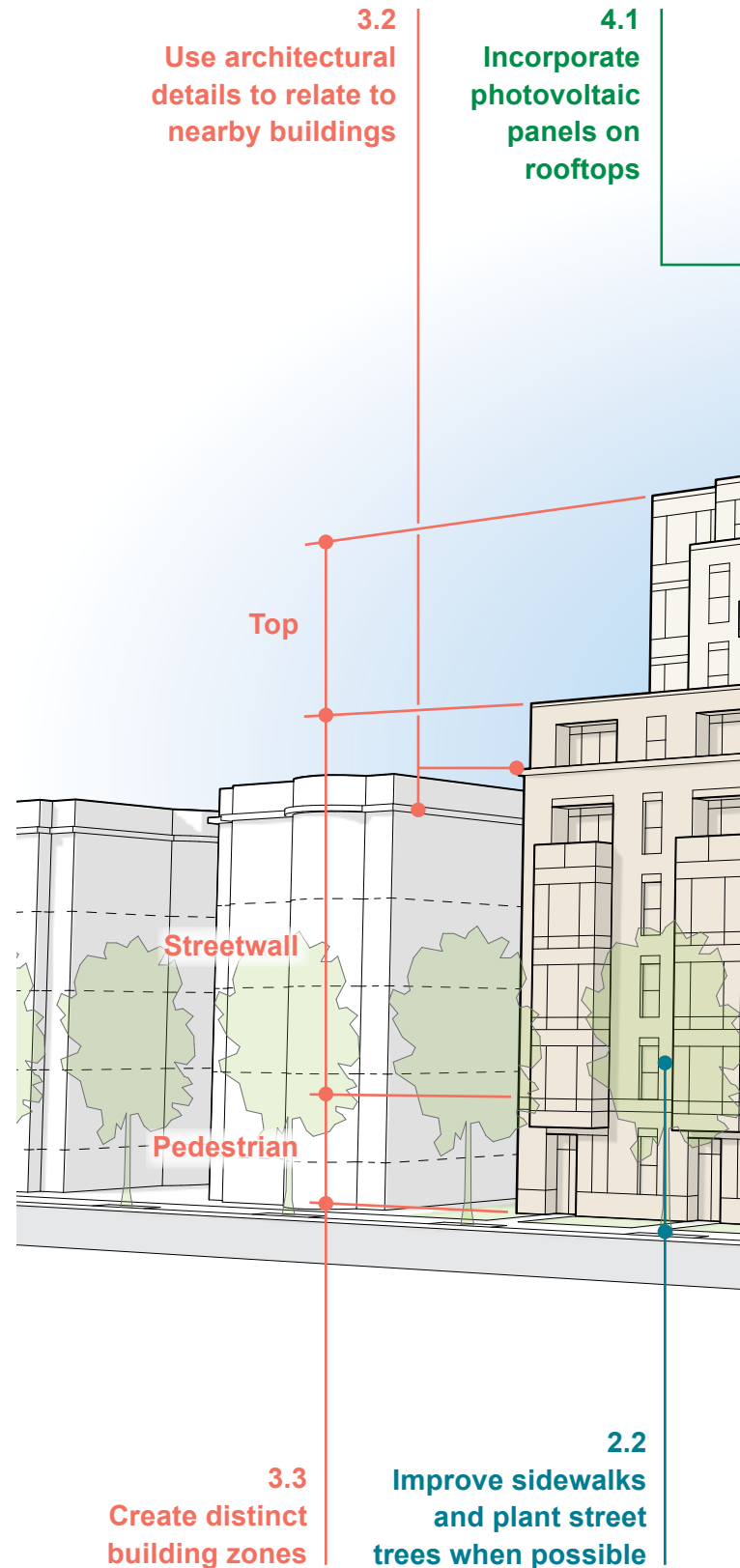
Six-story multifamily buildings are often taller than the surrounding residential fabric, though examples of 5-6 story brick apartment buildings can be found in most neighborhoods throughout Cambridge. New development should seek to respond to the existing forms, heights, and rhythms of the adjacent context. Upper level step backs and material changes can help reduce the apparent height and add visual interest.

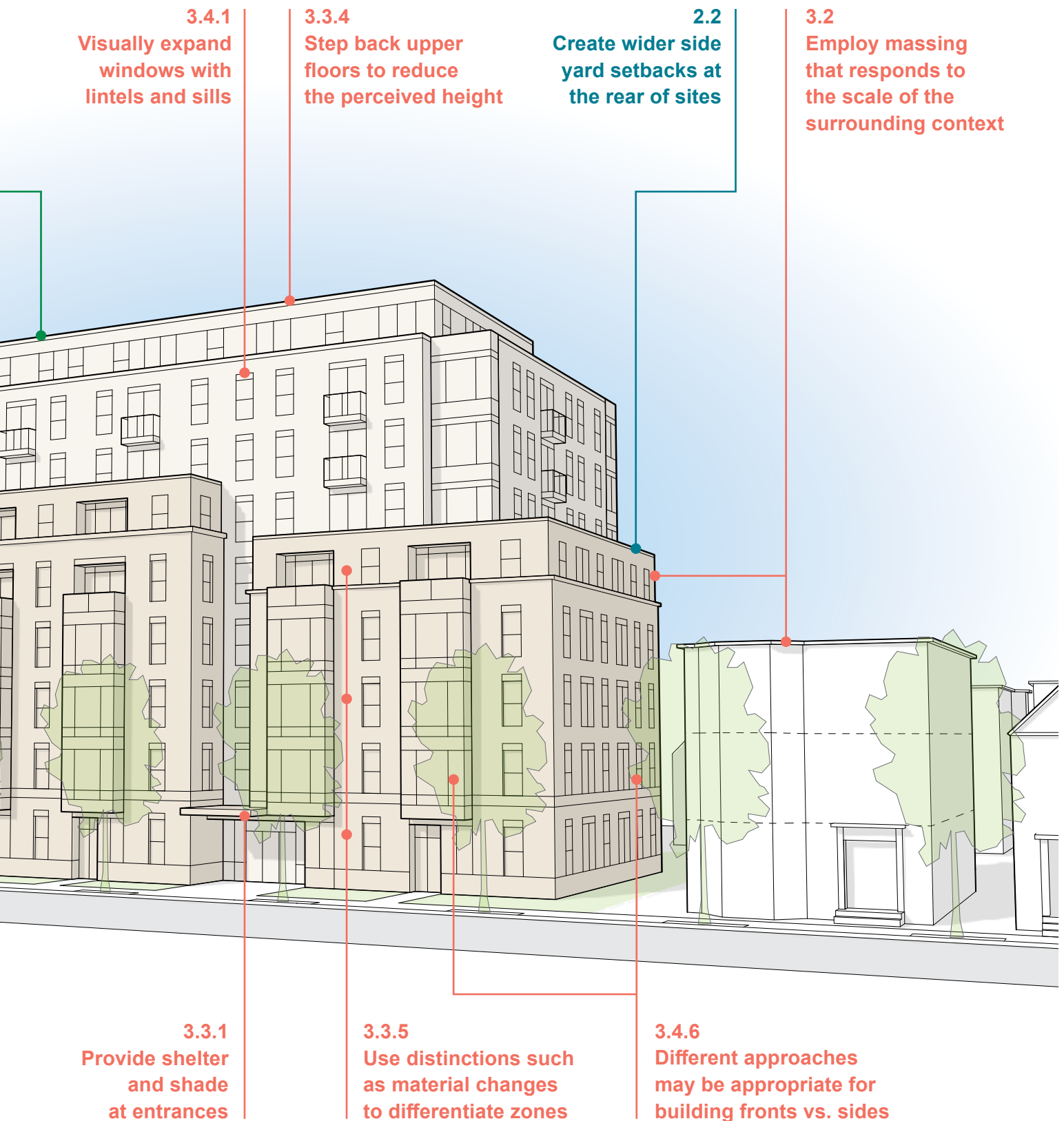




5.3 EXAMPLE: 9-STORY BUILDING IN RESIDENTIAL NEIGHBORHOOD

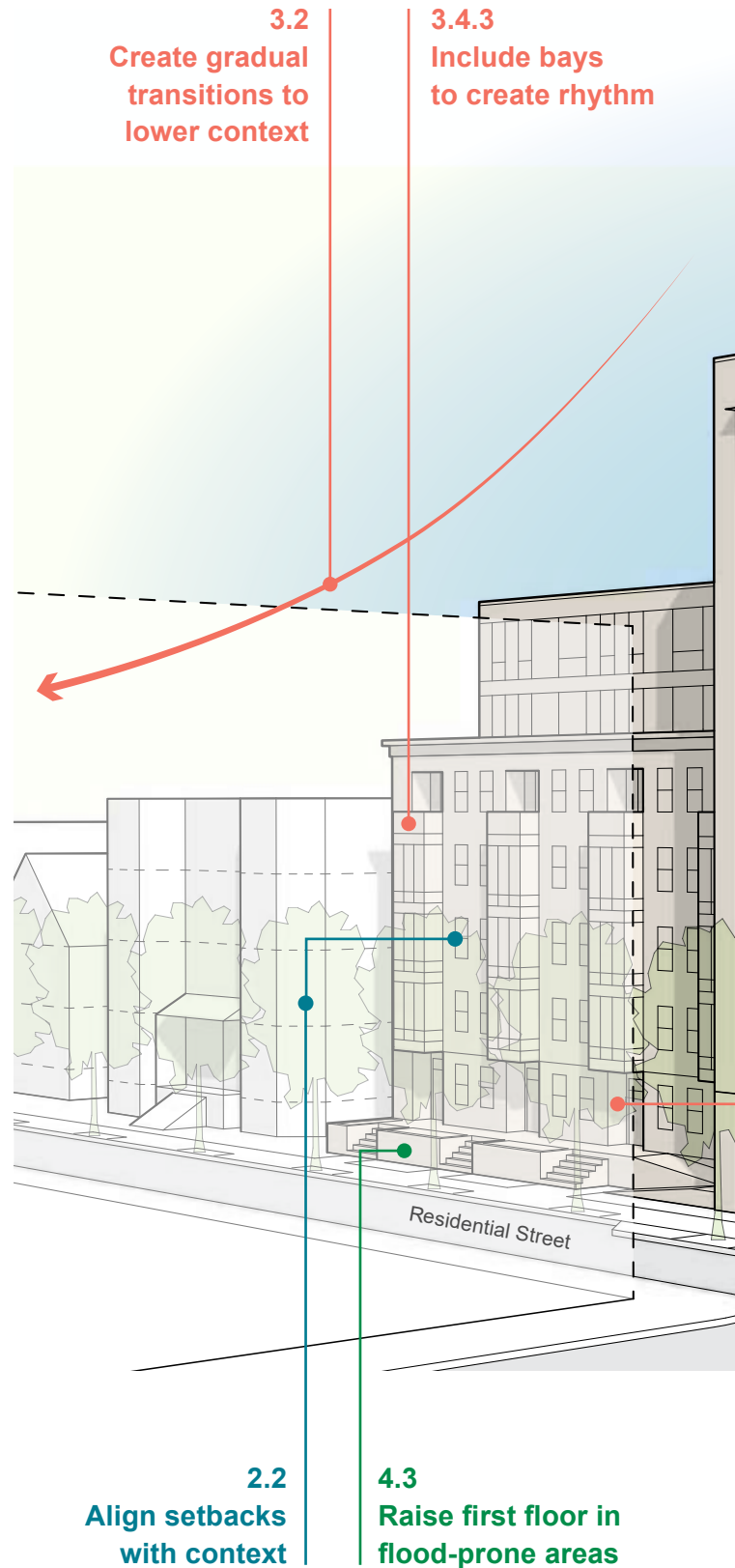
For nine-story multifamily buildings within existing neighborhoods, the primary goal is to use massing, facade composition, and material strategies to reduce the perceived height of new development. Strongly stepping back the upper portion of the building at a height similar to the adjacent context will help it visually recede. The highest level of facade articulation and details should be concentrated in the Pedestrian and Streetwall Zones to draw focus to these lower sections.

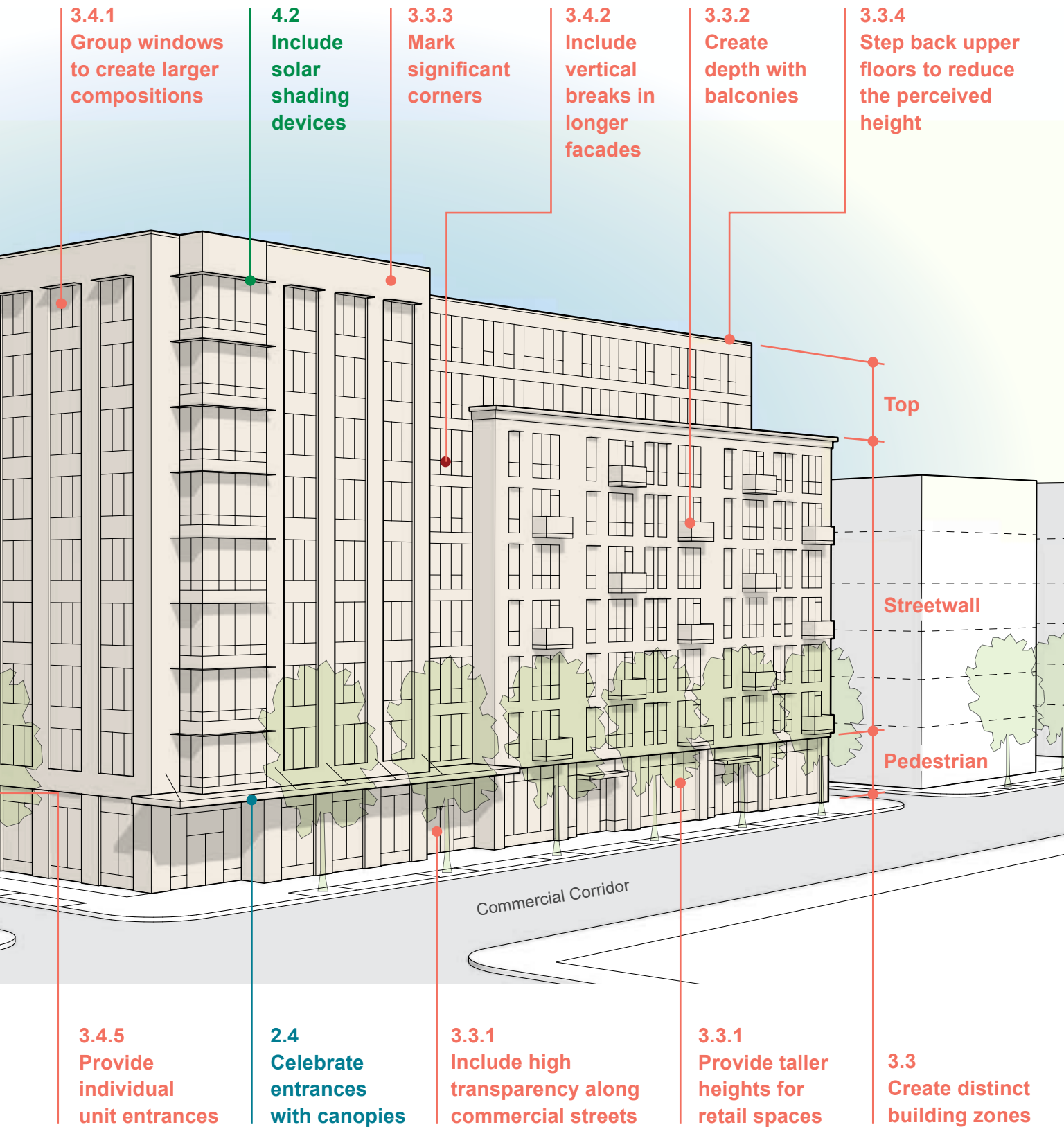




5.4 EXAMPLE: 9-STORY BUILDING ON A RETAIL CORRIDOR

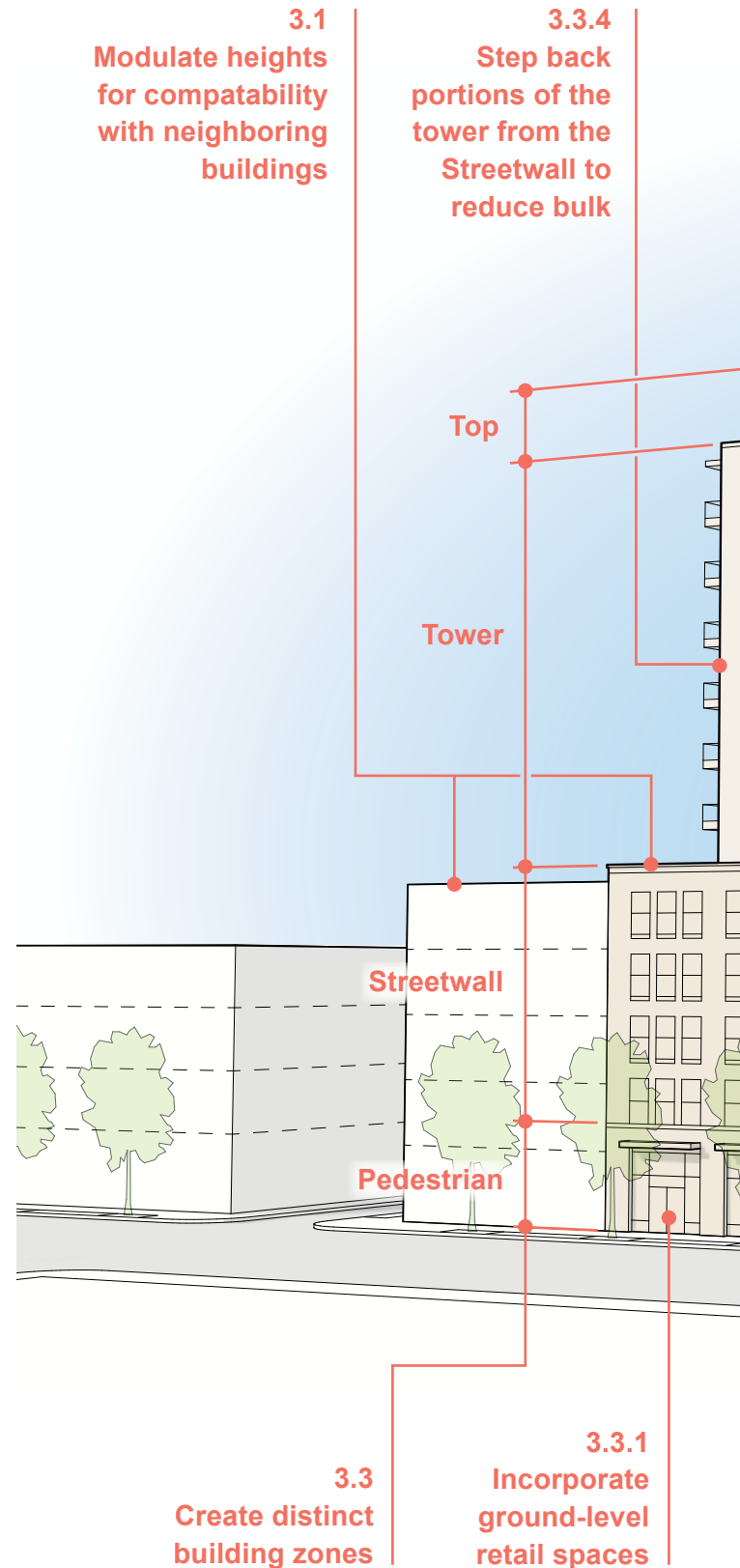
New development in these locations will often need to bridge scales between shorter neighborhood districts and larger commercial corridors. Distinct approaches should be applied to the "front" and "sides" of the building based on their unique context- a taller, more urban expression is appropriate along the corridor and a more fine-grained and intimate scale integrates into the neighborhood. Moments of height are reserved for significant corners or intersections.

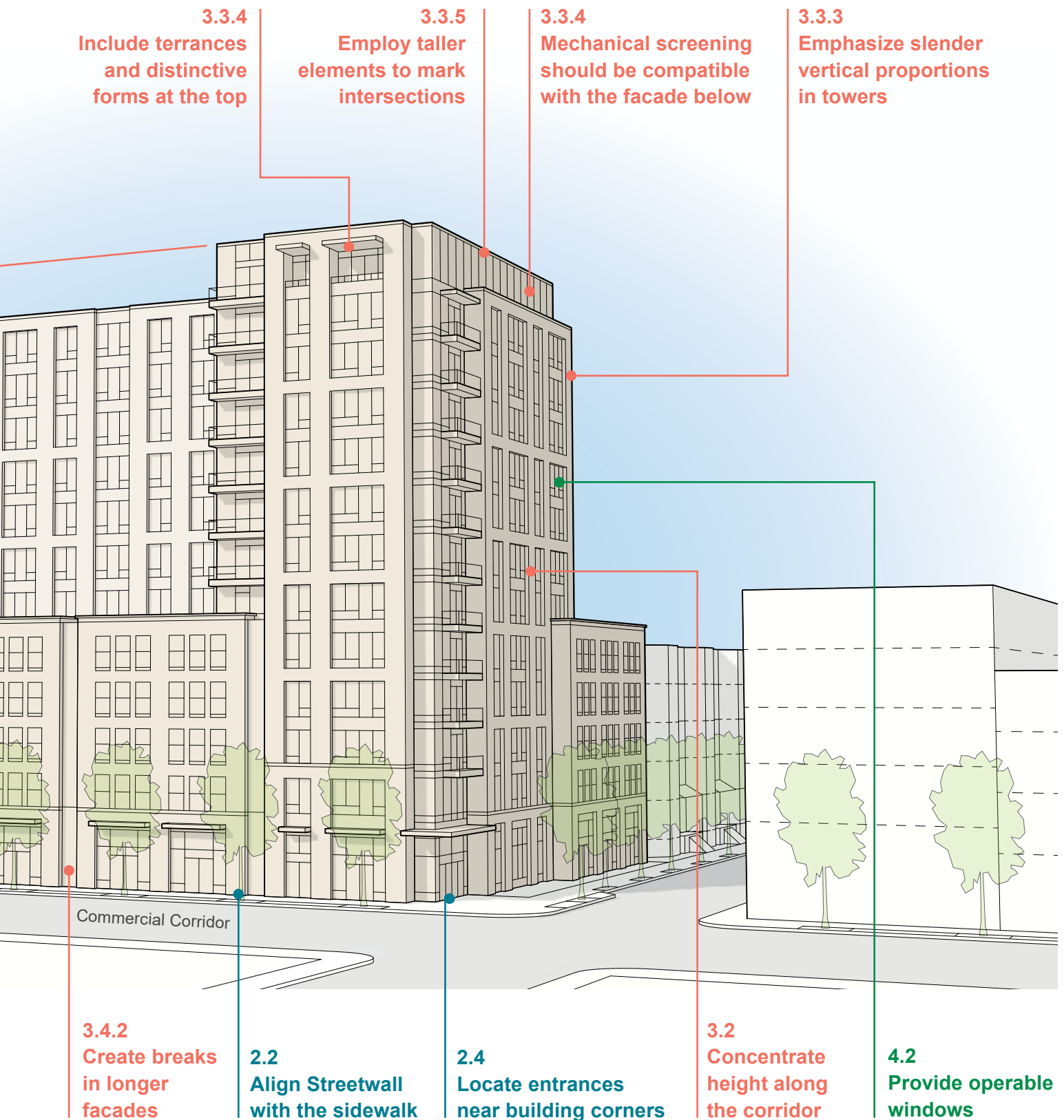




5.5 EXAMPLE: 12 - 15 STORY BUILDING ON A RETAIL CORRIDOR

New development twelve stories and taller will typically include a "Tower" zone that is distinct from the Streetwall below. This division should occur around the average streetwall height of the context, and is often achieved through upper-level step backs and changes in material or architectural detailing. Portions of the tower may come to the ground to mark important nodes or intersections, and should emphasize slender, vertical proportions. The top is an opportunity for distinctive forms that punctuate the tower.





6. GLOSSARY

Active Use: Building program that animates streets and open spaces by encouraging actual or visual engagement between tenants and the public. Active uses include residential entrances, restaurants, cafes, retail, services for the public (e.g. fitness centers, cafeterias, daycares, etc.), community spaces, art exhibition spaces/display windows, creative workspaces, cultural venues, and city services.

Affordable Housing Overlay: A set of modified development standards set forth in Section 11.207.3 of the Zoning Ordinance intended to allow incremental increases in density, limited increases in height, and relaxation of certain other zoning limitations for residential developments in which all units are made permanently affordable to households earning up to 100% of area median income.

Affordable Housing Overlay (AHO) Dwelling Unit: A dwelling unit within an AHO Project for which occupancy is restricted to an AHO Eligible Household and whose rent or initial sale price is established by the provisions of Section 11.207.3 of the Zoning Ordinance.

Architectural Details: Small-scale elements (both decorative and technical) of a building's facade and massing that provide visual interest and articulate the facade's composition; elements that express style and character.

Awning: A projecting element made of canvas or a similar material stretched on a frame and used to keep sun or rain off a storefront, window, or doorway.

Bay window: Window or a window wall that projects beyond the typical plane of the building elevation.

Block: group of adjacent buildings, bounded by public streets or other open spaces.

Build-to Line: A line, typically parallel to the lot line, where the facade of a building is required to be located.

Civic Structure: The connective pattern of public spaces, including streets, parks, and squares, significant landmark buildings, and the texture of commercial and residential blocks that organizes a city's public realm.

Canopy: A roofed shelter projecting over a sidewalk, driveway, entry, window, or similar area that may be supported by a building, or columns, poles, or braces.

Circulation: The interconnected system of streets, driveways, sidewalks, paths, bicycle lanes, squares, forecourts, courtyards, building entrances, lobbies, interior corridors, and stairs that facilitates movement. Circulation connects the varied elements of a city, organizes movement on individual sites, leads to building entrances, and connects interior spaces.

Cladding: The exterior material layer of a building envelope which forms a veneer such as brick, stone, metal, glass, concrete, wood, terracotta, or other composite systems made of such materials.

Context: The area around a project. Its neighborhood or district, including its buildings, landmarks, streets, parks, squares, and other open spaces, and natural features. Contextual buildings are harmonious with and respectful of the character of their contexts including building types, scales, materials, colors, landscape.

Cool Roof: A cool roof is designed to reflect more sunlight than a conventional roof, absorbing less solar energy and thereby reducing heat transfer to the building.

Commercial Corridor: A large, mixed-use street of citywide importance. In Cambridge, these include streets like Massachusetts Ave, Cambridge St, and Main St.

Cornice: A molded and projecting horizontal feature that crowns a facade.

Façade: The face of a building towards a street or other open space. The primary or "front" face of a building is particularly important as it frames the public realm and contributes to its character.

Fenestration: The arrangement of windows and doors on the facade of a building.

Frontage: The property line or part of a site facing a street or public open space. If the lot abuts more than one street, all street-facing sides are considered frontages.

Glass, Mirrored: Glass that blocks visibility from outside by reflecting light.

Glass, Opaque: Glass that is not transparent, typically achieved through films, etching, or backing panels.

Glass, Vision: Clear or tinted glass that is visually transparent from both the exterior and interior.

Glazing: The portions of the building envelope that let in light, including windows, plastic panels, clerestories, skylights, doors with glass, and glass block walls.

Green Wall: A vertical system designed to support the growth of living plants, often incorporating a growth medium and an irrigation system.

Green Roof: A roof that is partially or completely covered with vegetation and a growing medium, planted over a waterproof membrane. It may also include components such as a root barrier, drainage, and irrigation systems.

Landscape: Open space designed to enhance the functional, social, and ecological qualities of a site. Landscape includes soft landscape (organic elements such as soil, groundcover, shrubs, trees), hard landscape (pathways, decking), and features (furnishings, lighting, recreation and play equipment).

Lot: A parcel of land in identical ownership throughout, bounded by other lots or by streets, which is designated to be used, developed or built upon as a unit.

Low-Rise Building: A building with three or fewer stories.

Massing: The three-dimensional form of a building's volume including its height and major articulations.

Mechanical Equipment: Includes, but is not limited to, exhaust fans and ducts, air conditioning equipment, elevator bulkheads, heat exchangers, and transformers.

Microclimate: The local climate of a relatively small area, influenced by site features such as the color and reflectivity of surfaces, vegetation, and topography.

Mid-Rise Building: A building that has four to nine stories.

Mixed-Use: Development that includes more than one use— such as residential, commercial, industrial, or public and semi-public uses— within the same building, project, or site.

Open Space: All unbuilt areas, whether publicly or privately owned. Cambridge's Zoning Ordinance defines different categories of open space in Section 2.000.

Pedestrian Zone: The ground story, and occasionally second story, of a building facade fronting a street or open space, often including active uses oriented to engage the public realm.

Percent Transparency: The ratio of transparent window and door glazing to the total facade area. Also called the "Window-to-Wall Ratio".

Penthouse: An enclosed, unoccupied rooftop structure that houses mechanical, electrical, plumbing equipment, elevator machinery, roof access, and building systems.

Privately Owned Public Spaces (POPS): Open space that is owned, provided, and managed by a private entity, and accessible to the public, through an agreement between the City and private property owner that was developed during the City's project review process.

Public Art: A work of art created for or placed in the public realm for enjoyment by all. At its best, public art is responsive to its site or social and physical context. Public art can be ephemeral, temporary, or permanent, and it can be the creation of one person or many. It embraces a wide range of forms, sizes, and scales, including but not limited to murals, sculptures, memorials, monuments, integrated architectural or landscape features, functional elements (such as street furniture and lighting), community art, digital / time based media, performances, and festivals.

Public Realm: All spaces that are physically and/or visually accessible to the public, regardless of ownership. These spaces can include, but are not limited to, privately and publicly owned open spaces, parks, plazas, squares, streets, sidewalks, paths, building ground floors, and facades.

Publicly Accessible: Areas that are fully open to public access and meet applicable universal accessibility requirements.

Right-of-Way: Transportation corridors that comprise the majority of the public realm and are typically owned by a government entity. They facilitate movement and connections, and include streets, sidewalks, and paths.

Scale: The perceived sense of a building's size relative to the human body, to the street, and to nearby buildings.

Setback: The minimum distance which a building, portion of a building, or other structure must be set back from a property line, street, or designated natural feature.

Spandrel: The area between the top of a window on one floor and the sill of the window above it.

Step-back: A setback occurring at an upper level of a building that results in the façade above being located further back from the plane of the façade below.

Streetwall Zone: The portion of a building facade fronting a street or open space that extends from the Pedestrian Zone to a height typically equal to the width of the adjacent right of way.

Street, Residential: A street that is primarily or entirely lined by residential buildings.

Street, Retail: A street that is primarily or entirely lined by ground floor retail spaces.

Tall Building: A building that has ten or more stories.

Tower Zone: The portion of a tall building that extends from the Streetwall Zone to the Top Zone. Not all buildings will have a tower zone.

Top Zone: The uppermost portion of a building. Depending on building height, this may include cornices, roofs, mechanical penthouses or enclosures, and potentially one or more residential floors and/or common spaces.

Transparency: The ability to see through a surface, typically achieved by employing materials such as glass that allow the transmission of light.

Urban Heat Island (UHI): The increased temperature in urban settings caused by the replacement of natural land cover with surfaces that absorb and retain heat.

Yard: An open unoccupied space on the same lot with a building, open and unobstructed from the ground to the sky. Front, rear, and side yards are distinguished based on which property line they are adjacent to and are defined in Section 2.000 of the Zoning Ordinance.

7. PHOTO CREDITS

replace wit the ccredits fo rthe current photos.

IMAGE SOURCES:

- Cambridge Arts Council
- Cambridge Community Development Department
- Cambridge Day
- Erik Thorkildsen
- Gardenista
- Glen-Gary Brick
- Google Earth Pro
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- HMFH Architects
- OverUnder
- Semper Greenwall
- Turfstone

