

BLUE HILL DISTRICT DESIGN GUIDELINES

TOWN OF CHAPEL HILL, NORTH CAROLINA



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Blue Hill District Map

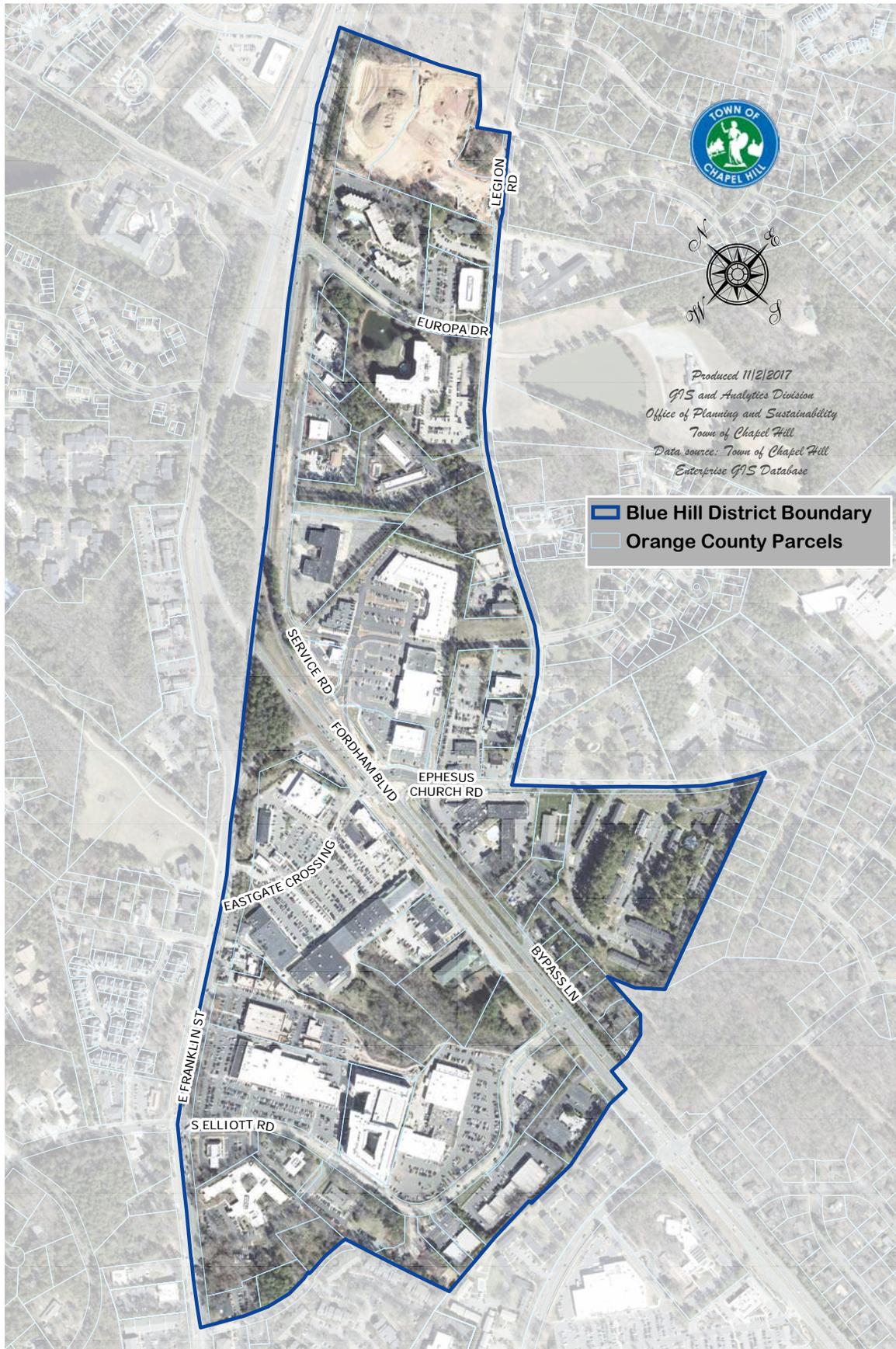


Figure 0-1 Blue Hill District Map.

05.23.2018

INTRODUCTION

The Blue Hill District (formerly Ephesus/Fordham) is emerging as a vibrant part of Chapel Hill based on a vision for redevelopment that is set forth in the area's Form-Based Code. The code establishes basic requirements for development as a series of prescriptive standards to be administered by Town staff. It also provides for a design review process, using design guidelines, for a specific set of topics, in which the Town's Community Design Commission (CDC) participates. These design guidelines are published, therefore, as provided in the code. The intent is to facilitate interpretation of the code by staff and review of the specified topics by the CDC.

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Establishment of the Blue Hill District

The Chapel Hill Town Council established the Blue Hill District in 2014, under its original name, the Ephesus/Fordham District. This District grew out of a small area planning and economic development initiative, with the goal of revitalizing and reconnecting this area of town by encouraging reinvestment in a collection of aging commercial properties.

A Form-Based zoning code was adopted for the District to facilitate redevelopment with a mixture of uses that would support a high-quality public realm in a pedestrian-friendly area. The Form-Based zoning regulations (found in Section 3.11 of the Land Use Management Ordinance or LUMO) prescribe the physical form of buildings and their relationship to the street. Blue Hill also functions as a Special Appearance District, for which design guidelines may be used to maintain a consistent and cohesive design aesthetic.

UNIQUENESS OF THE AREA

The Booker Creek natural area serves as a central feature of the Blue Hill District, running roughly north to south. With the adoption of the Chapel Hill Mobility Plan in 2017, the District also acts as the confluence of many existing and planned multi-use corridors.

This network of trails and enhanced natural areas suggests a re-orientation of buildings and sites within the Blue Hill District, away from the arterial roads that previously characterized the area. This can become a unique aspect of the District as more development is completed. While the construction of new local Complete Streets and the retrofitting of major roads is still an important opportunity, the high-quality public realm envisioned for the District becomes more achievable when considering the potential for interconnected open spaces and non-vehicular thoroughfares.

RECENT AREA HISTORY

As redevelopment of the Blue Hill District began, Chapel Hill residents identified flooding and traffic congestion as issues that needed to be addressed. In 2016, the Town funded \$2 million of infrastructure projects in the District to improve access, traffic flow, and bicycle and pedestrian safety. Following completion of a subwatershed study, the Town initiated design of a 4-acre flood storage facility to alleviate flooding in the District along Lower Booker Creek.

The zoning regulations have been refined since their initial adoption, including a series of code improvements enacted by Town Council in March 2017 with a focus on achieving greater walkability and public open space through redevelopment within the District. New requirements include design elements like building pass-throughs, block length and block perimeter maximums, as well as greater amounts of publicly accessible outdoor amenity space.

In October of 2017, the Town Council adopted a Mobility Plan that outlines a network of bicycle, pedestrian, and greenway corridors throughout the town. A Sub-Area Plan dedicated to the Blue Hill District identifies a series of current and future connections and also provides a palette of street types that support varying levels of vehicular and non-vehicular connectivity. These street types have been incorporated into the street standards of the Town's Engineering Design Manual.

The rebranding of the Ephesus/Fordham District as the Blue Hill District was announced in August 2017, following the decision of a majority of the property owners. The new brand was seen as a tool to help frame the market and drive the evolution of the District. The name change did not affect the boundaries or regulatory framework of the District.

Vision for the Blue Hill District



The Blue Hill District builds on the active, green and creative traditions found throughout Chapel Hill. The District's design guidelines contribute by promoting the development of a walkable community with opportunities for all to live, shop, work and share community experiences in one place. In the future, there are a variety of characteristics that will define the Blue Hill District, which are described below.

A pedestrian-friendly environment will exist throughout the District, with attractive, inviting streetscapes and interconnected multi-use paths. Street edges will be defined with buildings that themselves are pedestrian-friendly. A dense canopy of trees and interwoven landscaped areas will soften the urban fabric while offering places to rest or play. Natural resources will be valued and actively used, and new developments will be designed to complement and enhance the connections to the natural resources. The District will include residences, vibrant daytime businesses and enjoyable night-time uses.



The District will be a harmonious blend of local tradition, cutting-edge design and sustainability. With a range of living options, shopping, offices spaces, restaurants and outdoor spaces, the Blue Hill District will thrive on its mix of uses and a walkable, well-connected urban environment. The District will be distinct in the sense that people can walk from place to place, dine at an outdoor café, run or bike along Booker Creek, shop at a local boutique or relax in inviting outdoor spaces.



To maintain its urban vibrancy, the Blue Hill District will focus on people – not cars. Buildings will contribute to the urban fabric by stepping down as they meet the sidewalk's edge. Architecture will invite the attention of passersby through innovative design, details and variations in massing and high-quality materials. Storefronts, architectural screens and landscaping will minimize the visual presence of garages and parking lots. Public spaces, streets, greenways and parks, plazas and the creek's edge, will all cater to the pedestrian's enjoyment with safe sidewalks, ample landscaping, artwork, resting spots and places for gathering.



Visually, the Blue Hill District will convey a distinct identity that builds on the character of Downtown Chapel Hill while simultaneously offering a local alternative for all types of residents, students and visitors to enjoy. A diverse series of mixed-use developments will weave together to create the urban fabric. Its streets and pathways will be busy during the day and into the evening.

About this Document

PURPOSE OF THE DESIGN GUIDELINES

Design Guidelines help establish a common understanding of design principles and standards and provide a basis for making decisions about the appropriateness of new development. They also serve as an educational and planning tool for property owners and design professionals. While the guidelines are written such that they can be used by the layman to plan improvements, property owners are strongly encouraged to enlist the assistance of qualified design and planning professionals, including architects and landscape architects.

PROCESS OF DEVELOPING DESIGN GUIDELINES

The Town of Chapel Hill Planning Department created this document with assistance from the Community Design Commission (CDC), the Planning Commission (PC), town residents, business and property owners.

Outreach and public engagement included a series of on-site public meetings and two online public surveys. Initial meetings with Town staff, the CDC, the PC and local business and property owners provided a preliminary direction for the design guidelines. Two subsequent public workshops and the results from the online survey were then used to steer and refine the overall document.

DO THE DESIGN GUIDELINES DICTATE TASTE?

The guidelines reflect basic approaches to design that will help espouse best practices in urban design. They do not dictate style, but they do require compatibility with the neighborhood context and the surrounding natural environment.

Administering the Design Guidelines

ADDITIONAL COA REVIEW ELEMENTS INFORMATION

Refer to the corresponding column in the Design Guideline Authority table on pages 10-11 for a list of guidelines that inform COA Review Elements.

The Design Guidelines are a tool for preparing and evaluating development applications in the Walkable Residential and Walkable Mixed Use subdistricts of the Blue Hill District, as shown on the Town of Chapel Hill Official Zoning Map. Applicants should consult the Design Guidelines to understand how a project can best meet the intent of LUMO 3.11, and to understand the opportunity for flexibility with the review of design alternatives. For Town staff and the Community Design Commission, the Design Guidelines inform the following three aspects of design review:

NOTE

Note that this list is current as of the date of adoption of the design guidelines. Refer to Section 3.11.4.7.D for any updates that may occur.

CERTIFICATE OF APPROPRIATENESS REVIEW ELEMENTS

The Community Design Commission (CDC) will refer to the Design Guidelines when reviewing an application for a Certificate of Appropriateness (COA), to determine whether the following elements of an application meet the intent of the Form District as a base requirement:

- Architectural style
- Building elements listed in LUMO 3.11.2.6
- General design and arrangement of the building exterior
- Type and texture of building materials
- Type and style of windows and doors
- Type and style of light fixtures
- Aesthetic quality of masonry walls, fences, steps and pavement
- Aesthetic quality of above-ground, accessory utility features, including the screening of transformers and cabinet structures
- Appearance of structured parking visible from the public realm, architectural compatibility with the principle building
- Perimeter screening for Type C Frontage along Fordham Boulevard
- Appearance of above-ground stormwater control measures
- Quality of streetscape environment
- Quality of building pass-throughs
- Quality and activation of amenity spaces
- Reduced visibility of vehicular and service areas
- Appropriate transitions to surrounding developments
- Orientation and treatment of building entrances
- Appropriate use of lighting affixed to buildings

DESIGN ALTERNATIVES

When an applicant is seeking an alternative to a Form District standard, the Community Design Commission will refer to the Design Guidelines for assistance in determining whether the intent of the Form District is still being met and the alternative is warranted. In the case of multiple Design Alternatives, the Commission will look at the interaction of the Alternatives to ensure the proposed design meets the intent of the Form District. Appropriate opportunities for applicants to pursue a Design Alternative are identified in the Form-Based Code. These may be context-sensitive design solutions as well as deviations from standards due to a site constraint.

INTERPRETING CODE COMPLIANCE

Other guidelines in this document may assist staff in their interpretation of compliance with the Form District standards as base requirements. The images and language of the Design Guidelines aid in interpretation of design standards found in LUMO 3.11.

BEST PRACTICES

Some of the guidelines provide direction on approaches that are widely accepted as being correct or most effective in achieving design excellence. These “Best Practices” are included to inform users of some additional non-regulatory options to consider during the planning and design of a project.

ADDITIONAL DESIGN ALTERNATIVES INFORMATION

Refer to the corresponding column in the Design Guideline Authority table on pages 10-11 for a list of guidelines that inform Design Alternatives review.

ADDITIONAL COMPLIANCE INTERPRETATION INFORMATION

Refer to the corresponding column in Design Guideline Authority table on pages 10-11 for a list of guidelines that inform Code compliance interpretation.

Application of the Design Guidelines

WHO USES THE DESIGN GUIDELINES?

The guidelines are primarily for use by property owners and applicants considering development projects and by the Town's review authority. Property owners and applicants should review the guidelines to ensure that proposed development projects will contribute positively to the character of the Blue Hill District and to Chapel Hill as a whole.

HOW THE DESIGN GUIDELINES ARE APPLIED

The design guidelines provide the foundation for a design review process that ensures that new construction and redevelopment projects include high-quality design and promote Blue Hill's community objectives.

Projects subject to review using the design guidelines include:

- New commercial, office, institutional or public construction, additions and other exterior improvements
- New multi-family residential construction, additions and other exterior improvements
- Phased or incremental projects as defined within these guidelines
- Outdoor amenity spaces, recreation spaces or landscaping projects on commercial, office, multi-family or public properties

All projects subject to review are required to meet the intent of the guidelines. See "Interpreting the Design Guidelines" on page 14 for more information.

Types of projects for which the guidelines do not apply, include:

- Interior improvements and remodeling
- Projects that include only single-family or two-family residential uses
- Signage
- Accessory structures
- Minor modifications to floor area (as defined in the LUMO)
- Demolition
- Projects in the Blue Hill District located outside of the Walkable Residential and Walkable Mixed-use subdistricts

The design review process using these guidelines will be conducted by Chapel Hill Town staff and the Community Design Commission (CDC) as summarized in "Administering the Design Guidelines" on page 6.

INTERACTION WITH OTHER DOCUMENTS

The following resources should be consulted during the design process, to ensure compliance with all applicable rules and regulations. Where conflicts occur with the Design Guidelines, it is typical that other rules and regulations will govern.

- Chapel Hill LUMO Section 3.11
- Chapel Hill Public Works Engineering Design Manual
- Chapel Hill Mobility and Connectivity Plan
- Chapel Hill Town Code of Ordinances
- North Carolina Fire Code
- North Carolina BMP Manual

ADDITIONAL INFORMATION

See page 14 for more information about how the Design Guidelines interact with the Form-Based Code found in LUMO Section 3.11

DESIGN REVIEW PROCESS

1. The review process for applications in the Form District is established in LUMO 3.11.4.7.
2. The pre-application meeting between the applicant and the Town (LUMO 3.11.4.7.C.4.a) should include a discussion of the Design Guidelines and topics herein that are relevant to design of the particular site.
3. Staff will consult the Design Guidelines as necessary to assist in determining whether an application is in compliance with all applicable provisions of LUMO 3.11 (see LUMO 3.11.4.7.C.4.b).
4. The Community Design Commission will consult the Design Guidelines to inform their decision on whether to issue or deny a Certificate of Appropriateness (see LUMO 3.11.4.7.D.4).

Design Guideline Authority

The table below outlines the applicable review authority for each design topic, as outlined in the Town of Chapel Hill Land Use Management Ordinance (LUMO). In some cases, the review authority will vary within a design topic based on the individual guideline. Checks in the "Design Alternatives" column represent a range of options for *applicants* to choose from.

A more detailed "Design Guideline Overview Table" is included in the Appendix for individual Design Guidelines.

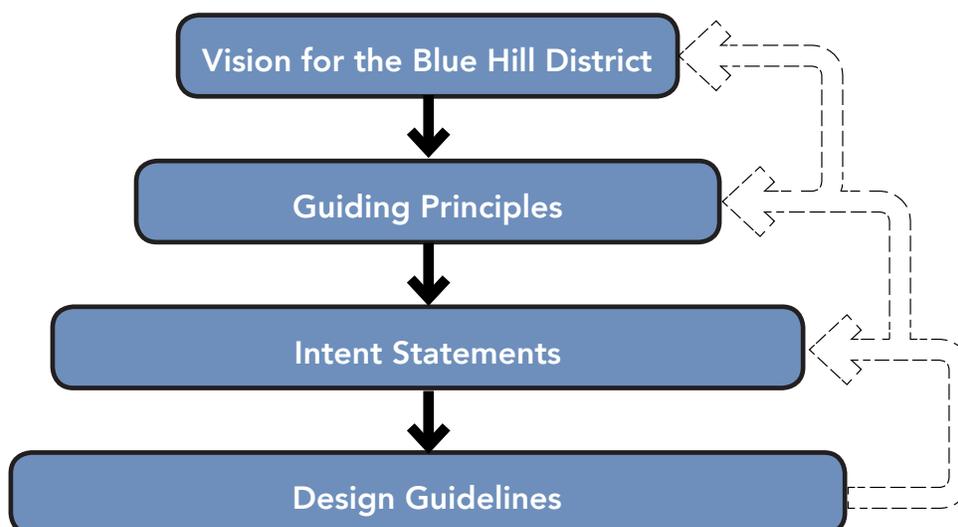
Chapter/Design Topic		Code Compliance	Certificate of Appropriateness Review Elements	Design Alternatives	Best Practices
CHAPTER 2	Public Right-of-Way				
	The Public Realm		✓	✓	✓
	View from the Public Right-of-Way	✓		✓	✓
	Pedestrian and Bicycle Connectivity	✓			
	Public Streetscape Character	✓	✓	✓	✓
	Public Art		✓	✓	✓
CHAPTER 3	Site Design				
	Building Placement and Setback Character	✓	✓		
	Building Orientation	✓		✓	
	Connectivity	✓	✓	✓	✓
	Outdoor Amenity Space	✓	✓	✓	✓
	Recreation Space	✓	✓		
	Outdoor Dining Areas	✓			
	Surface Parking	✓		✓	✓
	Structured Parking	✓	✓	✓	✓
	Landscape Design	✓	✓	✓	✓
	Fences and Site Walls		✓		
	Working with Topography	✓	✓	✓	✓
	Service Areas and Utilities	✓	✓		
	Drive-thru Areas	✓	✓		
	Stormwater Management (appearance)	✓	✓		
	Phased Improvements	✓		✓	
Sensitive Site Design Transitions	✓	✓	✓	✓	

Chapter/Design Topic (continued)

		Code Compliance	Certificate of Appropriateness Review Elements	Design Alternatives	Best Practices
CHAPTER 4	Building Design				
	Architectural Character		✓		
	Energy Efficiency and Building Performance			✓	✓
	Environmental Performance in Building Elements		✓	✓	✓
	Building Mass and Scale		✓	✓	✓
	Architectural Features (Design Elements)	✓	✓	✓	✓
	Four-sided Building Design	✓	✓		
	Building Elements	✓	✓	✓	
	Building Materials		✓	✓	
	Windows		✓		
	Exterior Lighting	✓	✓		
	Incremental Building Improvements			✓	

THE HIERARCHICAL STRUCTURE OF THE DOCUMENT

This document presents a series of design concepts in a hierarchical structure with four levels: At the highest level, a **Vision Statement** describes the long-term goal for the Blue Hill District. The Vision Statement in turn informs a set of **Guiding Principles**. These also are at a relatively high level and are the foundation for the guidelines that follow. The guidelines are organized in sets of topics, each of which is headed with an **Intent Statement** that outlines the anticipated outcome of the related design guidelines. Finally, the **Design Guidelines** themselves provide the more detailed directives for appropriateness. When a new or innovative approach is considered, how it meets the Intent Statement, Guiding Principles and Vision should be considered, from the bottom up.



Chapter Overview, Format & Interpretation

The design guidelines are organized and formatted to support consistent design review. See “Chapter Overview” below for more information about the organizational structure of the document and “Standard Design Guidelines Format” on page 13 for more information about the format of the design guidelines within this document. “Interpreting the Design Guidelines” on page 14 provides additional information on using the guidelines.

CHAPTER OVERVIEW

Following the Introduction, the design guidelines are organized by design topic into five separate chapters, as summarized below. For some smaller projects, all relevant design guidelines may be in one chapter (i.e., a project to expand and re-landscape a parking area would be subject only to the guidelines in Chapter 3). For larger projects, several chapters may apply (i.e., a new commercial or mixed-use project in the center of the District may be subject to design guidelines in Chapters 1-4).



CHAPTER 1: Guiding Principles

This chapter sets forth “high level” aspirations that inform the guidelines. They are based on intent statements that appear in the Form-Based Code and the Comprehensive Plan.



CHAPTER 2: Public Realm

This chapter presents a brief set of “high level” guidelines for the public realm (as defined on page 20). They describe the general qualities and consistency in design that is expected throughout the public realm of the Blue Hill District.



CHAPTER 3: Site Design Guidelines

This chapter establishes guidelines for streetscape, outdoor amenity spaces and landscape design within a property, as well as for the arrangement of buildings and other features on a site. These include guidelines for parking and the way in which a development should establish a positive relationship to adjacent properties and abutting neighborhoods.



CHAPTER 4: Building Design Guidelines

This chapter provides guidelines for buildings. They address the visual and functional character of new buildings as well as alterations and additions to existing buildings.

APPENDIX

The appendix includes the Design Guideline Authority Table and a glossary that defines terms not explained in the body of the design guidelines document.

Diagram 0-1 Chapter Overview

Standard Design Guidelines Format

The individual design guidelines in this document use a standard format. The format includes topic headings, intent statements related to the topic, numbered design guidelines, additional information about appropriate strategies and illustrations or diagrams. The diagram below uses a sample design guideline to illustrate each key element.

A →

Building Mass & Scale

The overall size, height and form of a building help determine how large it appears, and whether it is compatible with the surrounding context. Although a new building may be larger than adjacent buildings, it should not be monolithic in scale or jarringly contrast with neighboring development. A new building should use building articulation techniques to provide a sense of scale. These include varied heights, smaller building masses and articulated facades.

D →



Figure 4-3 Provide variation in building heights.

B →

BUILDING HEIGHT

New development must meet zoning requirements in Blue Hill while stepping down to create smooth transitions with adjacent lower-scale residential buildings.

C →

4.3 Provide variation in building heights.

- Incorporate height variations to reduce the scale of a building.
- Use variation in building and parapet heights to add visual interest and reduce boxy or monolithic building masses.

4.4 Locate the taller portion of a structure away from neighboring residential buildings of lower scale or other sensitive edges.

- Step down a taller, new building toward existing, lower-scaled neighbors.
- Where permitted by the base zoning, locate towers and other taller structures to minimize looming effects and shading of lower-scaled neighbors.

E →

ZONING ORDINANCE HEIGHT STANDARDS

Chapel Hill's Land Use Management Ordinance (LUMO) provides height standards that apply to all properties. Maximum permitted height varies by zone subdistrict .

KEY TO SAMPLE DESIGN GUIDELINES FORMAT ABOVE

A

The design topic is indicated with a heading followed by an intent statement.

C

The design guidelines describe a desired outcome. They are numbered by chapter for easy reference. Lettered statements under each numbered guideline aid in interpreting the guideline itself and sometimes offer options for meeting it.

E

Sidebars reference external documents (green sidebars) or for internal cross-references (blue sidebars).

B

A subtopic and intent statement are provided.

D

Photographs are numbered to reference individual guidelines and **Diagrams** are numbered sequentially to illustrate design principles.



Checkmarks and X marks indicate photographs/diagrams that generally illustrate an appropriate or inappropriate approach.



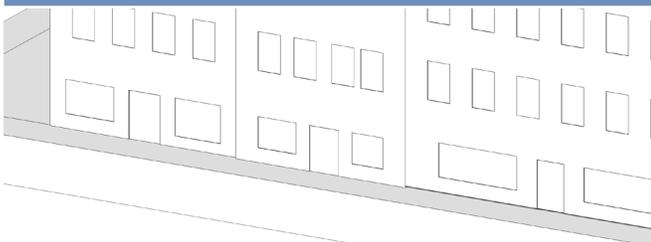
Interpreting the Design Guidelines

The design guidelines are intended to shape development that is consistent with community objectives. Compliance with the intent of applicable guidelines is expected, to the greatest extent feasible. Not all guidelines will apply to every project. Topics that are not part of a project are not applicable. In addition, not all bulleted (lettered) statements that appear under each numbered guideline will apply to each project. Some of these are to aid in interpreting the guideline itself and others offer options for meeting the guideline. Flexibility in applying the guidelines may be available for

phased improvements, minor projects or others as noted. Where a project includes a new approach not addressed by the guidelines, then the intent statement for the topic applies, as do the Guiding Principles (see page 16-18), to determine appropriateness.

In some cases, the design guidelines may also be used to help interpret and illustrate design standards within the Chapel Hill Land Use Management Ordinance (LUMO). As illustrated below, the LUMO and design guidelines work together to ensure that development promotes community objectives.

Topics Addressed by the Zoning Ordinance



The Chapel Hill LUMO provides quantitative standards, such as maximum height and minimum setbacks, that outline the basic shape of development. These are generally easy to interpret and provide a high level of predictability.

Topics Addressed by the Design Guidelines



The design guidelines address more detailed design considerations such as architectural character and compatibility with context. The guidelines require a greater degree of interpretation than the zoning ordinance. Therefore, they offer greater flexibility.

A Note About illustrations in the Design Guidelines:

Many images in the document illustrate individual design topics. Some show appropriate solutions; others show inappropriate designs. These images illustrate the intent of the guideline text and sometimes illustrate how to interpret standards in the LUMO. While an image may show a specific item that is appropriate, it may also include others that are not.

Captions help clarify what would be appropriate. The illustrations include a wide range of design styles, to demonstrate that specific styles are not required.

The photographs used throughout the document are from communities with similar demographics and geography to Chapel Hill. Many images are from college towns in communities in the southeast.

Diagram 0-3 Design Guidelines Interpretation

GUIDING PRINCIPLES

1

The guiding principles and design concepts in this chapter work together with the Chapel Hill 2020 Comprehensive Plan to support new public places that can be enjoyed by all while also fostering community prosperity. The guidelines and the review process through which they are administered seek to maintain Blue Hill as a cohesive and active place with an attractive and pedestrian-oriented environment. They promote the thoughtful design of new development while respecting the Town's traditional character. The guidelines encourage a contemporary approach to architectural creativity, a pedestrian-friendly experience and designing for Chapel Hill's climate and environment. The following guiding principles provide a foundation for the design guidelines and should be used to create a shared understanding when referenced for Design Alternatives. Each project should be consistent with the Guiding Principles.

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GP1: Achieve Excellence in Design



GP2: Promote Creativity



GP3: Design with Authenticity

Guiding Principles

GP1: ACHIEVE EXCELLENCE IN DESIGN

Each improvement in the Blue Hill District should express excellence in design and it should raise the bar for others to follow. This includes using high quality materials and construction methods and paying attention to detail.

GP2: PROMOTE CREATIVITY

Innovation in design is welcomed throughout Chapel Hill, including the Blue Hill District. Exploring new ways of designing buildings and outdoor amenity spaces is appropriate when they contribute to a cohesive urban fabric. This type of creativity should be distinguished from simply being “different.”

GP3: DESIGN WITH AUTHENTICITY

The Blue Hill District should be defined by buildings and outdoor places that reflect authentic design and material choices, including distinct construction techniques as well. A building design is authentic when it has a consistent design concept that speaks of its own time and does not convey a false history by imitating historical styles. It also is one that uses design concepts, materials and forms in a consistent manner such that an entire building is understood to be a single composition. Buildings and places should also respond to local climate conditions and the richly vegetated character of Chapel Hill. The result is a sense of authenticity and “timelessness” in buildings, outdoor amenity spaces and materials. A design that has a strong concept, and that will provide enduring interest to the street is timeless; it does not rely upon short-lived trends in design.



GP4: Design with Consistency

GP4: DESIGN WITH CONSISTENCY

Buildings and places in Chapel Hill that are highly valued are those which have a cohesive quality in their use of materials, organization of functions and overall design concept. Each new project in the Blue Hill District should also embody a single, cohesive design concept in terms of its material palette and organization of design elements, while connecting thoughtfully to the larger Town network.



GP5: Design for Durability

GP5: DESIGN FOR DURABILITY

New buildings and public spaces throughout the Blue Hill District should be designed for the long term with high-quality, durable materials.



GP6: Design for Sustainability

GP6: DESIGN FOR SUSTAINABILITY

Aspects of sustainability that relate to urban design and compatibility should be woven into all new improvements in the Blue Hill District. Plan for future retrofits as well.

GP7: DRAW UPON LOCAL DESIGN TRADITIONS

The Town of Chapel Hill exemplifies a unique character and authenticity, with lessons for new designs. Many buildings may share similar features, materials and forms that reflect the Town's design traditions and should inspire new work. In Blue Hill this does not mean copying earlier styles, but rather learning from them.



GP7: Draw Upon Local Design Traditions



GP8: Enhance the Pedestrian Experience (Walkability)

GP8: ENHANCE THE PEDESTRIAN EXPERIENCE (WALKABILITY)

Each improvement project should contribute to a pedestrian-friendly environment for people of all ages and abilities. This includes defining street edges with buildings and spaces that are visually interesting and attract pedestrian activity. Buildings that convey a sense of human scale and landscapes that invite walking are keys to successful design in the Blue Hill District. Designing sidewalks and other walkways to safely accommodate pedestrian traffic in an interconnected network is also important. This includes providing sidewalks of sufficient width for circulation and outdoor activities reflecting universal design principles, and installing appropriate landscape treatments for shade, beautification and a buffered pedestrian experience.



GP9: Keep the Automobile Subordinate

GP9: KEEP THE AUTOMOBILE SUBORDINATE

Parking structures and surface parking lots should support other functions and should be attractive, and visually subordinate in the urban setting. Parking facilities should be well-integrated and visually buffered. Parking facilities should be located to avoid disrupting pedestrian connectivity.



GP10: Create Engaging Open Spaces

GP10: CREATE ENGAGING OPEN SPACES

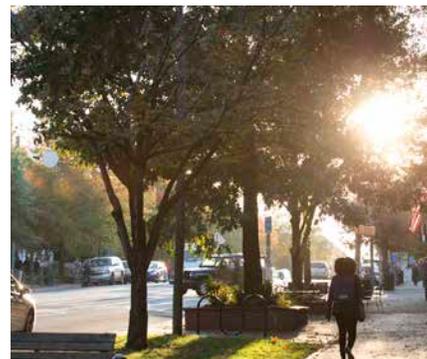
Each project should incorporate engaging elements, features or open space amenities, for pedestrians to move through and enjoy. These include public and private yards, promenades, plazas, and courtyards. Linking these elements and spaces while enhancing and restoring existing natural resources such as Booker Creek will provide a valuable green network as an amenity for the public to experience.

Design Concepts

The Blue Hill District draws upon basic design concepts that promote best practices in urban design and establish a sense of scale and place. These are some key terms that appear in the body of the guidelines:

Sense of Place

Sense of place describes our relationship with a site, district or neighborhood. In urban design, distinctive characteristics of the built environment contribute to a sense of place. It results from a unique collection of qualities and characteristics – visual, cultural, social and environmental – that provide meaning to a location. Outdoor spaces that invite human activity, signature design features such as public art and iconic architectural features, as well as an overall sense of visual continuity contribute to a sense of place. This is a fundamental concept that underlies many of the design guidelines in this document.



Sense of Place

Local Context

Local context refers to the combination of buildings, places, social traditions, abutting neighborhoods and environmental conditions that compose the Town of Chapel Hill and the Blue Hill District. Together these elements help to define principles for new designs and improvements. Context sensitive design provides a roadmap where new development projects relate to the character of the existing area. Note that local context for the Blue Hill District does not refer to the older, suburban development that characterized the district prior to adoption of the Form-Based Code. In the earlier stages of the District's redevelopment, the Vision for the Blue Hill District (pg 4) can be used to support the definition of local context.



Local Context

Sustainable Development

Sustainable development meets the needs of current generations without compromising the ability of future generations to meet their own needs. Development in the Blue Hill District should incorporate sustainable design features whenever possible to reduce environmental impacts and to conserve energy, water and material resources. This will also help the Town's overall sustainability objectives as outlined in its 2020 Comprehensive Plan, which promotes compact, mixed-use development, alternative transportation, greenway development, and environmental protection. Consistent with the Council's policy on energy performance, applicants are encouraged to meet the guidelines of the AIA-2030 Challenge, as amended. In addition, a green building incentive providing a 30% rebate of building permit fees is available in the Blue Hill District.



Sustainable Development



Public Realm

Public Realm

The public realm primarily consists of the roadways, sidewalks, parks, plazas, and other open spaces that comprise the arteries and focal points of the urban framework. In the Blue Hill District, Booker Creek also serves as part of the public realm. It is the main space where civic interaction occurs and is often defined in contrast to private property. A well designed public realm balances the mobility and access needs for all users and contributes to the efficient functioning of a town and its sense of place. The quality of the public realm determines how people experience and relate to the surrounding environment. Therefore, it is important to encourage a public realm that is safe, sustainable and enriching.



Visual Continuity

Visual Continuity

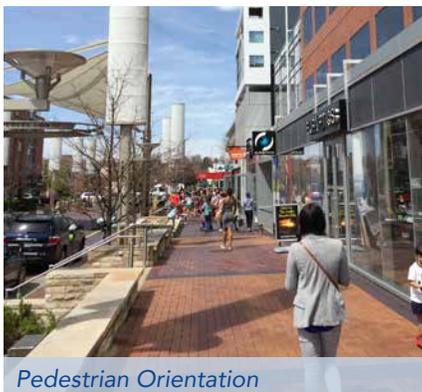
The design guidelines promote a sense of visual continuity among properties, especially along their frontages. Visual continuity results when similar features align, such as awnings, canopies and sets of windows, and when similar materials are used. Buildings of similar scale and those that align at the sidewalk edge also can contribute to visual continuity. In landscape design, the repetition of similar elements, including plants and site furnishings, can also contribute to visual continuity. This does not mean, however, that designs should be copied along a street. Diversity and creativity can occur while also achieving visual continuity, particularly with gradual transitions along a street. Establishing a balance is a key objective in the Blue Hill District.



Streetscape

Streetscape

The streetscape is the public area between the edge of the street and parking areas or building fronts. Elements include sidewalks, walking trails, curb extensions, street trees and lawns, street furniture and lighting.



Pedestrian Orientation

Pedestrian Orientation

Buildings and places that are visually interesting and invite exploration by pedestrians are considered to have a pedestrian orientation. At the street level, this includes building fronts that are visually interesting, inviting and have a sense of scale. Walkways and outdoor spaces that are comfortable, active and safe also contribute to a pedestrian orientation. This concept appears in many of the design guidelines in this document.

Scale

Scale refers to the overall size of building elements and details, including floors, windows, doors and materials as they proportionally relate to each other and to people. When these elements appear similar in size to those with which we are familiar, we can understand the size of a building in the context of our previous experience. Thus, the way in which individual parts of a project relate to each other, how the project relates to the size of the human body and how the project relates to its contextual scale are part of this concept. Conveying a sense of human scale is a key consideration in many of the design guidelines that follow.



Scale

Walkability

Walkability is the extent to which the built environment is friendly to the presence of people living, shopping, visiting and spending time in an area. It is a product of connected streets, sidewalks and paths, which are enhanced with attractive landscape features and outdoor spaces. These are framed with buildings that provide visual interest and access to activities that enliven the public realm. These are important considerations for design in the District, and especially when alternatives for extending block length are discussed.



Walkability

Visible from a Public Street

The Chapel Hill Land Use Management Ordinance establishes standards for design of buildings and site features that are visible from a public street. In many cases, this focuses on the fronts of buildings and other elements within the Street Frontages as defined in the code, but in some conditions, also relates to some features that are visible from other viewpoints along the public way. The visibility of all sides of a parking structure is an example.



Visible from a Public Street

Active Use/Frontage

Where buildings line the street, visual connections should be established between the interior spaces on the ground floor of the building and the people on the street and sidewalks outside the building. Orienting storefronts to face the street, designing main entrances to open onto the street and increasing the amount of windows used along the ground floor are a few of the ways to increase activity around a street-facing facade.



Active Use/Frontage



Massing/Variied Massing

Massing

Massing is a term which refers to the general shape and form as well as size of a building. Building mass is established by the arrangement and proportion of basic building components, including the main building volume, any wall offsets and projections, such as porches and arcades, as well as the roof and the foundation. Building massing that contributes to walkability is a key concept in the design guidelines.

Varied Massing

The design guidelines emphasize using variations in massing to help reduce the overall mass of a building and to establish a sense of human scale. This may be achieved by changing the heights of different parts of a building and by creating offsets in wall planes to express individual building modules. Varying massing to express different building modules also is a key concept in the design guidelines.



Modularity

Modularity

Varying the mass of a building can be expressed as a set of subordinate volumes, which although combined as a complete building, are distinct enough to read as a set of small forms linked together. These are considered building modules. Modularity also can be expressed by changes in wall planes, building materials and architectural details.



Articulation

Articulation

Articulation is the design of a building wall to provide visual interest, reduce mass and establish a sense of human scale. This may include variations in wall surfaces, changes in materials, and differences in fenestration patterns, as well as other design techniques that are described in the design guidelines.

PUBLIC RIGHT-OF-WAY

2

This section provides design guidelines for improvements in the public right-of-way. The “public right-of-way” refers to streets, sidewalks, non-vehicular thoroughfares, parks and greenways that are publicly accessible. All improvements to the public right-of-way in Chapel Hill’s Blue Hill District should contribute to walkability and enhance multi-modal connections. They also should make public places attractive and useful.

PUBLIC REALM

See definition in Chapel Hill LUMO 3.11.4.8.

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Figure 2-1 Enhance walkability in the public realm in each project.



Figure 2-2 Promote “greenness” throughout the Blue Hill District.

ADDITIONAL WALKABILITY INFORMATION

More information about walkability can be found in the Design Concepts section of Chapter 1: Guiding Principles.

The Public Realm

The public realm of the Blue Hill District should be dynamic, active, inviting and composed of high-quality materials. As defined in the Chapel Hill LUMO, the public realm includes “the streetscape or any other non-vehicular, publicly accessible area located along a designated frontage.” Adequate space should be provided for pedestrian traffic, landscape and streetscape elements. An emphasis on walkability is laid out in the District Summary of the Chapel Hill Land Use Management Ordinance (LUMO) in Section 3.11.2.1.

2.1 Enhance walkability in the public realm in each project.

- a. Use these urban design techniques in creating a dynamic public realm:
 - Active street frontages
 - Pedestrian-oriented entries
 - Windows facing the street
 - Small public spaces linked to the sidewalk
 - Urban streetscape design and landscaping
 - Street furniture
 - Public art
 - Pedestrian-scaled lighting
 - Pedestrian-scaled wayfinding signage

2.2 Promote “greenness” throughout the Blue Hill District.

- a. Include canopy trees, planter beds, green walls and roofs and additional plant materials on public projects whenever possible, to continue the green tradition of Chapel Hill.
- b. Seek opportunities to increase the amount of plant material along sidewalks, in pocket parks and other public outdoor amenity spaces.
- c. Coordinate the planting of larger trees in a way that provides shade for pedestrians along sidewalks, greenways and non-vehicular thoroughfares

THE INTERFACE BETWEEN PUBLIC STREETS & PRIVATE DEVELOPMENT

Although the design guidelines primarily address the character of development on privately-owned property in the Blue Hill District, it is important to understand the typical progression of spaces between buildings and an adjacent public street. In most cases, a new development will be responsible for improvements within the public area between the property and the street. Even for small developments where this may not be the case, new development should have a strong relationship to public areas, which may include incorporating amenities, paths or other features in a semi-public interface area. New development should also accommodate existing facilities or planned improvements in adjacent public areas.

The diagram below illustrates one type of arrangement of public and private spaces along a street edge.

A. PUBLIC AREA

This area is within the public right-of-way. It most often includes the area between the street edge and the inside edge of the sidewalk.

B. SEMI-PUBLIC AREA

This area includes highly-visible and publicly-accessible outdoor amenity spaces on private property adjacent to the public area. It may include outdoor public space. Compatibility with the public streetscape is preferred, in terms of paving, lighting and furnishings. Guidelines for this area are found in Chapter 3: Site Design Guidelines.

C. PRIVATE OUTDOOR AREA

This area includes private outdoor spaces that are less visible or accessible from the street. More variety in design is appropriate.



Diagram 2-1 The Interface Between Public Streets & Private Development

View from Public Right-of-Way



Figure 2-3 Enhance views from the public way to natural features and landmarks.

Views from the public right-of-way should be maintained and taken into account in the design of sites and buildings. The location of a building on a site, in addition to its scale, height and massing, can impact views from the adjacent public right-of-way, including streets, sidewalks, intersections, and public spaces. When designed with views in mind, a project also increases connectivity through a site and to neighboring sites. Each project should preserve noteworthy views, such as those to prominent buildings and to Booker Creek.

2.3 Enhance views from the public right-of-way to natural features and landmarks.

- a. Locate a building to maintain or frame a key view, as it is viewed from the public right-of-way.
- b. Vary a building's height and massing to provide view access.



Figure 2-4 Define the corners of corridor intersections with prominent building and site designs.

2.4 Define the corner of a property at a key intersection with a distinctive design element to provide visual interest, an active street edge, and to create gateways throughout the District.

- a. Prominent design elements may include (a):
 - Iconic design features (Chapter 4, page 102)
 - Ground floor design (Chapter 4, page 99)
 - Outdoor amenity space (Chapter 3 page 53)
 - Primary building entrance (Chapter 4, page 101)
 - Public art (Chapter 2, page 33)
 - Building corner articulation (Chapter 4, page 93)

Pedestrian and Bicycle Connectivity

Pedestrian and bicycle connections provide access to buildings, courtyards, internal paths and plazas. These systems should interconnect and facilitate pedestrian movement. Depending on the development, these connections may involve facilities along the street network, extensions to sidewalk and greenway networks via non-vehicular thoroughfares, and/or internal circulation within a development. This is especially relevant in large, multifamily residential projects or in clusters of small-scale commercial buildings.

2.5 Locate bicycle and pedestrian facilities to connect with public outdoor amenity spaces.

- a. Direct pedestrian and bicycle facilities through a public plaza, courtyard or other outdoor amenity space to help animate the space.
- b. Connect facilities between existing public paths, non-vehicular thoroughfares, greenways and outdoor amenity spaces.

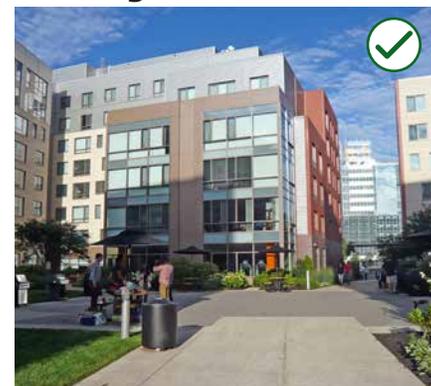


Figure 2-5 Locate bicycle and pedestrian facilities to connect with public outdoor amenity spaces.

STREETSCAPE FRONTAGES

Code requirements for streetscape frontages and the pedestrian way are described in the Chapel Hill LUMO, Section 3.11.2.5.

ADDITIONAL CONNECTIVITY INFORMATION

See “Connectivity” in Chapter 3, page 40, for additional guidelines related to the pedestrian network.



Figure 2-5b Connect facilities between existing public paths, non-vehicular thoroughfares, greenways and outdoor amenity spaces.

Public Streetscape Character



Figure 2-6a Incorporate plantings that define the edges of sidewalks, pedestrian paths and outdoor amenity spaces.

ADDITIONAL STREETSCAPE STANDARDS

- Additional landscape design standards are provided in the Chapel Hill Public Works Engineering Design Manual, page 151-170 and the Chapel Hill LUMO Section 3.11.2.5.
- See the North Carolina Fire Code and Chapter 7 of the Town Code of Ordinances for more information about fire access
- Lighting incorporated in the design of the streetscape should adhere to the lighting standards outlined in the Design Manual
- A, B and C frontages are located, defined and described in more detail in the Chapel Hill LUMO Section 3.11.2.1.D.1-3.

This section provides guidelines for site furniture that support a consistent identity, as well as a coordinated landscape along the street edge. Streetscape features should be functional and durable, and should be coordinated with the identity of the Town, neighborhood, or development. The location and design of streetscape features and landscape elements must also accommodate fire access. Many times this can be resolved through the clustering of designs or by modifying plant spacing and alignments.

LANDSCAPING

Landscape design along a streetscape should help to establish a sense of visual continuity. Planting design within the interior of a site should provide a visual focus for pedestrians while accentuating access points, seating areas or interior site pathways. Deciduous plants should be chosen to provide shade during summer months. In general, plant materials that are indigenous or well-acclimated and non-invasive should be used.

2.6 Use landscape materials to enhance the “green” experience in the public right-of-way.

- a. Incorporate plantings that define the edges of sidewalks, pedestrian paths and public outdoor amenity spaces.
- b. Locate landscape materials to highlight building entries.
- c. Create a canopy over pedestrian areas, including sidewalks, utilizing canopy trees.

2.7 Develop a coordinated experience along all streetscapes to establish a sense of visual continuity.

- a. Use a consistent palette of landscape materials including:
 - Plant materials
 - Paving materials
 - Site furnishings
- b. Implement different landscape planting palettes to reinforce streetscape hierarchies.
 - Provide larger-scale planting clusters and wider street tree spacing for B frontages to respond to higher vehicular speeds and greater building setbacks.
 - Provide smaller-scale planting clusters and narrower street tree spacing with a more diverse palette for A frontages to respond to slower vehicular speeds and increased pedestrian activity.



Figure 2-8 Integrate an “urban” approach to landscaping.

2.8 Integrate an “urban” approach to landscaping. Elements include:

- Planters
- Decorative Pavers
- Site & Seat Walls
- A more formal planting style

2.9 Promote the use of landscape plantings along multi-use pathways, greenways and public connections.

- a. “Fingers” of green should be developed to connect internal pathways to greenways throughout the Blue Hill District.
- b. Use native, low-maintenance plantings, when possible. Refer to the Engineering Design Manual for native planting standards.



Figure 2-9 Promote the use of landscape plantings along multi-use pathways, greenways and public connections.



Figure 2-12 *Adjusting the scale of planting may be considered.*

DESIGN ALTERNATIVES FOR LANDSCAPE CONFLICTS

The Regulating Plan for the Blue Hill district identifies street typologies that have specific landscaping requirements, including street trees. These street sections are to be constructed when properties abutting them are improved. In some cases, however, utility service locations, required sight lines or fire access requirements may conflict with the streetscape standards in LUMO Section 3.11.2.5. When this occurs, these guidelines apply:

2.10 Adjusting the spacing of street trees may be considered.

- a. Adjust the spacing of trees or other landscape elements to avoid conflict conflicts with fire access, utility locations or sight lines.
- b. However, the net number of trees or amount of planting areas that would have been installed should be maintained. These may be located elsewhere in the street frontage.

2.11 Adjusting the alignment distance of street trees along a curb may be considered

- a. Where the code requires a line of street trees that would run parallel to a utility line, the alignment may be adjusted.
- b. For example, the line of street trees may be placed farther away from the curb, when sidewalk width is sufficient to do so. Or, they may be located along the inside edge of the sidewalk.

2.12 Adjusting the scale of planting may be considered.

- a. When a line of trees would conflict with an overhead utility line, fire access area or sight line, the size of plant material or plant area may be reduced. A lower scale tree species, or shrubbery, may be used.
- b. Where a line of trees would conflict with an underground utility line, raised planters that contain trees or shrubs may be used.

SITE FURNISHINGS

Site furnishings may include lighting, benches, chairs, tables, waste receptacles, bike racks, planters and other furnishings designed for outdoor use. Some of these may be located in the public right-of-way, while others will be placed within a property, such as in a plaza or courtyard.

2.13 Incorporate site furnishings into all new streetscape projects.

2.14 Use a coordinated set of site furnishings that accommodates a high level of activity along commercial street frontages. Site furnishings may include:

- lights
- benches
- litter receptacles
- recycling containers
- bike racks
- table sets
- planters
- ash urns
- bollards
- public signage
- pedestrian lighting
- pedestrian wayfinding signage

2.15 Cluster site furnishings and other streetscape features at mid-block locations to allow for fire access.

SITE FURNISHING SPECIFICATIONS

The Chapel Hill Engineering Design Manual (page 169) provides specifications for many site furnishings when they are to be located in the public right-of-way, and should be used in those cases. A list of approved site furniture is also provided.



Figure 2-14 Use a coordinated set of site furnishings that accommodates a high level of activity along commercial street frontages.

STREETSCAPE CLUSTERS

A streetscape “cluster” is an organization of the street furnishings, art and other elements, as listed in 2.14. Generally, a cluster of benches, bike racks, planters, trash receptacles, etc. should be provided every 100 feet (approx.) in the Blue Hill District. Streetscape clusters should also be provided around each transit stop, or at least two clusters per block face. Mid-block clusters are typically assembled in a linear fashion to maintain a comfortable aisle for pedestrian movement.



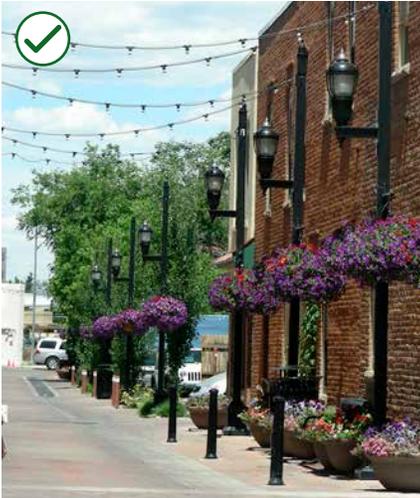


Figure 2-16d Install decorative streetlights or other coordinated features where they are not provided as a public improvement.

2.16 Select furnishing designs that are fitting within the Blue Hill District context.

- a. Selected site furnishings may match that identified for the public right-of-way, or they may be distinguishable as separate from that, while remaining compatible in general character, form and materials.
- b. Select designs that will be comfortable to use year-round. Selecting a bench design that drains is an example.
- c. Consider using custom designs:
 - Adaptations of standard furnishings that add a distinctive character to a specific site.
 - Well-crafted pieces that reflect skills of local artisans are encouraged.
- d. Install decorative streetlights or other coordinated features where they are not provided as a public improvement.
 - See “Exterior Lighting” in Chapter 4, page 111 for more information.



Figure 2-17 Locate site furnishings to animate the pedestrian network and outdoor amenity spaces.

2.17 Locate site furnishings to animate the pedestrian network and outdoor amenity spaces.

- a. Locate furnishings near active pedestrian areas, including major pedestrian routes, building entrances and outdoor gathering places.
- b. Locate furnishings so they will not impede a primary pedestrian way.
- c. Consider existing site furnishings and the site design when determining locations for new streetscape furnishings.



Figure 2-18 Use site furnishings to accommodate both active and passive pedestrian activity along a residential street frontage.

2.18 Use site furnishings to accommodate both active and passive pedestrian activity along a residential street frontage. These include:

- Landscaped “tree lawn” areas between the sidewalk and the street
- Benches or other furnishings located in landscaped areas

Public Art

Public art is highly encouraged as an amenity in the Blue Hill District as a way of creating visual interest and a special identity to individual development sites. Public art has the potential to enhance the site where it is located and have a positive impact on the broader neighborhood and community.

Public art includes decorative and functional features that are accessible or visible to the public. These may include sculptures, murals, mosaics, street furniture (benches, bike racks or other functional features with an original design), or other features that add interest, communicate a message or generate dialog.

2.19 Incorporating public art in a project is encouraged. Consider public art that:

- Is durable and accessible to the public.
- Provides a focal point in an outdoor amenity space.
- Relates to functional site features such as gates, entries, sitting areas and walkways.
- Reflects the cultural values of the community.

2.20 Locate public art strategically to:

- Frame or enhance a public view or corridor
- Encourage the use of public outdoor amenity space
- Activate recreational space
- Create visual interest on blank walls along a site.

2.21 Design considerations for public art:

- Use public art to enhance an outdoor amenity space.
- Size public art to be in proportion with the associated streetscape or outdoor amenity space, so as not to impede the usability of the space.
- Integrate water into a public art piece when feasible, but avoid designs that result in standing water.
- Consider how public art can respond to the design context of its surroundings, and to local design traditions.
- Consider public art that can also serve a pedestrian-friendly function such as shade or seating.

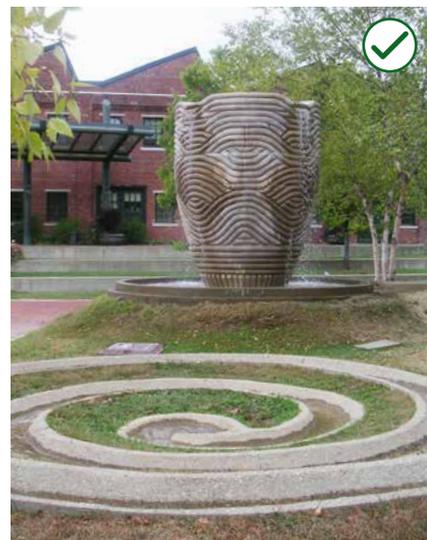


Figure 2-19 Incorporating public art in a project is encouraged.



Figure 2-20 Locate public art to enhance the Blue Hill District.

SITE DESIGN

3

New construction and redevelopment in the Blue Hill District should incorporate high-quality site design to enhance community image and help create more pedestrian-oriented spaces and connections with a unique sense of place.

Site design refers to the arrangement, placement and orientation of buildings and site features on a parcel. This includes the relationship between components on one site to components of neighboring properties and the public realm. Site design also considers the location and function of vehicular access, lighting, service and utility areas, incorporating storm water management, parking and providing outdoor amenity spaces such as patios and plazas.

FIRE CODE REQUIREMENTS

Refer to the North Carolina Fire Code and Chapter 7 of the Town Code of Ordinances to learn more about the fire code requirements for building setbacks and setbacks.

FLOOD DAMAGE PREVENTION

Refer to Chapter 5, Article IV of the Town Code - Flood Damage Prevention - to learn more about what is permitted.

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Building Placement and Setback Character

BUILDING PLACEMENT REQUIREMENTS

The LUMO uses a Regulating Plan to organize building placement and frontage design. This information can be found in Section 3.11.2.2-3.11.2.5 of the LUMO.

Building placement addresses the distance between a building and the street or the sidewalk edge. Setback character refers to the descriptive quality of the area between a building and the sidewalk edge. Buildings in Blue Hill should frame a street while bringing window displays into closer contact with people on the sidewalk. The resulting “street wall” creates a more inviting and comfortable pedestrian environment by providing a sense of enclosure and a comfortable scale for pedestrians. While alignment is preferred, the LUMO allows some setback; when this occurs, the setback area should be designed as a public amenity space. Additional context-sensitive guidelines for building frontages are provided in Chapter 4.

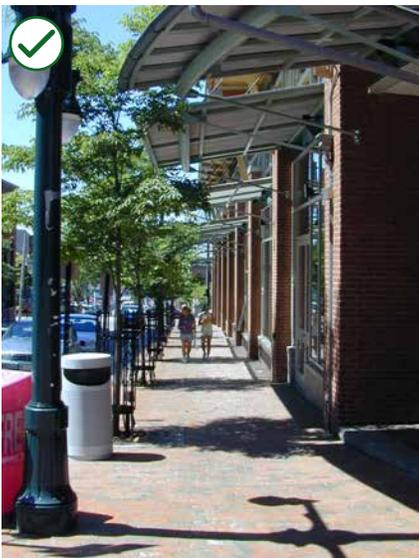


Figure 3-1 Place a building to promote a safe, interesting and comfortable pedestrian environment along the street.

3.1 Place a building to promote a safe, interesting and comfortable pedestrian environment along the street.

- a. When a building wall is set back from the public streetscape or a natural feature, design the intervening space to be attractive to pedestrians.

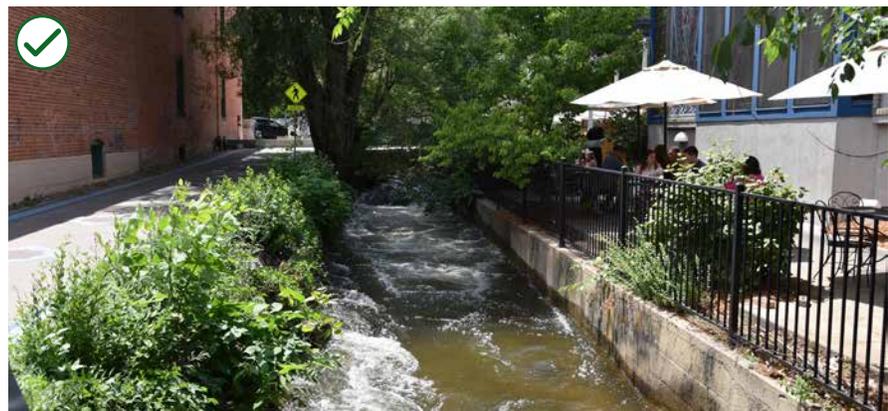


Figure 3-1a When a building wall is set back from the public streetscape or a natural feature, design the intervening space to be attractive to pedestrians.

3.2 Design the street frontage to promote pedestrian activity. Appropriate strategies include:

- Active street frontages
- Pedestrian-oriented entries
- Windows facing the street
- Small public spaces linked to the sidewalk
- Urban streetscape design and landscaping

3.3 Develop an active pedestrian-friendly area in front of a building, when it is set back from the build-to line. Areas should be:

- Open to the public
- Landscaped with "green" areas

3.4 Design the street frontage to be compatible with the surrounding context. Provide a landscaped front setback:

- Between buildings or parking areas and the street where development will be oriented primarily towards internal parking areas
- Where residential development with a landscaped setback is located across the street



Figure 3-3 Develop an active pedestrian-friendly area in front of a building, when it is set back from the build-to line.

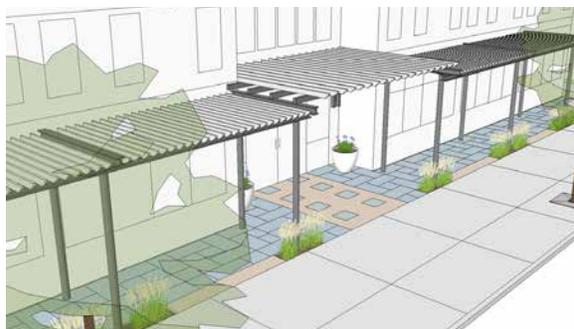
STRATEGIES FOR ACTIVATING STREET FRONTAGES

Where possible, buildings in Blue Hill should be built to the build-to-line to support an active street edge. When buildings are set back from the build-to-line, the setback area should be designed to encourage active use. Landscape features (including seating, plants, lighting, bicycle racks, etc.), outdoor dining and architectural features are all encouraged. These alternatives should be integrated with the design of the building and may be combined as appropriate.

LANDSCAPE FEATURES



ARCADE



OUTDOOR DINING



Diagram 3-1 Strategies for activating street frontages

FORM-BASED CODE BUILDING SETBACK REQUIREMENTS

The Chapel Hill LUMO provides building setback requirements that address the placement of a building in relation to the edges of a property. Side and rear setbacks ensure that a building's location is compatible with surrounding properties, while the front setback addresses the relationship of a building to the street and sidewalk.

TYPE A1



Front building setback is limited to 0-10'. On-street parking is allowed.

TYPE A2



Front building setback is limited to 0-20'. On-street parking is allowed.

TYPE B1



Front building setback with parking is limited to 0-85'.
Front building setback without parking is limited to 0-20'.

Diagram 3-2 Form-Based Code Setback Requirements

Building Orientation

Building orientation refers to how a building entry relates to its surroundings. A building's primary entrance and facade should face the street in order to create an engaging and pedestrian-friendly streetscape.

3.5 Orient a building to the public streetscape.

- Place a primary entry to face a street.
- Orient a primary entry to a public plaza or other prominent outdoor amenity space where appropriate.

3.6 Where a building has multiple frontages such as streets, plazas and/or amenity spaces, provide a secondary entry along each frontage.

3.7 If a property is located along Booker Creek, orient an entry toward this natural feature.

- Provide entries to face Booker Creek and an adjacent street, when feasible.
- Orient a building toward Booker Creek in a way that activates existing or new community spaces.

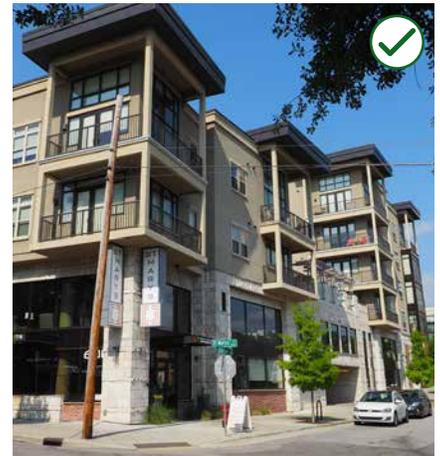


Figure 3-5 Orient a building to the public streetscape.

BUILDING ENTRANCE REQUIREMENTS

Standards for the location and spacing of entrances can be found in LUMO Sections 3.11.2.3.4, 3.11.2.4.4, and 3.11.2.7.Q

BUILDING ORIENTATION

Orient a building's primary functional entry to face a street. Orienting an additional entry to a public plaza or other prominent public space is also suggested.

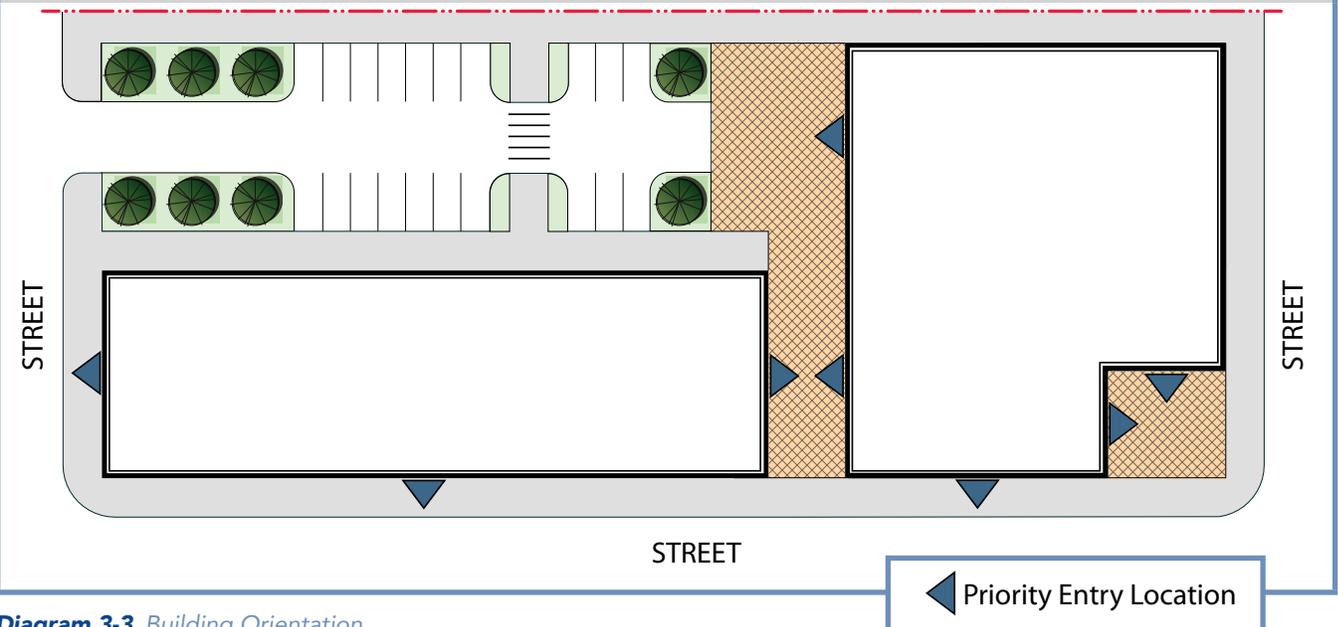


Diagram 3-3 Building Orientation

DESIGNING PEDESTRIAN, CYCLING AND VEHICULAR FACILITIES

- Refer to the Chapel Hill Engineering Design Manual to learn more about the design of pedestrian and bicycle facilities.
- Refer to the North Carolina Fire Code and Chapter 7 of the Town Code of Ordinances for information about street and fire lane requirements.
- Refer to the Chapel Hill Mobility and Connectivity Plan for additional connectivity information.

Connectivity

Connectivity refers to the network of sidewalks, thoroughfares, lanes and streets that provide pedestrian and vehicle routes within and between properties or neighborhoods. Future development should help create a more active, and inter-connected environment throughout Blue Hill. Future development should also utilize sidewalks, building pass-throughs and multi-use alleys to create connections throughout a site. Initially, individual sites will be more walkable, with better connections between buildings, sidewalks, parking areas and buildings. As additional sites redevelop, a network of connections between sites, and to adjacent neighborhoods, should emerge. This network of connections will also be strengthened by maintaining important views and creating new views through the design and placement of new connections on a site.

PEDESTRIAN & BICYCLE CONNECTIONS

A site should establish an internal pedestrian and bicycle circulation system that connects site components and is integrated with the public realm. Direct connections through sites should reduce walking and biking distances between properties in the District.



3.8 Connect a development to established pedestrian pathways and bikeways.

- Provide a clearly defined, direct connection to adjoining public sidewalks, paths and greenways. Appropriate connections include:
 - Sidewalks
 - Internal walkways and mid-block passages
 - Multi-use alleys
 - Building pass-throughs
 - Non-vehicular thoroughfares
 - Speed tables
- Appropriate features to connect include:
 - Outdoor amenity spaces
 - Building entrances
 - Recreation spaces
 - Plazas and courtyards
 - Outdoor dining areas

Figure 3-8 Connect a development to established pedestrian and bikeways.

3.9 Provide pedestrian and bicycle connections into and between properties.

- a. Connect an internal circulation system to those of adjacent properties, when possible.
- b. Provide a mid-block connection for pedestrians and bicyclists, when possible.
- c. Use building pass-throughs to provide public connections between blocks.
- d. Provide pedestrian and bicycle links between outdoor open spaces, when possible.
- e. Locate sidewalks and non-vehicular thoroughfares to link with potential future development phases.
- f. Align sidewalks and non-vehicular thoroughfares to potential future connections on adjoining properties.



3.10 Incorporate bicycle parking into the design of a new building and in connection with existing bikeways.

- a. Locate bicycle parking facilities in highly visible and accessible locations.
- b. Design bicycle parking facilities with coverings and other protections from the elements.



Figure 3-9 Provide pedestrian and bicycle connections into and between properties.

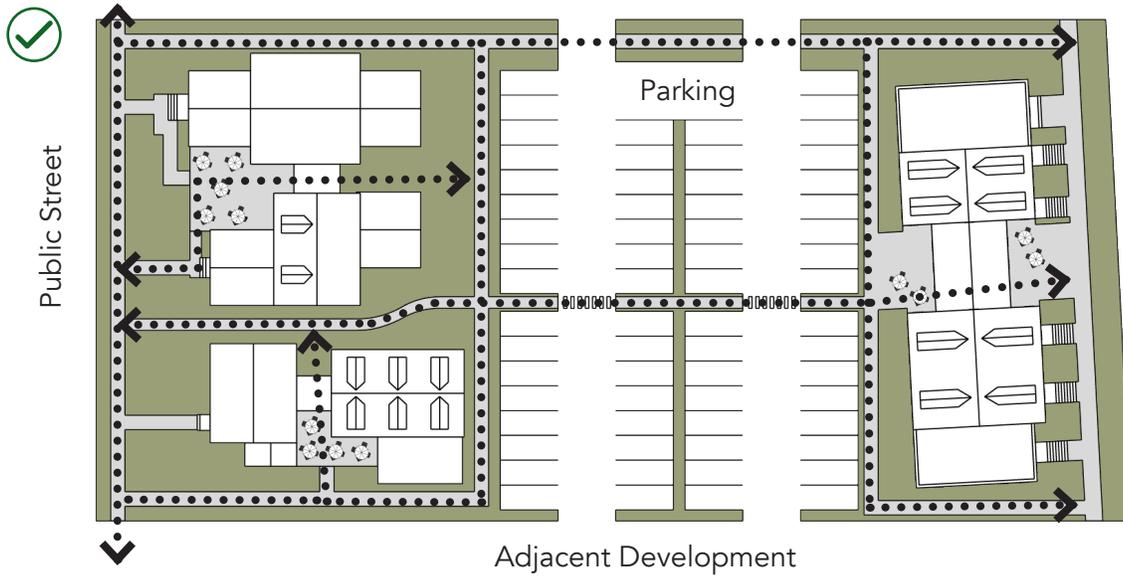
Figure 3-10 Incorporate bicycle parking into the design of a new building and in connection with existing bikeways.

BICYCLE PARKING REQUIREMENTS

See LUMO Section 3.11.4.1.E for more information on required bicycle parking.

STRATEGIES FOR PEDESTRIAN CONNECTIONS

Future development should help create a more active, and inter-connected environment throughout the Blue Hill District. This may include mid-block pedestrian connections, and pedestrian connections that are routed to and through building pass-throughs, parking lots or outdoor amenity spaces such as courtyards, patios and plazas.



SIDEWALK CONNECTION OPTIONS

New development and redevelopment should provide pedestrian connections from walking trails and sidewalks on surrounding streets to building entries. As illustrated below, such connections may be direct, or may be routed through outdoor open space or across a landscaped parking island where a building is located at the rear of a site.

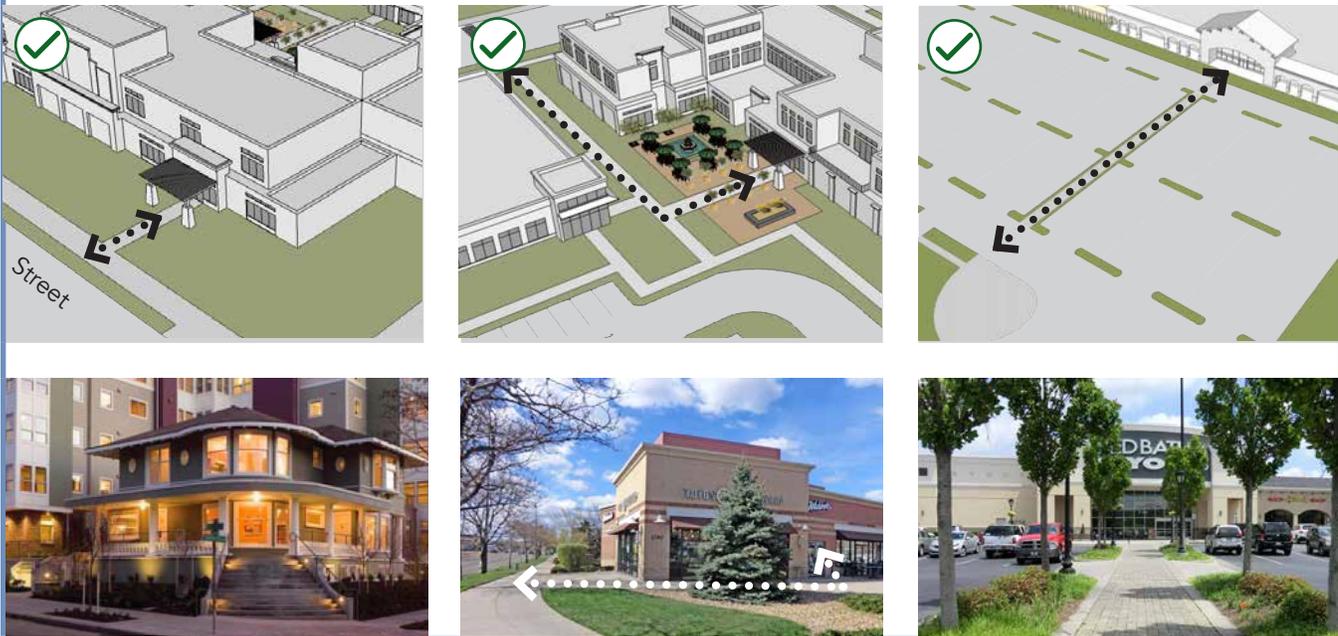


Diagram 3-4 Strategies for Pedestrian Connections

BUILDING PASS-THROUGHS

A building pass-through allows access from one side of a building to another in a large development as an alternative to a street. As with a street, a pass-through should be designed to provide safe and enjoyable public passage. Active uses should be provided.

3.11 Design a building pass-through to be inviting and in proportion to its associated building.

- Locate a building pass-through centrally within a building to provide a balanced form and easily-accessible location.
- Increase the height and width of a building pass-through when greater pass-through lengths are necessary.
- Increase the height and width of a building pass-through when a building's height increases.
- Provide variation in massing to create visual interest. Possible tools include:
 - Height variation
 - Wall offset
 - Wall setback
 - Material change

3.12 Activate a building pass-through to create a safe, enjoyable public space.

- Promote designs that keep "eyes on the street." Possible design elements include:
 - Windows
 - Doors
 - Courtyards
 - Bridges
- Align a building pass-through to frame a clear view of an outdoor amenity space and buildings beyond.
- Activate a pass-through wall to provide a pedestrian-friendly experience. See Design Options for Windowless Facade Areas, Diagram 4-8 on page 98.
- Incorporate lighting in the design of a pass-through that is visually interesting and creative. For instance, consider using festoon lights in a pass-through.
- The concept of a pass-through is that it should have views, and access, to uses inside flanking buildings. If parking is allowed in a pass-through, it must be screened using techniques described for structured parking (pg. 60-63) and the pedestrian route must be separated from auto circulation.

BUILDING PASS-THROUGH DESIGN STANDARDS

Design standards for building pass-throughs and opportunities for design alternatives to be approved by the CDC can be found in Sec. 3.11.2.7.S of the LUMO.



Figure 3-11 Design a building pass-through to be inviting and in proportion to its associated building.

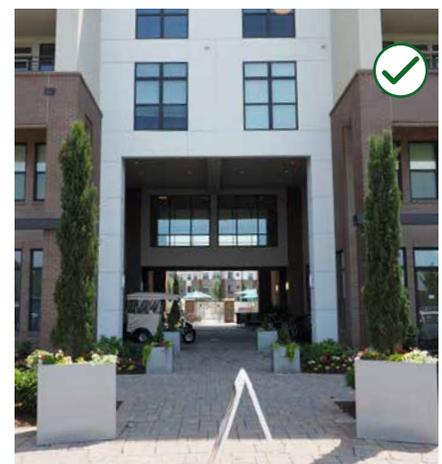
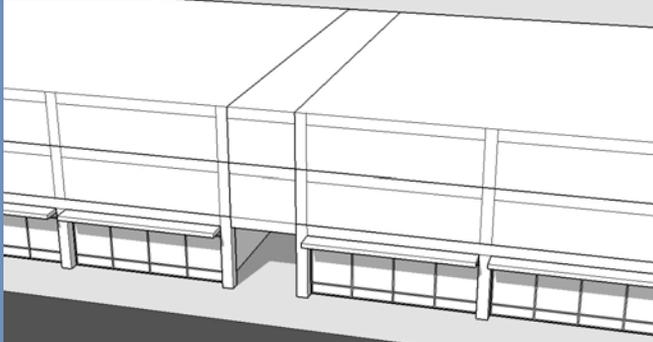


Figure 3-11d Provide variation in massing to create visual interest.

BUILDING PASS-THROUGH PROPORTIONS

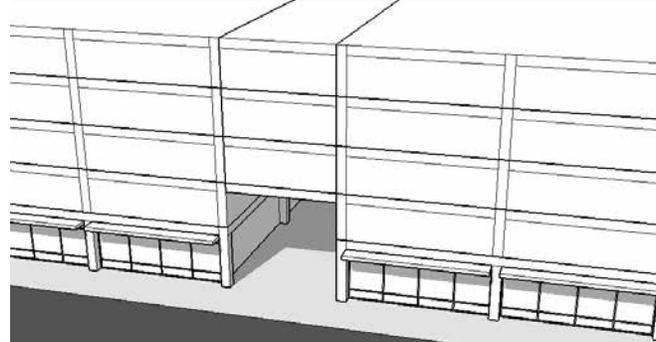
The proportion of the width, length and height of an enclosed pass-through should be scaled to invite its use by pedestrians.

2 TO 3 -STORY PROPORTION



A pass-through with the minimum required dimensions is more appropriate for shorter distances and lower scaled buildings.

4+ -STORY PROPORTION



As the size of a buildings increases or the length of the walkway increases, larger dimensions are needed to be in proportion.

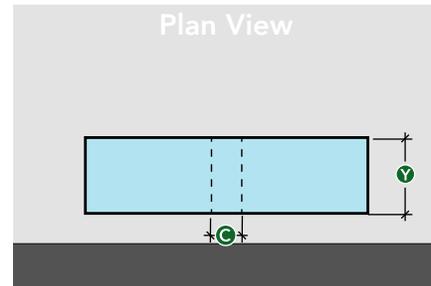
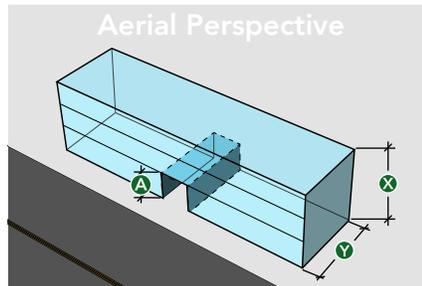
Diagram 3-5 Building Pass-through Proportions

BUILDING PASS-THROUGH WIDTH DIMENSIONS

The width and height of a pass-through should increase as walk distance increases.

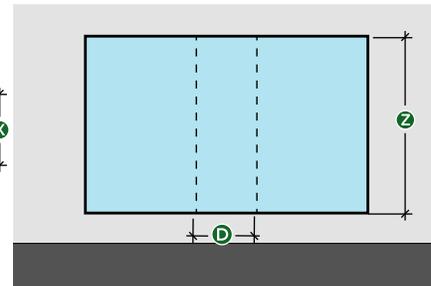
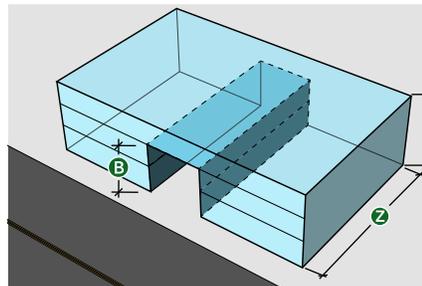
✓ 1. SHORT/SHALLOW

A relatively small opening (A x C) is in proportion to a relatively short walk distance (Y) and building height (X).



✓ 2. TALL/LONG

A relatively large opening (B x D) is in proportion to a relatively long walk distance (Z) and building height (X).



✗ 3. SHORT/LONG

A relatively small opening (A x C) is out of proportion to a relatively long walk distance (Z).

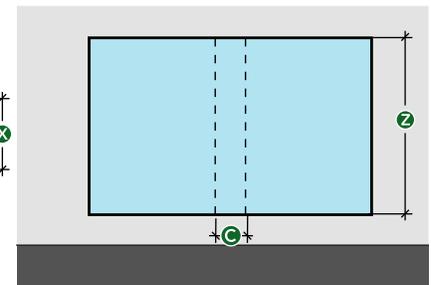
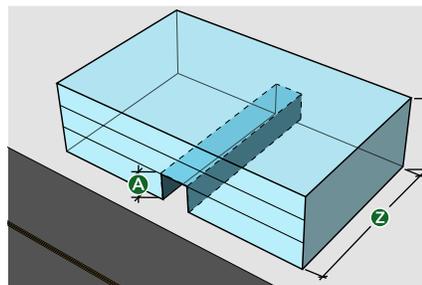


Diagram 3-6 Building Pass-through Width Dimensions

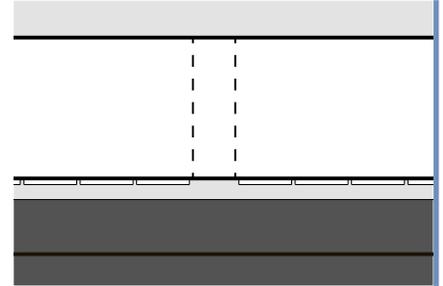
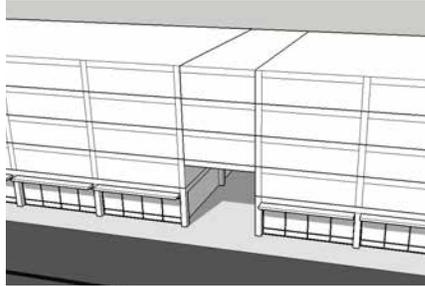
BUILDING PASS-THROUGH FORMS

These alternative forms may be considered for building pass-through designs. Some designs may also include a combination of these forms.

1. TUNNEL



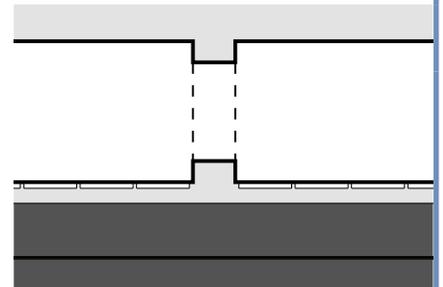
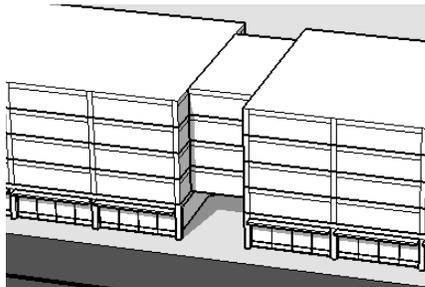
A covered, continuous walkway through a building



2. STEPBACK



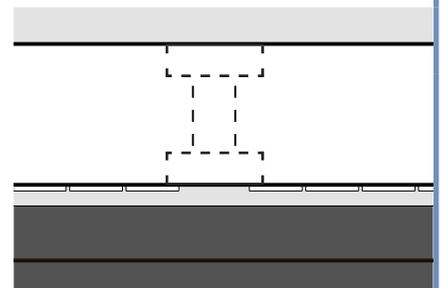
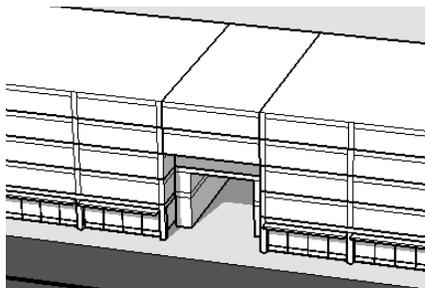
- Only a portion of the pass-through is covered
- Enclosed or open walkways may be used



3. HYBRID



The width and height of the pass-through vary



4. OPEN AIR



- The entire pass-through is open to the sky
- It may, however, include pergolas or other shelters

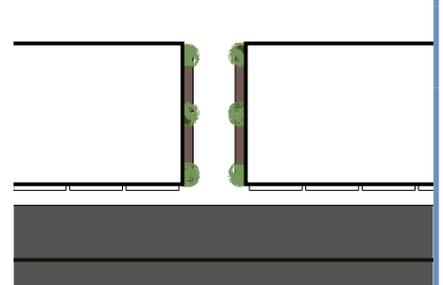
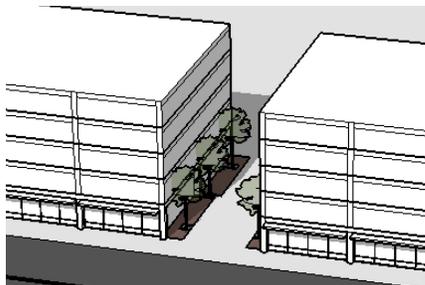


Diagram 3-7 Building Pass-through Forms

BUILDING PASS-THROUGH OPTIONS

A building pass-through allows access from one side of a building to another in a large development. The images below illustrate examples of appropriate building pass-through options.

BUILDING PASS-THROUGHS WITH ELEVATED WALKWAYS



BUILDING PASS-THROUGHS WITH INTERIOR PEDESTRIAN ACTIVATION AND AREAS THAT ARE OPEN TO THE SKY



BUILDING PASS-THROUGHS THAT INCLUDE A BUILDING ENTRY

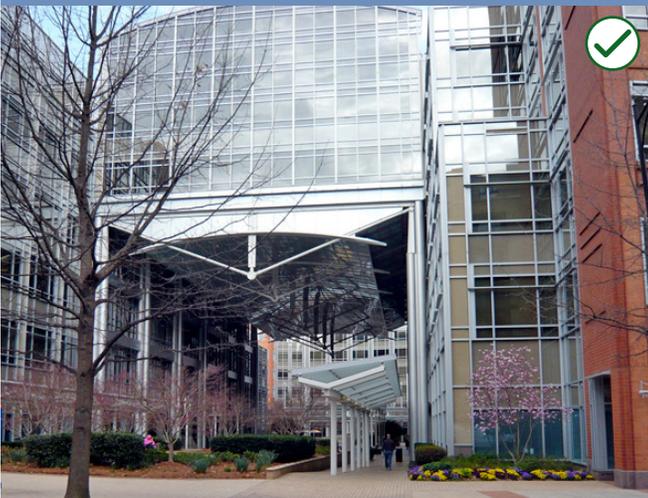


Diagram 3-8 Building Pass-through Options

BUILDING PASS-THROUGHS WITH ELEVATED WALKWAYS



BUILDING PASS-THROUGHS WITH INTERIOR PEDESTRIAN ACTIVATION AND AREAS THAT ARE OPEN TO THE SKY



BUILDING PASS-THROUGHS THAT INCLUDE A BUILDING ENTRY



VEHICULAR ACCESS & CONNECTIVITY

Automobile access should be unobtrusive. Driveways should be designed to promote safety and minimize pedestrian-vehicle conflicts.

VEHICULAR ACCESS DESIGN STANDARDS

Additional information and vehicular access design standards are provided in the Chapel Hill Public Works Engineering Design Manual. Refer to LUMO 5.9.5(h) for reciprocal cross-access requirement between parking lots (and decks) on adjoining properties.

3.13 Provide vehicular connections into and between adjoining properties.

- a. Ensure that a development has more than one vehicular entrance/exit.
- b. Provide a direct vehicular connection to vehicular thoroughfares on adjoining properties to reduce traffic and pedestrian impacts on surrounding streets.
- c. Align internal drive aisles to allow for future connections to adjoining properties.
- d. Where possible, design fire lanes and emergency access points to be visually appealing. For instance, consider a short grass-pave drive or other paving alternatives to concrete.



Figure 3-13 Provide vehicular connections into and between properties.



STRATEGIES FOR VEHICULAR CONNECTIONS

Provide vehicular connections into and between adjoining properties.

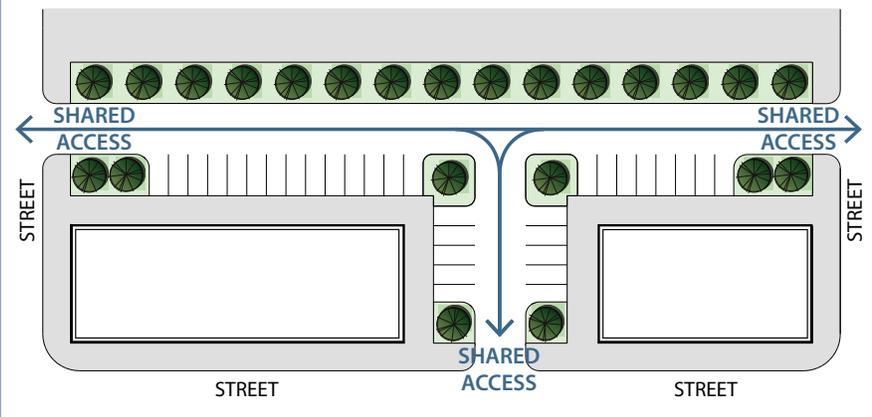


Diagram 3-9 Strategies for Vehicular Connections

3.14 Create a consistent streetscape experience within a development.

- a. Coordinate streetscape improvements within a development with streetscape improvements on surrounding streets, whenever possible.



3.15 Where a curb cut is to be installed, minimize its width.

- a. Consider using shared driveways between properties to reduce the number of curb cuts.



3.16 Design a service drive to be a visual asset.

- a. Use decorative and porous paving materials where feasible based on vehicle load requirements.
- b. Include landscape materials to buffer views and soften appearance.



Figure 3-14 Create a consistent streetscape experience within a development.



Figure 3-16
Design a service drive to be a visual asset.

Outdoor Amenity Space

STANDARDS FOR OUTDOOR AMENITY SPACES

The LUMO (Sec. 3.11.2.7.F) provides design provisions, alternatives and standards for outdoor amenity spaces. These guidelines address qualitative aspects that support a pedestrian-friendly experience and the relationship of an amenity space to buildings and other site features.

Outdoor amenity space includes public and semi-public areas such as plazas, courtyards, patios, gardens, small park spaces, rooftops or landscaped features that are visible from surrounding streets. These provide places for people to gather, engage in activities and enjoy a sense of community, and they are encouraged throughout the Blue Hill District. They should be linked to the network of walkways and paths throughout the district.

A new development should incorporate outdoor amenity space that projects a vibrant image and invites pedestrian activity. These places should be planned to activate streets and buildings while enhancing the pedestrian experience within the interior of a site. The size and location of outdoor amenity spaces should be sufficient to accommodate the intended social uses. It should not be over-sized, such that the space will appear to be under-utilized. The location should also consider the surrounding vehicular traffic to determine if buffers are needed to create a usable space or if the edges can be left open and inviting for passing pedestrians, cyclists and drivers. An outdoor amenity space should also utilize landscaping and lighting that creates inviting spaces, while adhering to the standards outlined in the Chapel Hill Engineering Design Manual.



Figure 3-17 Locate an outdoor amenity space to provide a focal point on a site.

DESIGN OPTIONS FOR OUTDOOR AMENITY SPACE

Outdoor amenity space can include active and passive designs, as illustrated below.

COURTYARDS



PLAZAS



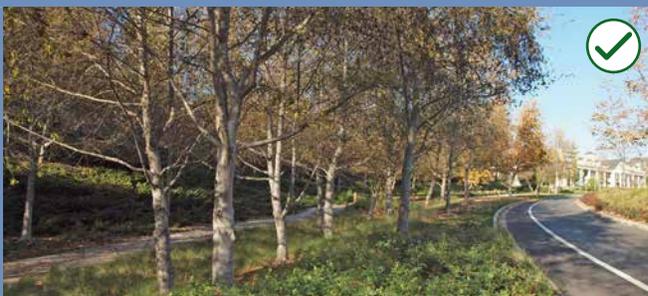
RIVER WALKS



STREETSCAPE



STORMWATER RETENTION AREAS



AMPHITHEATER



Diagram 3-10 Design Options for Outdoor Amenity Space



Figure 3-18 *Locate and orient outdoor amenity space to be actively used.*



Figure 3-18e *Consider locating an outdoor amenity space on a rooftop.*



Figure 3-19 *Locate outdoor amenity space where it will be shaded in summer months.*

OUTDOOR AMENITY SPACE LOCATION

In a large development, an outdoor space can be a focal point. An outdoor amenity space may also be an accent within a small project. An outdoor amenity space can also provide relief from long building facades. An outdoor amenity space should be located to encourage active use and consider connecting to existing or proposed greenways. Paths of vehicular travel, such as large driveways or delivery areas, cannot be counted as amenity space, as they do not meet the intent of the guidelines presented in this section.

3.17 Locate an outdoor amenity space to provide a focal point on a site.

- Locate outdoor amenity space to highlight key building features.
- Position outdoor amenity space to link adjoining buildings, when possible.
- When possible, consider opportunities to abut neighboring outdoor amenity spaces between properties.

3.18 Locate and orient outdoor amenity space to be actively used.

- Provide clear connections from an outdoor amenity space to pedestrian circulation routes and building entrances.
- Orient an outdoor amenity space to link with other cultural resources, natural features or greenways and to extend existing view corridors.
- Orient an outdoor amenity space to views of active spaces or architectural landmarks to provide visual interest.
- Consider locating outdoor amenity spaces along active pedestrian circulation paths such as a greenway, as opposed to the interior of a property.
- Consider locating an outdoor amenity space on a rooftop.

3.19 Locate outdoor amenity space where it will be shaded in summer months.

- Design an outdoor amenity space to be cool in the summer months and warm in the winter months.
- The opportunity to include shade trees or a pergola with lattice, to maintain a partial view of the sky, should be a determining factor when locating an outdoor amenity space.

3.20 Create outdoor amenity space in the remaining area when a building is set back from the build-to line.

- Design the space to be publicly accessible.
- Integrate the space with the design of the building.
- Refer to Diagram 3-10 for design options.



OUTDOOR AMENITY SPACE DESIGN ELEMENTS

An outdoor amenity space should be designed and furnished to encourage activity and create a comfortable space for all to enjoy. Creative and inviting elements should be incorporated into outdoor amenity spaces, such as water features or public art. Natural resources such as Booker Creek should be enhanced in a way that respects their natural character while improving public access, treating them as park-like features. Where possible, the outdoor amenity space may also be integrated into the on-site stormwater management system.

3.21 Design an outdoor amenity space to be inviting.

- Size the space to provide a comfortable scale for pedestrians.
- Design the space to invite public use.
- Create a sense of enclosure for an outdoor amenity space area by positioning buildings to frame the space.
- Use landscaping to create an inviting and comfortable experience including large plantings that provide shade.
- Using public art to add interest to an outdoor amenity space may be considered. See "Public Art" (Chapter 2) for more information.
- Provide open or permeable edges to improve public access from adjoining public rights-of-way.

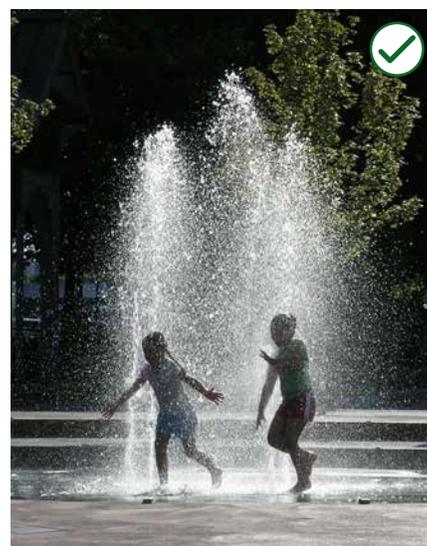


Figure 3-21 Design an outdoor amenity space to be inviting.

3.22 Furnish outdoor amenity spaces to encourage passive use and public enjoyment.

- Provide benches, tables, shelters and landscape features.
- Consider how the design of a space can support programming, performances and events.

3.23 Create a coordinated design palette for an outdoor open space.

- Coordinate landscape and site design elements within a development, to create a consistent visual design.
- Use site furniture, public art and streetscape elements to help establish a sense of identity within the development.

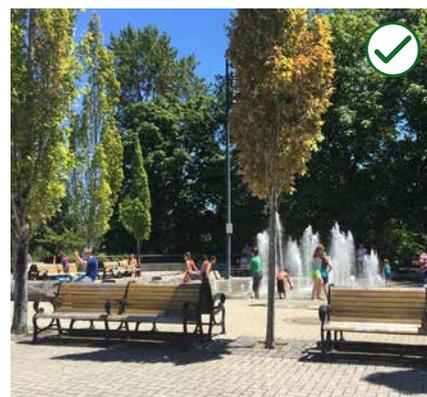


Figure 3-22 Furnish outdoor amenity spaces to encourage active use and public enjoyment.

ADDITIONAL GUIDELINES

See Outdoor Amenity Space guidelines (Chapter 3, page 50) and Landscaping guidelines (Chapter 3, page 64) for additional information.

STANDARDS FOR OUTDOOR AMENITY SPACE

The LUMO provides general standards and alternatives for outdoor amenity space in Sec. 3.11.2.7.F. These guidelines address quality and features for outdoor amenity spaces.

3.24 Promote a “green” experience in all outdoor amenity spaces.

- a. Increase the amount of plant material used in outdoor amenity spaces, whenever possible.
- b. Use trees to provide shade in outdoor amenity space. Trees are preferred to man-made shade structures such as canopies.
- c. Use plants to create an improved experience in outdoor amenity spaces.
- d. Balance hardscape areas with lawns, gardens and planter beds.
- e. Preserve and enhance existing natural resources such as mature trees and water features by incorporating them into amenity spaces.

3.25 Design a rooftop outdoor amenity space to be highly visible and easily accessible from the public way. The stairs and elevator should be exterior or located in a vestibule.



Figure 3-24 Promote a “green” experience in all outdoor amenity spaces.



Figure 3-25 Design a rooftop outdoor amenity space to be highly visible and easily accessible from the public way. The stairs and elevator should be exterior or located in a vestibule.

- 3.26 Design a rooftop outdoor amenity space to capitalize on views of natural features and active social spaces.**
- Orient a rooftop space to take advantage of nearby natural features such as Booker Creek.
 - Orient a rooftop space toward pedestrian activity, such as a plaza, courtyard or other outdoor amenity space on the ground level.
 - Avoid orienting a rooftop space toward a parking lot or highway.
- 3.27 Design outdoor amenity space to incorporate Low Impact Development (LID) principles for stormwater management.**
- Design and locate larger stormwater management systems such as bioretention areas to serve as usable open space or as a site amenity.
 - Use permeable surfaces and paving systems to assist with stormwater drainage.
 - Where appropriate, incorporate rain-water capture systems and storage cisterns, allowing stormwater to be reused for landscape irrigation.



Figure 3-27 Design outdoor amenity space to incorporate Low Impact Development (LID) principles for stormwater management.

STORMWATER MANAGEMENT

See "Stormwater Management" (Chapter 3, page 71) for more information.

STANDARDS FOR RECREATION SPACES

The LUMO provides general standards and alternatives for a recreation space in Sec. 3.11.2.7.G. These guidelines address quality and features for a recreation amenity.



Figure 3-28 Design recreation areas to provide options for a variety of users.

Recreation Space

Recreation spaces will be developed in conjunction with new residential and mixed-use housing. These indoor or outdoor areas will provide common, semi-private, active spaces to be enjoyed by residents.

3.28 Design recreation areas to provide options for a variety of users.

- a. Provide active recreation for a variety of ages and fitness levels. Options include a combination of:
 - Basketball courts
 - Tennis courts
 - Fitness courses
 - Playgrounds
 - Shuffleboards
 - Horseshoe pits
 - Disc golf baskets
 - Pickleball courts
 - Bocce Ball courts
- b. Recreation activity areas may share space with outdoor amenity spaces, provided that the areas are safely delineated.

3.29 Design and furnish a recreation area to fit with the context of its development.

- a. Materials and colors should match those found on the site and buildings within the development, when possible.
- b. Landscape materials and site furnishings should match those found throughout the site.



Figure 3-29 Design and furnish a recreation area to fit with the context of its development.

Outdoor Dining Areas

Outdoor dining areas and sidewalk cafes located within a private property can help animate the public realm and are welcomed throughout the Blue Hill District. An outdoor dining area or sidewalk café typically involves a grouping of tables and/or seating for the purpose of eating, drinking or social gathering.

3.30 Locate an outdoor dining area to accommodate pedestrian traffic along the sidewalk.

- Locate a dining area immediately adjacent to a building front, in an inset or in a side courtyard to maintain a public walkway along the curb side.
- Maintain a clear path along the sidewalk for pedestrians.
- Use a railing, raised planter, detectable barrier, or similar edge treatment to define the perimeter of a permanent outdoor dining area.
- Design a railing or detectable barrier to be sturdy and of durable materials.

OUTDOOR DINING SPACE STANDARDS

Coordinate with Chapter 17, Article VI of the Chapel Hill LUMO. Also consult the North Carolina Building Code for outdoor dining standards and safety requirements.



Figure 3-30 Locate an outdoor dining area to accommodate pedestrian traffic along the sidewalk.



Figure 3-30b Maintain a clear path along the sidewalk for pedestrians.

STANDARDS FOR SURFACE PARKING

See LUMO Section 3.11.2.5 for parking location requirements and 3.11.4.2.C for screening and landscaping requirements.



Figure 3-31 Minimize the visual impact of surface parking.

Surface Parking

Site design considerations for parking include the location of surface lots, their design and their relationship to pedestrian and vehicular circulation systems. Surface parking lots should not be a visually prominent feature of sites in the District, especially those along high-traffic corridors, such as Fordham Boulevard, or in locations intended for strong pedestrian orientation.

3.31 Minimize the visual impact of surface parking.

- a. Buffer or screen the view of parked cars from a public sidewalk or street using one or more of the following methods:
 - Landscaping
 - Site walls
 - Decorative fencing
 - Public art
 - Other methods that meet the intent of this guideline

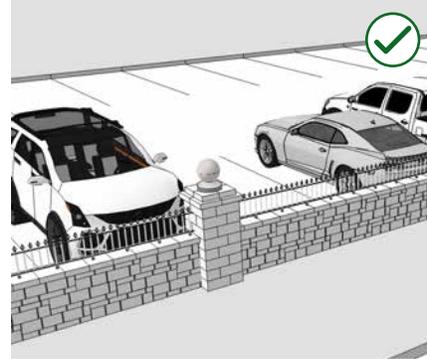
SURFACE PARKING SCREENING OPTIONS

Options include:

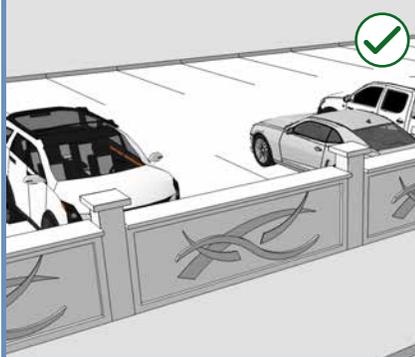
LANDSCAPING



SITE WALL



PUBLIC ART



DECORATIVE FENCING

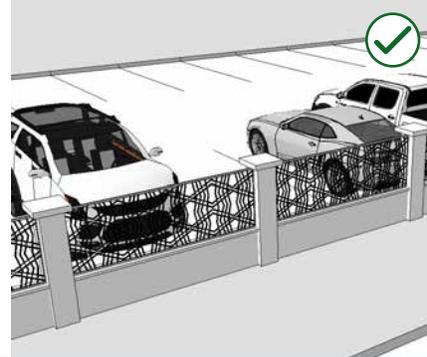


Diagram 3-11 Surface Parking Screening Options

3.32 Locate a surface parking lot so it will minimize gaps in the continuous building wall.

- Place the parking at the rear of the site. If this is not feasible, locate it beside the building.
- Minimize the number of vehicular access points to a site from a public street.
- Encourage shared, consolidated access between adjacent properties.
- Discourage driveway access from a public street, where other options are available.



3.33 Divide a large parking area into interconnected, smaller modules with landscape buffers.

- A vegetated buffer that separates two parking modules should be used.
- Incorporate open, vegetated areas for stormwater conveyance and bioretention areas into landscape buffers, as alternatives to traditional convex, curbed landscape islands.
- Landscape buffers should include pedestrian routes that improve connectivity between the parking lot and surrounding buildings.



Figure 3-33 Divide a large parking area into interconnected, small modules with landscape buffers.

3.34 Design a surface parking lot for sustainability by incorporating one or more of the following features, or other features that create a more sustainable site:

- Installation of EV chargers or conduit laid for future installation
- Carpool spaces
- Park and ride spaces
- Carport canopies for solar PV systems
- Permeable surfaces and paving systems to assist with stormwater management



Figure 3-32 Locate a surface parking lot so it will minimize gaps in the continuous building wall.

DESIGN OF STRUCTURED PARKING

The appearance of structured parking is defined in Section 3.11.4.1.B.4 of the LUMO.



Figure 3-35 Provide an active use at the sidewalk edge when parking in a structure occurs at the street level on a primary street.

Structured Parking

Structured parking should be compatible with nearby buildings in terms of building scale, consistency between window patterns, materials and screening elements. At the street level, structured parking should support a pedestrian-friendly experience with an active use at the sidewalk edge, especially at corner locations. On upper floors that can be viewed from the public way, structures should be designed to include attractive elements such as building articulation, architectural screens and detailing.

3.35 Provide an active use at the sidewalk edge when parking in a structure occurs at the street level on a primary street.

- a. Other methods of providing visual interest may also be employed. Options include:
 - Architectural details
 - Public art
 - Wall sculpture
 - Display cases

3.36 Wrapping the parking with an active use is preferred.

- a. When an active use is not feasible, provide an architectural screen.
- b. Screening that reflects window patterns along the street is encouraged.



Figure 3-36 Wrapping the parking with an active use is preferred.

PARKING STRUCTURE FACADE TREATMENT OPTIONS

Options include:

PUBLIC ART



ARCHITECTURAL DETAILS



RETAIL WRAP



Diagram 3-12 Parking Structure Facade Treatment Options

PUBLIC ART



GREEN WALLS



MIXED-USE WRAP



RESIDENTIAL WRAP



3.37 Design architectural screens to be an integral part of the building design.

- Design an architectural screen to create visual interest by including decorative patterns, railings and details.
- Construct architectural screens of durable materials and finishes, to be consistent with the primary building materials.
- While an architectural screen is not required to completely screen cars, design it to minimize their visual impact.
- Incorporate plant material to create a green screen.



3.38 Design a parking structure to minimize light spill into adjacent sites.

- Locate internal lighting to minimize light spill outside of the parking structure.
- Incorporate design elements such as screening to minimize light spill.
- Consider wall-mounted light fixtures on the top level of a parking structure, or other measures to prevent a 'stadium light' effect.



3.39 Design a parking structure to promote sustainability by incorporating one or more of the following features, or other features that create a more sustainable site:

- Installation of EV chargers or conduit laid for future installation
- Carpool spaces
- Shared parking
- Solar panels
- Green roof



3.40 Design a parking structure to be adaptable for future non-vehicular uses. Some considerations include:

- Flat floorplates
- Pedestrian access planning
- Autonomous vehicle access planning
- Electrical and mechanical system integration planning

Figure 3-37 Design architectural screens to be an integral part of the building design.

LANDSCAPE STANDARDS

The landscape design guidelines are intended to complement landscape design standards in the LUMO Section 3.11.2.5, 3.11.4.2 and in Chapter 6.4 of the Chapel Hill Engineering Manual. Additional landscape guidelines can also be found in Chapter 2.

STORMWATER MANAGEMENT

See the guidelines for Stormwater Management (Chapter 3, pg. 71) for more information.

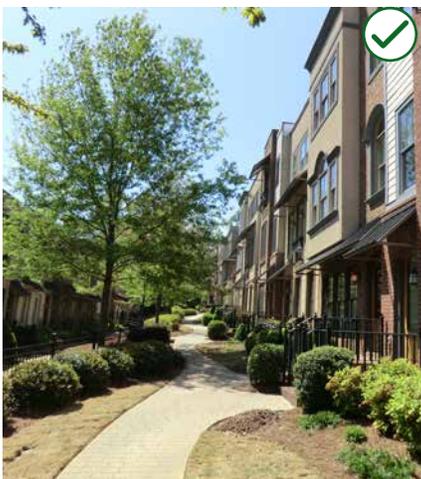


Figure 3-42 Use a coordinated landscape palette to establish a sense of visual continuity within a site.

Landscape Design

Landscaping addresses the basic aesthetics of a site, including trees, shrubs and other plantings, as well as ornamental features and site contours. Landscapes should be designed to enhance community image, invite pedestrian activity, preserve mature trees and highlight distinctive topographic or other site features. In general, indigenous or well-acclimated and noninvasive species should be used. Landscape design should also help to establish a sense of visual continuity within a site.

3.41 Preserve and maintain mature trees and other significant vegetation.

- a. Include existing vegetation as part of a landscape design scheme when feasible.
- b. Identify healthy trees and vegetation clusters for preservation. Give special consideration to mature trees.

3.42 Use a coordinated landscape palette to establish a sense of visual continuity within a site.

- a. Incorporate live plant materials that are native to the area.
- b. Use patterns of similar tree and shrub species to establish visual consistency across a large development.
- c. Use subtle variations in the landscape palette to highlight different uses or areas within a development.
- d. Minimize the use of high-maintenance plants. If necessary, use these species for small accent areas.
- e. Incorporate drought-tolerant plants into the design of a site.
- f. Include trees that will be large at maturity wherever feasible, in order to establish a tree canopy that provides shade.

3.43 Integrate landscaping and stormwater management systems.

- a. Use stormwater management facilities, such as ponds, swales and bioretention areas, as landscape amenities.



Figure 3-43 Integrate landscaping and stormwater management systems.

Fences and Site Walls

Fencing and walls can be helpful to property owners seeking greater security and privacy, and may be appropriate along rear and side lots in some contexts. While fences and walls often serve utilitarian functions, they should also enhance the character of the street and appear to be integral components of site design. Aside from those that may be used to screen trash storage, fences and walls should typically be pedestrian-scaled and permit partial views into the property.

3.44 Coordinate a fence or wall with the overall site design.

- Design a fence or wall to be an integral part of the site and serve as an amenity that adds visual interest to the property.
- Create fence or wall openings to lead to an internal circulation system.
- Incorporate landscape plants along walls that face residential areas.

3.45 Use a material that is durable and compatible with that of adjacent buildings and other site features.

- For a fence, use finished metal, natural wood or a durable substitute that appears similar in scale and character.
- Concrete and stone are appropriate for walls.
- Vinyl, chain link, or razor wire are inappropriate.
- Opaque privacy fences or solid walls are inappropriate along street frontages.

3.46 Design a retaining wall to minimize impacts on the natural character of the site.

- Design a retaining wall to step with the topography of the site.
- Design a retaining wall to be in scale with a development.
- Terrace retaining walls on steeper slopes to minimize height of individual walls.
- Use high quality materials such as brick and stone for walls that are visible to the public realm.
- Integrate landscaping and/or public art into the design.

3.47 Incorporate design variations in a site wall to create interest.

- Articulate the surface and height of the wall.
- Include simple changes in material.
- Incorporate planting material.

STANDARDS FOR FENCES AND WALLS

The LUMO establishes standards for the location, materials and quality of fences and walls in Section 3.11.4.2.G. These guidelines assist by providing additional guidance.



Figure 3-44 Coordinate a fence or wall with the overall site design.



Figure 3-46 Design a retaining wall to minimize impacts on the natural character of the site.

Working with Topography

Many sites in Chapel Hill include topographical features that influence development opportunities. Where possible, site design should preserve and work within existing topography. Any re-grading should maintain pedestrian and vehicular connectivity while minimizing potential negative visual impacts of large retaining walls.



Figure 3-48b Use a series of landscaped terraces or stepped walls where a taller cut or change in grade is necessary.



Figure 3-48c Incorporate an existing topographic landform as a natural or open space amenity.



Figure 3-51 Design a building to step with the existing topography of a site.

3.48 Design a site to integrate with existing topography.

- Where regrading a site is necessary, design it to minimize impacts to landform stability and built environment.
- Use a series of landscaped terraces or stepped walls where a taller cut or change in grade is necessary.
- Incorporate an existing topographic landform as a natural or open space amenity.

3.49 Design parking lots to take advantage of changes in topography.

- Terrace parking lots on steep slopes, following site contours.
- Where on-site parking is provided, consider taking advantage of site topography to provide subterranean or partially subterranean parking.
- Place parking deck entrances at a lower/higher grade to allow access to a separate level from the ground floor.

3.50 Orient a building's primary facade along a level grade, where possible.

3.51 Design a building to step with the existing topography of a site.

- Step building foundations to follow site contours, when feasible.
- "Terrace" a building into a hillside to minimize site disturbance and create private outdoor spaces and site features.
- Step the first floor of a building along a sloped street to maintain a close connection to the sidewalk level.
- Maintain continuous upper floor plates by varying first floor heights according to changes in grade.

3.52 Define facade elements to respond to changes in topography.

- Step building entrances to follow changes in building foundations.
- Step windows with topography to ensure a continued visual connection and an active edge for pedestrians.
- Limit the maximum length of an exposed foundation wall to maintain an active building edge.
- Limit the maximum height of an exposed foundation wall to maintain a pedestrian scale.



Figure 3-52 Design facade elements to respond to changes in topography.

3.53 Step outdoor amenity spaces to follow changes in topography.

- Use site elements such as seat walls and berms to transition between changes in grade.
- Integrate landscape elements such as seating, lighting and others with changes in grade.
- Consider locating a sloped sidewalk adjacent to stepped hardscape areas in order to maintain ADA access.

3.54 Provide frequent connections between the public walk and the site and its building(s).

- Include regularly spaced connections between pedestrian circulation systems and the finished grade of a project site.
- Avoid using sheer sitewalls that limit pedestrian access into a site from the public way.

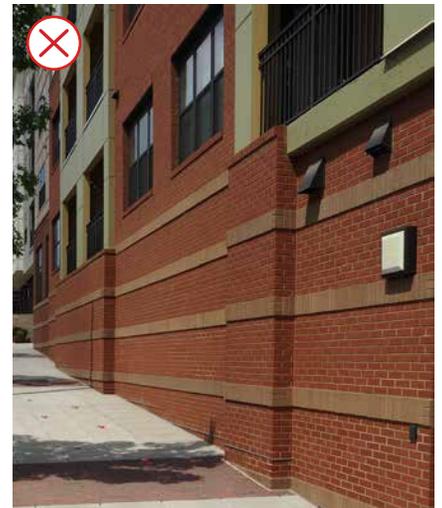


Figure 3-52d Limit the maximum height of an exposed foundation wall to maintain a pedestrian scale.

3.55 Retaining walls are subject to the same guidance as blank walls. Use one or more of the following methods:

- Vertical landscaping
- Public art
- Change in materials and color
- Integrate seating into wall



Figure 3-54 Provide frequent connections between the public walk and the site and its building(s).



Figure 3-53c Consider locating a sloped sidewalk adjacent to stepped hardscape areas in order to maintain ADA access.

Service Areas & Utilities

Service areas and utilities include loading docks, trash areas, electrical stations, wireless facilities, cabinet structures and other necessary functions. They should be located and designed to be visually unobtrusive and integrated with the design of the site and the building. Service areas are typically most appropriate when located to the rear of a building and not visible from the public right-of-way or abutting properties.

ACCESS TO SERVICE AREAS

The LUMO provides additional information on Service Area access (Sec. 3.11.4.1.G), screening (Sec. 3.11.4.2.E), and permitted encroachment in setback areas (3.11.2.7.J)



Figure 3-56 Locate a service area or utility to minimize visual impacts from the street and sidewalk.



Figure 3-57 Enclose a free-standing utility or service area.

3.56 Locate a service area or utility to minimize visual impacts from the street and sidewalk.

- a. Locate a service area out of public view, when feasible.
- b. Locate a service area away from streets, residential areas or outdoor amenity space.
- c. Locate a service area or utility to the side or rear of a primary structure.
- d. Orient a service area toward a service lane or alley.
- e. Locate a service area to minimize conflicts with other abutting uses.

3.57 Enclose a free-standing utility or service area.

- a. Design a service area or utility to be visually subordinate.
- b. Use a similar material and color palette for service areas and utilities, when separate from a primary building.
- c. Screen the entrance to a service area or utility with a solid gate made from painted metal, wood or other high-quality, non-reflective material that is detailed for visual interest.
- d. Do not use chain link fencing.



3.58 Provide lighting for service areas and utilities.

- Use a lighting fixture(s) that supports safe navigation of the area.
- Choose a lighting fixture that is compatible with a building and site design in its size, design and material.
- Shield site lighting to minimize off-site glare.

3.59 Integrate mechanical equipment into the design of a building.

- Integrate service areas and utilities into a building wall, when feasible.
- Consider integrating a service or utility area into a gap in a side or rear building wall.

SERVICE AREA LIGHTING

Additional lighting information can be found in these design guidelines (Chapter 4, pg. 111) or in the LUMO (Sec. 3.11.4.4).

WIRELESS COMMUNICATION FACILITIES

For additional standards on wireless communication facilities, see LUMO Sec. 5.20



Figure 3-57b Use a similar material and color palette for service areas and utilities, when separate from a primary building.

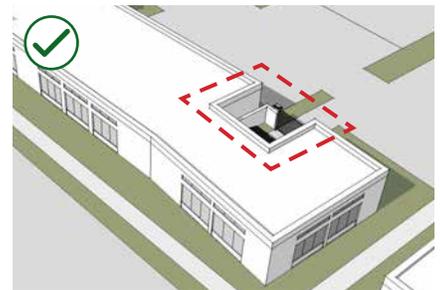


Figure 3-59 Integrate mechanical equipment into the design of a building.

DRIVE-THRU FACILITIES

Refer to the LUMO for additional information on Drive-Through Facilities (Sec. 3.11.4.1.F).



Figure 3-60 Design a drive-thru to be subordinate to the principle structure on a site.



Figure 3-61 Locate a drive-thru area to avoid conflicts with internal circulation.



Figure 3-62 Coordinate the design elements of a drive-thru area with the primary structure.

Drive-Thru Areas

If it is permitted, a drive-thru facility should provide convenient access and safe circulation. Individual corporate identity can be accommodated while also keeping the facility subordinate to the street scene and the center within which the use is located. In Chapel Hill a drive-thru area includes, but is not limited to menu boards, stacking lanes, trash receptacles, ordering box, drive up windows. Traffic impacts of queuing lanes on internal circulation to a development should be minimized to reduce impacts to internal congestion. To minimize the visual impacts of cars queuing at a drive-thru, these facilities should be placed away from a street frontage.

3.60 Design a drive-thru area to be subordinate to the principal structure on a site.

- a. Locate a drive-thru area behind the principal structure on a site.
- b. Locate a queuing lane to minimize visual impacts on a public street.
- c. Screen drive-thru aisles from the view of street frontages and adjacent parking areas. Use one or more of the following:
 - Landscaping
 - Site wall
 - Site fence
- d. Where feasible, locate a drive-thru area and queuing lane internal to a parking structure.

3.61 Locate a drive-thru area to avoid conflicts with internal circulation.

- a. Locate a drive-thru area to avoid intersecting existing pedestrian walkways.
- b. Locate a drive-thru entrance to avoid conflicts with internal drive aisles.
- c. If a drive-thru lane must intersect a pedestrian walkway, incorporate a speed table and appropriate signage to alert drivers to the presence of pedestrians.

3.62 Coordinate the design elements of a drive-thru area with the primary structure.

- a. Use a similar material and color palette for the elements within a drive-thru area.

3.63 Locate menu board speakers to protect adjoining residential areas from excessive noise.

Stormwater Management

Stormwater management addresses the conveyance and treatment of rainfall and other surface water entering a site. Low Impact Development (LID) is a specific development strategy to address stormwater in a way that closely mimics the natural, pre-development, hydrologic system. Integrating stormwater management and LID principles into the design of a site not only helps address stormwater effectively, but also can be used to create additional green spaces and amenity spaces to activate an area. For this reason, properly integrated LID and stormwater management practices help achieve the goals of these design guidelines overall. The guidelines that follow complement landscape requirements in the LUMO.

3.64 Incorporate Low Impact Development (LID) principles to mitigate stormwater impacts.

- a. Incorporate a natural drainage way as an amenity into the site plan. Enhance and restore drainage ways that have been impacted by prior development.
- b. Avoid altering or obscuring natural drainage ways.
- c. Additional LID management systems include:
 - Permeable surfaces and paving systems
 - Bioretention and other planted drainage areas
 - Green roofs and other building systems
 - Rainwater harvesting systems, including rain barrels and cisterns, used for landscape irrigation or other non-potable water demands

3.65 Incorporate and design stormwater management systems as site amenities.

- a. Possible stormwater management systems include:
 - On-site rainwater collection and filtration
 - Outdoor amenity space to also serve as rainwater detention/retention area
 - Outdoor amenity space, such as a plaza, courtyard or patio, into and around stormwater management areas
 - Green roofs to help address stormwater impacts
- b. Minimize the use of rip rap and other devices that do not appear natural in character.

ADDITIONAL STORMWATER MANAGEMENT INFORMATION

For additional information on Stormwater Management, see the LUMO (Sec. 3.11.4.3), the North Carolina Stormwater Design Manual and other North Carolina Department of Environmental Quality resources. Note that LUMO Sec. 3.11.4.2.B allows the Town Manager to modify landscape requirements to accommodate Low Impact Development stormwater measures.

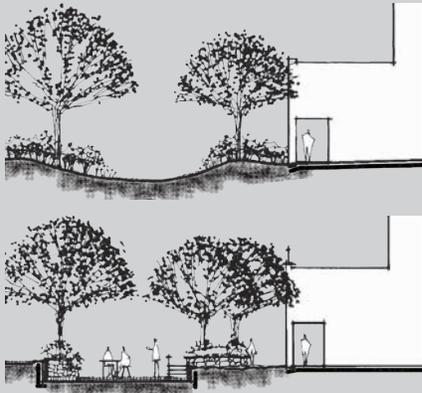


Figure 3-64 Incorporate Low Impact Development (LID) principles, such as stormwater planters and permeable pavement, to mitigate stormwater impacts.

LOW IMPACT DEVELOPMENT SYSTEMS AS SITE AMENITIES

Low Impact Development (LID) is a stormwater management approach to address rainfall in a way which more closely mimics the natural hydrologic system at the site prior to any development. Techniques include those which infiltrate, store, filter, evaporate and detain stormwater close to the location where the rain fell. LID principles encourage integrating stormwater management systems into landscapes and open space throughout a site. Illustrations, resources and other information regarding LID principles and stormwater management systems are provided below.

STORMWATER RETENTION AREAS AS AMENITIES



The design guidelines promote using LID principles to integrate stormwater management systems with public open space areas. The stormwater treatment areas illustrated above serve as a passive landscape amenity (top) and an outdoor seating area with a permeable surface (bottom).

LID & STORMWATER RESOURCES

Resources to assist with stormwater management strategies and LID principles include:

- » Chapel Hill LUMO Section 5.4
- » Chapel Hill Public Works Engineering Design Manual, Chapter 4
- » North Carolina Division of Water Resources (NCDWR) Stormwater Design Manual
- » North Carolina Department of Environmental Quality (NCDEQ) - Best Management Practices Manual
- » North Carolina Erosion Control and Sediment Control Planning and Design Manual
- » Construction Industry Compliance Assistance (www.cicacenter.org)
- » International Stormwater Best Management Practices (BMP) Database (www.bmpdatabase.org)
- » EPA Stormwater Discharges from Construction Activities

COORDINATING MANAGEMENT SYSTEMS TO PROMOTE LOW IMPACT DEVELOPMENT



Diagram 3-13 Low Impact Development Systems as Site Amenities

MANAGEMENT SYSTEMS TO PROMOTE LOW IMPACT DEVELOPMENT (LID)

A range of stormwater management systems may be used to implement LID principles for site design. The most commonly used systems, which can often be used to meet stormwater management requirements under NC design criteria, are summarized below and on the next page.

PERMEABLE SURFACES



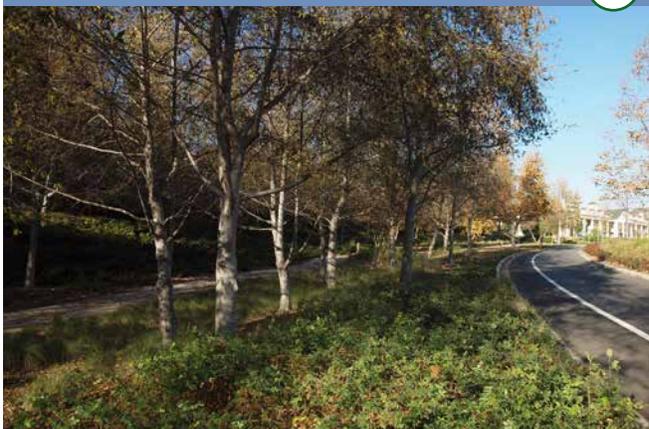
Permeable surfaces include paving systems that allow rainwater to percolate into the ground underneath. Such systems can significantly reduce runoff generated by parking areas, drive aisles, pedestrian paths and plazas.

BIORETENTION



Bioretention systems manage and treat stormwater runoff in a shallow depression filled with a soil bed and planting materials to filter runoff. They help provide greater site utilization and attractive landscape areas while protecting water quality.

BIOSWALES & VEGETATED SWALES



Bioswales and vegetated swales are linear bioretention systems used to partially treat water while also conveying flows to larger bioretention or other stormwater management systems.

STORMWATER PLANTERS



Stormwater planters are specialized planter systems installed adjacent to a sidewalk to manage street and sidewalk runoff. The planter is lined with a permeable fabric, filled with gravel or stone, and topped off with soil, plants, and sometimes trees.

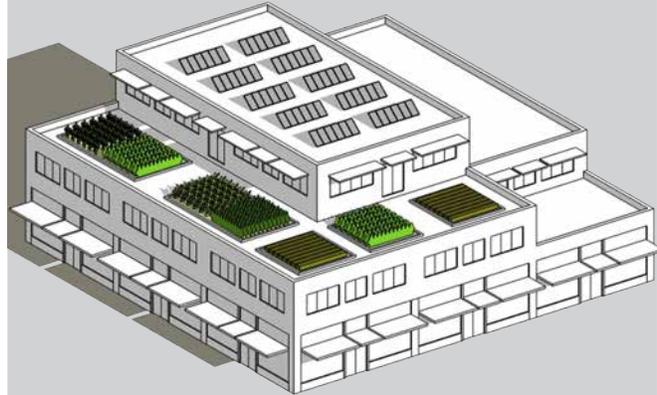
Diagram 3-14 Management Systems to Promote Low Impact Development (LID)

RAINWATER HARVESTING SYSTEMS



Rainwater harvesting systems include a storage device and pre-filter to separate organic debris and usable water. They collect and store water for reuse in lawn and garden watering and/or other non-potable water uses.

GREEN ROOFS



Green roofs and roof gardens are vegetated roof systems that help detain, filter and absorb rainfall. They may also provide heating and cooling benefits for the building.

TREE PRESERVATION



Preserving mature trees helps manage the rate at which rainfall reaches the ground to provide benefits for stormwater management.

CLUSTERING/OPEN SPACE DEVELOPMENT



Clustering is an overall site design strategy that concentrates development and impervious surfaces on a portion of the site to allow other areas to remain natural and even to restore natural resources. This strategy can reduce stormwater pollution, construction costs and the need for regrading.

Phased Improvements

Some projects may involve incremental improvements to an existing development. Some flexibility in the application of the design guidelines is appropriate for such projects, while also meeting their intent.

BUILDINGS OUTSIDE THE BUILD-TO ZONE

Refer to LUMO Sec. 3.11.4.7.E for guidance on buildings located outside the build-to zone of an existing or planned street.

3.66 When locating a new building on a site with existing ones, consider the following:

- Expand an existing building by extending it closer to the street.
- Locate a new building between the street and a parking area when existing buildings are located behind a surface parking lot.
- Improve pedestrian connections between the new building and the existing buildings.

3.67 Plan incremental improvements to accommodate future development.

- a. Locate interim improvements to accommodate future vehicular and pedestrian connections. For example, locate a walkway, parking areas, or drive aisle to accommodate future buildings.
- b. Avoid an incremental improvement that would hinder the ability for future phases to comply with the Form-Based Code.
- c. Provide a landscaped buffer or architectural screen when a delay between phases of development would leave exposed a site feature, building or equipment that is inconsistent with the Town LUMO or these Design Guidelines.

3.68 Design phased improvements to enhance the pedestrian environment of an existing development.

- a. Site a new building to maximize street frontage and minimize the visual impact of parking areas.
- b. Place an improvement to enhance the pedestrian environment. For example, locate a new building or public open space area to create a pedestrian gateway into the site.
- c. Plan for later pedestrian improvements, such as connections between the street and interior buildings, or to an adjacent neighborhood, when locating a new building or addition.
- d. Plan for restoration and enhancement of environmentally sensitive areas as phases of development occur.

PHASED REDEVELOPMENT OF AN EXISTING SITE

In some cases, redevelopment of a site may be phased so that incremental improvements build towards long term objectives. Town standards and guidelines must still be met during the phased development of a site, to the extent feasible. However, there are some cases in which flexibility could be appropriate as an interim solution. In the example illustrated below, an auto-oriented shopping center is redeveloped in a series of phases. Each phase builds on previous phases, ultimately producing a scenario that promotes the vision for the Blue Hill District with a pedestrian-oriented setting.

EXISTING CONDITION



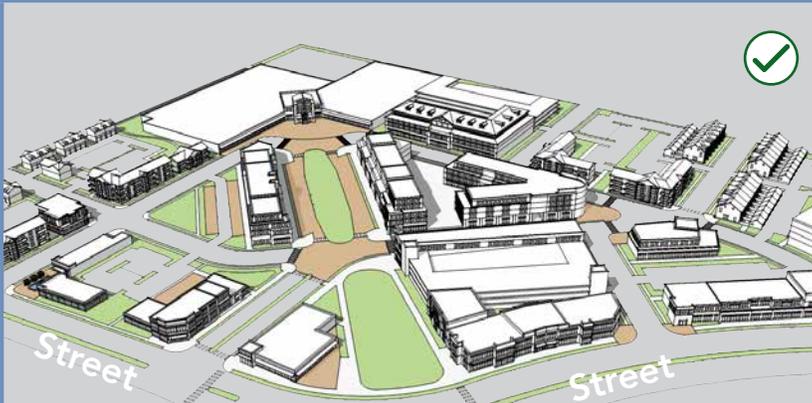
Commercial development is located to the rear of the site, separated from the street edge by surface parking.

INTERMEDIATE PHASE OF REDEVELOPMENT



The site is reorganized for the development of smaller projects, that activate the street edge and improve walkability.

FINAL PHASE OF REDEVELOPMENT



Surface parking is consolidated into a structure providing space for new higher-density, mixed-use development.

Diagram 3-15 *Phased Redevelopment of an Existing Site*

Sensitive Site Design Transitions

Sensitive site design transitions should be developed to reduce conflicts between adjacent sites with different uses. The most typical transition in the Blue Hill District is a commercial property adjacent to a residential property. Where a potential conflict occurs, a sensitive transition that limits the potential negative effects from the commercial activity on the residential property should be incorporated into the design of the development. Site design adjacent to an existing or future residential neighborhood should provide a compatible transition that minimizes potential negative impacts while promoting positive connections. Designs that incorporate compatible uses and designs, and which link commercial and mixed-use areas with the adjacent residential neighborhoods are generally preferred as illustrated in “Strategies to Promote a Compatible Transition to an Adjacent Low-scale Development or Neighborhood” (Diagram 3-16).

Sensitive transitions are also important for a project’s interface with Booker Creek. A building should be placed to sensitively transition to this natural feature.

3.69 Design a site with a new land use to be compatible with adjacent neighborhoods.

- Place and orient a building to minimize potential negative impacts on an adjacent residential neighborhood.
- Avoid orienting the rear of a building toward an adjacent residential neighborhood.
- Avoid creating an impassible barrier between a newly developed site and an adjacent neighborhood.
- Do not locate a mechanical or service area directly adjacent to a residential neighborhood.



Figure 3-69 Design a site with a new land use to be compatible with adjacent neighborhoods.



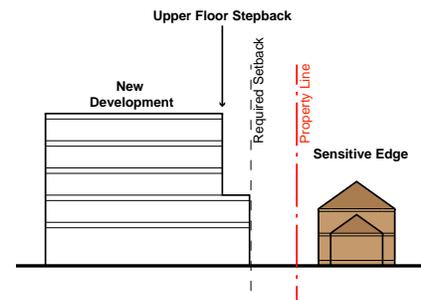
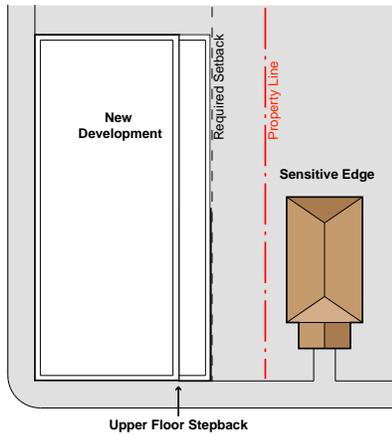
Figure 3-69a Place and orient buildings to minimize potential negative impacts on an adjacent residential neighborhood.

STRATEGIES TO PROMOTE A COMPATIBLE TRANSITION TO AN ADJACENT LOW-SCALE DEVELOPMENT OR NEIGHBORHOOD

Provide a transition in scale to prevent a looming wall and minimize the negative visual effects of a larger building on an adjacent low-scale property. The intent is also to respond to the building placement patterns of the District. Sensitive edge conditions involve low-scale development and residentially zoned properties. Use one or more of the following options to address a sensitive edge condition.

UPPER FLOOR STEPBACK

Provide an upper floor stepback along a side lot line that is a sensitive edge. This option is particularly effective when the sensitive edge is a low-scale residentially-zoned property.



INCREASED SIDE SETBACK

Provide an increased side setback along a side lot line that is a sensitive edge. This option is effective when the sensitive edge is a low-scale residentially-zoned property.

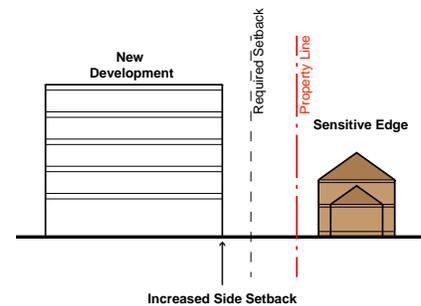
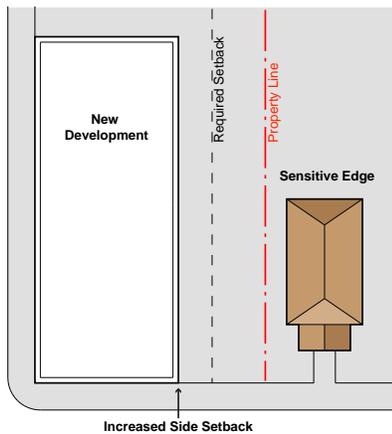


Diagram 3-16 Strategies to Promote a Compatible Transition to Adjacent Neighborhood Developments

3.70 Minimize negative impacts of a commercial operation on an adjacent residential property.

- Locate a commercial activity that generates noise, odor or other similar impacts away from the shared lot line with a residential property.
- Where a commercial use is adjacent to a residential use, buffer or screen the commercial activities. This could include a buffer area with landscaping and outdoor amenities such as an exercise area, picnic area or pedestrian walkway.
- Where a fence or physical barrier is needed to minimize negative impacts from the commercial operation, utilize a barrier that retains some transparency.



Figure 3-70 Minimize negative impacts of a commercial operation on an adjacent residential property.

3.71 Provide pedestrian, bike and vehicular connections to adjacent neighborhoods.

- Where possible, extend paths or small vehicular lanes to connect with streets and paths in an adjacent neighborhood.
- Design pedestrian and vehicular circulation systems to consider potential future connections to adjacent neighborhoods.
- Incorporate breaks in a landscape buffer to allow for pedestrian and bicycle connections.
- Do not incorporate continuous walls, fences or landscaping that prevents pedestrian or bicycle connections across a landscaped buffer area.



Figure 3-71 Provide pedestrian, bike and vehicular connections to adjacent neighborhoods.

3.72 Design site transitions to connect to future/proposed developments.

- Transition areas should be pedestrian-friendly and allow access between properties.
- Site transitions should be designed to be compatible with adjacent public and private landscape areas.



Figure 3-72 Design site transitions to connect to future/proposed developments.



Figure 3-73 Design a landscape buffer area to include shared amenities.

3.73 Design a landscape buffer area to include shared amenities. This may include:

- Multi-use paths
- Picnic areas
- Exercise areas
- Playgrounds
- Water features, including landscaped stormwater management facilities
- Other landscape features

3.74 If a property is located along a curved portion of Booker Creek, place a building edge(s) to respond to the Creek’s curvilinear shape and to activate a community amenity. Appropriate placements include:

- Curved
 - Angled
 - Rectilinear
 - Stepped
- a. Consider opportunities to enhance and restore Booker Creek as a natural feature, where it has been impacted by prior development.

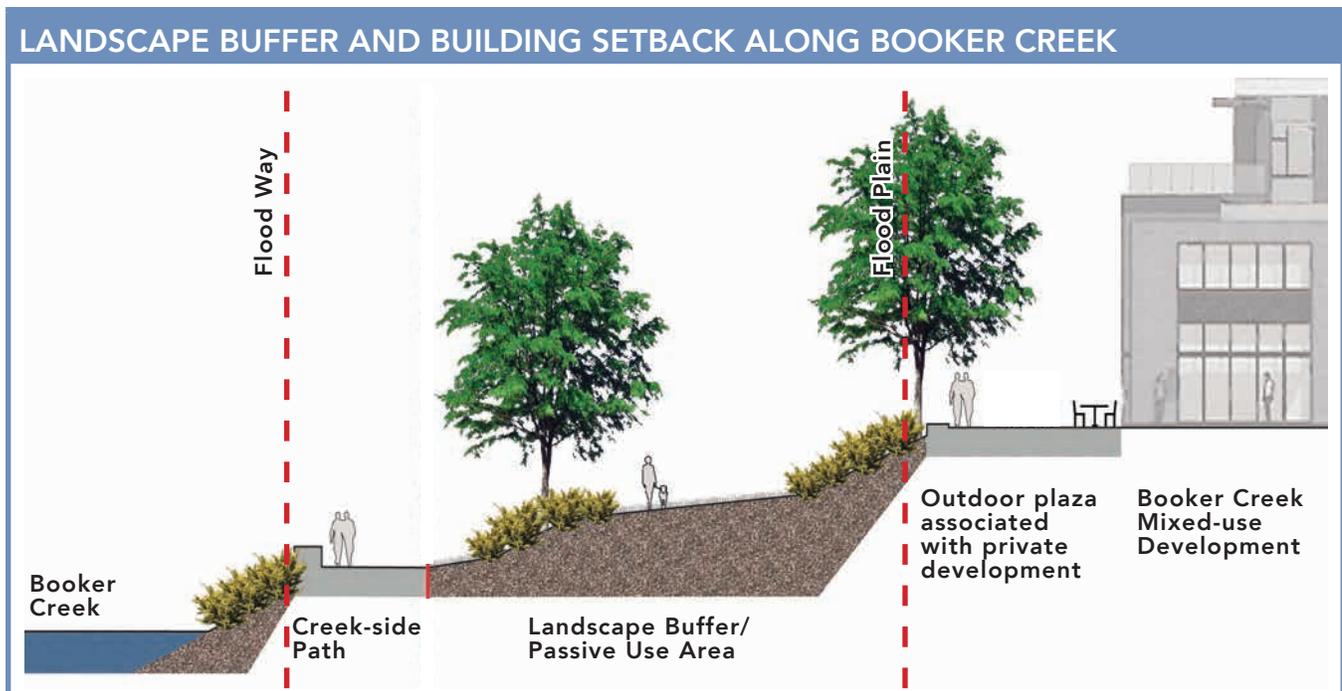
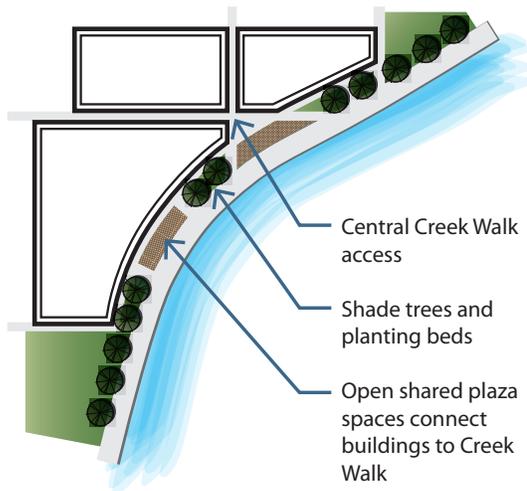


Diagram 3-17 Landscape Buffer and Building Setback Along Booker Creek

BUILDING PLACEMENT ADJACENT TO BOOKER CREEK

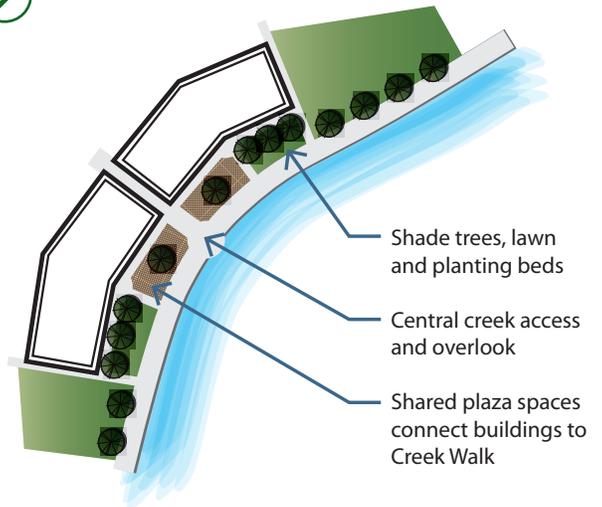
Buildings adjacent to Booker Creek should be designed to respond to the Creek's natural alignment, while also framing pedestrian access and outdoor amenity space.

CURVED



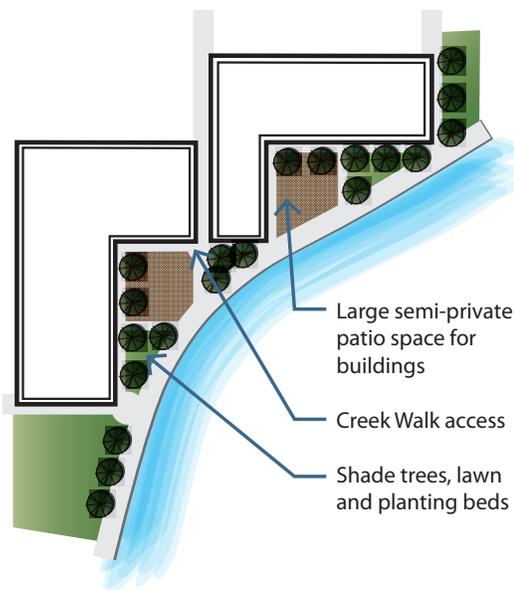
These buildings match the curvature of the creek and activate the Creek Walk with plaza spaces and pedestrian access.

ANGLED



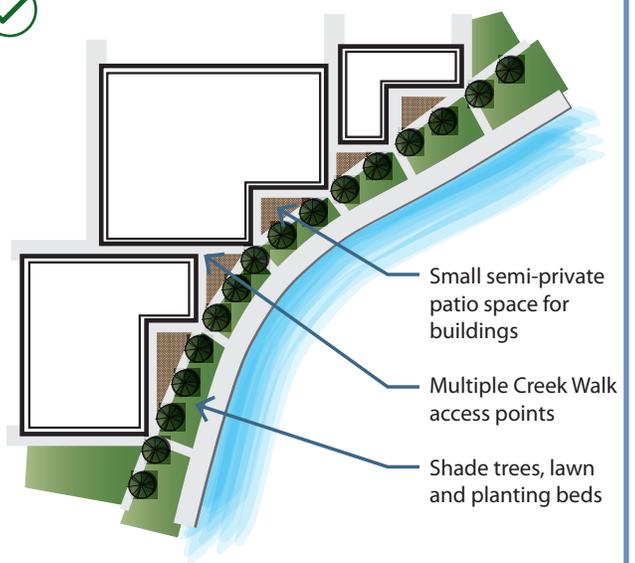
Angled buildings frame the Creek and provide plaza space and a centralized creek access.

RECTILINEAR



Rectilinear buildings are placed along the Creek so that they provide triangular plazas and open space along the Creek Walk.

STEPPED



A series of buildings provides a "stepped" edge to the Creek. Open space along the Creek Walk is broken up and distributed more evenly along the edge of the site.

Diagram 3-18 Building Placement Adjacent to Booker Creek

BUILDING DESIGN

4

This section addresses the exterior design of new buildings in the Blue Hill District. Building design addresses the visual and functional character of a building, including its relationship to surrounding development. These guidelines do not address interior design. The design guidelines are not intended to preclude affordable housing. The guidelines focus on principles that should apply to all types of development regardless of cost.

Key design topics include: character, height, scale and materials. The objective is to promote designs that enhance the pedestrian experience and create a sense of place throughout the District. High quality, innovative designs are preferred and they should appear in scale with each other. Active ground floor uses that enhance the pedestrian experience are especially welcomed.

ADDITIONAL INFORMATION

In addition to the building design guidelines that follow, review the North Carolina Fire Code and Chapter 7 of the Town Code of Ordinances to learn more about the fire code requirements for building setbacks, setbacks and forecourts.

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Architectural Character



Figure 4-1 Innovative new designs that draw upon regional design tradition are preferred.



Figure 4-1c Standardized “corporate” style architecture is discouraged.



Figure 4-2 Create a pedestrian-friendly environment with all new projects.

Consistency in architectural character and high-quality design of its own time is crucial for new development in the Blue Hill District. A building should reflect the traditions of Chapel Hill while developing an updated aesthetic within the District. Franchise designs that are generic and standardized are discouraged. Each building should provide a pedestrian-friendly ground floor and an active street edge.

4.1 Innovative new designs that draw upon local and regional design traditions are preferred.

- a. Design a building to provide a sense of authenticity in its form and materials.
- b. Maintain cohesiveness in new building designs, where materials, features, and building form all work together.
- c. Standardized corporate architecture that does not reflect local traditions is discouraged.

4.2 Create a pedestrian-friendly environment with all new projects.

- a. Use architectural devices that promote shading and cooling. These include:
 - Awnings
 - Canopies
 - Arcades
 - Matte finish materials
- b. Use building elements to create a street edge that invites pedestrian activity. These include:
 - First floor canopies that complement the character of the building and its street front
 - Architectural details that provide a sense of scale
 - Wall surfaces with visually interesting detailing, textures and colors
 - Art including sculptures, friezes and murals
- c. Develop an active building edge to enhance pedestrian interest. This may include:
 - Respond to Changes in Topography (Chapter 3, page 66)
 - Building Articulation (Chapter 4, page 90)
 - Architectural Features (Chapter 4, page 97)
 - Building Elements (Chapter 4, page 106)
 - Building Materials (Chapter 4, page 108)
 - Windowless Facade Alternatives (Diagram 4-8)
 - Pedestrian-Friendly Commercial Ground Floor (Diagram 4-9)

Energy Efficiency and Building Performance

The conservation of energy is a key objective in community planning and a guiding principle for the Blue Hill District. The design process should include an evaluation of the physical assets of the site to maximize energy efficiency and conservation in the placement and design of a building. Landscapes play a large part in planning for energy efficiency and building performance on a site.

Building designs should address seasonal changes and design with the climate of Chapel Hill in mind. Designs should implement passive strategies that save energy (and money) whenever feasible. Natural lighting and ventilation, shading, thermal mass and many other options are available. Using sustainable building materials that are durable, long-lasting, locally-made and recycled/recyclable are encouraged. Careful consideration should also be given to balancing sustainable design principles with those related to maintaining the traditional character of the area.

4.3 Utilize sustainable building design solutions throughout the Blue Hill District.

- a. New building designs that promote energy conservation while adding visual interest should be supported.
- b. Design building projects to reduce environmental impacts, like stormwater runoff, on the public streetscape.

4.4 Design with energy efficiency and use of renewable energy as top priorities.

- a. Examine energy efficiency opportunities when developing a site design for a new project.
- b. Examine building performance and system efficiency for all new projects.
- c. Utilize external shading (integrated into the building and/or with landscape) to keep out summer sun and let in winter sun.
- d. Design windows to maximize indirect daylight into interior spaces.
- e. Use exterior shading devices, such as overhangs and light shelves, to manage solar gain in the summer months and welcome solar access in winter months.
- f. Incorporate renewable energy systems, such as solar thermal for HVAC and hot water systems, and a solar PV system or wind turbine for electricity.
- g. Incorporate features for daylighting the upper floor of a building, such as clerestories or roof monitors.

ADDITIONAL INFORMATION

Each building should be designed to accommodate energy-conservancy and generating technologies, including the capacity to add some of these features in the future.



Figure 4-4 Design with energy efficiency and use of renewable energy as top priorities.

- 4.5 Locate a new building, or an addition, to take advantage of micro-climatic opportunities for energy conservation.**
- Orient a building to be consistent with established development patterns, when they are a part of the desired features for the context.
 - Consider seasonal solar and wind exposure patterns when positioning a new building on its site.
- 4.6 Design an addition to take advantage of energy-saving and energy-generating opportunities.**
- Design and locate windows to maximize indirect daylighting into interior spaces.
 - Use exterior shading devices, such as overhangs, light shelves, architectural screens or shade trees, to manage solar gain in summer months and minimize solar loss in winter months.
 - Incorporate energy-producing devices, including solar thermal collectors, solar PV systems and wind turbines, into the design of the site and building, while respecting the context.
- 4.7 Maximize solar access for all properties.**
- New development should incorporate heights and setbacks to minimize impacts to solar access on adjoining properties. This is especially important for residential sites and sites that adjoin or are adjacent to residential properties.

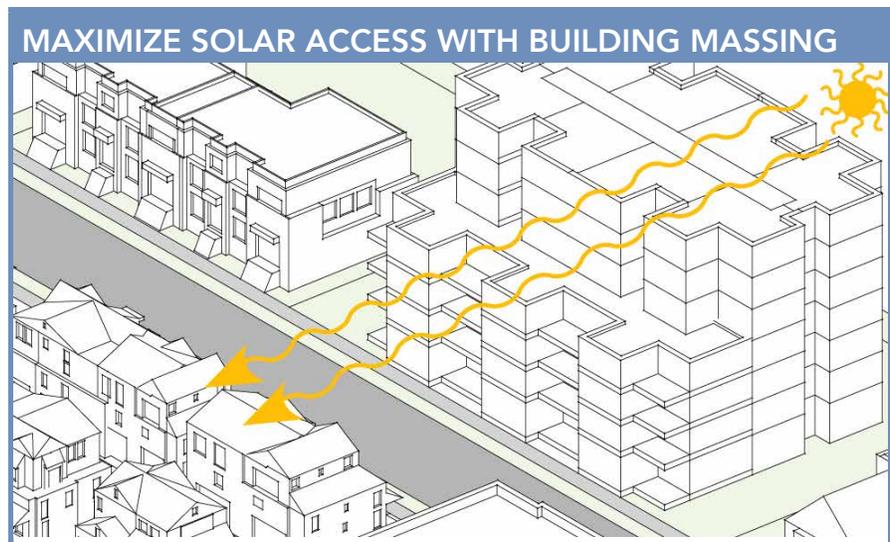


Diagram 4-1 Maximize Solar Access with Building Massing: New development should incorporate heights and setbacks to minimize impacts to solar access on adjoining properties. This is especially important for residential sites and sites that adjoin or are adjacent to residential properties.

Environmental Performance in Building Elements

The elements that make up a building, including windows, mechanical systems and materials, influence environmental performance and represent components of sustainable development. New building elements that improve environmental performance should be employed if they have been proven effective in Chapel Hill's climate. Applicants should refer to performance targets and best practices endorsed by the Town for reducing the carbon footprint of new construction. While those targets are evolving over time, examples may include the AIA-2030 Challenge, USGBC certification, and ASHRAE standards.

4.8 Use sustainable building materials whenever possible. These materials may be:

- Locally manufactured
- Low maintenance
- Materials with long life spans
- Recycled materials

4.9 Incorporate building elements that allow for natural environmental control, such as the following:

- Operable windows for natural ventilation to reduce air conditioning needs.
- Locating vertical or horizontal shading devices to reduce solar heat gain.
- Daylighting strategies to reduce electrical lighting demand.
- Thermal mass or building materials that are capable of storing heat, which will reduce heat transferred through a building envelope.
- "Green roof" to provide insulation, absorb water, and reduce heat island effect.

4.10 Minimize the visual impacts of energy devices on the character of the District.

- a. Mount equipment where it has the least visual impact on buildings and important view corridors.
- b. Where exposed hardware frames and piping are visible, use a matte finish and color that is consistent with the color scheme of the primary structure.



Figure 4-9 Incorporate building elements that allow for natural environmental control.

SUSTAINABLE BUILDING MATERIALS & ELEMENTS



Incorporate building elements that allow for natural environmental control and reduce energy and water consumption. Exterior shading devices, photovoltaics and green roofs are just a few examples.



Use sustainable building materials whenever possible, such as ones that are locally manufactured, low maintenance with long life spans and recycled.

Diagram 4-2 Sustainable Building Materials & Elements

Building Mass & Scale

The overall size, height and form of a building help determine how large it appears, and whether it is compatible with the surrounding context. Although a new building may be larger than adjacent buildings, it should not be monolithic in scale or jarringly contrast with neighboring development. A new building should use articulation techniques to provide a sense of scale. These include varied heights, smaller building masses and articulated facades.

Appropriate building height and placement limits for each of the zone subdistricts are identified in the LUMO (Sec.3.11.2.3-3.11.2.4.) The following guidelines provide further clarification on how the design of a building can enhance the pedestrian environment through varied massing, height and a combination of building articulation methods.

BUILDING HEIGHT

New development must meet zoning requirements in Blue Hill while stepping down to create smooth transitions with adjacent lower-scale residential buildings.

4.11 Provide variation in building heights.

- Incorporate height variations to reduce the scale of a building.
- Use variation in building and parapet heights to add visual interest and reduce boxy or monolithic building masses.

4.12 Locate the taller portion of a structure away from neighboring residential buildings of lower scale or other sensitive edges.

- Step down a taller, new building toward existing, lower-scaled neighbors.
- Where permitted by the base zoning, locate towers and other taller structures to minimize looming effects and shading of lower-scaled neighbors.

BUILDING AND STORY HEIGHT

Measuring building and story height is addressed by the LUMO (Sec. 3.11.2.7.K-M).



Figure 4-11 Provide variation in building heights.



Figure 4-12 Locate the taller portion of a structure away from neighboring residential buildings of lower scale or other sensitive edges.

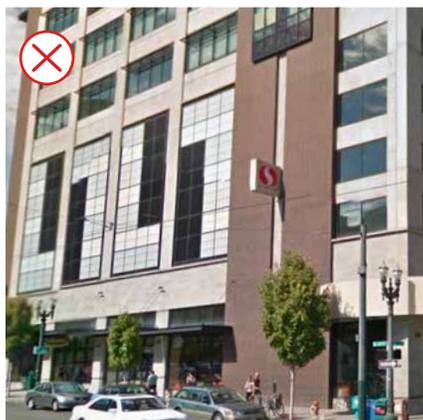
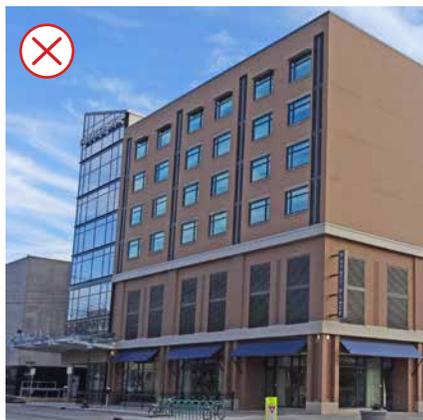


Figure 4-13 Establish a sense of human scale in the design of a new building.

BUILDING ARTICULATION

Building articulation includes vertical or horizontal changes in materials, texture or wall plane that influence the scale of a building. New development in the Blue Hill District should incorporate articulation techniques that promote a sense of human scale and divide the mass and scale of a larger building into smaller parts.

4.13 Establish a sense of human scale in the design of a new building.

- a. Use vertical and horizontal articulation techniques to reduce the apparent scale of a larger building mass.
- b. Use articulation techniques in proportion to a building's overall mass. For example, deeper insets are needed as a building's length increases.
- c. Apply materials in units, panels or modules that help to convey a sense of scale.
- d. Create a sense of texture through shadow lines which also provide a sense of depth and visual interest.

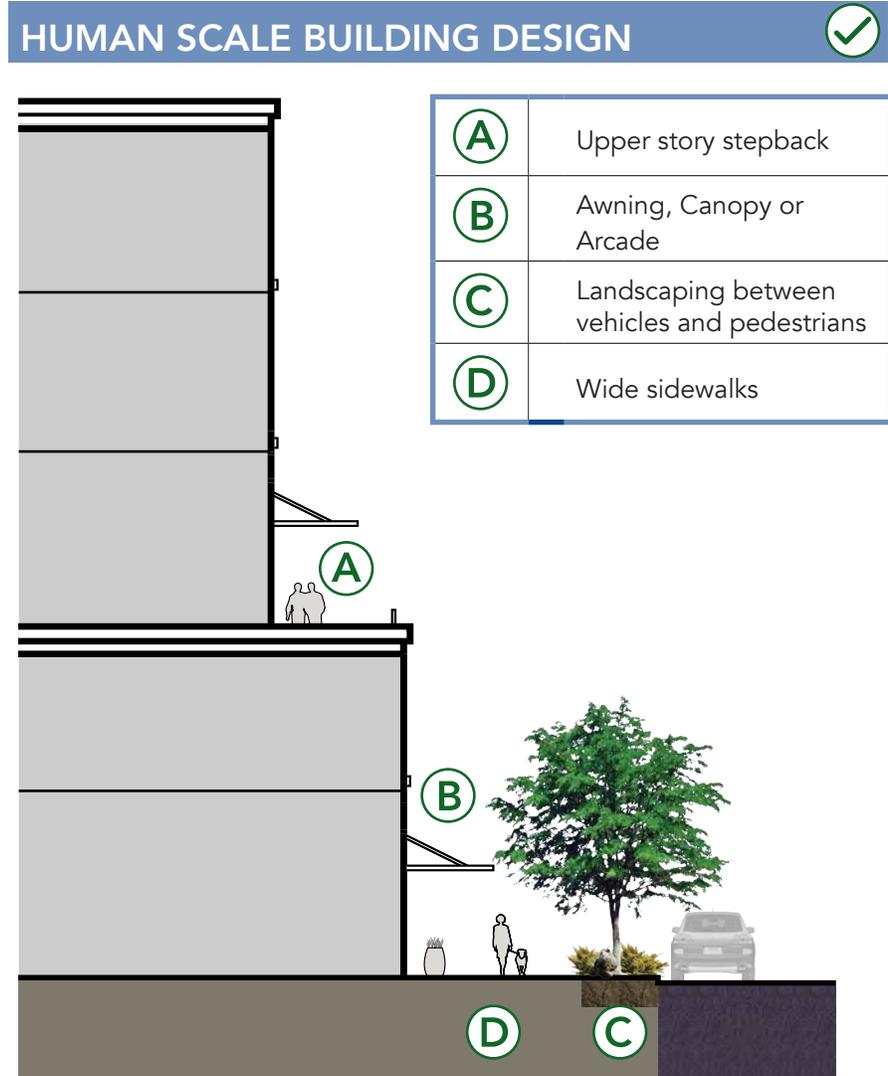


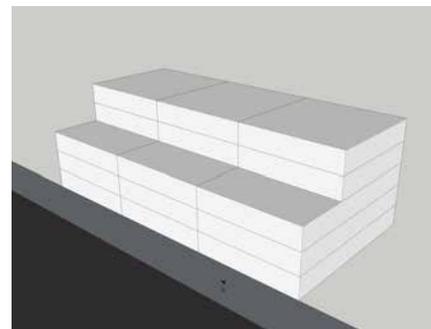
Diagram 4-3 Human Scale Building Design

OPTIONS FOR VARIED BUILDING MASSING

Building massing techniques can be used to reduce the overall appearance of a building while also helping to create a more interesting building form. Stepping down the mass of a building adjacent to a pedestrian way or sensitive area will provide a smooth transition to a lower scale.

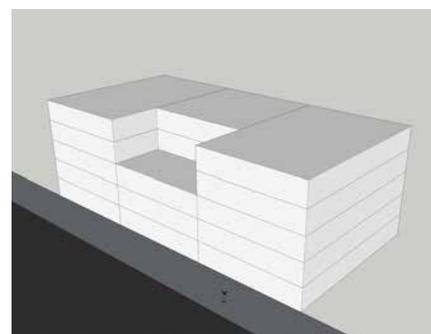
1. FRONT STEPBACK

A front stepback reduces the mass of a building along the street frontage.



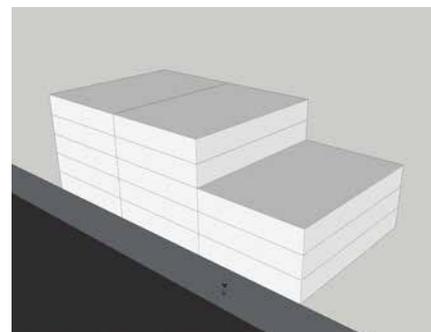
2. MIDDLE STEPBACK

A middle stepback reduces the central mass of a building by expressing different modules.



3. SIDE STEPDOWN

A side stepdown reduces the mass of a building to provide a transition to a neighboring building of smaller scale or a pedestrian connection.



4. REAR STEPDOWN

A rear stepdown provides a transition between the rear of a building and a sensitive area such as an adjacent residential area or outdoor amenity space.

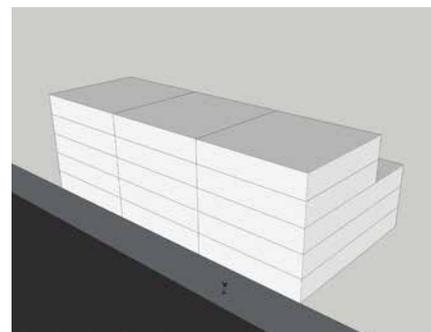


Diagram 4-4 Options for Varied Building Massing



Figure 4-14 Incorporate horizontal expression lines to establish a sense of scale.



Figure 4-15 Provide vertical articulation in a larger building mass to establish a sense of scale.



Figure 4-16 Use materials to convey a sense of human scale and visual interest to pedestrians.



Figure 4-17 Incorporate balconies to create depth and interest on a building facade.

4.14 Incorporate horizontal expression lines to establish a sense of scale.

- a. Use moldings, a change in material, or an offset in the wall plane to define the scale of lower floors in relation to the street.
- b. Align architectural features with similar features along the street, where a distinct alignment pattern already exists.

4.15 Provide vertical articulation in a larger building mass to establish a sense of scale.

- a. Use moldings, columns, a change in material or an offset in the wall plane to define different building modules.
- b. Organize modules to reflect traditional lots widths or facade dimensions.

4.16 Use materials to convey a sense of human scale and visual interest to pedestrians.

4.17 Incorporate balconies to create depth and interest on a building facade.

- a. Integrate balconies into the design of a building facade to express different modules.
- b. Use a balcony to provide shade for the sidewalk or lower balcony areas.

4.18 Vary cornice lines to create visual interest.

- a. Create a sense of visual interest by using a variety of cornice heights for individual modules.



Figure 4-18 Vary cornice lines to create visual interest.

- 4.19 Create a sense of visual interest by using a variety of roof heights along the street.**
- Vary roof heights through differences in roof form and parapet height.
 - Vary the roof profile by stepping down some parts of the facade.
- 4.20 Incorporate a roof form that provides a “cap.”**
- Define a flat roof form with a distinct parapet or cornice line. This can help reinforce a vertical base, middle and cap building articulation, and contribute to a sense of iconic design.
 - Use an overhang on sloped roof forms on multi-family buildings. This helps to define the roof as a building cap.
- 4.21 Utilize one of the following methods to design a building that is located on the corner:**
- Chamfer the corner and provide a visual connection between the street and the interior at the ground level.
 - Curve the corner of the building.
 - Increase the setback from one or both of the street frontages with a corner plaza.
 - Create an enhanced linear outdoor space along one or both of the street frontages.



Figure 4-19 Create a sense of visual interest by using a variety of roof heights along the street.



Figure 4-20 Incorporate a roof form that provides a “cap.”

BASE, MIDDLE, CAP DESIGN

On a taller (over two stories) commercial or mixed use building, horizontal articulation techniques may be used in combination to express a traditional base, middle and cap facade composition. This design creates well-defined ground or lower floors and a distinctive “cap” element that frame middle building floors.

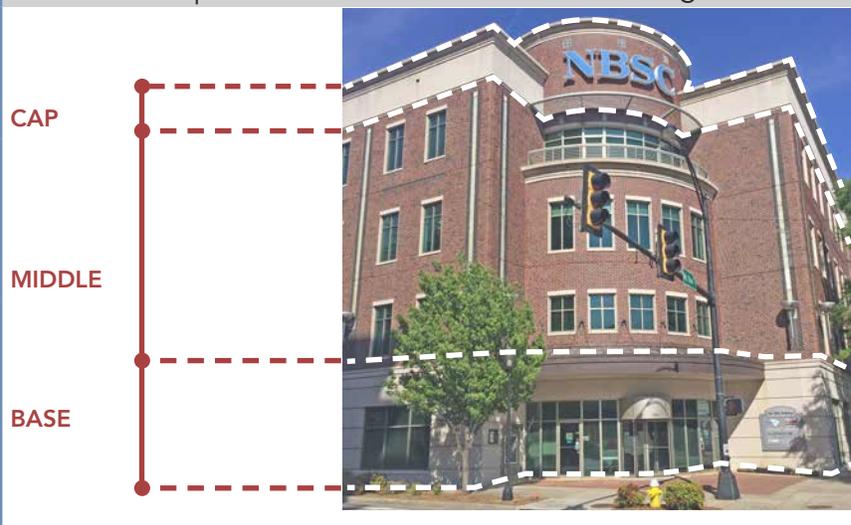


Diagram 4-5 Base, Middle, Cap Design

OPTIONS FOR BUILDING ARTICULATION

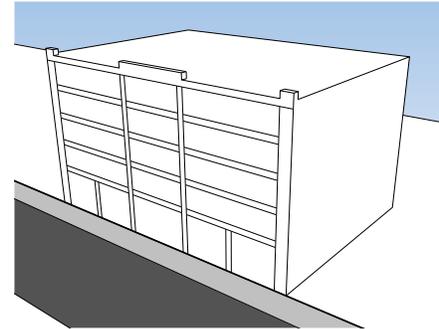
The design options described and illustrated below and on the next page may be used individually, or in combination, to meet the intent of the design guidelines for building articulation. Note that other creative building articulation strategies may also be appropriate.

1. ACCENT LINE

Accent lines include vertical and horizontal moldings and attached columns, as in this example. An accent line often projects sufficiently from the face of a building wall to cast a distinct shadow.

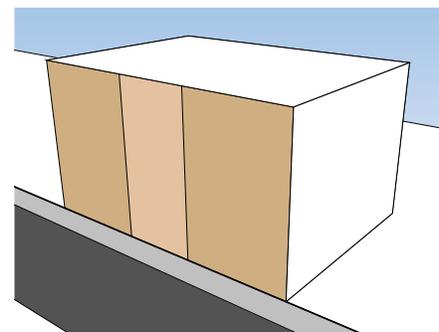
Examples include:

- a. Moldings
- b. Sills
- c. Cornices
- d. Canopies



2. COLOR CHANGE

Color changes may occur as significant vertical or horizontal design on a building wall, where it maintains an overall cohesiveness in the building design [i.e. avoid abrupt and inconsistent color changes]. In this example different facade modules vary in color.



3. MATERIAL CHANGE

Material change may appear as a significant vertical or horizontal surface. In this example of townhomes, a change in material expresses each unit.

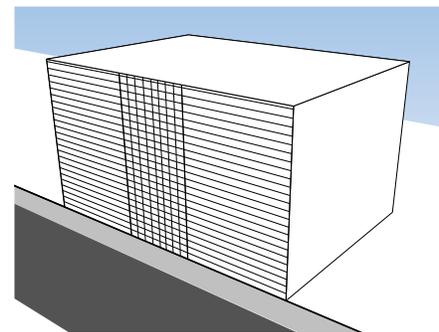
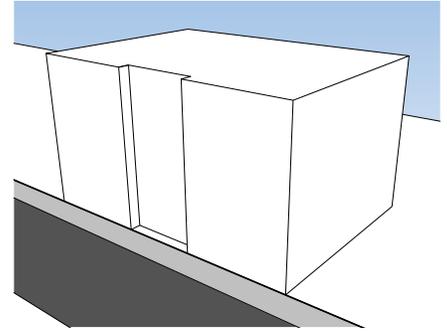


Diagram 4-6 Options for Building Articulation

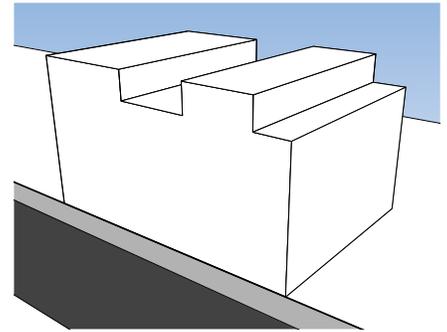
4. MINOR WALL OFFSET

A minor wall offset is a vertical expression line created by notching a building wall for its full height. Minor wall offsets are typically 5 feet or less. In this example the central bay is inset from the flanking walls.



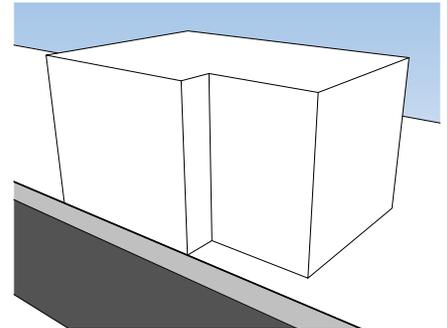
5. HEIGHT VARIATION

A variation in height may occur as a setback of part of a floor or a change in roof line. In this example of a single building, a portion on the right is one story less than that on the left.



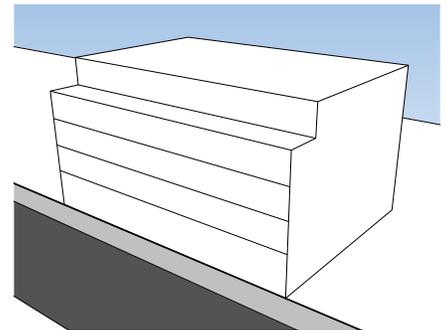
6. INCREASED WALL SETBACK

An increased setback is similar to a minor wall offset, but with a larger dimension. It often provides an outdoor amenity space along part of the front of a building.



7. UPPER FLOOR STEPBACK

An upper floor stepback is similar to an increased setback, but it only occurs on an upper floor(s). In this example, a portion of the fourth floor is set back from the front wall plane.



COMBINING BUILDING ARTICULATION METHODS

A single building articulation method is typically insufficient to achieve a desired design outcome or promote architectural creativity. Combining multiple methods into a single building is highly encouraged. As shown in Diagram 4-7, a building often includes some or all of the building articulation methods identified previously in Diagram 4-6.



Diagram 4-7 Combining Building Articulation Methods

- A1** Accent Lines
- A2** Color Changes
- A3** Material Changes
- A4** Minor Wall Offsets
- A5** Height Variation
- A6** Increased Setbacks
- A7** Upper Floor Stepbacks



After

Architectural Features (Design Elements)

Architectural features such as windows, doors and materials help establish a building's character and help convey a distinct community image for the Blue Hill District. Such features are those that add visual interest and create a unique sense of place, while encouraging pedestrian activity. When a new building is located such that it becomes a view terminus, it should be designed to be visually interesting.

OVERALL FACADE CHARACTER

A building facade should incorporate high-quality design features that enhance Chapel Hill's community image and convey an active and vibrant appearance. The design guidelines below apply to facade areas that face public streets, the pedestrian way or parking lots. They are especially important for visible facades along a major commercial corridor such as Fordham Boulevard and major interior cross-streets such as South Elliott Road.

4.22 Design a building facade to enhance community image.

- Incorporate design features that add depth and detail, such as deep roof eaves and changes in the facade plane that create patterns of light and shadow.
- Use high-quality building materials on visible facades.

4.23 Design a building facade to be compatible with its context.

- When possible, align canopies, windows and roof cornices on adjacent buildings.
- Use materials or other facade features that are compatible with adjacent buildings.

4.24 Design a building facade to convey visual interest.

- Incorporate facade features such as pergolas, arcades or awnings to add visual interest.



Figure 4-22a Incorporate design features that add depth and detail.



Figure 4-23b Use materials or other facade features that are compatible with adjacent buildings.

ARCHITECTURAL DESIGN ELEMENTS

Additional Town code information on building facades can be found in the LUMO (Sec. 3.11.2.3 - Sec. 3.11.2.7).

ADDING VISUAL INTEREST TO A BUILDING

Refer to "Design Options for Addressing Windowless Facade Areas" (Diagram 4-8) for more information.



Figure 4-24 Design a building facade to convey visual interest.

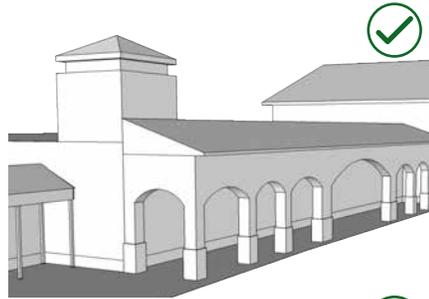
DESIGN OPTIONS FOR ADDRESSING WINDOWLESS FACADE AREAS

In some cases where a transparency requirement does not apply, a building may have windowless facade areas where the interior contains parking, retail shelving, storage or other inactive uses. The design options illustrated below are appropriate methods of meeting the intent of Guideline 4.25 on page 99 by promoting an active appearance on a windowless facade area facing a sidewalk, parking area or other public frontage.

Note that other creative strategies are also appropriate to address windowless facade areas, including the “Design Options for a Pedestrian-Friendly Ground Floor” on page 100.

1. ARCADES

An arcade or loggia can help create a more transparent appearance on an otherwise windowless facade while also adding visual interest.



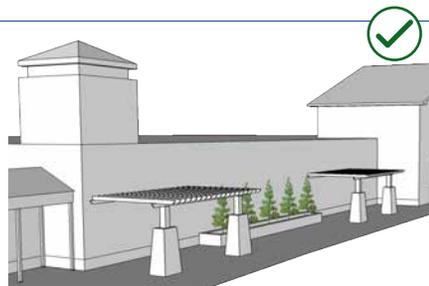
2. ARCHITECTURAL DETAILS/SCREENS

Details such as architectural screens or patterned materials can help create a more active appearance and add visual interest on a windowless facade.



3. PERGOLAS/STRUCTURES

Pergolas or other landscape structures can help soften the view of a windowless facade and help create a more active appearance.



4. VERTICAL TRELLIS/LANDSCAPING

A vertical trellis allows vines and plants to cover blank wall areas and provide visual interest. A vertical trellis may work in combination with a raised planting bed.



Diagram 4-8 Design Options for Addressing Windowless Facade Areas

GROUND FLOOR DESIGN

Building design should incorporate features that help create a pedestrian-friendly street level. High-quality ground floor design considers elements such as height, transparency, entrance location, canopies and awnings. In mixed-use areas, it is especially important to incorporate active features into the ground floor such as plazas and storefront windows. In residential areas, the ground floor may incorporate other design features, such as porches and stoops, to engage the sidewalk and street.

The LUMO establishes ground floor standards for transparency percentages, story height limits, elevation requirements, limits on blank walls and others. The following guidelines expand on those standards to provide additional pedestrian-oriented strategies that help activate the street edge.

4.25 Design the ground floor to engage the public realm and promote pedestrian activity.

- a. Incorporate recessed entries, courtyards or other setbacks in the ground floor facade.
- b. Use design features such as windows, display areas and awnings to engage the street and add pedestrian interest.
- c. Avoid long blank wall areas that will diminish pedestrian interest. Instead, add visual interest to blank walls through at least one of the techniques shown in Diagram 4-8.

4.26 Use building materials to define the ground floor and add visual interest.

- a. Use changes in material to add ground-floor interest.
- b. Define the ground floor of a building by incorporating a different material, color or texture.

APPLICATION OF MATERIALS

See “Building Materials” on pg. 108 for additional guidance on the application of materials.



Figure 4-26 Use building materials to define the ground floor and add visual interest.

DESIGN OPTIONS FOR A PEDESTRIAN-FRIENDLY GROUND FLOOR

The design options described and illustrated below may be used individually, or in combination, to meet the intent of the design guidelines for ground floor design on page 99. In most cases, the street level of a building should incorporate windows and other pedestrian-friendly features.

1. WINDOWS

Commercial buildings should incorporate a high percentage of transparent glass to actively engage the street and sidewalk. Windows may be combined with canopies, awnings, planters and other features to enhance the street level.



2. DISPLAY AREAS

Display cases or other product displays can create pedestrian interest and engage the street and sidewalk. Such treatments are especially appropriate along an otherwise windowless facade.



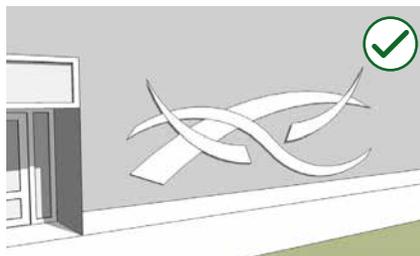
3. CANOPIES AND AWNINGS

Canopies and awnings help define the street-level pedestrian area and may provide shade or highlight entries and storefront windows.



4. WALL ART

Wall art, mosaics and murals add interest, especially along an otherwise windowless facade.



5. PLANTERS/ LANDSCAPING

Integrated planters, large pots or other areas for landscaping add interest along the building facade and help engage the street and sidewalk.



Diagram 4-9 Design Options for a Pedestrian-Friendly Ground Floor

PRIMARY BUILDING ENTRANCE

The primary entrance of a structure should be oriented to a street, major sidewalk, pedestrian way, plaza, courtyard or other outdoor public space. The objective is to provide a sense of connection with the neighborhood and add "eyes on the street." In most cases, orienting the entrance toward the street is preferred, but in some designs, orienting an entrance to an active courtyard that is visible from the street will accomplish the same objective.

4.27 Design the main entrance to be clearly identifiable.

- a. Use an architectural element(s) to highlight an entrance, and to provide weather protection, where feasible. Potential treatments include:
 - Canopy
 - Awning
 - Arcade Portico
 - Building recess
 - Moldings
 - Change in material
 - Change in color
- b. Use variation in building mass and height to highlight a main entrance.

4.28 Orient the primary entrance of a building to face a street, plaza or pedestrian way.

- a. Orient the primary entrance towards the street.
- b. Use a "double-fronted" design that provides an entry to the street and another to an outdoor amenity space, plaza or a parking lot, when present.
- c. In some cases, the front door may be positioned perpendicular to the street. Where this is the case, clearly define the entry. This may be achieved by:
 - Incorporating a recessed entry, canopy or awning for commercial/mixed-use building types, or
 - Incorporating a porch, stoop or canopy for residential building types.

4.29 If a property is located along Booker Creek, orient an entry toward this natural feature.

BUILDING ENTRANCES

Additional Town code information on building entrances can be found in the LUMO (Sec. 3.11.2.7.Q).



Figure 4-27 Design the main entrance to be clearly identifiable.



Figure 4-28 Orient the primary entrance of a building to face a street, plaza or pedestrian way.



ICONIC DESIGN FEATURES

Iconic design features include those that help define a building, convey a unique appearance, or make an area more memorable. New development in a highly-visible location, such as at the intersection of arterial roads, should incorporate iconic design features. In most cases, large-scale new development projects in any location should incorporate iconic design features for entries, view corridors, building form or roofs.



4.30 Use an iconic design feature to foster a unique sense of place.

- a. Incorporate iconic design features such as well-defined entries or tower elements into the design of a new development that is large-scale or located in a highly-visible location. Design an iconic design feature to be in proportion with a building and its features as well as nearby buildings.



4.31 Locate an iconic design feature to maximize its visibility and impact. Appropriate locations include:

- At a primary building entry
- Adjacent to, or at the entrance to an outdoor public space
- At the corner of a building (especially when the building itself is at the intersection of two streets or lanes)
- At the termination of a view or vista (i.e., located to be highly visible when looking down a street or path)

Figure 4-30 Use an iconic design feature to foster a unique sense of place.



Figure 4-31 Locate an iconic design feature to maximize its visibility and impact. For instance, locate the feature at the primary building entry,



Figure 4-30a Incorporate iconic design features such as well-defined entries or tower elements.

Four-sided Building Design

A building's facade strongly impacts the pedestrian experience on an adjacent public space, such as a sidewalk or public open amenity space. All building sides should be designed for public view, using building form and architectural details to create visual interest. The degree of detail may vary depending on the location of the wall, but some architectural detail is needed because a blank or featureless building facade can diminish interest. Thus, building design should be considered "in the round." This applies to buildings and parking structures in the Blue Hill District.

4.32 Design a building to provide interest on all sides that will be viewed from the public realm.

- a. All faces of a building should include architectural details to reduce the visual impact of a "back side." Visual interest can be provided through a variety of methods, including:
 - Windows and doors
 - Building articulation techniques such as:
 - » Accent lines
 - » Color changes
 - » Height variation
 - » Minor wall offsets
 - » Upper floor setback
 - » Material changes
 - » Increased wall setbacks
 - » (See Diagram 4-6 for additional information on the list of articulation options)
 - Site walls and raised planters
 - Decorative wall treatments, including:
 - » Wall art
 - » A display window or display cases
 - » Green walls
- b. Incorporate more visual interest techniques on Primary walls to differentiate from Secondary/Tertiary walls.
- c. Incorporate active uses and/or pedestrian-friendly features on the ground floor to encourage an enjoyable pedestrian experience. Secondary/tertiary walls may not have storefronts but should follow Diagram 4-9.

FOUR-SIDED DESIGN

See "Understanding Four-sided Design for Buildings" and "Facade Treatments for Four-sided Building Design" (pages 103-104) for additional information on four-sided building design.



Figure 4-32 Design a building to provide interest on all sides that will be viewed from the public realm.

UNDERSTANDING FOUR-SIDED DESIGN FOR BUILDINGS

A key goal in the Blue Hill District Design Guidelines is that buildings be designed to be “four-sided.” This means that all walls are to be designed to create visual interest, convey a sense of scale and in some cases to help activate streets, outdoor amenity spaces and large developments. The degree to which an individual wall must have these qualities varies, depending upon the location of the wall. Where walls are highly visible by the public and/or are located near high amounts of pedestrian

activity, a high degree of “pedestrian-friendly” features must be provided. In other locations, where walls are less visible, fewer pedestrian-friendly features are required.

Many design guidelines in this chapter provide guidance on how to apply those variables. The degree to which design variables are combined can vary, depending upon the context.

The Intent of Four-sided Design

There are several important objectives associated with the requirement for designing four-sided buildings. These are:

1. To create walls that are visually interesting, as viewed from close up and far away (both from the public way and from within a project)
2. To provide visual interest and a sense of scale for a wall that is viewed close up (usually for pedestrians)
3. To provide views of active uses inside a building (to help animate the adjacent streets or outdoor public amenity spaces)

Different Priorities for Four-sided Design

Even though the overall objective is to design all four sides of a building as attractive elevations, there are some differences in the degree to which this level of design is needed, or merited. Some walls will be seen by observers (pedestrians and motorists) up close and frequently; whereas other walls will be seen less frequently or perhaps at a distance. The degree of design detail that is applied to each wall should reflect these contextual factors:

Determining a Wall Type Classification

Early in the design process, the type of wall categories should be determined.

Key factors in determining priorities for wall treatment are:

- Proximity to a public way (a street or a walkway internal to a project)
- Proximity to a sensitive edge (such as an adjacent residential area or an outdoor amenity space)
- Assigned primary frontage for Build-to-zone requirements
- Street type of frontage, as defined in the Chapel Hill Mobility Plan
- Servicing requirements (an area where utilities or trash storage are to be located, for example)

WALL TREATMENTS FOR FOUR-SIDED BUILDING DESIGN

Wall Type A: High Priority (Primary Wall)



This wall type is highly visible to the public and is important in conveying a sense of scale, visual interest and a pedestrian-oriented activity for the building and its site. This is the “front” of a building, either facing a street, into a development or onto an outdoor public amenity space. It should include a high percentage of glass to display goods and activities inside. (Note that a building may have more than one “Type A” wall, especially in “double-fronted” building scenarios, and when the building is at a highly visible location.)

A High Priority wall:

- Faces a public right-of-way and is in relatively close proximity to it
- Will be seen by users on a regular basis
- Contributes to a clustering of buildings that defines a place

Objectives for High Priority walls:

- Convey a sense of human scale in massing and detailing
- Have a high level of visual interest
- Invite pedestrian activity
- Provide views into interior functions

Wall Type B: Pedestrian-Friendly (Secondary Wall)



These are also in high-traffic areas, but are walls (or portions thereof) where internal functions do not lend themselves to designs with extensive amounts of transparency. On a freestanding pad site in a commercial center, for example, there is likely to be one wall where service doors are located, and public access is not appropriate. Because these are in high-traffic areas, a high degree of wall surface treatment is needed. This may include a broader range of options to achieve visual interest, including wall art or other architectural detailing. (See “Options for Windowless Facades,” Diagram 4-8)

A Pedestrian-friendly wall:

- Faces a pedestrian area
- Will be seen a regular basis
- Includes some “back of house” or service functions

Objectives for Pedestrian-friendly walls:

- Convey a sense of human scale in massing and detailing
- Have a high level of visual interest
- Be compatible with pedestrian activity in the area

Wall Type C: Service-Oriented (Tertiary Wall)



Finally, there are walls that are more remote in terms of public exposure. Even so, the objective is still to assure that these walls are seen as part of coherent design composition. A lesser level of detail may be appropriate.

A Service-Oriented wall:

- Is seen by the general public at a distance
- Is less frequently experienced by the general public
- Has service functions as a primary requirement

Objectives for Service Oriented walls:

- Convey a sense of scale in general massing
- Have a moderate level of visual interest
- Convey a sense of relatedness to the overall building design

Building Elements

Building elements - such as balconies, stoops, entries and windows - in the Blue Hill District should be human scaled to increase pedestrian activity. Elements such as forecourts, building arcades and front porches connect buildings to the public realm. Building elements will create visual continuity along the street and a cohesive transition from building to building.

BUILDING ELEMENTS

Additional information on Building Elements design can be found in the LUMO (Sec. 3.11.2.6).

ACTIVE FRONTAGES

See pages 98 and 100 for strategies to promote an active frontage.

4.33 Include building elements to create a street edge that invites pedestrian activity. Potential building elements to incorporate include:

- Building forecourts
- Plazas
- Arcades
- Porches

4.34 Design a forecourt to enhance the pedestrian experience.

- Maintain the street edge
- Engage the street
- Provide interest and activity
- Be accessible

STRATEGIES TO ACTIVATE A FORECOURT

Three strategies that promote an active street frontage for forecourts are illustrated below.

COLONNADE/ARCADE



Extending a colonnade or arcade wall across a forecourt can help maintain an active, pedestrian-oriented street frontage.

SITE WALL



A low wall with plantings to the front or rear can help bridge a forecourt to maintain an active, pedestrian-oriented street frontage.

PLANTERS



A low planter or series of planters can help bridge a forecourt to maintain an active, pedestrian-oriented street frontage.

Diagram 4-10 Strategies to Activate a Forecourt

4.35 Expanding the width of a forecourt may be considered as a design alternative when the edge is clearly defined.

- a. Expand the design of a forecourt to increase pedestrian interest.
- b. Design a forecourt to provide architectural interest and variation in the design of a building.
- c. Use strategies as shown in Diagram 4-10 to define the public edge of a forecourt.



Figure 4-35 Expanding the width of a forecourt may be considered as a design alternative when the edge is clearly defined.

4.36 Encourage consistency in arcade design.

- a. Integrate a building arcade into the design of a building.
- b. Use materials for an arcade that are compatible with the primary building.

4.37 Design an arcade to improve the pedestrian experience by including elements to:

- Protect pedestrians from the weather
 - Create a human-scaled building element
 - Create interest by increasing building articulation
- a. Include an arcade to provide architectural interest and variation.
 - b. Use an arcade to create a more transparent appearance.



Figure 4-37a Include an arcade to provide architectural interest and variation.

4.38 Incorporate a front porch to create a visual and functional connection between a residential building and the street.

- a. Locate a front porch to define a residential entry.
- b. Orient a front porch towards the street and sidewalk.

4.39 Incorporate building elements that are visually consistent with elements on adjacent, new buildings.

- a. Include building elements that are of a scale and form similar to those on adjacent buildings.
- b. Do not copy building elements on adjacent redeveloped sites. Instead, incorporate building elements that are unique to the development but compliment those on neighboring structures.

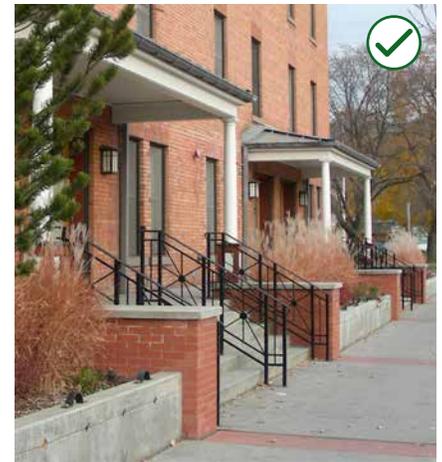


Figure 4-38 Incorporate a front porch to create a visual and functional connection between a residential building and the street.

PERMITTED BUILDING MATERIALS

The LUMO establishes a base list of permitted materials that can be found in Sec. 3.11.2.7.R. These guidelines address the quality and application of building materials.



Figure 4-40 Incorporate building materials that contribute to the visual continuity of the District.



Figure 4-41a Avoid mixing several materials in a way that would result in an overly busy design.

Building Materials

Exterior building materials and colors should provide a sense of scale and texture and convey design quality and visual interest. Building facades should use high-quality, durable materials that contribute to the visual continuity of the context and convey high quality in design and detail.

4.40 Incorporate building materials that contribute to the visual continuity of the District.

- a. Utilize genuine masonry, metal, concrete and glass, where possible.
- b. Avoid using imitation or highly reflective materials.

4.41 Develop simple combinations to retain the overall composition of the building.

- a. Avoid mixing several materials in a way that would result in an overly busy design.

4.42 Use high quality, durable building materials.

- a. Choose materials that are proven to be durable in the Chapel Hill climate.
- b. Choose materials that are likely to maintain an intended finish over time or acquire a patina, when it is understood to be a desired outcome.
- c. Incorporate building materials at the ground level that will withstand on-going contact with the public, sustaining impacts without compromising the appearance.

4.43 Alternative primary materials may be considered when they are designed to express modules and a sense of scale. These may include:

- Architectural metals
- Glass curtain walls
- Architectural concrete

4.44 Utilize traditional masonry materials such as stone, concrete and brick, where feasible.

- Use genuine masonry units, which appear authentic in their depth and dimension.
- Wrap masonry units around corners of wall to ensure that it does not appear to be an applied veneer.

4.45 Architectural metals may be considered as a primary building material for design alternatives on building walls.

- Incorporate architectural metals that convey a sense of human scale. For example, use smaller-scaled panels, varying forms and designs to create patterns to provide visual interest and eliminate expanses of unarticulated wall space.
- Choose a metal that has a proven durability in the Chapel Hill climate.
- Detailing of architectural metals should be done in a manner that is consistent with the durability and longevity of the material.

4.46 Architectural concrete may be considered as a primary building material for design alternatives on building walls.

- Detail architectural concrete to provide visual interest and convey a sense of scale.
- Detail architectural concrete in a manner that is consistent with the durability and longevity of the material.

4.47 Architectural glass may be considered as a primary material.

- Detail glass to provide a sense of scale.
- On the ground floor, use glass that permits views into the building to activate the street.
- Avoid the use of tinted windows on the ground.
- Avoid the design of a glass box.

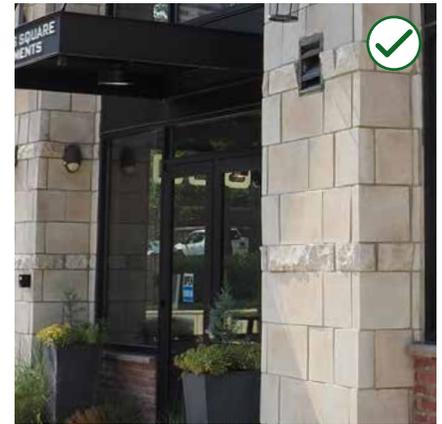


Figure 4-44b Wrap masonry units around corners of wall to ensure the material does not appear to be an applied veneer.

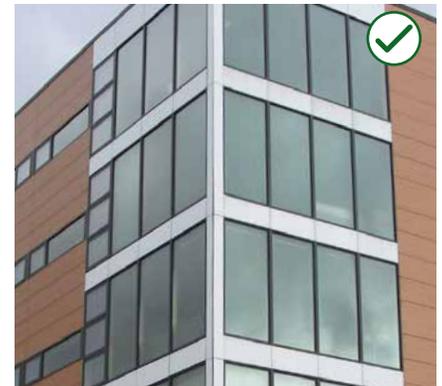


Figure 4-45 Architectural metal may be considered as a primary building material for design alternatives on building walls.

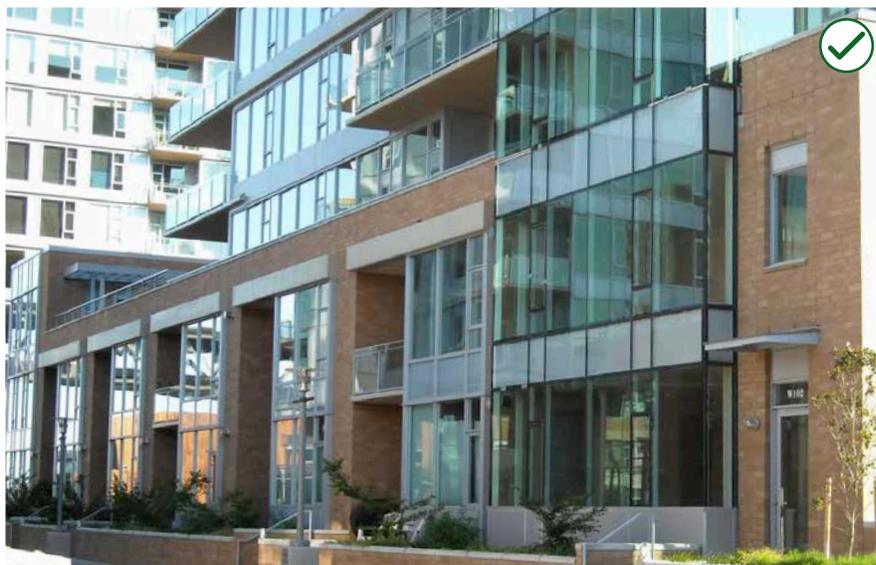


Figure 4-47 Architectural glass may be considered as a primary material.

WINDOW TRANSPARENCY

The LUMO establishes a minimum percentage of transparency in Sec. 3.11.2.7.O. These guidelines address quality and arrangement of windows on a building facade.



Figure 4-48 Design a window to create depth and shadow on a facade.

Windows

Windows are a key design element for commercial, mixed-use and residential buildings. Their design and arrangement should express a human scale and building modularity, while creating visual continuity with context and providing visual interest to the public streetscape. High-quality windows should be used on all new projects in the Blue Hill District.

4.48 Design a window to create depth and shadow on a facade.

- Design a window on an upper floor to appear to be inset into the wall.
- Avoid using a window that lacks depth.
- Use light shelves to reduce direct solar gain through windows on appropriate sides of a building

4.49 Locate and space windows to express individual modules of a large facade, to express scale and to create rhythm along the block.

- Provide consistent horizontal spacing between windows on a floor.
- Vertically align windows on upper and lower floors.
- Provide a common head height for windows on a single floor. Minor deviations may be appropriate for an accent, but vertical alignment and horizontal spacing should remain consistent.
- If a glazed wall is incorporated, use spandrels, moldings, awnings or sills to provide vertical and horizontal expression.

4.50 Use durable window materials.

- Incorporate windows with metal or wood frames, where possible.
- Avoid using window materials that do not have a proven durability, such as windows with warranties less than 10-years for example.
- Avoid using thin window frames.



Figure 4-49 Locate and space windows to express individual modules of a large facade, to express scale and to create rhythm along the block.

Exterior Lighting

The character and level of exterior building lighting helps establish a sense of identity and cohesion in the Blue Hill District. It can help create a sense of place, highlight distinctive architectural details and reinforce the overall form, massing and spatial characteristics of the building or site. Exterior building lighting is also important to provide safety for pedestrians along the street.

4.51 Install exterior lighting that will enhance the public realm and improve the pedestrian experience.

- Design a lighting plan to enrich the appearance and function of the building and site.
- Locate light fixtures to be visually subordinate to other building and site features during the day.
- Exterior lighting may be used to enhance the nighttime appearance of trees, shrubs and other landscape features.
- Design lighting so that it does not endanger the safety of pedestrian or automobile traffic.

4.52 Use exterior lighting to highlight the distinctive features of a site, such as:

- Building entrance
- Architectural details
- Signs
- Outdoor use areas
- Public art

4.53 Minimize the visual impacts of architectural lighting on neighboring properties.

- Use exterior light sources with a low level of luminescence.
- In most cases, use white lights that cast a color similar to daylight.
- Reserve washing an entire building elevation for civic buildings and landmark structures.

4.54 Use shielded and focused light sources to prevent glare and light pollution.

- Provide shielded and focused light sources that direct light downward.
- Do not use high intensity light sources or cast light directly upward.
- Shield lighting associated with service areas, parking lots and parking structures.
- Light sources should be designed, installed and maintained to prevent light trespass onto a neighboring property or the public right-of-way.

4.55 Coordinate fixture designs with abutting properties to establish a sense of continuity.

- This is especially important for walkways and lanes that interconnect within a development.

ADDITIONAL INFORMATION

The LUMO establishes minimum standards for installation, location and measurement of exterior lighting in Sec. 3.11.4.4.H. These guidelines address quality and consistency for a building and site.

SIGN ILLUMINATION

The LUMO establishes standards for sign illumination in Sec. 5.14.11.



Figure 4-51 Install exterior lighting that will enhance the public realm and improve the pedestrian experience.



Figure 4-54 Use shielded and focused light sources to prevent glare and light pollution.

Incremental Building Improvements

While many properties in the Blue Hill District will redevelop entirely, with new buildings that comply with the standards and guidelines, there may be a situation in which redevelopment of a property is to be phased. This may involve interim improvements that cannot fully comply with the Code. Some flexibility in applying the standards in these cases may be considered, when the intent of the standards and guidelines is met and when the potential to fully comply with the standards remains as final phases are completed. A master plan or similar documentation may be required to indicate how future phases will comply with the standards. Some flexibility in complying with these standards may be considered as Design Alternatives for interim improvements.

4.56 Alternatives to the design of an addition to an existing building may be considered.

- a. It may be located where it will support functions in the existing building.
- b. It may not be required to meet build-to requirements.
- c. It may not be required to meet minimum building height standards.
- d. Requirements for primary materials for the addition may also be adjusted.

4.57 Alternatives in the design of improvements to an existing parking lot may be considered.

- a. Buffering or screening requirements may be adjusted where existing dimensions limit compliance.
- b. Adjustments to the required amount of landscaping in the interior of the lot also may be considered.

4.58 Alternatives in the design of a buffer or landscape transition may be considered.

- a. Where a buffer is required between two phases of the same property, adjustments in design standards may be considered.
- b. This may be especially appropriate where connectivity between the two phases is to be maintained.

APPENDIX

Introduction to the Overview Table

The design guidelines for the Blue Hill District are applied in a variety of ways:

1. Staff will use some of the guidelines when determining compliance with requirements in the Town Code.
2. The Community Design Commission will refer to some of the guidelines when determining whether elements of an application meet the intent of the Form District when reviewed for a Certificate of Appropriateness.
3. The CDC also will use some of the guidelines when considering the appropriateness of Design Alternatives that applicants may propose, to determine whether the intent of the Form District is still being met.
4. Finally, some guidelines are presented as non-regulatory options for property owners in the light of “best practices” in urban design.

This table indicates how each of the design guidelines may be applied. Note that, in many cases, a guideline may be used in more than one of the different categories described above.

Reading The Overview Table

The chart indicates which of the four review authorities relate to each design guideline. If the guideline relates to the interpretation of a specific provision in the Land Use Management Ordinance (LUMO), that section of the code is referenced. In the code, many of the relevant sections exist in Section 3.11. For brevity in the chart, those numbers are omitted. For example, Section 3.11.4.1.G references requirements for “Service Drive, Loading Dock Access and Vehicular Access.” In the Overview Table, Design Guideline 3.13, “Provide vehicular connection into and between adjoining properties,” is linked to that code section. In the table, the reference is listed at 4.1.G, thus omitting the first two digits.

In some cases, a design guideline relates in a more general way to the review authority for a Certificate of Appropriateness (3.11.4.7.D.1) or a Design Alternative (3.11.1.2.H). In these cases, a checkmark in the appropriate cell on the chart indicates this condition.

IN THE APPENDIX

Design Guideline Overview Table.....	A-2
Glossary of Terms.....	A- 16

Design Guideline Overview Table

This table provides detailed instruction for individual Design Guidelines. References to the Town code* information are included in the appropriate columns for each applicable review authority.

Chapter 2: Public Right-of-Way			Code Compliance	Certificate of Appropriateness Review Elements**	Design Alternatives***	Best Practices
		Page #				
The Public Realm						
2.1	Enhance walkability in the public realm in each project.	24		✓		
2.2	Promote "greenness" throughout the Blue Hill District.	24			4.2	✓
View from the Public Right-of-Way						
2.3	Enhance views from the public right-of-way to natural features and landmarks.	26			✓	✓
2.4	Define the corner of a property at a key intersection with a distinctive design element.	26	2.1.D.5; 2.7.I.3		2.7.I.3	✓
Pedestrian and Bicycle Connectivity						
2.5	Locate bicycle and pedestrian facilities to connect with public outdoor amenity spaces.	27	2.7.F.4; LUMO 5.8			
Public Streetscape Character						
2.6	Use landscape materials to enhance the "green" experience in the public right-of-way.	28			4.2.D	✓
2.7	Develop a coordinated experience along all streetscapes to establish a sense of visual continuity.	29	4.2.D			
2.8	Integrate an "urban" approach to landscaping.	29			4.2	✓
2.9	Promote the use of landscape plantings along multiuse pathways, greenways and public connections.	29			4.2	✓
2.9	(a)	29	4.2.D; Design Manual			
2.9	(b)	29				
2.10	Adjusting the spacing of street trees may be considered.	30			2.5	

*NOTE: All references are subsections of Section 3.11 of the Land Use Management Ordinance (LUMO), unless otherwise noted in green.

**Sec. 3.11.4.7.D.1 serves as a reference for each entry in the Certificate of Appropriateness Review Elements column, in addition to other references provided for certain guidelines.

***Sec. 3.11.1.2.H serves as a reference for each entry in the Design Alternatives column, in addition to other references provided for certain guidelines.

	Page #	Code Compliance	Certificate of Appropriateness Review Elements**	Design Alternatives***	Best Practices
Public Streetscape Character (continued)					
2.11	Adjusting the alignment distance of street trees along a curb may be considered.	30		2.5	
2.12	Adjusting the scale of planting may be considered.	30		2.5	
2.13	Incorporate site furnishings into all new streetscape projects.	31	Design Manual		
2.14	Use a coordinated set of site furnishings that accommodates a high level of activity along commercial street frontages.	31	Design Manual; 4.5.B		
2.15	Cluster site furnishings and other streetscape features at mid-block locations to allow for fire access.	31	Fire Code		
2.16	Select furnishing designs that are fitting within the Blue Hill District context.	32	Design Manual		
2.17 (a)(b)	Locate site furnishings to animate the pedestrian network and outdoor amenity spaces.	32	Design Manual		
2.17 (c)		32		☑	
2.18	Use site furnishings to accommodate both active and passive pedestrian activity along a residential street frontage.	32	2.5	2.7.J	
Public Art					
2.19	Incorporating public art in a project is encouraged.	33		2.7.I.3	☑
2.20	Locate public art strategically.	33			☑
2.21	Design considerations for public art.	33			☑

*NOTE: All references are subsections of Section 3.11 of the Land Use Management Ordinance (LUMO), unless otherwise noted in green.

**Sec. 3.11.4.7.D.1 serves as a reference for each entry in the Certificate of Appropriateness Review Elements column, in addition to other references provided for certain guidelines.

***Sec. 3.11.1.2.H serves as a reference for each entry in the Design Alternatives column, in addition to other references provided for certain guidelines.

Chapter 3: Site Design

	Page #	Code Compliance	Certificate of Appropriateness Review Elements**	Design Alternatives***	Best Practices
Building Placement and Setback Character					
3.1	Place a building to promote a safe, interesting and comfortable pedestrian environment along the street.	36		2.7.2; 2.7.J	
3.2	Design the street frontage to promote pedestrian activity.	37		2.7.O; 2.7.P; 2.7.Q	
3.3	Develop an active pedestrian-friendly area in front of a building, when it is set back from the build-to line.	37	2.7.I.4; 2.7.F.4		
3.4	Design the street frontage to be compatible with the surrounding context.	37	2.5; 4.2.C		
Building Orientation					
3.5	Orient a building to the public streetscape.	39	2.7.Q		2.7.Q.4
3.6	Where a building has multiple frontages such as streets, plazas and/or amenity spaces, provide a secondary entry along each frontage.	39	2.5; 2.7.Q		
3.7	If a property is located along Booker Creek, orient an entry toward this natural feature.	39	2.5; 2.7.Q		
Connectivity					
3.8	Connect a development to established pedestrian pathways and bikeways.	40	2.7.D; 2.7.F.4; 2.7.S		
3.9	Provide pedestrian and bicycle connections into and between properties.	41	LUMO 5.8		
3.10	Incorporate bicycle parking into the design of a new building and in connection with existing bikeways.	41	4.1.E		
3.11 (a-c)	Design a building pass-through to be inviting and in proportion to its associated building.	43		2.7.S	
3.11 (d)		43		2.7.S	✓
3.12 (a)(c)	Activate a building pass-through to create a safe, enjoyable public space.	43		2.7.S	
3.12 (b)(d)		43		2.7.S	✓

*NOTE: All references are subsections of Section 3.11 of the Land Use Management Ordinance (LUMO), unless otherwise noted in green.
 **Sec. 3.11.4.7.D.1 serves as a reference for each entry in the Certificate of Appropriateness Review Elements column, in addition to other references provided for certain guidelines.
 ***Sec. 3.11.1.2.H serves as a reference for each entry in the Design Alternatives column, in addition to other references provided for certain guidelines.

	Page #	Code Compliance	Certificate of Appropriateness Review Elements**	Design Alternatives***	Best Practices
Connectivity (continued)					
3.13 (a-c) Provide vehicular connections into and between adjoining properties.	48	4.1.G			
3.13 (d)	48		4.1.G		
3.14 Create a consistent streetscape experience within a development.	49				
3.15 Where a curb cut is to be installed, minimize its width.	49	4.1.G.2			
3.16 (a) Design a service drive to be a visual asset.	49		4.2.E		
3.16 (b)	49	4.2.E			
Outdoor Amenity Space					
3.17 Locate an outdoor amenity space to provide a focal point on a site.	52			2.7.F4.i	
3.18 (a) Locate and orient outdoor amenity space to be actively used.	52	2.7.F4.c			
3.18 (b-d)	52			2.7.F4.i	
3.18 (e)	52			2.7.F4.c	
3.19 Locate outdoor amenity space where it will be shaded in summer months.	52		2.7.F		
3.20 (a) Create outdoor amenity space in the remaining area when a building is set back from the build-to-line.	53	Design Manual			
3.20 (b)(c)	53				
3.21 Design an outdoor amenity space to be inviting.	53		2.7.F		

*NOTE: All references are subsections of Section 3.11 of the Land Use Management Ordinance (LUMO), unless otherwise noted in green.

**Sec. 3.11.4.7.D.1 serves as a reference for each entry in the Certificate of Appropriateness Review Elements column, in addition to other references provided for certain guidelines.

***Sec. 3.11.1.2.H serves as a reference for each entry in the Design Alternatives column, in addition to other references provided for certain guidelines.

	Page #	Code Compliance	Certificate of Appropriateness Review Elements**	Design Alternatives***	Best Practices
Outdoor Amenity Space (continued)					
3.22	Furnish outdoor amenity spaces to encourage passive use and public enjoyment.	53		2.7.F	
3.23	Create a coordinated design palette for an outdoor open space.	53	Design Manual	2.7.F	
3.24	Promote a "green" experience in all outdoor amenity spaces.	54		1.2.A	
3.25	Design a rooftop outdoor amenity space to be visible and accessible.	54		2.7.F4.c	
3.26	Design a rooftop outdoor amenity space to capitalize on views of natural features and active social spaces.	55		2.7.F4.c	
3.27	Design outdoor amenity space to incorporate Low Impact Development (LID) principles for stormwater management.	55		4.2.B	
Recreation Space					
3.28	Design recreation areas to provide options for a variety of users.	56	2.7.G		
3.29	Design and furnish a recreation area to fit with the context of its development.	56		2.7.G	
Outdoor Dining Areas					
3.30	Locate an outdoor dining area to accommodate pedestrian traffic along the sidewalk.	57	2.7.I.4		
Surface Parking					
3.31	Minimize the visual impact of surface parking.	58	4.2.C.2		
3.32	Locate a surface parking lot so it will minimize gaps in the continuous building wall.	59	2.7.I; 4.1.G.1		
3.33	Divide a large parking area into interconnected, smaller modules with landscape buffers.	59	4.2.B; 4.2.C		
3.34	Design a surface parking lot for sustainability by incorporating one or more of the following features.	59	4.1.C.1	1.2.A	

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	Page #	Code Compliance	Certificate of Appropriateness Review Elements**	Design Alternatives***	Best Practices
Structured Parking					
3.35 Provide an active use at the sidewalk edge when parking in a structure occurs at the street level on a primary street.	60	2.5			
3.36 Wrapping the parking with an active use is preferred.	60		4.1.B.4		
3.37 Design architectural screens to be an integral part of the building design.	63		4.1.B.4		
3.38 (a) Design a parking structure to minimize light spill into adjacent sites.	63	4.4.E			
3.38 (b)(c)	63		☑		
3.39 Design a parking structure to promote sustainability.	63			1.2.A	☑
3.40 Design a parking structure to be adaptable for future non-vehicular uses.	63			☑	☑
Landscape Design					
3.41 (a) Preserve and maintain mature trees and other significant vegetation.	64			1.2.A	☑
3.41 (b)	64	LUMO 5.7			
3.42 Use a coordinated landscape palette to establish a sense of visual continuity within a site.	64	4.2.D			
3.43 Integrate landscaping and stormwater management systems.	64		4.2.B		
Fences and Site Walls					
3.44 Coordinate a fence or wall with the overall site design.	65		4.2.G		
3.45 Use a material that is durable and compatible with that of adjacent buildings and other site features.	65		4.2.G		

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	Page #	Code Compliance	Certificate of Appropriateness Review Elements**	Design Alternatives***	Best Practices
Fences and Site Walls (continued)					
3.46	Design a retaining wall to minimize impacts on the natural character of the site.	65		4.2.G	
3.47	Incorporate design variations in a site wall to create interest.	65		4.2.G	
Working with Topography					
3.48 (a)	Design a site to integrate with existing topography.	66	1.2.A		
3.48 (b)(c)		66			
3.49	Design parking lots to take advantage of changes in topography.	66		2.3; 2.4	
3.50	Orient a building's primary facade along a level grade, where possible.	66		2.7.F	
3.51 (a)(c)(d)	Design a building to step with the existing topography of a site.	66	2.3; 2.4		
3.51 (b)		66			
3.52	Define facade elements to respond to changes in topography.	67		2.3; 2.4	
3.53	Step outdoor amenity spaces to follow changes in topography.	67		2.7.F	
3.54	Provide frequent connections between the public walk to the site and its building(s).	67	2.3; 2.4		
3.55	Retaining walls are subject to the same guidance as blank walls.	67		4.2.G	
Service Areas and Utilities					
3.56	Locate a service area or utility to minimize visual impacts from the street and sidewalk.	68	4.2.E.2		
3.57	Enclose a free-standing utility or service area.	68		4.2.E.2	

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	Page #	Code Compliance	Certificate of Appropriateness Review Elements**	Design Alternatives***	Best Practices
Service Areas and Utilities (continued)					
3.58	Provide lighting for service areas and utilities.	69	4.4		
3.59	Integrate mechanical equipment into the design of a building.	69		2.7.J; 4.2.E	
Drive-thru Areas					
3.60	Design a drive-thru area to be subordinate to the principal structure on a site.	70	4.1.F.1		
3.61	Locate a drive-thru area to avoid conflicts with internal circulation.	70	4.1.F; Design Manual		
3.62	Coordinate the design elements of a drive-thru area with the primary structure.	70		4.1.F	
3.63	Locate menu board speakers to protect adjoining residential areas from excessive noise.	70	4.1.F		
Stormwater Management					
3.64	Incorporate Low Impact Development (LID) principles to mitigate stormwater impacts.	71	4.3.D		
3.65	Incorporate and design stormwater management systems as site amenities.	71			
Phased Improvements					
3.66	When locating a new building on a site with existing ones, consider the following.	75	2.7.I		
3.67	Plan incremental improvements to accommodate future development.	75		4.7.F	
3.68	Design phased improvements to enhance the pedestrian environment of an existing development.	75		4.7.F	

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		Page #	Code Compliance	Certificate of Appropriateness Review Elements**	Design Alternatives***	Best Practices
Sensitive Site Design Transitions						
3.69 (a)(c)	Design a site with a new land use to be compatible with adjacent neighborhoods.	77	4.2.H			
3.69 (b)(d)		77			4.2.E; 4.2.H	
3.70	Minimize negative impacts of a commercial operation on an adjacent residential property.	79		4.2.H		
3.71	Provide pedestrian, bike and vehicular connections to adjacent neighborhoods.	79	LUMO 5.8.1			
3.72	Design site transitions to connect to future/proposed developments.	79				
3.73	Design a landscape buffer area to include shared amenities.	80			1.2.H; 4.2.H	
3.74	If a property is located along a curved portion of Booker Creek, place a building edge(s) to respond to the Creek's curvilinear shape and to activate a community amenity.	80		2.5; 2.7.I		

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Chapter 4: Building Design

	Page #	Code Compliance	Certificate of Appropriateness Review Elements**	Design Alternatives***	Best Practices
Architectural Character					
4.1	Innovative new designs that draw upon local and regional design traditions are preferred.	84		✓	
4.2	Create a pedestrian-friendly environment with all new projects.	84	2.6		
Energy Efficiency and Building Performance					
4.3	Utilize sustainable building design solutions throughout the Blue Hill District.	85		1.2.A	✓
4.4	Design with energy efficiency and use of renewable energy as top priorities.	85		1.2.A	✓
4.5	Locate a new building, or an addition, to take advantage of micro-climatic opportunities for energy conservation.	86		2.7.L	✓
4.6	Design an addition to take advantage of energy-saving and energy-generating opportunities.	86		4.7.E	✓
4.7	Maximize solar access for all properties.	86		2.7.L	✓
Environmental Performance in Building Elements					
4.8	Use sustainable building materials whenever possible.	87		2.7.R	✓
4.9	Incorporate building elements that allow for natural environmental control.	87		1.2.A	✓
4.10	Minimize the visual impacts of energy devices on the character of the District.	87	4.2.E		
Building Mass and Scale					
4.11	Provide variation in building heights.	89		2.7.T	✓
4.12	Locate the taller portion of a structure away from neighboring residential buildings of lower scale or other sensitive edges.	89	4.2.H		

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Building Mass and Scale (continued)					
4.13	Establish a sense of human scale in the design of a new building.	90		2.7.T	
4.14	Incorporate horizontal expression lines to establish a sense of scale.	92		2.6	
4.15	Provide vertical articulation in a larger building mass to establish a sense of scale.	92			
4.16	Use materials to convey a sense of human scale and visual interest to pedestrians.	92		2.7.R	
4.17	Incorporate balconies to create depth and interest on a building facade.	92		2.6.C	
4.18	Vary cornice lines to create visual interest.	92		2.7.T	
4.19	Create a sense of visual interest by using a variety of roof heights along the street.	93		2.7.T	
4.20	Incorporate a roof form that provides a "cap."	93			
4.21	Utilize one of the following methods to design a building that is located on the corner.	93		2.1.D.5; 2.7.F; 2.7.I.3	
Architectural Features (Design Elements)					
4.22 (a)	Design a building facade to enhance community image.	97		2.6	
4.22 (b)		97		2.7.R	
4.23	Design a building facade to be compatible with its context.	97		2.6; 2.7.O; 2.7.R	
4.24	Design a building facade to convey visual interest.	97		2.6	
4.25	Design the ground floor to engage the public realm and promote pedestrian activity.	99		2.6; 2.7.O; 2.7.P	
4.26	Use building materials to define the ground floor and add visual interest.	99		2.7.R	

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Architectural Features (Design Elements) (continued)					
4.27 Design the main entrance to be clearly identifiable.	101		2.7.Q		
4.27 (a)					
4.27 (b)	101			2.7.T	✓
4.28 Orient the primary entrance of a building to face a street, plaza or pedestrian way.	101		2.1.D		
4.28 (a)(b)					
4.28 (c)	101			2.1.D	
4.29 If a property is located along Booker Creek, orient an entry toward this natural feature.	101	2.7.Q			
4.30 Use an iconic design feature to foster a unique sense of place.	102			2.7.L	✓
4.31 Locate an iconic design feature to maximize its visibility and impact.	102		2.7.Q; 2.7.I.3		
Four-sided Building Design					
4.32 Design a building to provide interest on all sides that will be viewed from the public realm.	103	2.6; 2.7.O; 2.7.R			
4.32 (a)					
4.32 (b)(c)	103		1.1; 4.1.B.4		
Building Elements					
4.33 Include building elements to create a street edge that invites pedestrian activity.	106		2.6		
4.34 Design a forecourt to enhance the pedestrian experience.	106	2.6.G	2.6.G		
4.35 Expanding the size of a forecourt may be considered as a design alternative when the edge is clearly defined.	107			2.6.G	
4.36 Encourage consistency in arcade design.	107		2.6.E		

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Building Elements (continued)					
4.37	Design an arcade to improve the pedestrian experience.	107		2.6.E	
4.38	Incorporate a front porch to create a visual and functional connection between a residential building and the street.	107	2.6.A	2.6.A	
4.39	Incorporate building elements that are visually consistent with elements on adjacent, new buildings.	107		2.6	
Building Materials					
4.40	Incorporate building materials that contribute to the visual continuity of the District.	108		2.7.R	
4.41	Develop simple combinations to retain the overall composition of the building.	108		2.7.R	
4.42	Use high quality, durable building materials.	108		2.7.R	
4.43	Alternative primary materials may be considered when they are designed to express modules and a sense of scale.	108			2.7.R.4
4.44	Utilize traditional masonry materials such as stone, concrete and brick, where feasible.	109		2.7.R	
4.45	Architectural metals may be considered as a primary building material for design alternatives on building walls.	109			2.7.R.4
4.46	Architectural concrete may be considered as a primary building material for design alternatives on building walls.	109			2.7.R.4
4.47	Architectural glass may be considered as a primary material.	109		2.7.R	

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Windows					
4.48 Design a window to create depth and shadow on a facade.	110		2.7.O		
4.49 Locate and space windows to express individual modules of a large facade, to express scale and to create rhythm along the block.	110		2.7.O		
4.50 Use durable window materials.	110		2.7.O		
Exterior Lighting					
4.51 (a) Install exterior lighting that will enhance the public realm and improve the pedestrian experience.	111		4.4.H		
4.51 (b)(c)(d)	111	4.4.H			
4.52 Use exterior lighting to highlight the distinctive features of a site.	111		4.4.H		
4.53 Minimize the visual impacts of architectural lighting on neighboring properties.	111	4.4.B; 4.4.D			
4.54 Use shielded and focused light sources to prevent glare and light pollution.	111	4.4.H			
4.55 Coordinate fixture designs with abutting properties to establish a sense of continuity.	111		4.4.D; 4.4.H		
Incremental Building Improvements					
4.56 Alternatives to the design of an addition to an existing building may be considered.	112			1.2.A; 4.7.E	
4.57 Alternatives in the design of improvements to an existing parking lot may be considered.	112			1.2.A; 4.2.C	
4.58 Alternatives in the design of a buffer or landscape transition may be considered.	112			1.2.A; 4.7.F	

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Glossary of Terms

The glossary below includes terms that are defined for the design guidelines.

Adaptive Reuse. The process of reusing an old site or building for a purpose other than which it was built or designed for, such as a residence converted into an office.

Addition. Construction that expands the square footage of an existing building.

Alignment. The linear relationship of structures or parts of structures to each other.

Appropriate. Suitable or compatible.

Arcade. A covered passageway with arches along one or both sides.

Arch. A curved construction that spans an opening and supports the weight above it.

Architectural Screen. A fabricated metal component that is fastened to a building wall, or over an opening to provide an ornamental or mesh screen that adds visual interest or limits the visibility of parked cars, utility areas or other visual intrusions.

Articulation. Design elements, including both horizontal and vertical changes in materials, texture or wall plane that add interest to the face of a building. Massing articulation is the way in which a building is broken down into modules, sub-parts, or major elements, that provide a sense of human scale.

Attic. The upper level of a building, usually not of full ceiling height, directly beneath the roof.

Awning. A roof-like cover that is temporary or portable in nature that projects from the wall of a building and is supported primarily from the exterior wall of a building.

Base, Middle, Cap Design. A traditional building facade composition with well-defined ground or lower floors and a distinctive "cap" element framing middle building floors.

Batten. A board attached to the back or front of two other parallel boards, usually to hold them together.

Bay. The horizontal divisions of a building, defined by windows, columns, pilasters, etc.

Bay Window. A projecting window that forms an extension to the floor space of the internal room.

Block Face. See "Street Face."

Board & Batten. Siding fashioned of boards set vertically and covered where their edges join by narrow strips called battens.

Bond. A term used to describe the various patterns in which brick (or stone) is laid, such as 'common bond' or 'Flemish bond.'

Bracket. A supporting member of wood, stone, or metal often used for both decorative and structural purposes and generally found under projecting features such as eaves or cornices. Also, brackets are used as supports for a balcony.

Building. Anything attached to the ground having a roof supported by columns or by walls and intended for shelter, housing or enclosure of persons, animals or personal property. See the Town of Chapel Hill Zoning Ordinance.

Building Module. A sub-part of a larger building that appears as a single facade plane. One large building can incorporate several modules.

Bulkhead. The structural panels just below display windows on storefronts. Bulkheads can be both supportive and decorative in design.

Buttress. A pier of masonry placed against a wall for additional support.

Canopy. A roofed structure placed so as to extend outward from a building, to provide a protective shield for doors, windows, and other openings. Canopies are usually supported by the building with additional support extending to the ground directly under the canopy edge.

Cantilevered. A projecting element, anchored in the body of the building, as in the case of a cantilevered balcony.

Casement Window. A window with one or two sashes which are hinged at the sides and usually open outward.

Character. The qualities and attributes of any structure, site, street or district.

Cinder Block. A concrete masonry unit block made from cinders (fly ash or bottom ash).

Clapboards. Horizontal wooden boards, thinner at the top edge, which are overlapped to provide a weatherproof exterior wall surface.

Clerestory. A section of a wall pierced with windows projecting above the aisles of a church.

Colonnade. A range of columns.

Column. A circular or square vertical structural member.

Compatible. Existing or performing in harmonious, agreeable combination with its surroundings.

Concrete Masonry Unit (CMU). A large rectangular brick made from cast concrete. A cinder block is a type of CMU.

Configuration. The arrangement of elements and details on a building or structure that help to define the character.

Construction. The act of adding an addition to an existing building or structure, or the erection of a new principle or accessory building or structure on a lot or property.

Context. The setting in which a site, structure, street or district exists.

Cornice. A projecting element that tops a wall.

Course. A horizontal layer or row of stones or bricks in a wall.

Cresting. A decorated ornamental finish along the top of a wall or roof — often made of ornamental metal.

Cupola. A dome placed on a circular or polygonal base crowning a roof or turret.

Design Guideline. A statement describing an intent or desired outcome to help guide development toward a desired level of quality through the design of the physical environment. Guidelines are applied on a discretionary basis relative to the context of development.

Design Review. A system for evaluating development to ensure that it is consistent with community objectives.

Dormer. A roofed structure that contains one or more windows and projects from a sloped roof.

Double-Hung Window. A window with two sashes, one sliding vertically over the other.

Eave. The edge of a roof that projects beyond the face of a wall.

Exterior Insulation and Finish System (EIFS). “See Synthetic Stucco.”

Element. A material part or detail of a site, structure, street, or district.

Elevation. Any one of the external face or facades of a building; the straight-on view of a building wall.

Fabric. The physical material of a building, structure, or community; an interweaving of component parts.

Façade. The exterior walls of a building.

Face block. A series of structures placed parallel to a street along one side of a city block.

Fascia. A flat horizontal member of molding; forms the trim of a flat roof or pitched roof.

Fenestration. The arrangement of windows on a building.

Fiber Cement Siding. A composite material made of sand, cement and cellulose fibers that is used as an exterior building material. Hardie-board is a type of fiber cement siding.

Flashing. Thin metal sheets used to prevent moisture infiltration at joints of roof planes and between the roof and vertical surfaces.

Form. The shape and structure of a building.

Foundation. The lowest exposed portion of the building wall, which supports the structure above.

Frame. The exposed trim around a window or door opening; also called a casing.

Gable. A triangular shape roof formed by two intersecting roof planes; also the triangular shape wall at the end of the roof.

Glazing. Window glass.

Hardie-board. See "Fiber Cement Siding."

Harmony. Pleasing or congruent arrangement.

Head. Upper horizontal framing member of a window or door.

Hip. A roof with four planes all sloping toward the center of the structure.

Horizontal Alignment: Design elements such as moldings, belt courses, parapets and cornices or changes in material and color that produce horizontal lines along a building facade. A block face may have buildings with coordinated elements of horizontal alignment.

Infill. New construction where there had been vacant land before, such as a new building between two older structures.

Landscape. The totality of the built or human influenced habitat experienced at any one place. Dominant features are topography, plant cover, buildings or other structures and their patterns.

Lattice. An openwork grill of interlacing wood strips used as screening.

Low-Impact Development (LID). A stormwater management approach to manage rainfall in a way which more closely mimics the natural hydrologic system at the site prior to any development. Techniques include those which infiltrate, store, filter, evaporate and detain stormwater close to the location where the rain fell.

Masonry. Construction of brick, stone, or other material requiring mortar, as well as concrete that has been detailed to resemble traditional masonry panels. Masonry does not include synthetic stucco (EIFS), concrete masonry units (CMU), fiber cement siding (hardie-board) or panelized brick.

Massing. The overall composition of the exterior of the major volumes of a building, especially when the structure has major and minor elements.

Materials. The physical elements that were combined or deposited in a particular pattern or configuration to form a property.

Metal Standing Seam Roof. A roof composed of overlapping sections of metal such as copper-bearing steel or iron coated with terne alloy of lead and tin. These roofs were attached or crimped together in various raised seams for which the roof is named.

Minor Project. Limited improvements to an existing site without new construction (except accessory buildings). Minor projects include replacement of existing landscaping, modification of existing parking lots, changes to utilities, mechanical equipment or service areas, renovation or improvements to an existing facade or new/modified accessory buildings.

Molding or Moulding. A construction or decorative element that has a variety of contours or outlines.

Mortar. A mixture of sand, lime, cement and water, used as a binding agent in masonry construction.

Net Facade Area. The surface area of a building facade without including the surface area occupied by windows and doors.

Offset. See "Wall Offset."

Orientation. The relationship of a structure to the compass points or a site feature; may refer to the direction a facade faces, such as the south elevation, or the direction of a main axis, as in an east-west orientation.

Parapet. A low wall at the edge of a roof, balcony, or deck.

Parapet Block. A block of buildings with a roof profile that results from being built directly against each other such as along a traditional main street.

Pediment. A triangular crowning element forming the gable of a roof; any similar triangular element used over windows, doors, etc.

Pergola. A functional or ornamental shade structure of vertical posts or pillars that usually support cross-beams and a sturdy open lattice.

Perpendicular Wall Sign. A sign that projects in a perpendicular direction from a building wall or hangs from a bracket that projects from a building wall above pedestrian height.

Pilaster. A square pillar attached, but projecting from a wall, resembling a classical column.

Pitch. The degree of the slope of a roof.

Pole Sign. A sign that is mounted on a freestanding pole.

Porch. A structure attached to a building to shelter an entrance.

Primary Facade. The main building face; the side of a building that faces the street.

Primary Structure. The main structure on a property.

Proportion. The relationship of the size, shape, and location of one building element to all the other elements; each architectural style typically has its own rules of proportion.

Redevelopment. Any repair, reconstruction, or improvement, excluding additions as defined herein, to an existing structure where the costs of which is less than fifty (50) percent of the total replacement cost of the structure either (1) before the improvement or repair is started, or (2) if the structure has been damaged and is being restored. The term does not, however, include either (1) any project for improvement of a structure to comply with existing state or local health, sanitary, or safety code specifications which are solely necessary to assure safe living conditions, or (2) any alteration of a structure listed on the National Register of Historic Places or a State Inventory of Historic Places.

Rhythm. Regular occurrence of elements or features, such as spacing between buildings.

Ridge. The top horizontal member of a roof where the sloping surfaces meet; the peak of the roof.

Rusticated. Roughening of stonework or concrete blocks to give greater articulation to each block.

Scale. Proportional elements that demonstrate the size, materials and style of buildings. The proportions of the elements of a building to one another and the whole, and to adjacent buildings.

Secondary Structure. A smaller or lesser structure associated with a primary structure on a property.

Setback. A line demarcating that portion of the lot specified must remain devoted to a yard, and the buildable portion of the lot. Building setbacks and “yard” are considered one and the same. See the Chapel Hill Zoning Ordinance for more information (on the web via the Planning and Development Services page at www.townofchapelhill.org/town-hall/departments-services/planning-and-development-services).

Setting. The sum of attributes of a locality, neighborhood or property that defines its character.

Shed roof. A pitched roof with a single plane.

Siding. The exterior wall covering or sheathing of a structure.

Site feature. A component of the property surrounding the structure, such as a fence, walkway, or landscaping.

Site wall. A low wall along the edge of a property; may also serve as a retaining wall.

Siting. The placement of a building, structure, or object on a site in relation to natural features, boundaries, and other parts of the built environment.

Small Project. A project with limited floor area that is generally less than 1,500 square feet.

Stormwater Management. The collection, conveyance, storage, treatment and disposal of stormwater runoff in a manner intended to prevent increased flood damage, stream bank channel erosion, habitat degradation and water quality degradation, and to enhance and promote the public health, safety and general welfare. See the Chapel Hill Stormwater Ordinance.

Street Face. That portion of a block with frontage on a street; there are generally two block faces with frontage on either side of a street.

Streetscape. The relationship of the street, landscaping, and buildings as seen by the eye in one view.

Structure. Anything built, constructed or erected, or established or composed of parts joined together in some definite manner, the use of which requires location on the ground or which is attached to something having permanent location on the ground. Swimming pools, tennis courts, dog houses, and outdoor fenced animal runs are considered structures. Tents, vehicles, trailers and play equipment attached to the ground in some permanent or temporary way are considered structures. A structure may or may not be easily moved from a given location on the ground. See the Chapel Hill Zoning Ordinance.

Style. A type of architecture distinguished by special characteristics of structure and ornament and often related in time; also a general quality of a distinctive manner.

Synthetic Stucco (EIFS). A non load bearing exterior wall cladding system that consists of an insulation board attached adhesively or mechanically to a building facade. Note that synthetic stucco is also frequently referred-to as EIFS (Exterior Insulation and Finish System).

Transom. A horizontal window opening over a door or window, often with a hinged window.

Transparency. The relationship of solid building wall to open or glass areas.

Tree-lawn. The landscaped area between the street and sidewalk.

Trellis. A framework of light wooden or metal bars used as a support for trees or climbing plants.

Trim. The decorative framing of openings and other features on a facade.

Turret. A small slender tower.

Under Canopy Sign. A sign that is hung perpendicular to a building under a canopy which projects over the public entrances into a building.

Veranda. A covered porch or balcony on a building's exterior.

Vernacular. A regional form or adaptation of an architectural style.

Wall Offset. A notch or break in the facade of a building.

Wall Sign. A sign attached parallel to, and not projecting significantly from, the wall of a building.