



LAKEFRONT NEIGHBORHOOD DESIGN GUIDELINES

Prepared for **The Howard Hughes Corporation**

Prepared by **Design Collective, Inc.**

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Prepared for:

The Howard Hughes Corporation

Prepared by:

**Design
Collective**

With support from:

Gutschick, Little & Weber, P.A.

Wells + Associates

Shulman, Rogers, Gandal, Pordy & Ecker, P.A.

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1.0 INTRODUCTION

BACKGROUND
PURPOSE OF THE LAKEFRONT
NEIGHBORHOOD DESIGN
GUIDELINES
THE VISION FOR LAKEFRONT
NEIGHBORHOOD



Background

Howard County Council Bill Nos. 58-2009 and 52-2016 formally adopted and amended, respectively, the Downtown Columbia Plan, a General Plan Amendment for the purpose of revitalizing and redeveloping Downtown Columbia. Resolution No. 138-2010 subsequently adopted the Downtown-wide Design Guidelines to ensure that Downtown Columbia will be attractive, aesthetically coherent, practical, environmentally sensitive, and of beauty and value.

In accordance with the Howard County Zoning Regulations and the Howard County Department of Planning and Zoning, Division of Land Development, all new development in Downtown must include a Final Development Plan (FDP) with accompanying documentation as prescribed in the *Application for Downtown Columbia Revitalization* checklist. Neighborhood Specific Design Guidelines are a component of this FDP requirement and checklist.

The *Lakefront Neighborhood Design Guidelines* build upon and compliment the vision as described in the documents referenced above and others. These documents, identifying the required elements and expectations for the level of detail, include:

1. Bill Nos. 58-2009 and 52-2016, *Downtown Columbia Plan, a General Plan Amendment*;
2. Resolution No. 138-2010, *Downtown-wide Design Guidelines*;
3. Howard County Sign Ordinance, Downtown Columbia Provisions;
4. Final Development Plan: Application for Downtown Columbia Revitalization (2014); and
5. Howard County Zoning Regulations, Downtown Revitalization Provisions

The *Lakefront Neighborhood Design Guidelines*, although built upon the *Downtown-wide Design Guidelines*, further develop the character of this individual neighborhood, defining the details for achieving this character in materials and methods. As such, for the Lakefront Neighborhood only, the *Downtown-wide Design Guidelines* are replaced fully by the *Lakefront Neighborhood Design Guidelines*.

The effectiveness of the *Lakefront Neighborhood Design Guidelines* is tied to the effectiveness of the underlying FDP. Please see the FDP plan sheets for additional information on recordation phasing and effect.

Purpose of the Lakefront Neighborhood Design Guidelines

The *Lakefront Neighborhood Design Guidelines* are comprehensive and complete and serve as the guide for the design and development of Lakefront Neighborhood. All development in Lakefront Neighborhood shall comply with these guidelines as determined by the Planning Board or Staff unless amended by future FDP submissions or variations as permitted herein or other adjustments are approved as authorized by the Zoning Regulations as a part of the FDP, SDP, or permit process. The previously prepared master plan for Downtown Columbia and the accompanying *Downtown-wide Design Guidelines* remain important reference documents, but specific quantitative and/or qualitative design considerations for Lakefront Neighborhood are governed exclusively by the *Lakefront Neighborhood Design Guidelines*.

The intent of these guidelines is to provide developers and designers with criteria for urban design, street design, pedestrian and bicycle circulation, open space design, architectural design, and signage and wayfinding design. Moreover, these guidelines provide a basis from which the County Staff, Planning Board, and the Design Advisory Panel (DAP) will evaluate development proposals for compliance with the vision for Downtown and Lakefront Neighborhood specifically. The *Guidelines* are specifically prepared to ensure that all new development fulfills the vision for design excellence, sustainability, and unique neighborhood character as described in previous Downtown Columbia efforts and documents. Moreover, certain elements within the *Lakefront Neighborhood Design Guidelines* are generally envisioned to be consistent throughout Downtown Columbia to create a coherent character. These elements include street lighting, benches, trash and recycling receptacles, tree grates, primary sidewalk material, Downtown Columbia permanent identification signs, neighborhood permanent identification signs, vehicular and pedestrian directions signs, and parking signs.

As a primary goal of the Downtown Columbia vision, sustainability has been elevated as a priority for all elements of design and, therefore, is integrated throughout the *Lakefront Neighborhood Design Guidelines*. Specific sustainable criteria are incorporated in all sections, including Urban Design, Street Design, Amenity Space, Architecture, and Signage. Additionally, the *Downtown Columbia Sustainability Program Guidelines* are included for reference in Appendix A.1 and cover Livability topics such as housing diversity, affordability and proximity, as well as Transportation topics such as transit access, transit routes, transit hub and stop amenities.¹

The *Lakefront Neighborhood Design Guidelines* are not a prescription for a specific design mandate. Variations from these guidelines that conform to the goals of the *Downtown Columbia Plan* are permitted on the basis of unusual programmatic requirements, peculiar site or economic constraints, or architectural/site design merit as determined by the County and where shown on appropriately submitted documents.

Design review and approval are governed by applicable County regulations.

All applicable building codes, laws, Acts, life safety codes, ADA, environmental regulations, development approval processes, Howard County, State, and Federal regulations and permitting processes, and similar regulations must be adhered to and are not superseded by the *Lakefront Neighborhood Design Guidelines*.

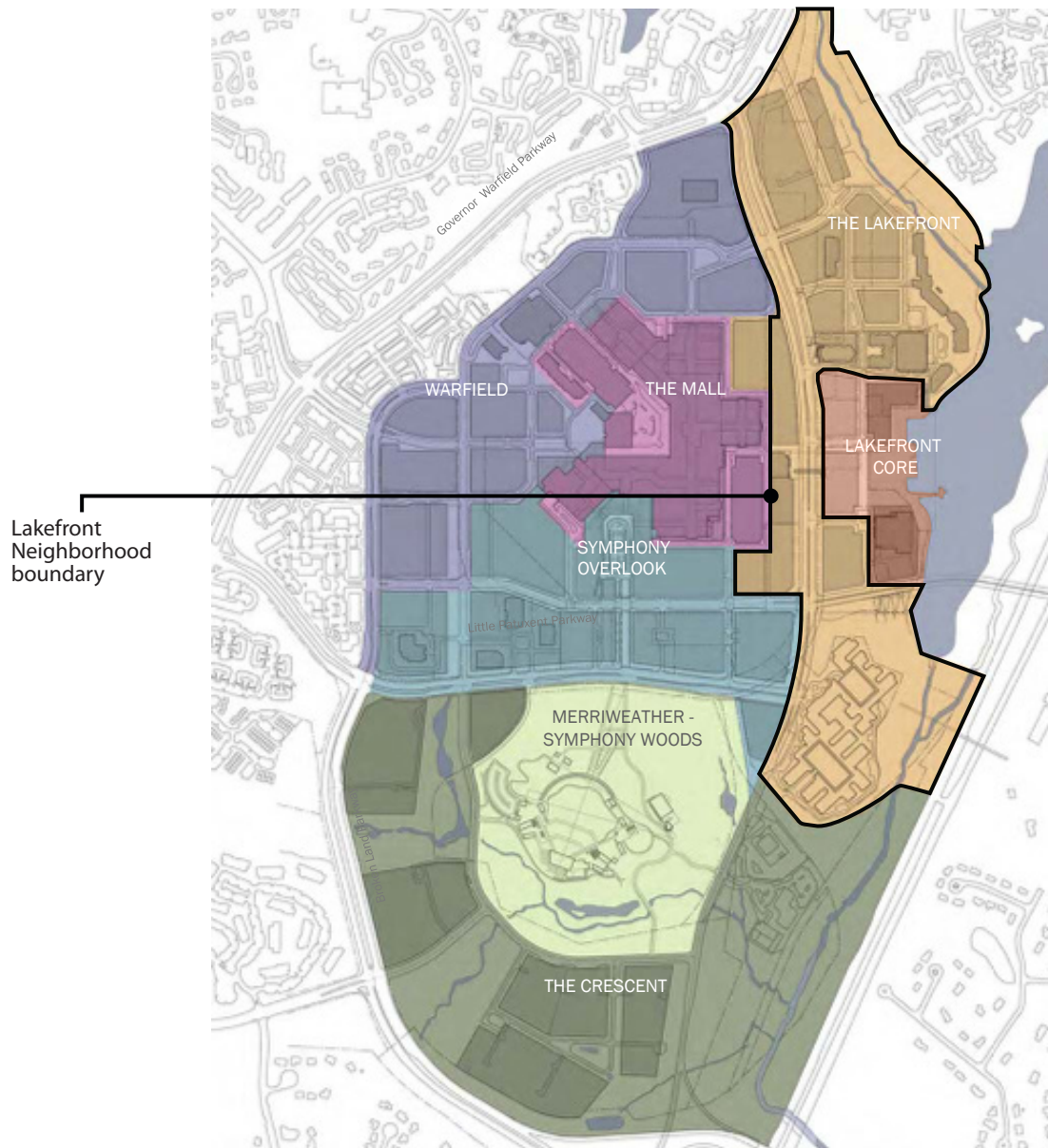
Throughout the *Guidelines*, the use of the word “shall” identifies mandated criteria. “Must,” “required,” and “mandated” are additional words with the same meaning. The use of the word “encouraged,” “should,” or “recommended” identify criteria which are desired. In some instances, words such as “prohibited” and “not permitted” identify practices, materials, or systems which are not allowed in the Lakefront Neighborhood redevelopment.

Throughout this document, illustrative examples and photographs of building types, architectural design styles, open space design, streetscape, and similar are offered. These images are for illustrative purposes only and are not intended to suggest a specific style or design.

The *Guidelines* apply to all development within the boundaries of the Lakefront Neighborhood only. These guidelines may be modified from time to time with Howard County Planning Board approval through future FDP submissions.

¹ See applicable amendments in Bills 52-2016, 54-2016, 55-2016, and Resolution 103-2016.

Purpose



The *Downtown Columbia Plan - Neighborhood Diagram*, shown above, illustrates the boundaries of the approved neighborhoods for Downtown Columbia. While keeping with the vision for Downtown, previous FDP efforts have made refinements to the neighborhood boundaries. These previous, approved adjustments have been followed for the Lakefront Neighborhood; no further revisions have been made.

The Vision for Lakefront Neighborhood

The Lakefront Neighborhood is located between Lake Kittamaquandi to the east and the Mall to the west and from Little Patuxent Parkway to the north and Symphony Woods to the south, wrapping around the Lakefront Core Neighborhood (a separate neighborhood for the purposes of the neighborhood-specific design guidelines).

As stated in the *Downtown-wide Design Guidelines*, the vision for the combined Lakefront and Lakefront Core Neighborhoods is to bring community life and activity back to the water's edge. The Lakefront area should be a lively, walkable neighborhood connected and oriented to Lake Kittamaquandi. New development should be designed to incorporate outdoor corridors to enhance visibility and access to existing amenity spaces. The Lakefront area should be revitalized with new development that may include cultural, retail, restaurant, office, residential, and hospitality uses. The Lakefront Neighborhood is envisioned to be the potential location for a new signature building, in addition to the existing former Rouse Company Headquarters' signature building in the Lakefront Core.

The Lakefront area has been isolated from other areas of Downtown Columbia due to the design of Little Patuxent Parkway and topography. The *Downtown Columbia Plan* proposes three new amenity space corridors extending east to west to enhance connectivity between the lake and other downtown destinations. The central, main Lakefront Connection is one of the three corridors and is partially located within the Lakefront Neighborhood and partially in the Lakefront Core Neighborhood, connecting the Mall to the central lakefront area and Plaza. Two additional corridors occur to the north and south within the Lakefront Neighborhood. The northern corridor is located along Sterrett Place, extending west of Little Patuxent to the woods and stream area to the east. The southern corridor stretches from Symphony Overlook to the southern tip of the lake. Additionally, enhancing and extending trails and Shared-Use Paths (SUP) to and through the neighborhood will further increase connectivity to other surrounding neighborhoods, as can be seen in Vision Diagram 1 on the following page.

Beyond the goals outlined in the *Downtown Columbia Downtown-wide Design Guidelines*, the Lakefront Neighborhood is envisioned as a Health/ Wellness/ Fitness district with the following five, prime drivers:

- Become Maryland's prime example of a healthy neighborhood;
- Connect people with health, fitness, and wellness through daily engagement and activity;
- Create a place to Live-Work-Play-Eat-Shop (LWPES) in an enriched natural setting that promotes healthy lifestyles;
- Develop a walkable, mixed-use neighborhood that celebrates Columbia's founding ideas and Lakefront's central significance; and
- Anchor with thoroughly-integrated medical office buildings that are outwardly-focused to support health and wellness.



Precedent: The Blairs, Silver Spring MD, A LEED Gold, Fitwell Standard healthy living community; image credit - Design Collective

The Vision for Lakefront Neighborhood



Lakefront Neighborhood - Vision Diagram 1

- | | | | |
|--|--------------------------------|--|------------------------------|
| | PRIMARY AMENITY SPACE CORRIDOR | | PROPOSED NEIGHBORHOOD BLOCKS |
| | SHARED USE PATHS & TRAILS | | EXISTING AMENITY SPACES |
| | | | NEIGHBORHOOD BOUNDARY |



A Promenade



B Shared Use Path



C Trails

Establish Amenity Space Corridors

Three new amenity space corridors will extend east to west to enhance connectivity in Downtown. The central Lakefront Connection, largely located in the Lakefront Core Neighborhood, connects the Mall to the Lakefront Plaza. The northern corridor, Warfield Promenade, is a broad sidewalk lined by a double row of trees, located along Sterrett Place and extending east to the woods, stream, and trails. The southern corridor stretches from Symphony Overlook to the southern tip of the lake, creating the new Lakefront Terrace amenity space, a series of lawn and wildflower terraces that descend down the slope to the lake. Activities along these corridors may include programmed events, outdoor dining, public art, and outdoor exhibition space. In each, views should be framed, rather than obstructed by trees or structures.

See Section 4.2 Amenity Space Types on pages 78 and 80 for additional information.

Extend Shared Use Paths

A planned Shared-Use Path along Little Patuxent Parkway will connect the three envisioned east-west corridors through the Lakefront Neighborhoods, as well as connect to the existing Shared-Use Path and trail network around the Lake and Symphony Woods and other locations throughout Columbia.

See the Bicycle Circulation Plan on page 41 and Section 4.2 Amenity Space Types on page 75 for additional information.

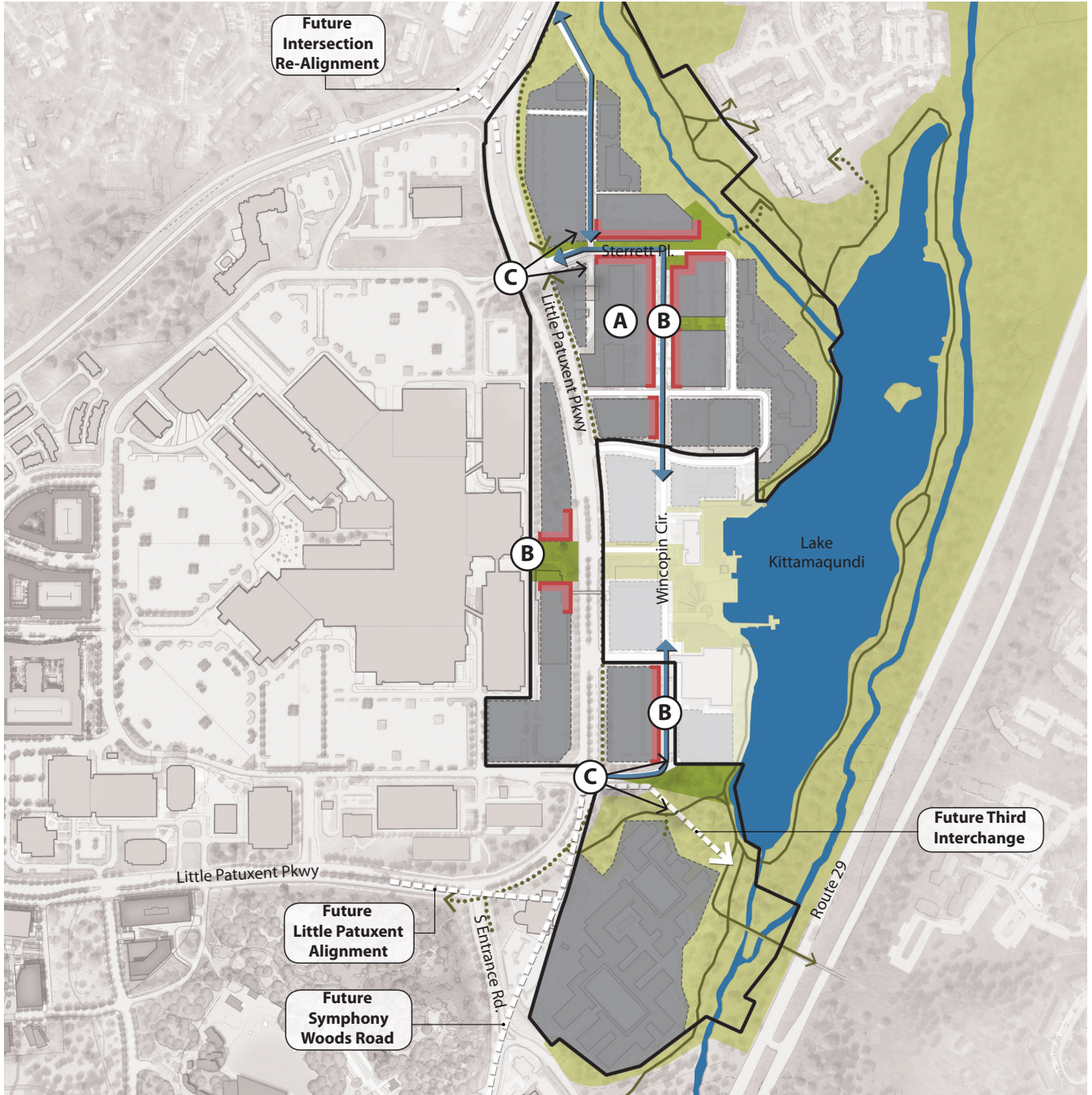
Enhance Trails

While a trail exists around Lake Kittamaqundi, improving the approach and connections to it as well as the lighting, wayfinding, and natural buffer along the lake will enhance the overall user experience. Providing a clear and safe connection, particularly for bicyclists, to the lake trail is a primary objective stated in the *Downtown Columbia Plan*.


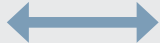


In the north, the Warfield Promenade will connect to the Lake-to-Lake-to-Lake Trail and, to the south, the Lakefornt Terrace will connect to the Lake Kittamaqundi Loop Trail.*

See the Bicycle Circulation Plan on page 41 and *Section 4.2 Amenity Space Types on pages 78 and 80 for additional information and conditions.

The Vision for Lakefront Neighborhood



Lakefront Neighborhood Vision Diagram 2

	ACTIVE FRONTAGE		PROPOSED NEIGHBORHOOD BLOCKS
	NEW STREET ALIGNMENT		EXISTING AMENITY SPACES
	PRIMARY VIEW CORRIDOR		NEIGHBORHOOD BOUNDARY



A Aerial Rendering of Lakefront Core showing the proposed connecting street grid and buildings; credit - Design Collective



B Active Streetscape; credit - Design Collective



C The Lakefront Neighborhood will have two additional visual and physical access corridors east-west

Enhance the street network

The Lakefront Core has and will build on a well-established block and street pattern with Wincopin Circle and Connection at its heart. In the Lakefront Neighborhood, Wincopin extends farther both north and south, with a grid of streets branching off it. Extending Wincopin will improve connectivity for all transportation modes and increase the viability of retail uses along the new street. These new streets will be designed as Complete Streets to serve all users.

See Section 3.0 Street Design, Complete Streets on pages 32-33 for additional information.

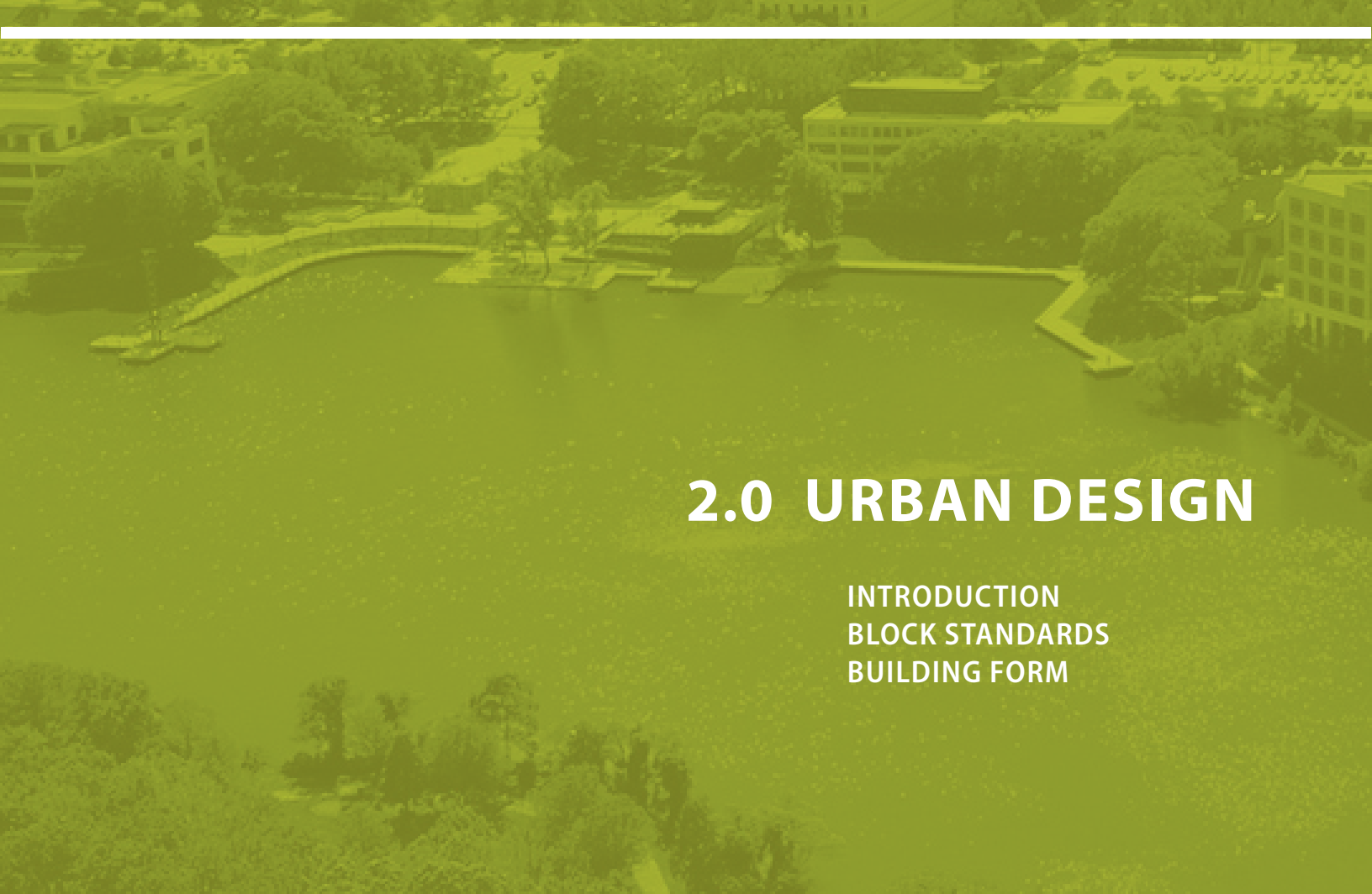
Activate the Streetscape

As noted above, Wincopin is envisioned to extend from Sterrett Place in the north to past the Rouse HQ/Whole Foods Building in the south. New development fronting Wincopin should transform the street into an active retail/restaurant street with a pedestrian-oriented streetscape. See the Active Frontages Plan Diagram to the left, indicating where active ground-floor uses should be located. Where feasible, restaurants are encouraged to provide outdoor dining opportunities near the Lakefront Plaza and also at the northern end near Sterrett Place.

Improve visibility

The intent of the Lakefront Connection, as with the other two east-west Amenity Space Corridors, is to establish visual and physical access corridors east-west, from the Mall and Symphony Overlook to Lake Kittamaqundi. Currently, from Little Patuxent Parkway, there is very limited visibility to the lakefront. By giving the Lakefront Neighborhood a presence on Little Patuxent Parkway and encouraging connectivity, the addition of the two new northern and southern Amenity Space Corridors, at Sterrett and the southern tip of the lake, create a framework to achieve the primary goal of bringing community life and activity back to the water's edge.

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2.0 URBAN DESIGN

INTRODUCTION
BLOCK STANDARDS
BUILDING FORM

Urban Design Introduction

Overview

As described in the *Downtown Columbia Design Guidelines*, the Lakefront Neighborhood is envisioned as a lively, walkable neighborhood connected and oriented to Lake Kittamaqundi where residences, offices, shops and restaurants as well as entertainment, civic, and cultural uses are all integrated. In character with this vision, buildings range from 1 to 20 stories in height with shared parking facilities integrated either wholly or partially within individual buildings. Open spaces, such as plazas, promenades, and greens, are incorporated within the neighborhood, providing connections back to other Downtown destinations and views to the lake. Natural areas flank and buffer the lake, providing trails and shared-use paths that connect to a larger pedestrian and bicycle network. The Urban Design Criteria include design standards to ensure this vision.

Purpose

The Urban Design Criteria specify those physical elements of the plan that collectively, through careful placement, define the physical characteristics and visual appearance of the public realm. The Urban Design Criteria describe how buildings and the street interface, including the placement of buildings and structures, building heights, and bulk standards.

Sustainability Goals

One of the objectives for the development of Downtown Columbia is to create a vibrant, walkable, and economically sustainable community in which to live, work, and play, by creating dense and compact mixed-use neighborhoods. A sustainable neighborhood should create an urban ecology through an integrated green infrastructure network that includes trees, vegetation, and amenity spaces.

Primary sustainability measures for urban design include:

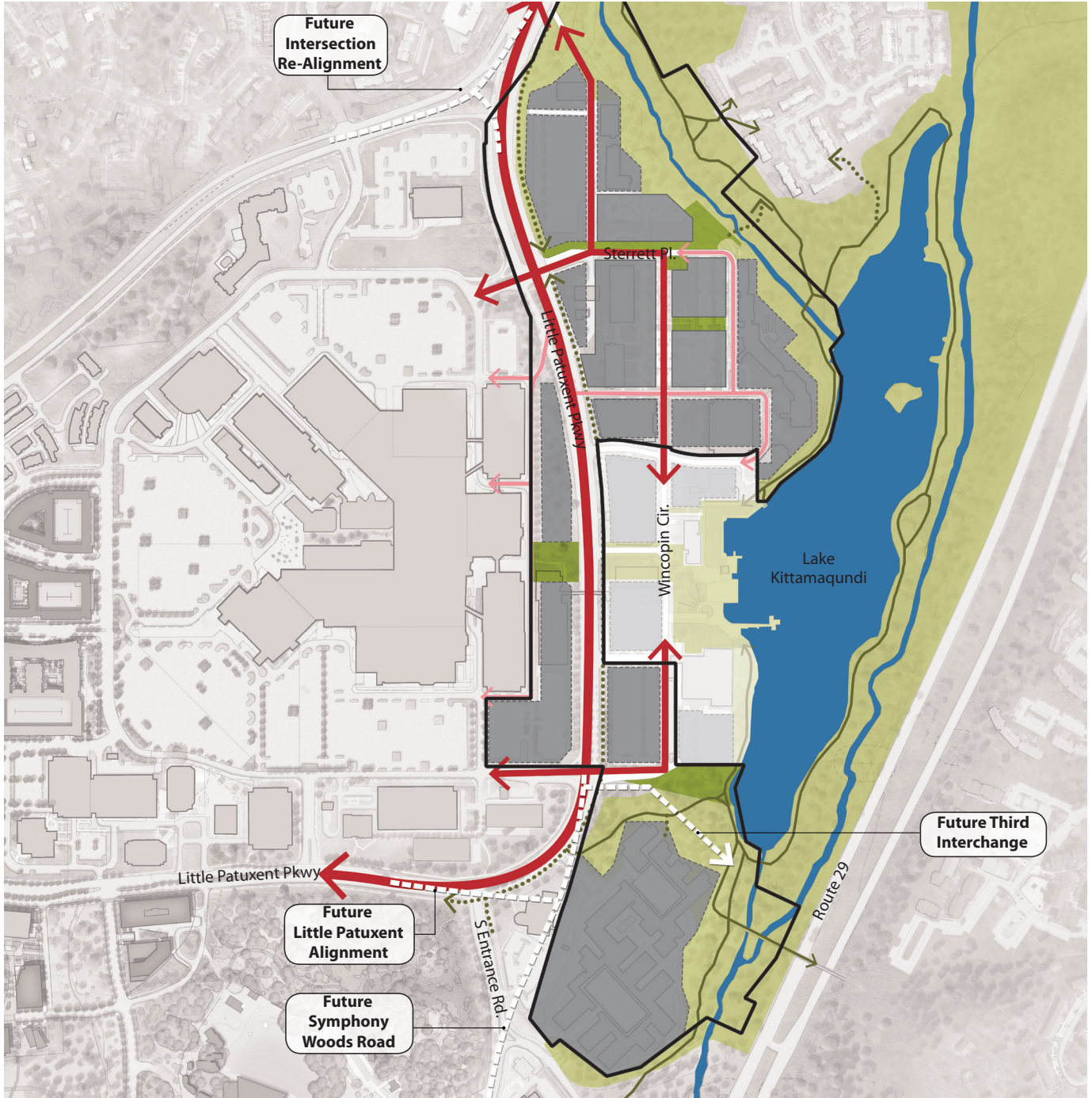
- Use mixed-use development to integrate housing, business, services, retail, and community space.
- Provide efficient access between housing and diverse services, transportation, open space, and cultural areas.
- Create spaces for active and passive recreation to promote human health and well being.
- Promote walkable neighborhoods for economic vitality and healthy lifestyles.
- Create a green infrastructure network through urban forestry, soil health conservation, integrated stormwater management, and areas of native habitat.

For informational reference, the Downtown Columbia Sustainability Program and Guidelines, as developed for the Downtown-wide Design Guidelines, can be found in Appendix A1.







Components

The Urban Design Criteria include the Regulating Plan Diagram showing the recommended block configuration for the Lakefront Neighborhood. Within the Regulating Plan, primary and secondary streets are located. Primary streets accommodate the major pedestrian movements and main entrances to commercial and residential buildings; have a focus on active ground-level space (e.g., with retail, restaurants, lobbies, and/or interior amenity space wrapping prominent building corners); and connect major destinations. In addition to Wincopin Circle, Little Patuxent Parkway is designated as a primary street in the Regulating Plan on the facing page, supporting the Downtown Columbia Plan vision of transforming Little Patuxent into a more pedestrian-friendly street. In the Lakefront Neighborhood, given the limited street network, garage and service entries may be located along primary streets. **See Section 2.0 Urban Design, Parking for further criteria on pages 24-25.** Secondary streets allow for more flexibility within the plan and provide alternate locations for building entrances and needed garage and service entries.

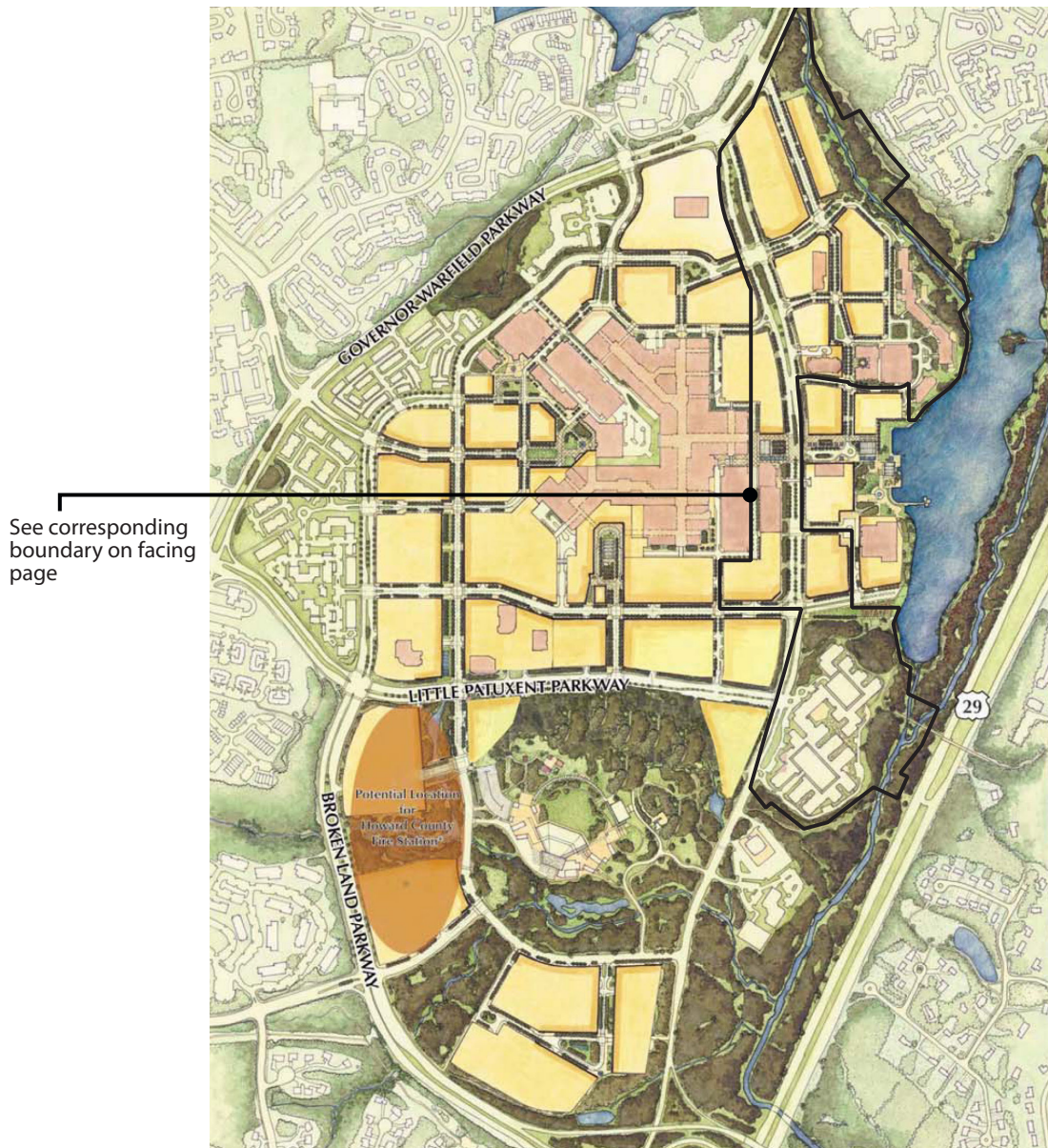
Block Standards provide guidelines for the block configuration, block length, frontage coverage, terminated vistas, and gateway thresholds within the Lakefront Neighborhood. Building Form provides requirements for setbacks, building form and massing, as well as a Building Height Diagram. Building Form also includes guidelines for parking and services and primary building entrances.



Lakefront Neighborhood Regulating Plan

- | | | | |
|---|-------------------|---|------------------------------|
|  | PRIMARY STREETS |  | PROPOSED NEIGHBORHOOD BLOCKS |
|  | SECONDARY STREETS |  | EXISTING AMENITY SPACES |
| | |  | PROPOSED AMENITY SPACES |
| | |  | EXISTING TRAIL/PATHWAY |
| | |  | PROPOSED TRAIL/PATHWAY |

See Street Design for further criteria on Street Types, pages 29 and 34-37.










Downtown Columbia Plan - General Plan Amendment; Street and Block Plan

The *Downtown Columbia Plan - Street and Block Plan*, shown above, illustrates a block configuration and street network. While keeping with the vision for Downtown, further refinements to Lakefront Neighborhood have evolved the street and block configuration as follows and as can be seen on the facing page:

The street and block network has been adjusted slightly to include the extension of Wincopin straight north, building off the recently approved Lakefront Core Wincopin Connection extension to the south. This extension will provide greater connectivity, access, and visibility to the lake and promote viable shops and restaurants facing the lake, as well as north along Wincopin near Sterrett Place, by linking directly to the Lakefront Plaza and Whole Foods. Additionally, the street connecting from the extension of Wincopin west to Little Patuxent Parkway (shown in the *Downtown Columbia Plan* near the Exxon gas station, a block south of Sterrett) has been shifted south, to build off the access provided to the new development at Little Patuxent Square and to avoid disruption of the Exxon entrance off Little Patuxent Parkway. To the east, this street becomes a mews, providing pedestrian passage through the block.



Lakefront Neighborhood Block Plan

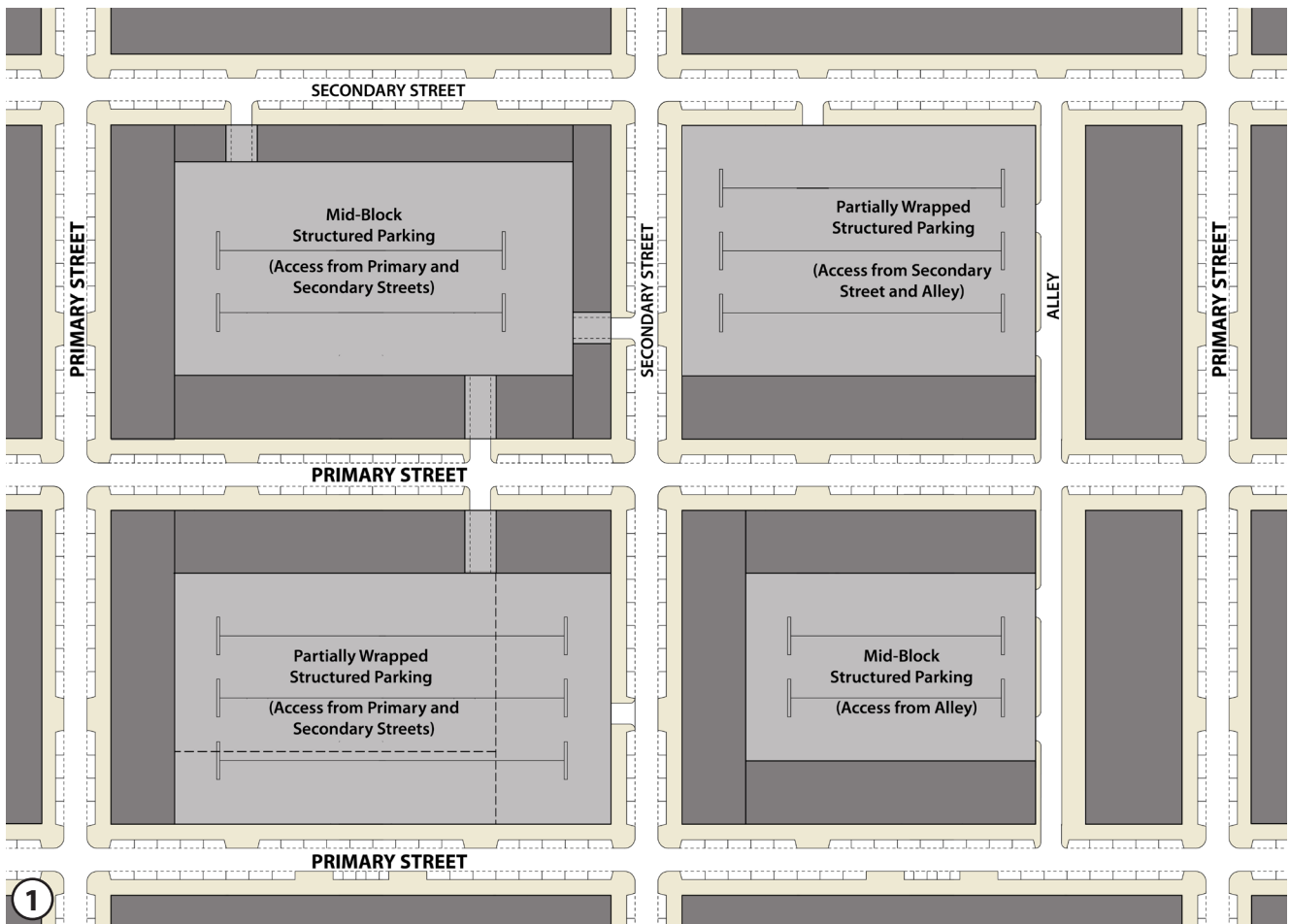
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|---|--------------------|---|------------------------|
|  | LAKEFRONT BLOCKS |  | NEIGHBORHOOD BOUNDARY |
|  | EXISTING BUILDINGS |  | EXISTING TRAIL/PATHWAY |
|  | NATURAL AREAS |  | PROPOSED TRAIL/PATHWAY |
|  | AMENITY SPACES | | |

Block Standards

Block Configuration ①

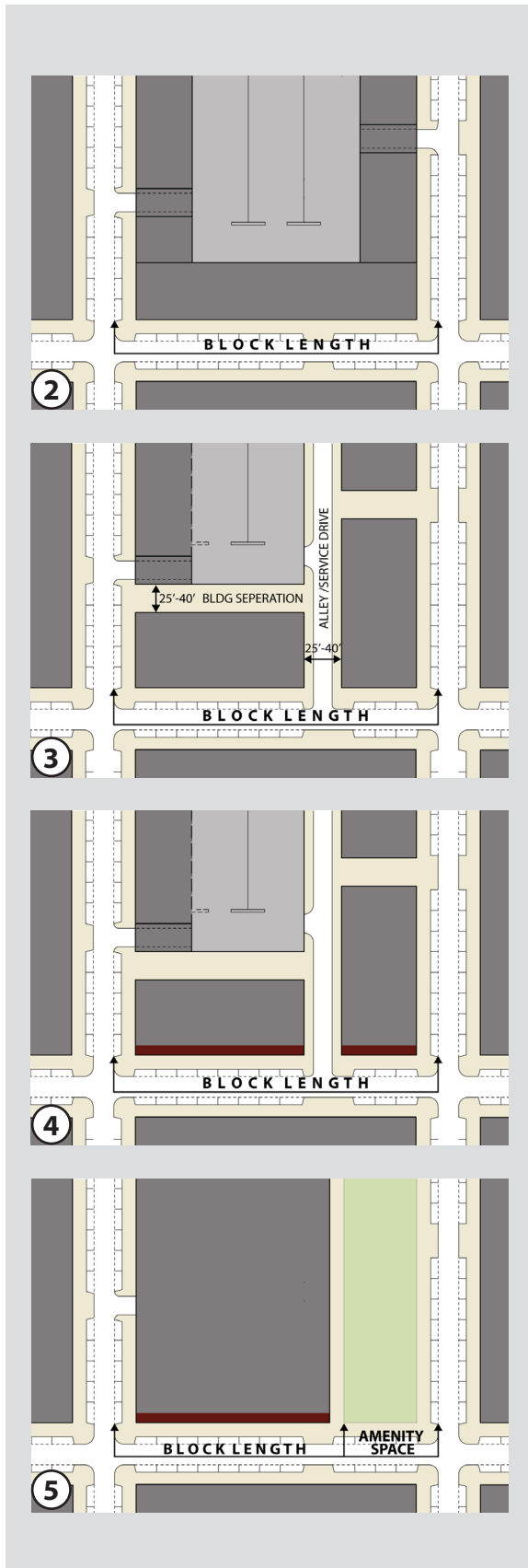
With the goal of emulating the best vibrant downtowns, development within the Lakefront Neighborhood should reflect the urban form found in these precedents. The Lakefront Core Neighborhood has an existing grid pattern requiring minimal extension of the street system to complete the network; this grid will extend into the Lakefront Neighborhood. Focus should be on infill development to strengthen the urban environment, while establishing view corridors that open to the lake and connect to other areas of Downtown.

The Lakefront Neighborhood is characterized by urban development blocks expanding out from the existing amenity space of the Lakefront Plaza that acts as a historic center of Downtown Columbia. While the development areas within the neighborhood are fairly well defined, these areas should incorporate open space corridors that connect west to the Mall. Within the buildable areas, a mix of building forms and densities accommodating residential, office, retail, restaurant, as well as entertainment, cultural, and civic uses should be encouraged. Parking should be located primarily in structured parking garages, with pedestrian access to and from parking provided to the more pedestrian-oriented, primary street(s) and/or amenity space(s).



Block Configuration Diagram - Various block configurations based on primary and secondary street frontage.

For Primary and Secondary Streets, see Lakefront Core Neighborhood Regulating Plan, page 13.



Block Length

Block length is measured between street right-of-ways (from curb to curb, excluding alleys and service drives). Primary and Secondary Amenity Spaces may be subtracted from the block length.

- ② Average Block Length 350' or less
Maximum Block Length 600'
- ③ Long blocks (450' or greater) should have a pedestrian passage or Common Access Easement (CAE)* that provides through access to another street, mid-block parking garage (see page 22), or open space. For long blocks that cannot accommodate a pedestrian passage or CAE, due to site or other constraints, visual relief to long building facades should be provided per criteria under Building Width, page 20.

* When a CAE or pedestrian passage is provided, building separation shall be a minimum of 25' wide. Additional building separation may be required based on building context, public safety, and/or service functions and will be evaluated at the Site Development Plan (SDP) phase.

Careful attention shall be given to breaking long blocks into shorter, pedestrian-scaled sections by introducing some variety in color and materials and through the use of special tower elements, bays, or variations in facade designs (**see also Architecture section, page 97**).

Frontage Coverage

Frontage is the location where a building engages the public realm. Maintaining "street walls" along frontages is important to create engaging streetscapes.

- ④ Building frontages shall be 80-100% of block length.
- ⑤ Amenity Space shall be deducted from the block length dimension.

Terminated Vistas ①

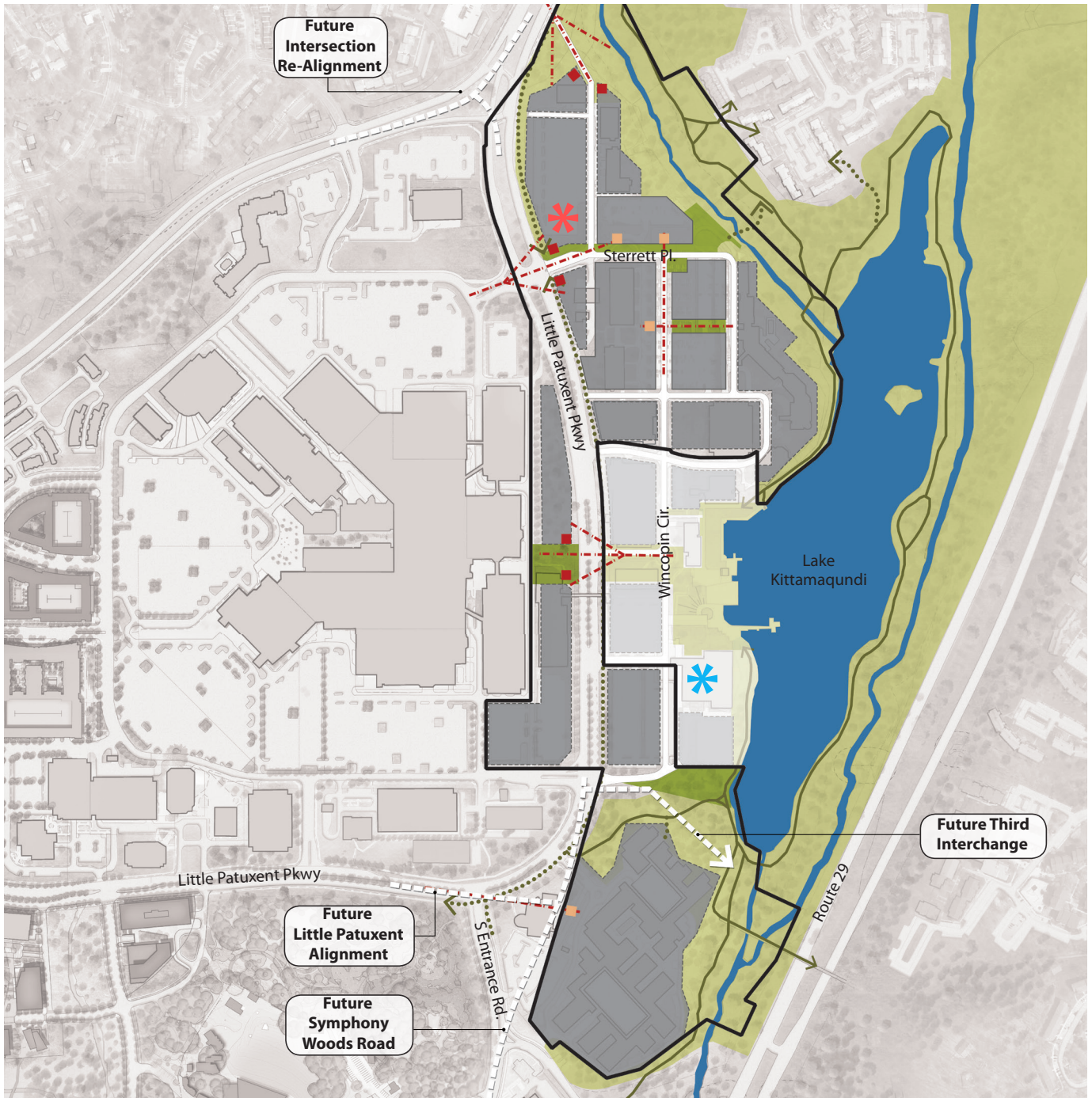
Buildings that terminate a street or important vista shall have special articulating or massing, such as recesses, projections, a special façade, lobby entrance, bay window, tower element, or similar.

Gateway Threshold ②

Buildings that act as gateway markers for the neighborhood (see the Lakefront Neighborhood Gateways and Vistas Plan to the right) shall respond in design with the appropriate corner elements that announce the Lakefront Neighborhood and welcome visitors. The gateway threshold can be expressed by bookending elements on neighboring buildings, by towers, by recessed corner elements, and similar.

See also **Architecture section, Building Form, pages 110-115.**



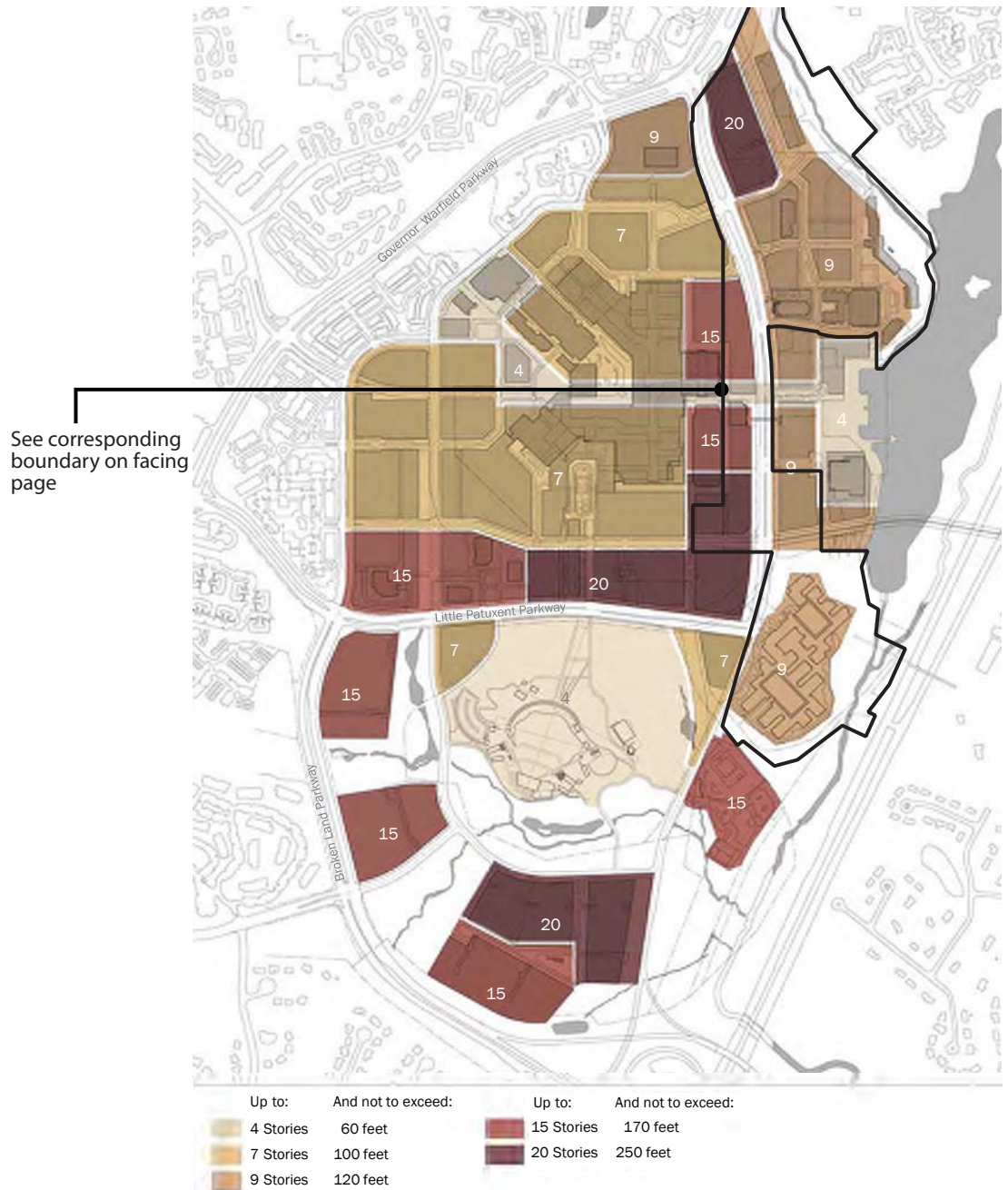


Lakefront Neighborhood Gateways and Vistas Plan

- TERMINATED VISTA
 - "GATEWAY" THRESHOLD
 - IMPORTANT AXIS
 - EXISTING TRAIL/PATHWAY
 - PROPOSED TRAIL/PATHWAY
- ✱ EXISTING SIGNATURE BUILDING
(The Rouse HQ/Whole Foods Building is located in the adjacent Lakefront Core Neighborhood)
 - ✱ POTENTIAL SIGNATURE BUILDING

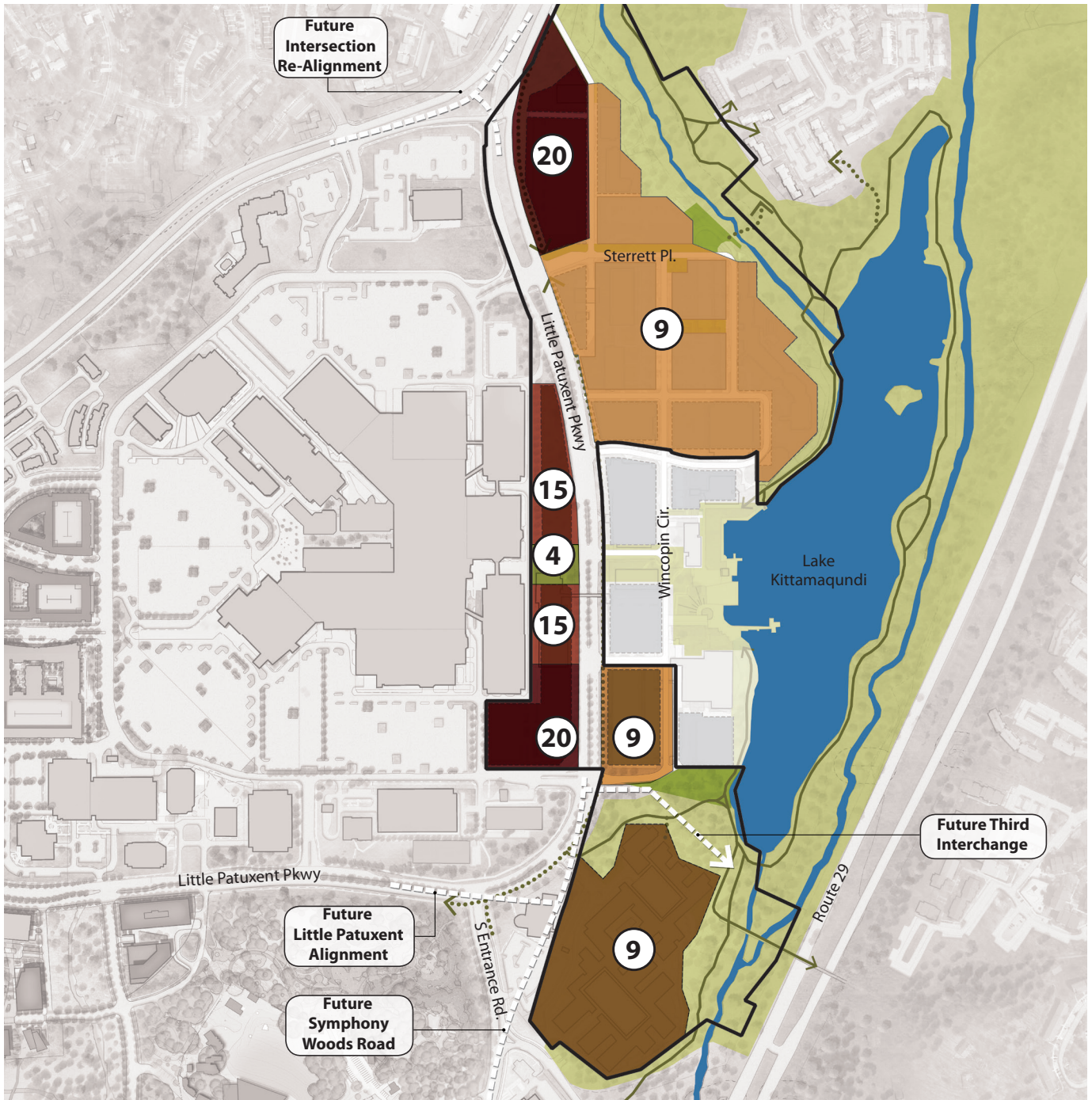
(See Section 5.0 Architecture, p. 111-114 for additional criteria.)

Building Form



Downtown Columbia Plan - General Plan Amendment; Maximum Building Height Plan

The *Downtown Columbia Plan - Maximum Building Height Plan* (shown above) illustrates maximum building heights throughout Downtown. Consistent with the vision for Downtown and the approved Downtown-wide Design Guidelines, the Lakefront Neighborhood Building Height areas have not been modified, other than to shift to correspond with the proposed shifts to the street and block configuration, as noted on page 14. Additionally, for the Lakefront North area as shown in the first Lakefront Neighborhood FDP only, the not-to-exceed height for 9 stories has been increased to 145' to allow for tall lower-level stories and appropriate office floor-to-floor heights on the upper stories, to accommodate the intended retail and general and medical office uses.



Lakefront Neighborhood Building Height Plan

- MAX. 4 STORIES (NOT TO EXCEED 60')*
- MAX. 9 STORIES (NOT TO EXCEED 145'**)*
- MAX. 15 STORIES (NOT TO EXCEED 170')*
- MAX. 20 STORIES (NOT TO EXCEED 250')*
- EXISTING TRAIL/PATHWAY
- PROPOSED TRAIL/PATHWAY

* In the Lakefront Core, Building Height shall be measured relative to median grade along the Primary Street with the highest classification, as indicated on the Street Framework Plan.

** See facing page.

(See the Street Framework Plan on p. 31 as well as additional Massing criteria on p. 22.)

Front Setback (Build-To-Line) ①

The required front setback shall be between 15'* - 35' from outside face of curb to building face, unless an Amenity Space or Shared Use Path (such as proposed on Little Patuxent Parkway) is located between street and building in which case the front setback may be larger than 35'. For information on Arcades, see page 125. An optional 8' parallel parking space may be added to front setback requirements.

Variations in building setbacks shall occur in an orderly fashion. Buildings should align at the front façade. Alternating or staggering setbacks is not recommended.

* To accommodate the required pedestrian and planting zone dimensions, the minimum front setback of 10' from the Downtown Columbia Plan, General Plan Amendment was adjusted to 15'.

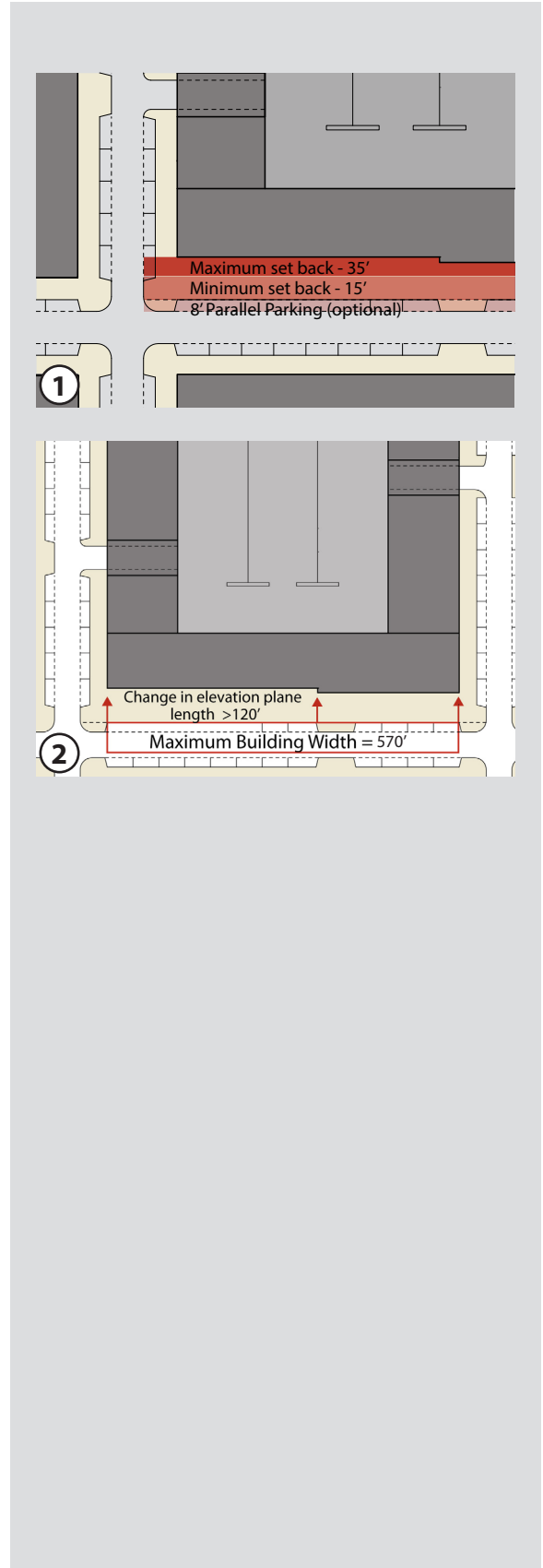
See Street Design section, Streetscape Zone, pages 42-50.

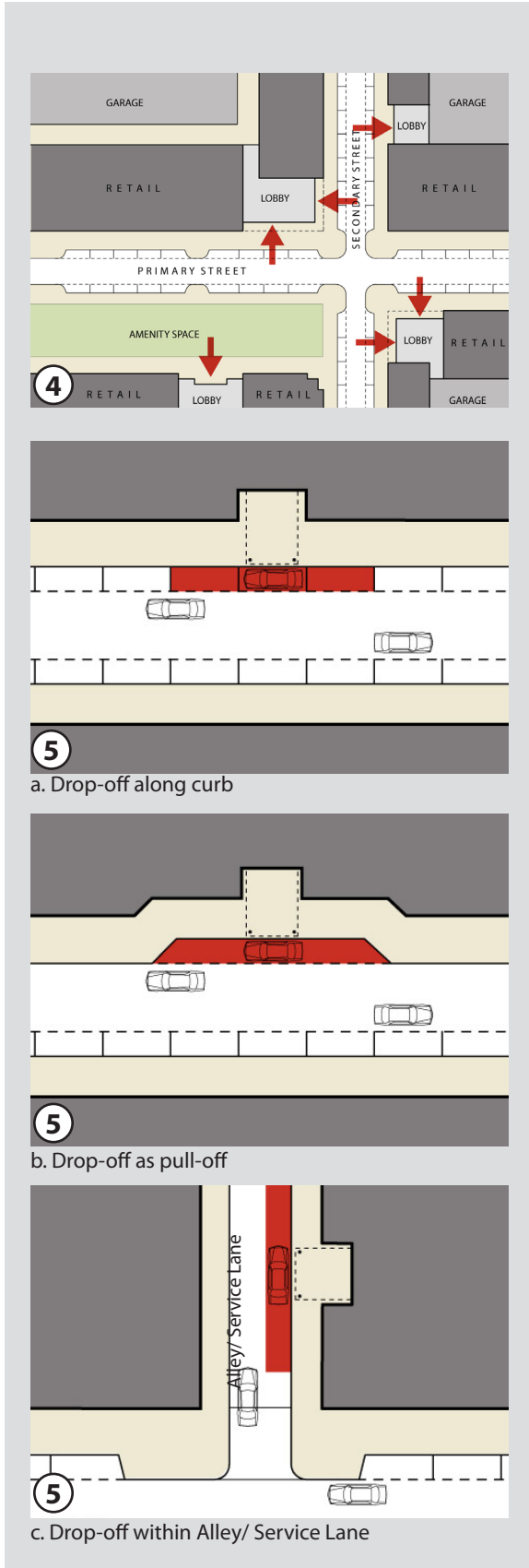
②

Building Width

Building width is defined as the horizontal dimension of the building elevation along the primary street or amenity space. Long elevations shall be visually broken into smaller sections through material and plane changes including recesses and projections, variations in window groupings, and/or the addition of bays. The Maximum Building Width shall be 570'.

See Architecture section, Building Form, pages 110-115.





4
Primary Building Entrance

The principal structure, including the primary building entrance, shall face a street or an amenity space at ground level, not a parking structure or parking lot. Primary entrances and lobbies are encouraged to face the primary street wherever possible. On a corner lot, the primary entrance should be placed near the corner, typically on the more prominent street, or facing an amenity space, unless this building space is occupied by retail. Retail is preferred as the ground-floor use facing primary streets and amenity spaces. A through-lobby, open-air passage, or entrance is encouraged that allows direct and efficient access from both the street and parking garages.

5
Drop-Offs

Locate drop-off zones along the curb or within parking facilities to promote sidewalk/street wall continuity and reduce conflicts with pedestrians. Curb cuts and vehicular entries should be limited along the block length.

Drop-offs, including residential, office, hotel, and restaurant drop-offs, may be incorporated:

- a. Along the curb with no pedestrian zone narrowing;
- b. Where there is no curbside parking lane and an off-street drop-off is not feasible, a drop-off lane may be added, up to 88 feet long, provided the sidewalk width is not reduced below 6 feet; or
- c. Within an off-street area (e.g., in an alley, service lane or parking facility).

In addition to drop-off zones, emergency response vehicle/service zones should be reserved along portions of the curb face (including areas where on-street parking is eliminated) to provide adequate pull-off, access to fire hydrants, and similar), as required by *Section 18.2 of the Fire Prevention Code*.

Drive-through Lanes

Drive-through lanes and stacking for banks, restaurants, or similar are discouraged along streets within the Lakefront Neighborhood and are not permitted along Boulevards and Primary Streets (see page 13). Stacking and access should be from the interior of the block and shall be designed so that parking and circulation around the block is not obstructed.

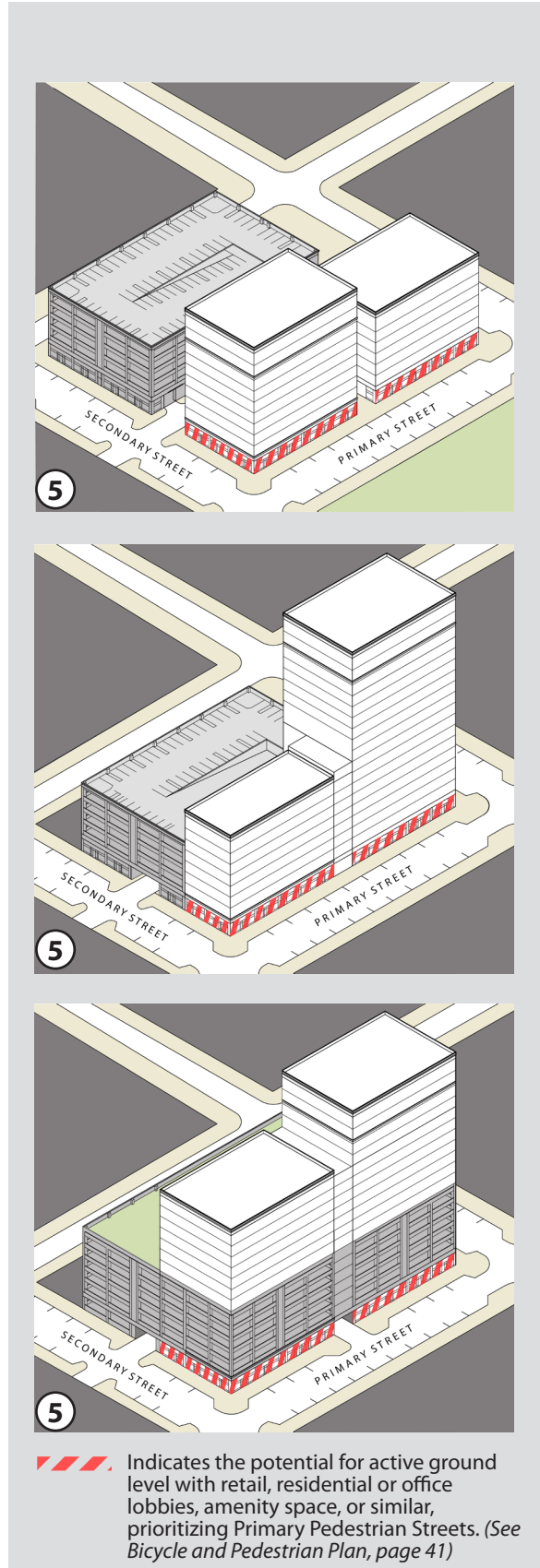
Parking 5

In the Lakefront Neighborhood, on-street parking is encouraged on all streets except where not feasible due to particular site constraints. **See Section 3.2 Street Design: Right-of-Way Zone for further criteria regarding on-street parking on pages 36-41.**

The goal of the structured parking within the Lakefront Neighborhood is to provide parking for new development in the neighborhood as well as existing uses. Structured parking, whether as traditionally-configured deck levels or as automated parking, is ideally integrated wholly or partially within new buildings. In Lakefront Neighborhood, exposure of garages to primary or secondary streets is anticipated; on primary streets, such as Little Patuxent Parkway, exposed garages shall be treated appropriately, as noted below. All parking facilities shall conform to the following criteria:

- a. Parking decks exposed to the public realm on primary streets or amenity spaces should be designed to be compatible with adjacent buildings and shall include screening or similar treatment with walls, architectural detailing, screens, green (vegetated) screens, landscaping, or other design elements.
- b. Garage entries shall be strongly signed but shall be carefully designed to not impact the continuity of the streetscape or retail storefront. Parking garage entrances shall not dominate the building street facade and are recommended to be a minimal opening in the building facade.
- c. Garage stairs and elevator cores shall be designed to provide a welcoming and safe environment; glazing is encouraged on stair towers. Pedestrian entrances to parking shall be well-articulated.
- d. Lighting (interior and exterior) shall be designed to avoid glare and excessive brightness (see Streetscape Lighting section p. 68, for additional criteria).
- e. Vehicular access to and from off-street parking shall be from secondary streets and/or alleys, where possible.
- f. Bicycle parking shall be provided in parking deck garages or other structures based on a site-by-site or building-by-building basis. Appropriate location, number of racks, and level of access for each facility shall depend on the anticipated use of the site or building. Interior bicycle parking standards should follow LEED for New Construction (LEED-NC) criteria. Additional exterior bicycle parking is encouraged.

For exterior site design standards for bicycle parking facilities, reference Appendix A.2, On-Road Bicycle Facilities Design Guidelines.



g. Pedestrian access to and from mid-block parking shall provide connections to the more pedestrian-oriented, primary streets or amenity spaces. (See also Primary Building Entrance section above).

h. In instances where surface parking is placed adjacent to the street, the parking lot shall be set back a minimum of 20 feet behind the front façade of an adjacent building. For temporary parking no setback shall be required, but a low evergreen hedge with landscaping and/or trees shall be installed along the entire edge of the parking lot adjacent to a public right-of-way (excluding construction parking) - **see additional criteria for temporary parking below, in item i.** If this is a permanent condition, a decorative wall and/or fence should be constructed together with native landscaping and trees along the entire edge of the parking area including vegetated structural stormwater BMPs where appropriate (if the parking area abuts a natural area or existing buffer, an exception may be granted on a case-by-case basis). In all cases, safety and security should be addressed in the design of the parking lot screening.

i. For temporary surface parking lots only, the requirement to provide 1 landscape island per 20 parking spaces may be waived, if there is a plan to replace the surface parking with redevelopment within 5 years per a county agreed-upon guarantee noted on the SDP.

j. On-street parking spaces on the same block as the proposed use should be counted towards fulfilling the parking requirement. Reductions in parking are encouraged and may be granted for shared uses. See *Howard County Zoning Regulations*, Section 133.E.3: Off-Street Parking and Loading Facilities, Downtown Revitalization.

See Architecture: Structured Parking on page 108 and Materials and Components Standards on pages 123-127 for additional criteria.

See Street Design for further criteria on integrating stormwater management into street parking on pages 58-59.

Alleys and Service Areas

Alleys and service areas provide vehicular access to parking facilities, loading, and service. All alleys and service areas shall conform to the following criteria:

a. Service areas should be located on secondary streets and alleys (rather than on primary streets), where possible. Service areas shall not be located with vehicular access onto Little Patuxent Parkway. On primary and secondary streets, service areas shall be screened by overhead doors, walls, or similar. Service areas should be designed such that vehicles parked at service areas and loading docks shall be clear of the pedestrian clear zone (see pages 42-50 for more information) and/or vehicular travel lanes. Further, trucks using alleys and service areas shall not back onto public streets.

b. Curb cuts and access lanes will be required for vehicles; at these locations, the sidewalk material(s) shall be carried across the access lane, where possible.

c. Service for small businesses and retail establishments (under 8,000 sf) may be permitted at the front door provided such service is not during primary business hours and does not adversely disrupt traffic movement.

d. Residential service and/or move-in/move-out access shall be located within the building or attached garage and/or along a service alley.

e. Service areas and alleys between buildings should be screened from public view by walls, fences, and/or landscaping, or, minimized along a street edge and screened by an overhead door.

See Architecture: Materials and Components Standards for additional criteria, pages 123-127.

Utilities

All new utilities shall be placed underground. Water and Sewer shall be designed in accordance with Howard County Design Manual II. Any deviations from the regulations will require a Design Manual Waiver to be approved by DPW.

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3.0 STREET DESIGN

INTRODUCTION
RIGHT-OF-WAY ZONE
VEHICULAR
BICYCLE
STREETScape ZONE
MATERIALS AND ELEMENTS

Street Design Introduction

Overview

The Downtown Columbia Plan calls for a more urban, pedestrian-oriented, mixed-use community that requires an approach to street design that anticipates walkable blocks. Moreover, the streets within the downtown are an important part of the open space system. While not as green or planted as the amenity spaces, the streets provide visual openness and spatial definition and are vital to the vibrancy of Downtown Columbia. Importantly, the streets should be designed as “Complete Streets,” accommodating the needs of pedestrians, bicycles, cars, and transit vehicles.

With this vision in mind, streets within the Lakefront Neighborhood should be designed for low speed to address the mobility and safety of pedestrians and bicycles. The streets and sidewalks should include design elements that provide appropriate visual and physical clues for drivers to indicate that pedestrians and on-street bicyclists are integral users of the circulation system. Additionally, to promote mobility and access to the existing and planned Shared-Use Paths (SUP) and trails along the Lakefront and throughout Downtown, crosswalks will occur at signalized intersections along Little Patuxent Parkway and stop-controlled intersections within the Lakefront Neighborhood to provide safe crossing for pedestrians and bicyclists. These guidelines, therefore, recommend changes in material, color, and texture for such components as crosswalks, medians/pedestrian refuge areas, turn lanes, and on-street parking, which may vary from Howard County’s typical street design criteria. It is also essential that streets comply with the Americans with Disabilities Act standards and consider the range of users’ mobility.

To create this unique urban environment, it is anticipated that streets within Downtown Columbia will vary from the current standards in the Howard County Subdivision and Land Development Regulations and the Design Manual, Volume III.

Purpose

The purpose of the Street Design Criteria for the Lakefront Neighborhood is to guide the design and character of all street types. The streets within the Lakefront Neighborhood should be designed as a network and support the vision established for the neighborhood. The criteria include both text and diagrams that specify: 1) typical street standards, 2) types of right-of-way zones, 3) types of streetscape zones, and 4) acceptable materials and components for the streetscape.

Sustainability Goals

One of the objectives for the development of Downtown Columbia is to create a street network that provides a diverse set of options for accessing the neighborhoods, while providing safe routes, creating comfortable microclimates including shaded areas, and reducing overall pollution and impervious infrastructure in order to meet sustainability goals. Through innovative streetscape design, bicycle and pedestrian access can provide safe alternatives to automobile use. By integrating stormwater Best Management Practices (BMPs) including rainwater tree pits, rainwater planters, and porous pavement where feasible, stormwater runoff quality can be improved and quantities can be decreased. Using native plants reduces the need for potable water for irrigation and contributes to a sense of place by supporting the flora, birds, and pollinators reflective of the mid-Atlantic Piedmont province. Stormwater runoff will be reduced and improved through integrated (BMPs), so that impurities in street and sidewalk runoff are reduced prior to draining to the Chesapeake Bay. These practices have the added benefit of providing more opportunities for microclimate and microhabitat enhancements as part of a larger green infrastructure framework. Trees and plants are selected and sited to encourage pedestrian use by providing shade. Finally, planted areas are designed and managed to foster health by limiting the use of pesticides, herbicides, and fertilizers.

Primary sustainability measures for streets include:

- Promote walkable neighborhoods for healthy lifestyles. The design of streets should include street trees, appropriate landscaping, and furnishings. Street trees generally should be planted at a maximum of 40 foot intervals or to shade at least 40% of the sidewalk within 10 years, although some variation is permitted based upon specific design or occupant considerations (e.g., signage visibility and entrance locations).
- To improve stormwater runoff quality and groundwater recharge, consider using rainwater tree pits, rainwater planters, porous pavement, and vegetated buffer areas.
- Design to accommodate a connected and diverse network of transportation options to reduce vehicle miles traveled per individual in single-occupancy vehicles.
- To facilitate and encourage cycling as transportation, design low speed streets to accommodate bicycle use and Shared-Use Path connections to major parks and amenity spaces, residential neighborhoods, and commercial centers.
- Provide open bicycle parking within 100 feet of a building's main entrance. Where appropriate to the building use and users, provide covered and secured bicycle parking (i.e., garage spaces, bike rooms, cages, and/or lockers) with access to the building or within 100 feet of a building entrance.
- Reduce vehicular trips through "park once" design scenarios and alternative transportation measures and limit permanent surface parking areas by accommodating 80% or more of required permanent parking with on-street parking and parking structures, where feasible and approved by the County. Interim surface parking areas are allowed as development progresses to full build-out.
- Reduce heat island effect from paving by using lightly colored or high albedo materials for paved surfaces, where feasible and approved by the County.

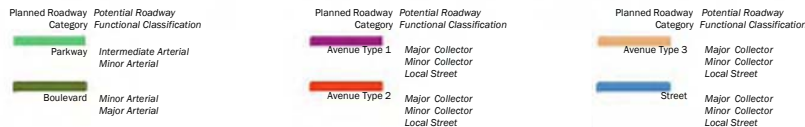
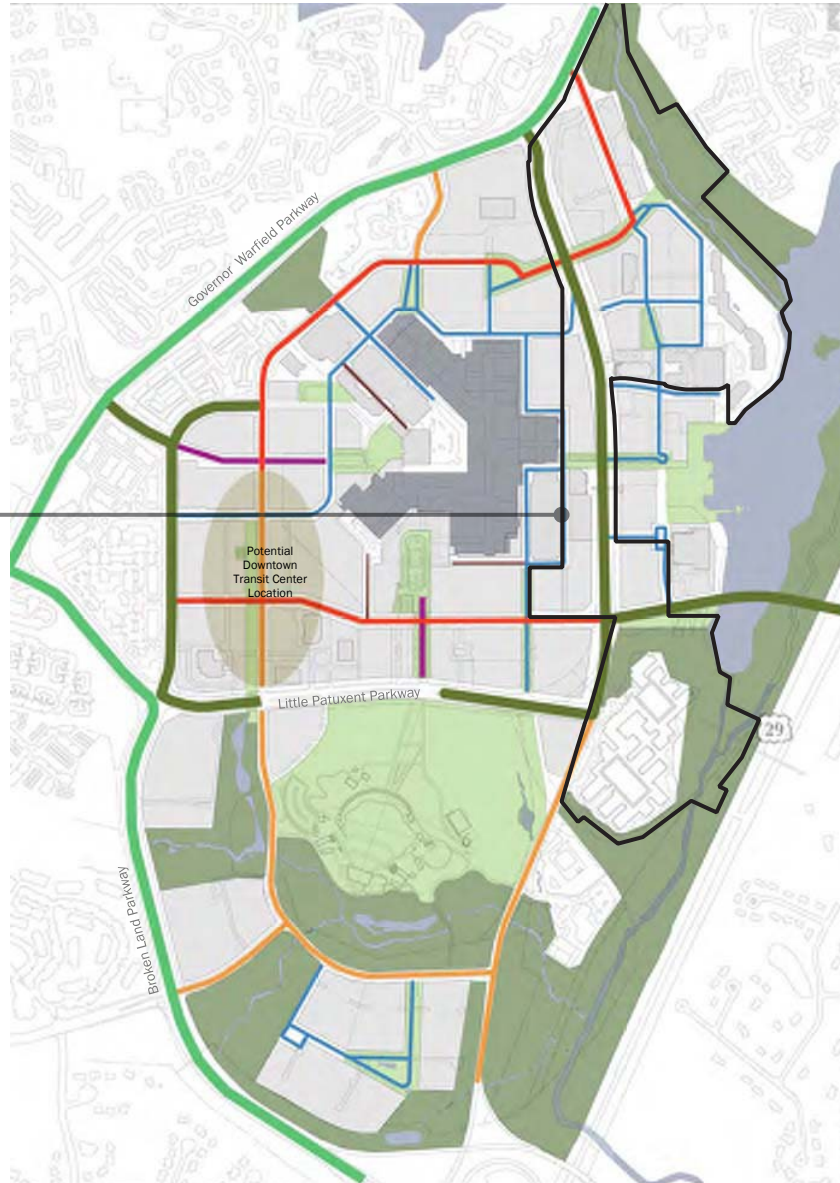
For reference, the Downtown Columbia Sustainability Program, as developed for the Downtown-wide Design Guidelines, can be found in Appendix A1.

Street Framework Plan

Changes to the Lakefront Neighborhood Block Plan (see Urban Design, page 15), based on existing and approved conditions and the vision for Lakefront Neighborhood, created variations in the configuration from the *Downtown Columbia Plan, General Plan Amendment - Street Framework Plan*, shown on the following page.

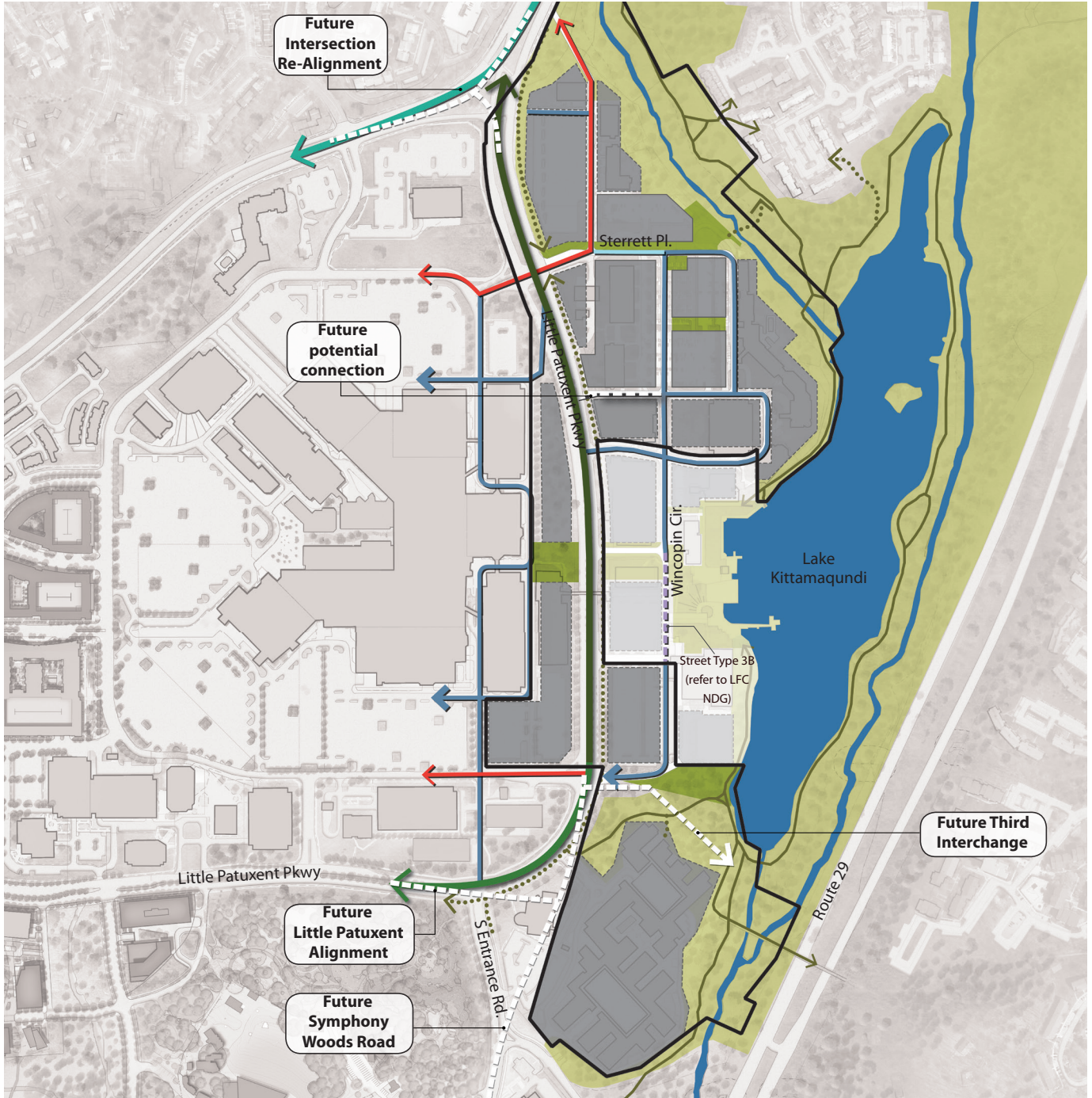
The street network has been adjusted slightly to include the extension of Wincopin straight north, building off the recently approved Lakefront Core Wincopin Connection extension to the south. This extension will provide greater connectivity, access, and visibility to the lake and promote viable shops and restaurants facing the lake, as well as north along Wincopin near Sterrett Place, by linking directly to the Lakefront Plaza and Whole Foods. Additionally, the street connecting from the extension of Wincopin west to Little Patuxent Parkway (shown in the *Downtown Columbia Plan* near the Exxon gas station, a block south of Sterrett) has been shifted south, to build off the access provided to the new development at Little Patuxent Square and to avoid disruption of the Exxon entrance off Little Patuxent Parkway. To the east, this street becomes a mews, providing pedestrian passage through the block. The street network in the overall Lakefront Neighborhood is anticipated to comprise both public and private streets; in the Lakefront North area, the streets are anticipated to be largely private due to existing easements. Streets that are anticipated to be private may have reduced right-of-way widths or other characteristics to minimize impacts to adjacent land and to further the design objectives for the neighborhood.

See corresponding boundary on facing page



Downtown Columbia Plan - General Plan Amendment; Street Framework Plan

As noted on the previous page, the street network has been adjusted slightly to include the extension of Wincopin straight north, building off the recently approved Lakefront Core Wincopin Connection extension to the south. This extension will provide greater connectivity, access, and visibility to the lake and promote viable shops and restaurants facing the lake, as well as north along Wincopin near Sterrett Place, by linking directly to the Lakefront Plaza and Whole Foods. Additionally, the street connecting from the extension of Wincopin west to Little Patuxent Parkway (shown in the *Downtown Columbia Plan* near the Exxon gas station, a block south of Sterrett) has been shifted south, to build off the access provided to the new development at Little Patuxent Square and to avoid disruption of the Exxon entrance off Little Patuxent Parkway. To the east, this street becomes a mews, providing pedestrian passage through the block.



Lakefront Neighborhood Street Framework Plan

- PARKWAY - Intermediate / Minor Arterial
(MULTI-LANE HIGHWAY W/ MEDIAN, NO PARKING)
- BOULEVARD - Minor Arterial/ Major Collector
(4 LANES W/ MEDIAN*)
- BOULEVARD 2 - Minor Arterial/ Major Collector
(6 LANES W/ MEDIAN*, PARALLEL PARKING (Optional with DPW approval))
- AVENUE TYPE 2
(4 LANES*, PARALLEL PARKING (Optional))
- STREET TYPE 3A - Minor Collector/ Local Street
(2 LANES*, PARALLEL PARKING (Optional))
- STREET TYPE 3C
(2 LANES*, OFF-PEAK AND/OR TYP. PARALLEL PARKING** (Optional))

* Additional lanes may be added to accommodate traffic volume and turning movements, as determined by a traffic study at the SDP phase. Alleys, Common Access Easements (CAE), or private streets may be placed within blocks for internal circulation, servicing, and parking. Final locations of these roadways will be proposed at the SDP phase.

See Urban Design for further criteria on alleys, pages 17 and 25.

The dashed Street Types shown in the plan diagram above indicate future extensions or alignments of streets, as approved in the Downtown Columbia Plan.

** For parallel parking used as travel lanes during peak hours, parking signs will be used to restrict parking to off-peak hours.

(For Wincopin Extended design intent, see pages 8-9.)

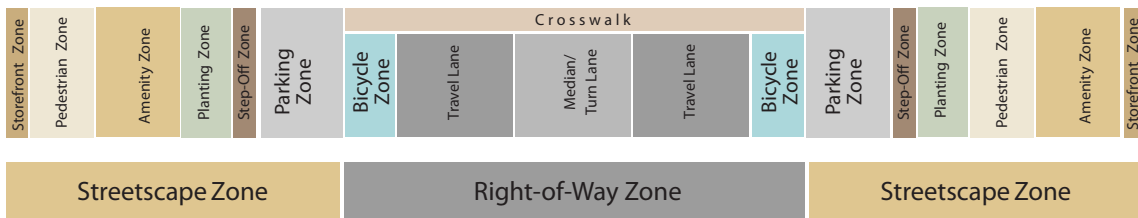
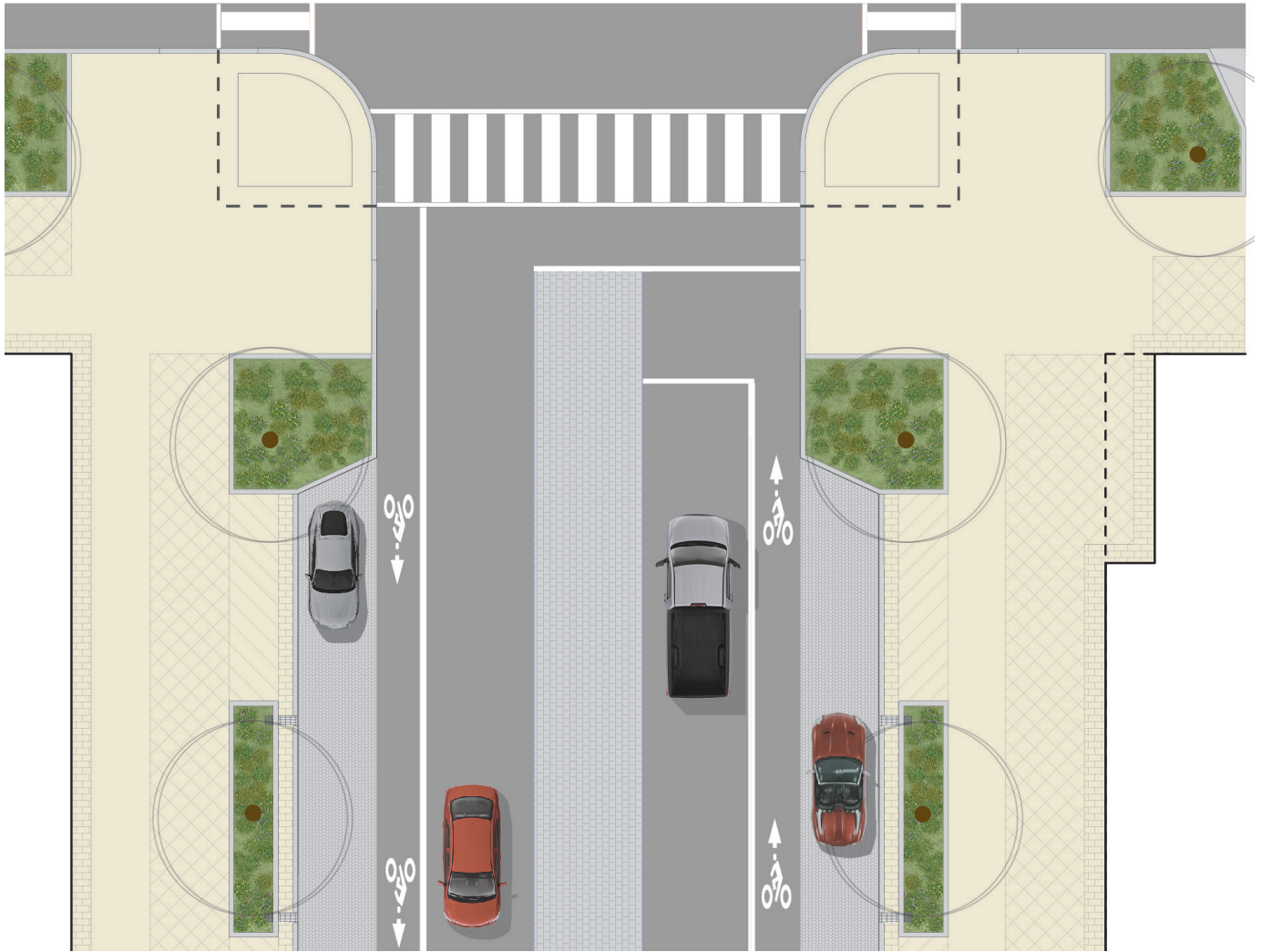
Complete Streets

Complete Streets are streets that provide safe and convenient accommodation to all potential users, including pedestrians, cyclists, private vehicle drivers, and transit riders alike. Complete Streets recognize that crossing the street, walking to shops, and cycling to work are equally important to driving. Complete Streets enable transit to be an efficiently accommodated and recognized mode of transportation. Since streets will play an important role in the livability of the Lakefront Neighborhood, they must accommodate all users, whether young or old, motorist or cyclist, walker or wheelchair user, bus rider or shopkeeper. A network of Complete Streets, together with necessary physical, design, and visual elements, will enable the Lakefront Neighborhood to be safer, more livable, and welcoming to everyone. Sustainable design elements including stormwater management, native planting, sustainable materials, and efficient lighting contribute to the overall comfort, safety, and natural resource benefits that are part of Complete Street design.

The Street Design criteria, therefore, address all of the necessary components of Complete Streets anticipated from face of building to face of building, across a street. These criteria include:

- 1) General provisions for all streets, including vehicle travel lanes, bicycle facilities, traffic calming devices (e.g., on-street parking and curb bulb-outs), pedestrian sidewalks, and the elements that comprise these components;
- 2) Right-of-Way Zone design criteria for bicycle and vehicular travel lanes;
- 3) Streetscape Zone design criteria for parking lanes, transit shelters, stormwater management, street trees, and all other elements within the sidewalk; and,
- 4) Materials and Elements Standards.

These guidelines describe the street system, identify specific design and dimensional criteria, and provide illustrative and photographic examples of street and streetscape design elements, as well as requirements for materials and elements that comprise the desired character for streets within the Lakefront Neighborhood.



Complete Street Concept Diagram

(The diagram above is an illustrative example only; see the Street Sections on pages 37-39 for particular street section criteria.).

General Provisions

1. The following typical street standards apply throughout the Lakefront Neighborhood:
 - a. Through Travel Lane Width adjacent to curb: 12'
 - b. Through Travel Lane Width adjacent to parking lane: 12'
 - c. Through Travel Lane Width adjacent to bike lane: 11'
 - d. Left Turning Lane Width: 11'
 - e. Right Turning Lane Width: 12'
 - f. On-Street parallel parking space dimensions: 8'
 - g. On-Street bike lane width: 5'
2. The street sections and plans shown on the pages 37-39 are typical of the street types; additional lanes may be added to accommodate traffic volume and turning movements, as determined by a traffic study at the Site Development Plan (SDP) phase.
3. Stormwater management practices shall be incorporated into the design of the streets, such as rainwater tree pits, rainwater planters, bioretention, and bioswales. These elements will require a location-specific determination during the SDP review process.
4. Transitions from one street type to another or transitions between one mode of travel to another shall be designed to ensure smooth changes between paving, parking, sidewalks, planting strips, and similar. Further, intersections where bike facilities and Shared-Use Pathways (SUP) merge or transition should be designed to reduce conflicts between pedestrians and cyclists as well as motor vehicles and cyclists. Specific pedestrian and bicycle facility configuration at each intersection will be determined at the time of final engineering
5. Where site plan conditions warrant variations to the Street Plans and Sections (see p. 37-39 and p. 48-50), the lane widths and sidewalk widths should remain the same while the number of lanes, planting zone width, parking type, and similar may vary. At an intersection where two different street types meet (with the exception of alleys) or where an existing street meets a new street, the larger curb radius range should be used. Variations shall require approval by the Howard County Planning and Public Works and Utilities Departments.
6. Streets shall have sidewalks along both sides throughout the Downtown, excepting where adjacent to natural areas on one side; in such instances, sidewalks are required only along the development side, not along the natural edge. In place of the required sidewalk, a Shared-Use Path is envisioned along the side of Little Patuxent Parkway within the Lakefront Neighborhood, providing both pedestrian and bicycle access. Sidewalks shall be designed consistently along the entire length of a street. Sidewalk Zones shall be no less than 15 feet wide. 20 to 35 feet is preferred where restaurants and outdoor dining is anticipated. In all instances, street trees should be planted in rainwater planters or tree pits. In instances where office or residential is the primary ground-level use, the minimum sidewalk width of 15 feet is preferred. For all public access sidewalks, 6 feet shall remain clear for pedestrians. **See Alleys and Service Areas, p. 25; the Zoning Regulations Section 133.0.E; and the County Design Manual, for additional criteria and requirements on service and loading areas and access.**
7. On urban streets where the posted speed is 25 mph or less, the use of shared lanes is preferred. On streets where the posted speed is greater than 25 mph, bicycle lanes, cycle tracks, or Shared-Use Paths should be used to accommodate safe bicycle movement. At 25 mph or less, bicyclists can safely travel with motor vehicles and "Share the Road" signage should be installed. Lakefront Neighborhood Avenue Type 2 and Street Type 3 roadways are envisioned to have a maximum posted speed of 25 mph and are intended to have shared lanes that accommodate both motor vehicles and bicycles (alternatively sharrows may be used as determined by DPZ, DPW, and the Office of Transportation at the SDP phase). Whereas Lakefront Neighborhood Boulevard 2 roadways are planned to have a posted speeds of 25 to 40 mph and shall incorporate on-street bicycle lanes or off-street Shared Use Paths (SUPs) where designated (**see Pedestrian and Bicycle Circulation Plan on page 41 for additional information**).
8. A native plant palette is suggested for rainwater planters or tree pits. Planting with a native groundcover or understory can help strengthen habitat potential, especially on streets near natural resources areas or open spaces.
9. Parallel parking is encouraged, especially where ground floor retail is located.
10. Curb "bulb-outs" should be considered at intersections and crosswalks, particularly where there are large

concentrations of retail and residential development and curbside parking. Within these areas, bulb-outs are a preferred element for corner construction except where there are extenuating design considerations such as the turning radius for certain vehicles or transit and on-street parking factors. When bulb-outs are not used, pedestrian safety concerns must be adequately met with other design elements or configurations. Additionally, curb radii shall be minimized at intersections to promote walkability and to reduce the pedestrian travel time across vehicular travel lanes.

11. To accommodate future bus stops in the Lakefront Neighborhood, as required and approved by Howard County, parallel parking spaces may be removed, without requiring replacement parking spaces, such that the curb line moves out to accommodate a bus shelter and other furnishings/amenities.

12. Crosswalks of a different paving material, texture, and/or color from the street asphalt are encouraged where sidewalks traverse vehicular travel lanes. On public streets, paving materials shall be approved by the Howard County Planning and Public Works and Utilities Departments.

13. Landscaping within a private right-of-way, if approved by the County, shall be planted and maintained by the property owner(s), developers, homeowner's associations, and/or other entities.

14. Plantings shall be setback a minimum of four feet from the edge of crosswalks and handicap curb cuts.

15. Street Trees:

a. A single species of primary street tree shall be consistent along an entire street (the length of the street), but shall vary from one street to the next. For example, one street may have Red Maples, while the next street over may have Willow Oaks. **Refer to the Howard County Landscape Manual for approved tree species.**

b. Howard County may approve or require variations in the dimensions of tree pits and grates between curb and sidewalk from those shown in the following Street Plans and Sections, depending on the species of street tree selected, planting technology or methods used, and engineering design of the back of curb and sidewalk. Final dimensions will be determined at Site Development Plan (SDP) stage.

c. Trees shall be planted at regular intervals along streets appropriate to the particular location and species. Along boulevards, trees may be staggered as appropriate to character.

d. Street trees are required along all new internal streets and existing County/Downtown streets, except where such streets are adjacent to wooded areas or amenity spaces. Trees and other plantings within state controlled and maintained right-of-ways shall meet SHA standards. Street trees along amenity and wooded areas will be evaluated to ensure design continuity on a case-by-case basis.

e. Street trees shall be placed in from curb face and centered in the planting strip or within minimum 4 foot by 6 foot planting pits within sidewalks or hardscape areas. Planting pits may have tree grates or may be planted with a groundcover.

f. The placement of street trees shall be coordinated with the placement of street lights, such that street trees are shifted to ensure adequate light levels. Street tree placement will be reviewed by the County at the SDP stage. **(See Street Design, page 68, for additional information on Street Lights.)**

g. Street trees shall be placed a minimum of 15 feet from all regulatory signs and all intersections when planted between the curb and sidewalk and located with consideration to underground utilities and structures. Street trees may not be planted within 5 feet of a street drain inlet structure, within 5 feet of an open space access strip, or within 10 feet of a driveway.

h. Street trees shall be placed to align where possible with lot lines and demising walls of buildings and storefronts so as to avoid blocking the front porches, storefronts, signage, and doors of buildings.

i. In order to create comfortable pedestrian passage, street trees shall have their limbs pruned over sidewalks to approximately 8 feet above grade when reasonably mature. Street trees shall be straight and true, have healthy trunks and a full, balanced crown and branching habit. Street trees with unbalanced crowns, a poor branching habit, and excessively bent or curved trunks will be rejected.

j. When a driveway or private roadway intersects a public right-of-way or when the site abuts the intersection of two or more public right-of-ways, landscaping must not obstruct visibility. No plant material taller than 2 feet above the curb shall be allowed in any sight triangle area except single trunk trees whose lower branches are pruned to a minimum height of 8 feet.

16. Along streets throughout Downtown, street lighting and street furniture should be consistent (see pages 62-68).

See Alleys and Service Areas, p. 25, for additional information on service and loading areas and access.

Street Design: Right-of-Way Zone

Overview

The Right-of-Way Zone addresses design criteria for the streets from curb to curb, including vehicular and bicycle lane widths, number of lanes, medians, pedestrian refuge areas, turn lanes, and crosswalks. The design criteria for sidewalks and other streetscape elements are covered in the following section, Streetscape Zone.

The Street Framework Diagram on page 31 shows locations for the various types of streets. Street sections and plans for the street types proposed within the Lakefront Neighborhood can be found on the following pages.

The Right-of-Way Zone includes:

1. Vehicular travel lanes for both private and transit vehicles;
2. Bicycle facilities:
 - a. Separate, on-street designated bicycle lanes
 - b. Shared lanes for bicycle and vehicular use
 - c. Bicycle boxes (clear bike zones at intersections)
3. Pedestrian crosswalks
4. Medians:
 - a. Planted medians (including Rainwater Tree Pits, Rainwater Planters, and/or Bioswales)
 - b. Turning lanes
 - c. Pedestrian refuge areas

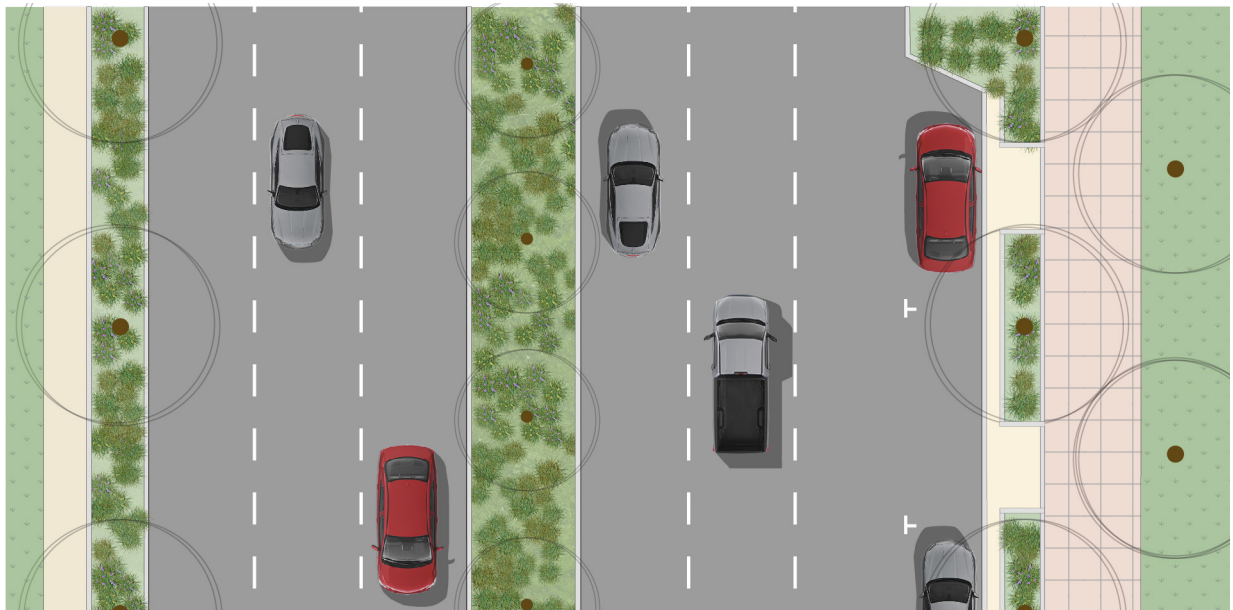
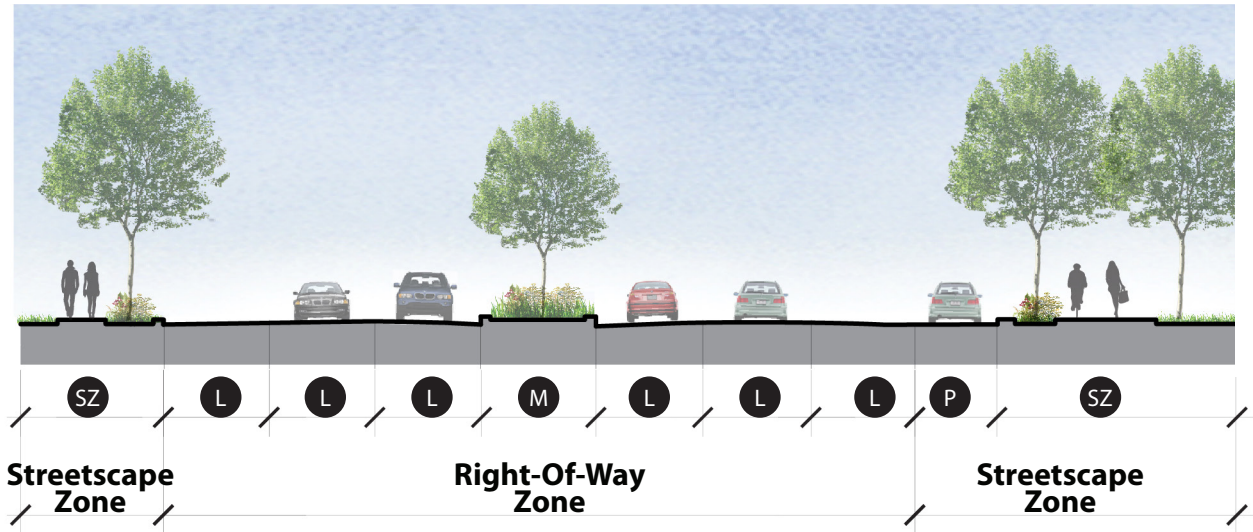
The primary types of Right-of-Way Zones in and adjacent to the Lakefront Neighborhood will include:

Boulevard: a thoroughfare designed for high vehicular capacity and moderate speed, traversing an urbanized area. Boulevards have planted medians and buffered sidewalks.

Avenue: A local urban thoroughfare designed for medium capacity and speed. Typically, Avenues link one destination point (e.g., such as a civic building, landmark, important amenity space, or similar) to another.

Street: A local urban thoroughfare of low speed and capacity.

Right-Of-Way Zone: Boulevard 2 (Little Patuxent Parkway)



BOULEVARD 2 (6 LANES WITH MEDIAN, PARALLEL PARKING) - Little Patuxent Parkway*

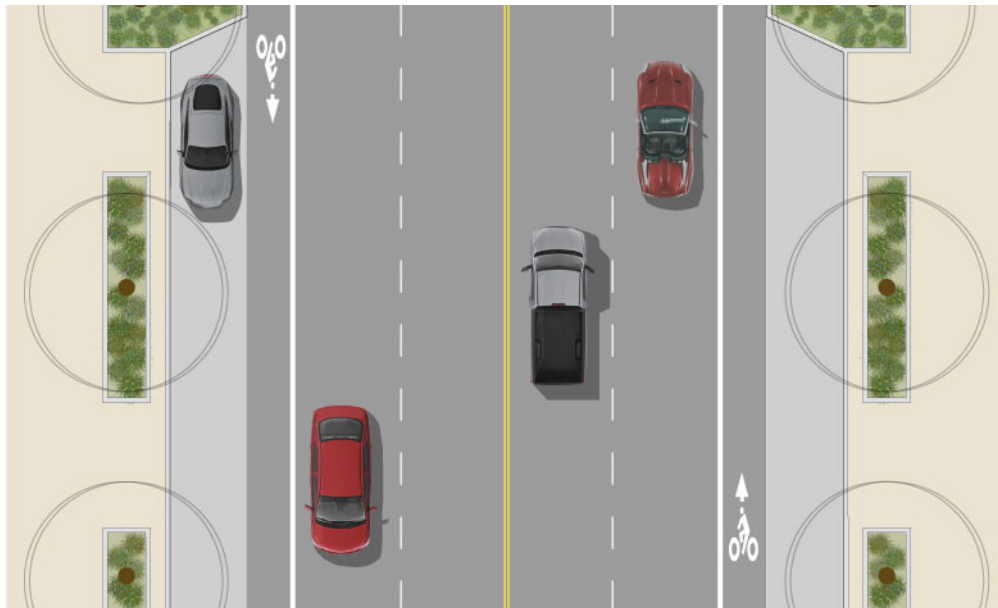
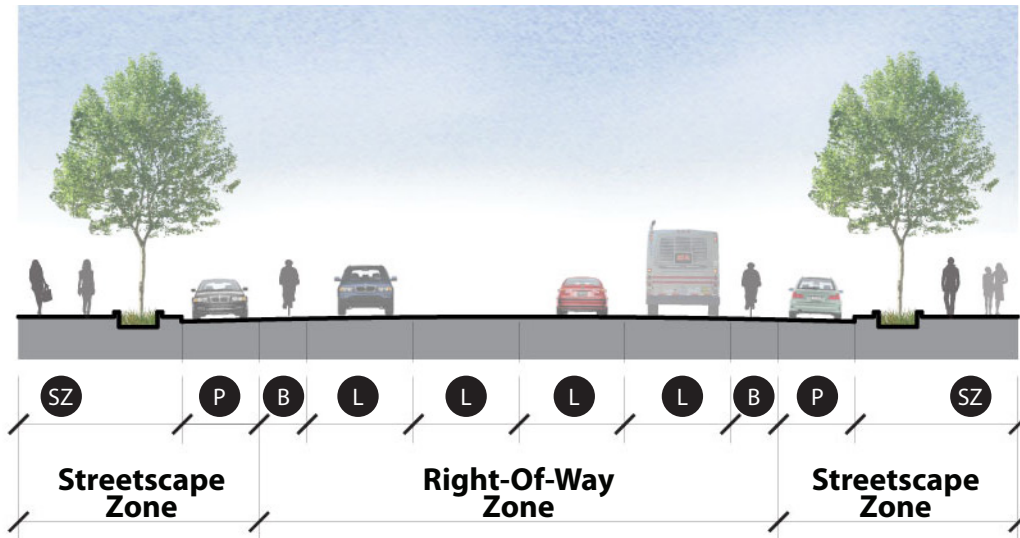
- M** 10' Median - Typical*
- L** 11' Travel Lane - Typical
- P** 8' Parallel Parking (Optional)** - reference Street Design: Streetscape
- SZ** Streetscape Zone*** - reference Street Design: Streetscape (For Street Tree criteria, see page 54.)

* The street section and plan shown above is typical of Little Patuxent Parkway, designated as a Boulevard in the Downtown Columbia Plan; additional turning lanes may exist or be added to accommodate turning movements, as determined by a traffic study at the SDP phase; adaptations may be required to adjust to existing site conditions.

** Within the Lakefront Neighborhood, parallel parking may be incorporated with DPZ/DPW approval, along the east side of Little Patuxent Parkway to accommodate parking for ground-level uses and/or drop-offs.

*** A Shared-Use Path may be included within the Streetscape Zone along the east side of Little Patuxent Parkway. The Path should navigate around existing, contributing trees where possible. (See Street Design: Streetscape Zone for additional details.)

Right-Of-Way Zone: Avenue Type 2



AVENUE TYPE 2 (4 LANES, BIKE LANES or SHARED LANES, PARALLEL PARKING^{*}) - Typical***

- L** 12' Travel Lane^{**} (11' Travel Lane inside)
- B** 5' Bike Lanes; Shared Lanes may be used where site constraints exist and the speed limit is 25 mph max.^{**}
- P** 8' Parallel Parking (Optional)^{***} - reference Street Design: Streetscape
- SZ** Streetscape Zone^{****} - reference Street Design: Streetscape **(For Street Tree criteria, see page 54.)**

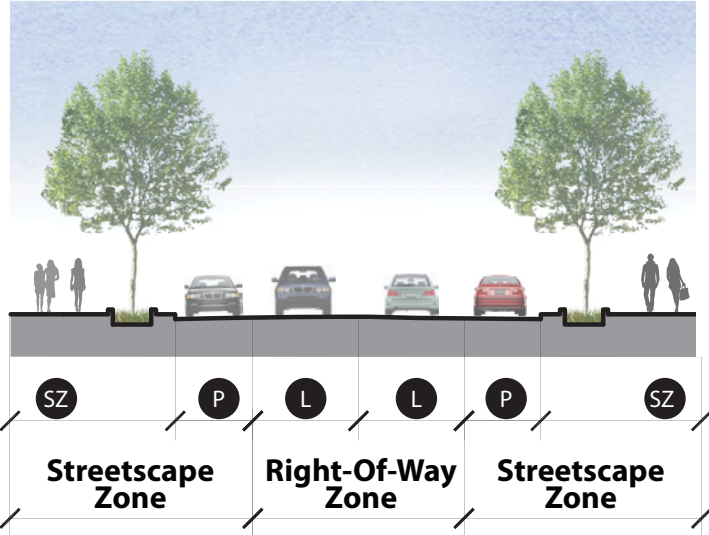
* The street section and plan shown above are typical of the street type; additional travel, turning, or bicycle lanes may exist or be added to accommodate traffic volume and turning movements, as determined by a traffic study at the SDP phase; adaptations may be required to adjust to existing site conditions.

** In Lakefront, Avenue Type 2 is envisioned to have a maximum posted speed of 25 mph and is intended have shared lanes that accommodate both motor vehicles and bicycles. **(See General Provisions, item 7, page 34, for additional information.)**

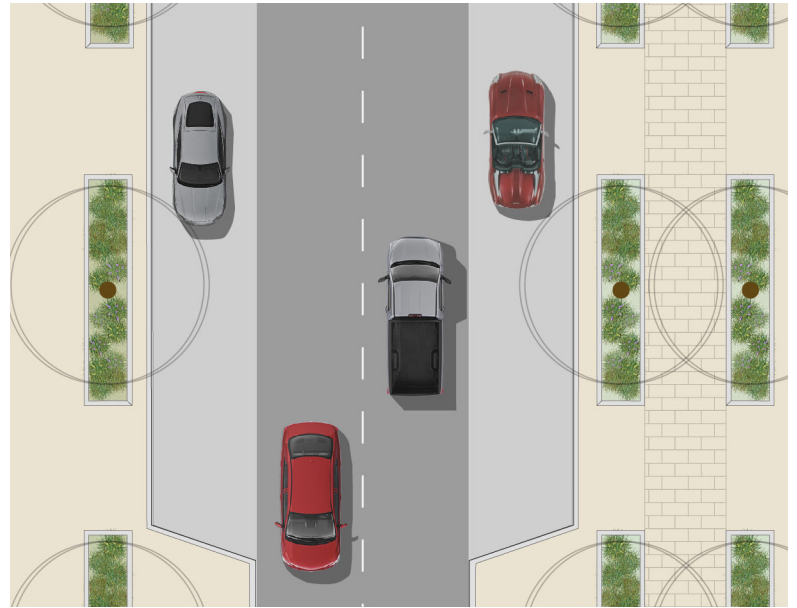
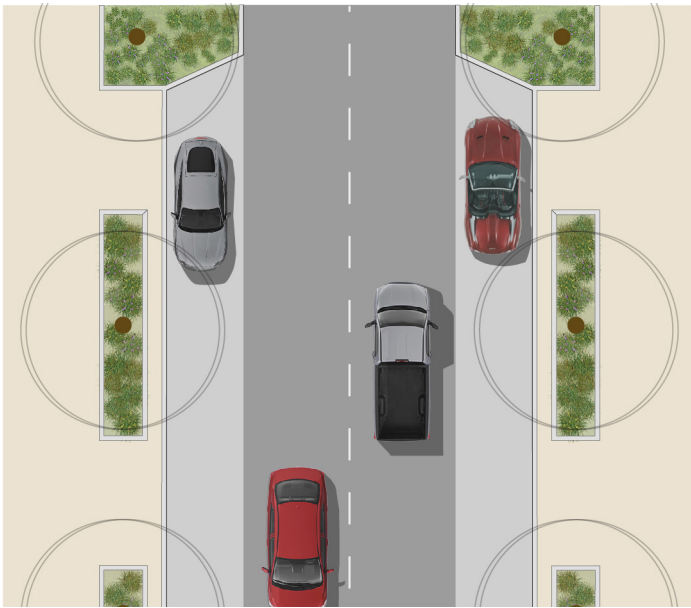
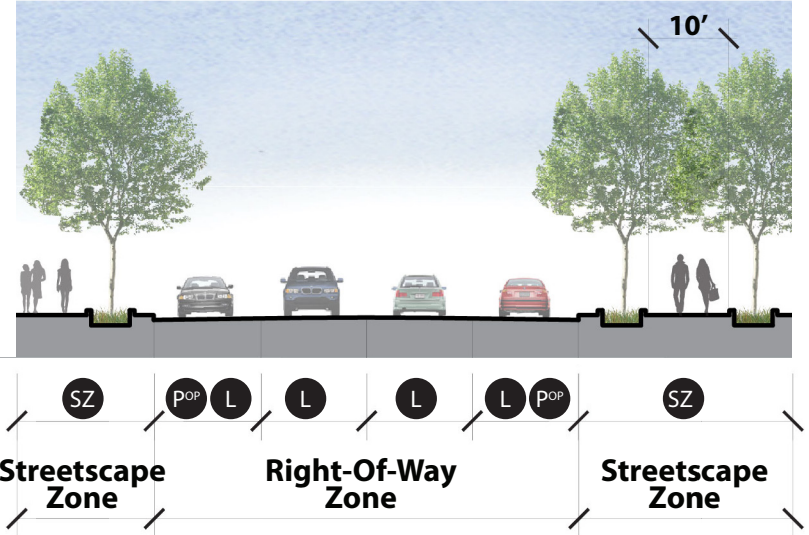
*** In Lakefront, where possible, parallel parking is encouraged on all Avenue Type 2 sections (except potentially directly adjacent to an amenity space or near LPP intersections) to accommodate parking for ground-level uses and/or drop-offs.

**** Where an Avenue Type 2 is adjacent to a natural area or a remaining existing use, the Streetscape Zone may be omitted, if determined by DPZ.

Right-Of-Way Zone: Street Type 3A



Right-Of-Way Zone: Street Type 3C



STREET TYPE 3A (2 LANES*, PARALLEL PARKING***) - Typical*

- L** 12' Travel Lane** (11' Travel Lane inside)
- P** 8' Parallel Parking (Optional)*** - reference Street Design: Streetscape
- SZ** Streetscape Zone**** - reference Street Design: Streetscape (For Street Tree criteria, see page 54.)

STREET TYPE 3C (2 LANES*, PARALLEL PARKING***) with double row of trees and 10' min. Ped. Zone on north side for Warfield Promenade

- L** 12' Travel Lane** (11' Travel Lane inside)
- POP** 12' Off-Peak (OP) Parallel Parking (Optional)***/ Travel Lane - reference Street Design: Streetscape
- SZ** Streetscape Zone**** - reference Street Design: Streetscape (For Street Tree criteria, see page 54.)

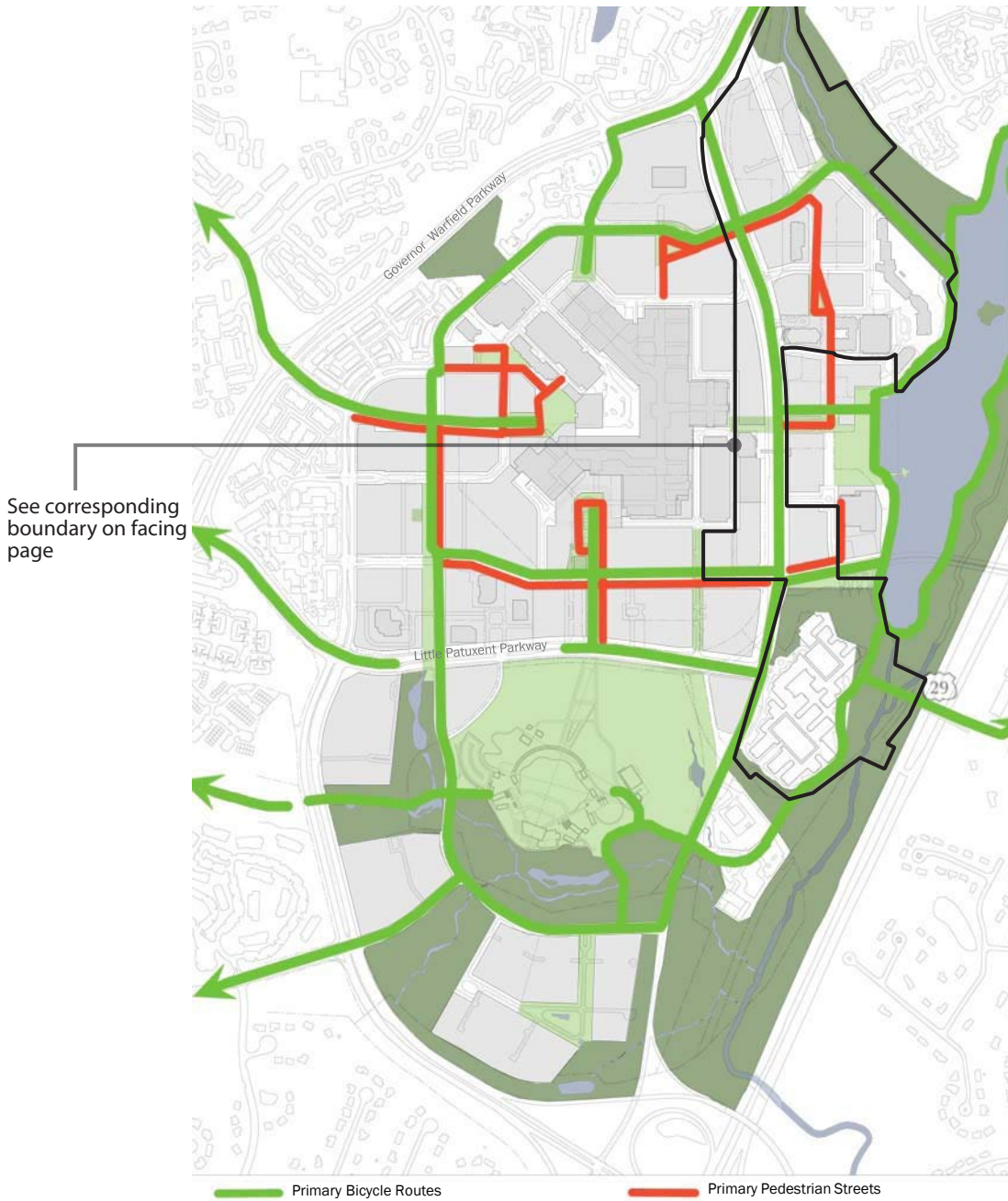
* The street sections and plans shown above are typical of the street type; additional travel, turning, or bicycle lanes may exist or be added to accommodate traffic volume and turning movements, as determined by a traffic study at the SDP phase; adaptations may be required to adjust to existing site conditions.

** In Lakefront, Street Types 3A and 3C are envisioned to have a maximum posted speed of 25 mph (15 mph is preferred) and are intended have shared lanes that accommodate both motor vehicles and bicycles. (See General Provisions, item 7, page 34, for additional information.)

*** In Lakefront, where possible, parallel parking is encouraged on all Street Types 3A and 3C sections (except potentially directly adjacent to an amenity space) to accommodate parking for ground-level uses and/or drop-offs. For parallel parking used as travel lanes during peak hours, parking signs will be used to restrict parking to off-peak hours.

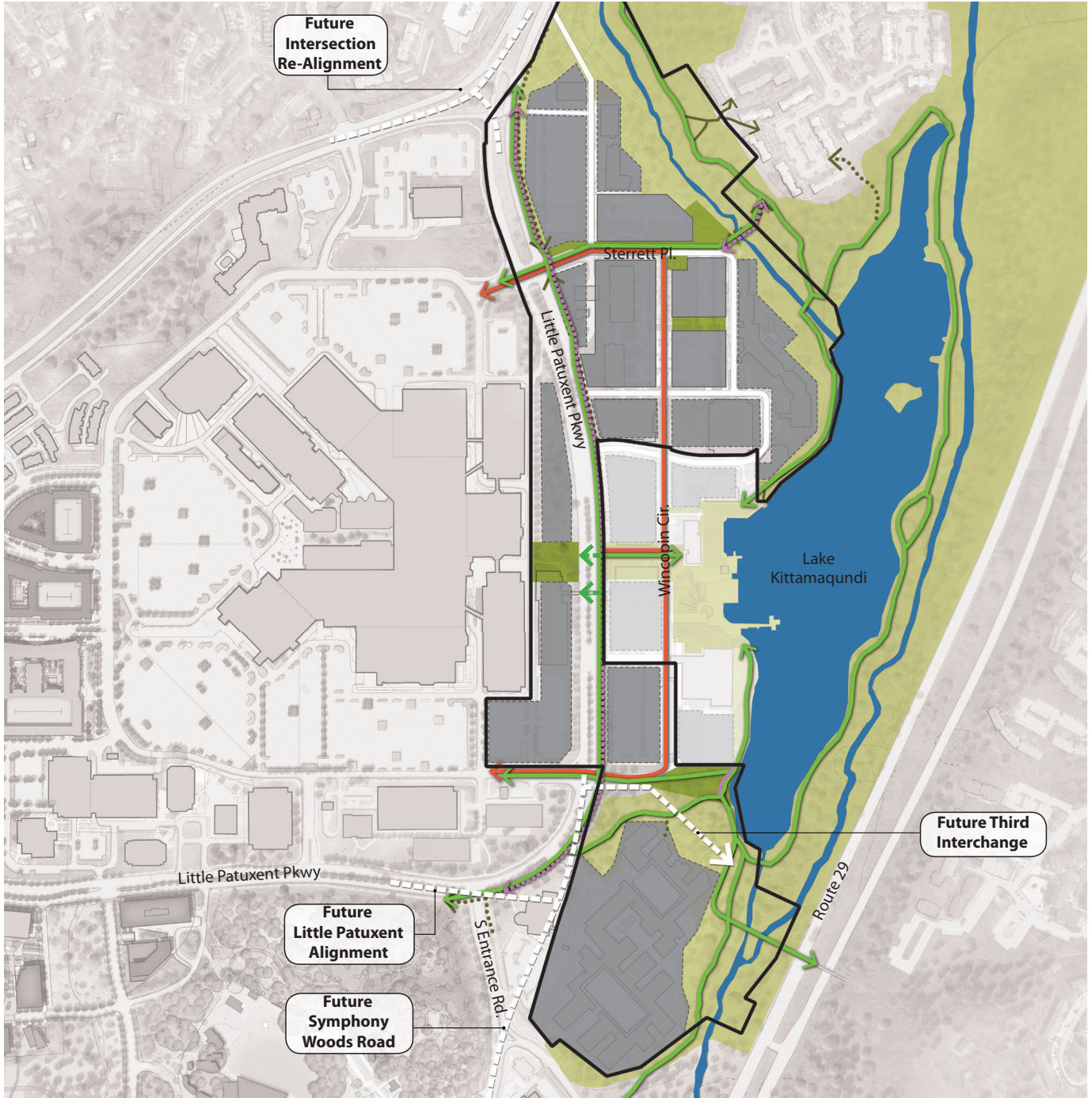
**** Where Street Types 3A and 3C are adjacent to a natural area or a remaining existing use, the Streetscape Zone may be omitted, if determined by DPZ.

Pedestrian and Bicycle Circulation



Downtown Columbia Plan - General Plan Amendment; Bicycle and Pedestrian Circulation Plan

The Pedestrian and Bicycle Circulation Plan above indicates desired locations for Primary Bicycle Routes throughout Downtown (shown in green); the Primary Pedestrian Streets (shown in red) indicate streets envisioned to have potentially heavy foot traffic and retail frontage. Accommodating bicyclists and pedestrians is essential to creating the multi-modal character desired for Downtown. The Lakefront Neighborhood Bicycle and Pedestrian Circulation Plan is guided by this intent. To note, in addition to the Primary Bicycle Routes, the plan on the facing page also shows both the existing Shared-Use Path along the lakefront as well as a proposed Shared-Use Path along Little Patuxent Parkway. Within the Lakefront Neighborhood, all Street Type 3 streets will have shared lanes. **(See Appendix A.2 for more information regarding on-road bicycle facilities.)** Primary Bicycle Routes and Pedestrian Streets have been identified in the Lakefront Neighborhood as shown in the *Downtown Columbia Plan*.



Lakefront Neighborhood Bicycle and Pedestrian Plan

- PRIMARY BICYCLE ROUTES AND PEDESTRIAN ROUTES*
- PRIMARY PEDESTRIAN STREETS**
- PEDESTRIAN/BICYCLE FACILITY TYPES:**
- EXISTING SHARED-USE PATH
- PROPOSED SHARED-USE PATH***

* Primary pedestrian routes and bicycle routes are a combination of sidewalks, Shared-Use Paths, shared lanes, and trails that provide safe movement through the Lakefront Neighborhood and to adjacent neighborhoods.

** A Primary Pedestrian Street is intended to be the focus of pedestrian activity. Primary Pedestrian Streets typically have wide sidewalks, amenity spaces, or other pedestrian features.

*** The Proposed Shared-Use Path along Little Patuxent Parkway should navigate around existing, contributing trees where possible.

See Appendix A.2 for more information regarding on-road bicycle facilities. See General Provisions, pages 34-35, for additional bicycle facility criteria.

Street Design: Streetscape Zone

Overview

The Streetscape Zone addresses design criteria for on-street parking and elements of the sidewalk including street trees and plantings, street lights, outdoor dining/seating areas, clear pedestrian walking zones, and the storefront (building frontage) zone. The streetscape criteria address streetscape characteristics including sidewalk widths, appropriate stormwater management methods, street tree types, landscaping, lighting, furniture, paving materials, dimensional criteria for the various zones, and other details in accordance with the particular streetscape type.

The Streetscape Zone includes:

- 1) The Parking Zone: On-street Parking (Optional);
- 2) The Sidewalk Zone:
 - a. Curb Step-off Zone (curb edge adjacent to on-street parking);
 - b. Planting Zone (for trees and planting, stormwater treatment, street lights, and signage);
 - c. Amenity Zone (Optional, for outdoor dining and temporary/movable furniture);
 - d. Clear Pedestrian Zone;
 - e. Shared-Use Path Zone (Optional); and
 - f. Building Frontage Zone.

Generally, the streetscape design is guided by whether the ground floor building frontage is commercial (retail, office, storefront, or similar non-residential use) or residential. Further, the commercial streetscape includes variations for the placement of outdoor dining and amenity zones. The streetscape types include:

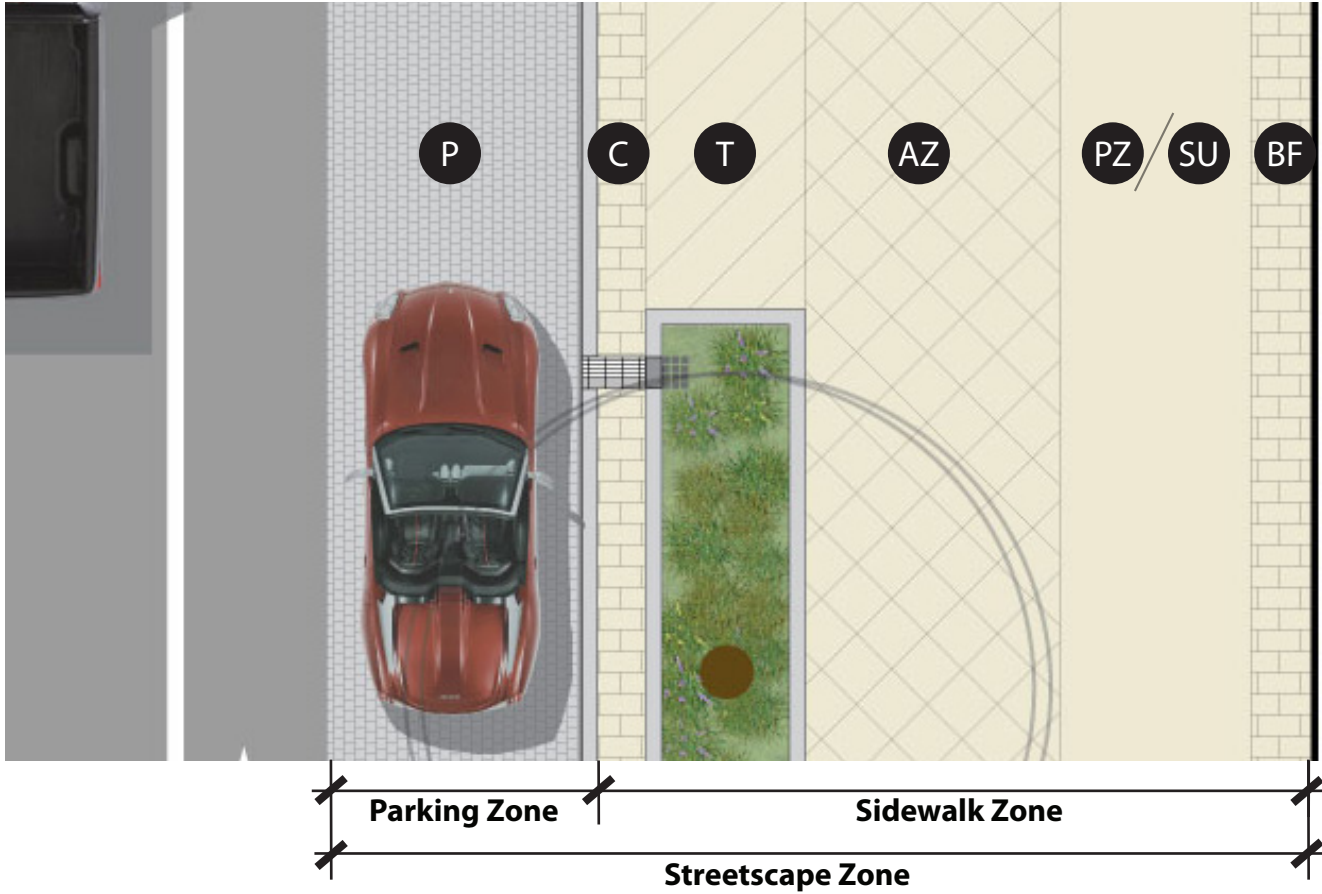
- 1) Commercial A Streetscape (with clear pedestrian zone along the storefront and optional dining/amenity space outboard, closer to the curb);
- 2) Commercial B Streetscape (with optional dining/amenity space along the storefront and clear pedestrian zone outboard); and
- 3) Residential A Streetscape (with transition zone against the building to accommodate paving, landscaping, stoops, and/or building projections).

Building frontage along a street may vary: including restaurants that may need outdoor dining and seating areas, retail that may not require outdoor dining, office, and residential, in accordance with the variety of streetscape types noted above. Therefore, building frontages and the streetscape may vary along a block or street and is not precisely coded to a plan diagram of streetscape types. However, the following specific streetscape elements should be consistent along the entire length of a street:

- 1) The step-off zone materials (paving is only required adjacent to on-street parking);
- 2) Street tree genus and species, and typical spacing;
- 3) Street light poles and furniture;
- 4) Provision and width of the clear pedestrian zone and/or shared-use zone; and,
- 5) Paving materials and elements.

The following streetscape elements may vary:

- 1) On-street parking;
- 2) Planting areas and tree grates (stormwater management should be integrated where appropriate);
- 3) Provisions for outdoor dining and amenity areas; and,
- 4) The residential (frontage) transition zone.



Parking Zone

- P Parallel Parking (Optional)

Sidewalk Zone

- C Curb Step-Off Zone
- T Planting Zone
- AZ Amenity Zone (Optional)
- PZ Pedestrian Zone (Required unless a Shared-Use Path is provided)
- SU Share-Use Zone (Optional)
- BF Building Frontage Zone

Parking Zone (Optional) **P**

Parallel parking is required by the *Downtown-wide Design Guidelines* to be 8' wide. In the Lakefront Neighborhood, where possible, parallel parking is encouraged on all internal area streets. Parallel parking offers an additional buffer between traffic and pedestrians, as well as helps lower vehicle speeds. The parking zone provides an opportunity to incorporate sustainable stormwater management design solutions by utilizing porous pavement or other strategies. These methods are encouraged to be incorporated into parking and streetscape design where possible.

Curb Step-Off Zone **C**

Step-Off Zone is 2' wide and allows pedestrians to exit from vehicles without being forced to walk in gutters or in tree pits. This zone also accommodates the vehicle's door swing, eliminating conflict with raised planters or street tree trunks. The Step-Off Zone, when adjacent to parallel parking, shall be covered in hardscape materials and shall be clear of planting to provide for the safe movement of pedestrians. Additionally, this zone should be fully paved adjacent to a transit stop. Where there is no parallel parking, the landscaped area, including ESDs, may extend up to the back of the curb.

Planting Zone **T**

Planting Zone is at a minimum 5' wide and accommodates permanent features such as tree pits, rainwater planters, light poles, street signage, benches, and bike racks. This zone may also incorporate non-permanent elements, including restaurants menu signs, waste receptacles, potted plants, and additional seating. Where the Planting Zone is adjacent to an Amenity Zone, Amenity Zone elements, such as dining tables, may occupy the hardscape areas of the Planting Zone. Additionally, this zone should be fully paved adjacent to a transit stop. Where bridges or culverts are required, the Planting Zone may be eliminated from the street section.

*** See the Material and Element Standards section on the following pages for additional criteria.**



Reference plan on page 43 for labels

Amenity Zone AZ

The Amenity Zone is 6-10 feet wide. This zone is reserved for amenities that may be customized depending on adjacent uses. Typical amenities include, but are not limited to, café tables, benches, planters, street trees, lighting, wayfinding signage, bollards, trash and recycling receptacles, and bike racks. The Amenity Zone is optional; this zone is encouraged where heavy pedestrian traffic for dining or entertainment uses is anticipated; this zone may be eliminated where pedestrian traffic is anticipated to be minimal and/or where site conditions are constrained.



Pedestrian Zone PZ

The Pedestrian Zone is a minimum 6 feet wide and shall remain clear of all street furniture, signs, and similar. This zone is reserved for the use of pedestrian circulation and is required unless a Shared-Use Path is provided. This area shall be clearly differentiated by paving materials or other visual cues.



*** See the Material and Element Standards section on the following pages for additional criteria.**



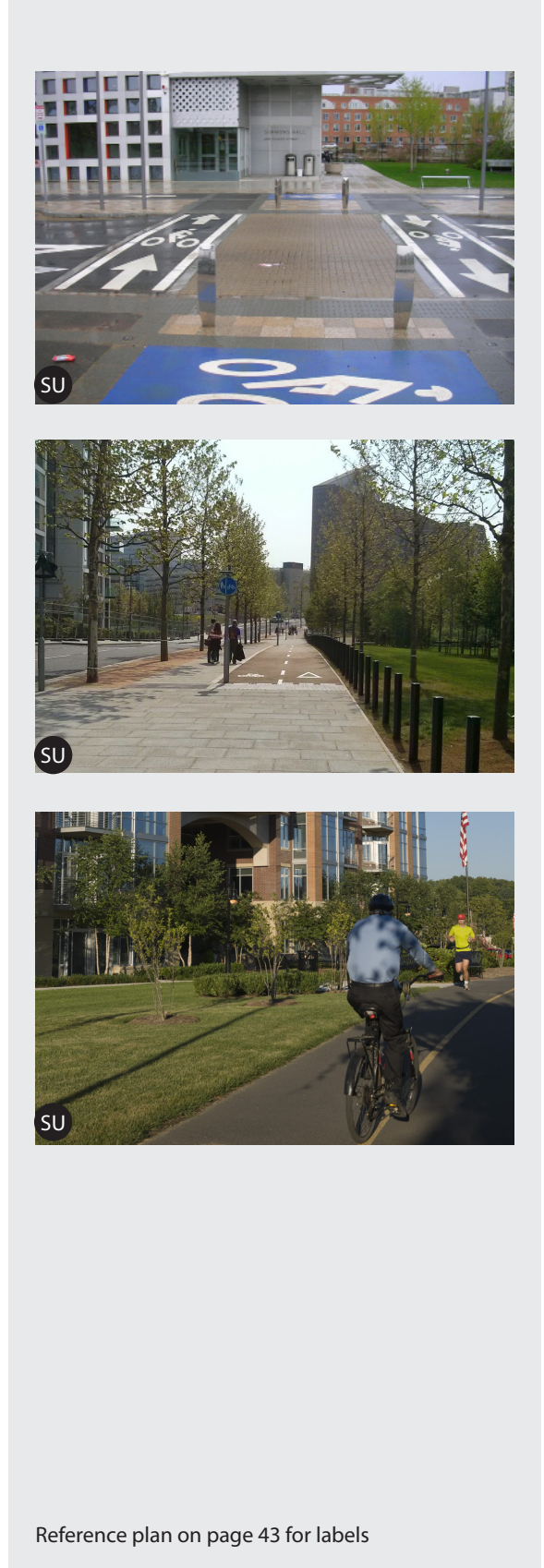
Reference plan on page 43 for labels

Shared-Use Zone (Optional) **SU**

The Shared-Use Zone is a minimum of 10 feet wide and contains a path reserved for pedestrian and bicycle circulation. The Shared-Use Zone shall remain clear of all street furniture, signs, and similar. The Shared-Use Zone is optional and, when incorporated within the Streetscape Zone, it typically replaces the Pedestrian Zone. In Lakefront Neighborhood, a Shared-Use Path is envisioned to run along the east side of Little Patuxent Parkway. (see **Bicycle Circulation Plan, page 41, for additional information**).

See Appendix A.3 for more information regarding off-road bicycle facilities.

* See the Material and Element Standards section on the following pages for additional criteria.



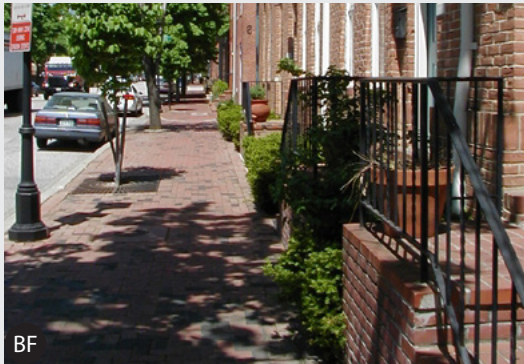
Reference plan on page 43 for labels

Building Frontage Zone BF

In commercial areas, the Building Frontage Zone shall be a minimum of 2 feet wide and is reserved for the commercial tenant/owner. This zone occupies the space nearest the building wall and may be used for signage, sidewalk displays, benches, and rainwater planters (see diagram for rainwater planters on pages 60-61) or to accommodate door swings and projecting window bays.

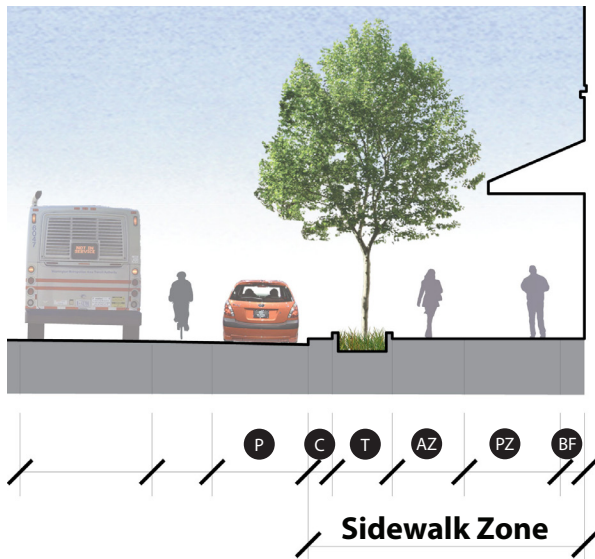
In residential areas, the Building Frontage Zone varies in width and is reserved for the building tenant/owner. This zone occupies the space nearest the building wall and may be used for stoops, benches, and rainwater planters (see diagram for rainwater planters on pages 60-61) or to accommodate door swings and projecting window bays.

*** See the Material and Element Standards section on the following pages for additional criteria.**



Reference plan on page 43 for labels

Streetscape Zone Types



Commercial A Streetscape Zones:

Parking Zone:

- P** 8' Parallel Parking (optional) (see page 53)

Sidewalk Zone = 15' min. - 35' max.*

- C** 2' min. Curb Step-Off Zone**
- T** 5' min. Tree/Planting Zone (see page 55)
- AZ** 6'-20' Amenity Zone (optional)*** /****
- PZ** 6' min. Pedestrian Zone****
- BF** 2' min. Building Frontage Zone****

* The maximum dimension of the Sidewalk Zone does not include the Parking Zone dimension, even where parallel parking is not present such as at intersection bump-outs. Additionally, where a portion of a building is required to step back to provide facade relief (see page 20), this distance should be limited, but shall not count towards the maximum dimension of the Sidewalk Zone.

** The Curb Step-Off Zone is required to be fully paved only where adjacent to parallel parking or a transit stop.

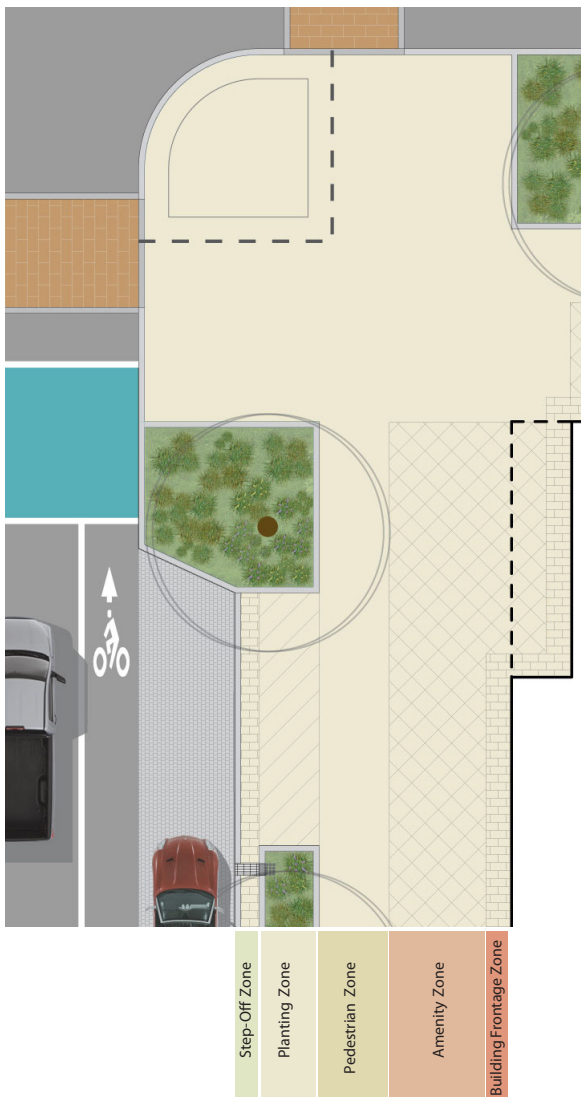
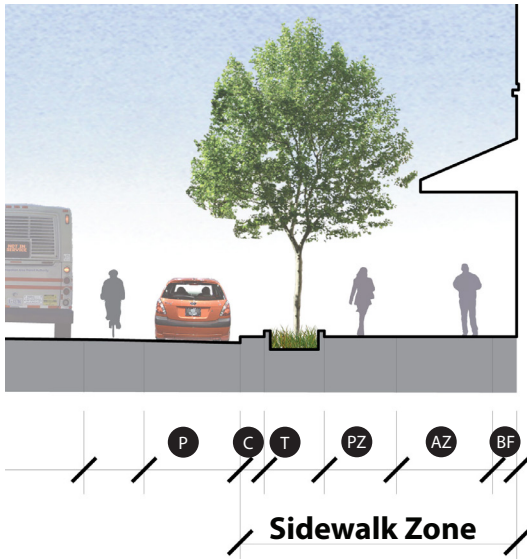
*** The Amenity Zone is optional; this zone is encouraged where heavy pedestrian traffic for dining or entertainment uses is anticipated; this zone may be eliminated where pedestrian traffic is anticipated to be minimal and/or where site conditions are constrained.

**** For information on Arcades, see page 125.

Typically, the Commercial A streetscape is preferred over the Commercial B streetscape, particularly along streets where heavy restaurant and retail space is planned. The Commercial A streetscape provides the opportunity for restaurant and café seating areas to be located along the curb rather than the storefronts, allowing pedestrians to be closer to the store windows and building entries.

For the length of any individual block where the streetscape types may vary, appropriate transitions should be provided to allow for a clear, continuous pedestrian pathway.

Commercial A streetscape can be used with all Street Types within the Lakefront Neighborhood.



Commercial B Streetscape Zones:

Parking Zone:

P 8' Parallel Parking (optional) (see page 53)

Sidewalk Zone = 15' min. - 35' max.*

C 2' min. Curb Step-Off Zone**

T 5' min. Tree/Planting Zone (see page 55)

PZ 6' min. Pedestrian Zone ****

AZ 6'-20' Amenity Zone (optional)*** /*****

BF 2' min. Building Frontage Zone*****

* The maximum dimension of the Sidewalk Zone does not include the Parking Zone dimension, even where parallel parking is not present such as at intersection bump-outs. Additionally, where a portion of a building is required to step back to provide facade relief (see page 20), this distance should be limited, but shall not count towards the maximum dimension of the Sidewalk Zone.

** The Curb Step-Off Zone is required to be fully paved only where adjacent to parallel parking or a transit stop.

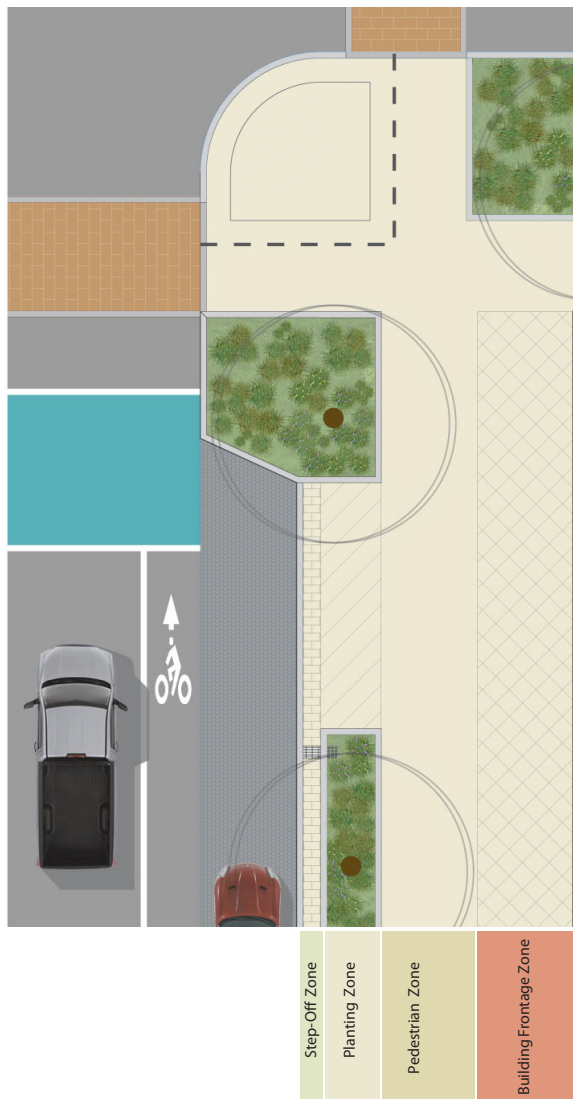
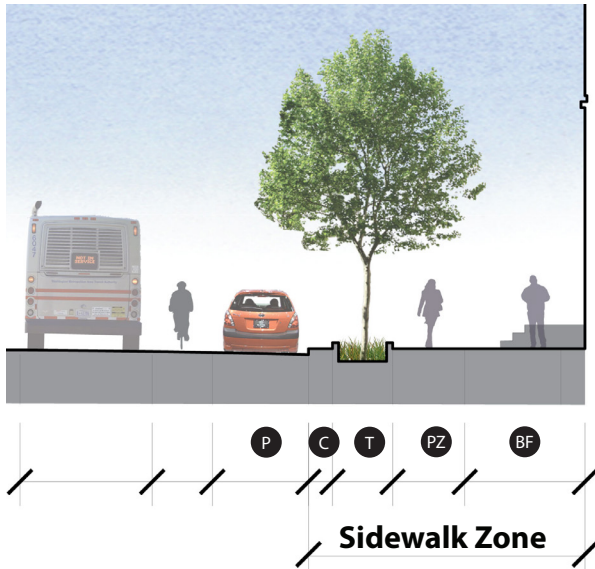
*** The Amenity Zone is optional; this zone is encouraged where heavy pedestrian traffic for dining or entertainment uses is anticipated; this zone may be eliminated where pedestrian traffic is anticipated to be minimal and/or where site conditions are constrained.

**** For information on Arcades, see page 125.

Typically, the Commercial A streetscape is preferred over the Commercial B streetscape. However, where general retail, office lobbies, and residential lobbies are planned, the Commercial B streetscape may be used. The Commercial B streetscape provides an opportunity for small cafés to have outdoor tables directly adjacent to their storefronts. The Commercial B streetscape also allows for outdoor seating for office/residential lobbies, adjacent to the building.

For the length of any individual block where the streetscape types may vary, appropriate transitions should be provided to allow for a clear, continuous pedestrian pathway.

Commercial B streetscape can be used with all Street types within the Lakefront Neighborhood.



Residential A Streetscape Zones:

Parking Zone:

P 8' Parallel Parking (optional) (see page 53)

Sidewalk Zone = 15' min. - 35' max.

C 2' min. Curb Step-Off Zone**

T 5' min. Tree/Planting Zone (see page 55)

PZ 6' Pedestrian Zone****

BF 2 - 22' Building Frontage Zone****

* The maximum dimension of the Sidewalk Zone does not include the Parking Zone dimension, even where parallel parking is not present such as at intersection bump-outs. Additionally, where a portion of a building is required to step back to provide facade relief (see page 20), this distance should be limited, but shall not count towards the maximum dimension of the Sidewalk Zone.

** The Curb Step-Off Zone is required to be fully paved only where adjacent to parallel parking or a transit stop.

**** For information on Arcades, see page 125.

Along streets where the primary ground-floor use is residential, Residential A streetscape shall be used.

Residential A streetscape, while urban in character, provides the opportunity for additional planting areas along the building edge, as a buffer to ground-floor residential units.

The residential zone, along the building edge, may include: planting areas, hardscape, and stoop entrances to residential units.

For the length of any individual block where the streetscape types may vary, appropriate transitions should be provided to allow for a clear, continuous pedestrian pathway.

For the length of any individual block where both commercial and residential uses exist, the predominate use shall determine the streetscape type.

Residential A streetscape can be used with all Street Types within the Lakefront Neighborhood.

Street Design: Material and Element Standards

Overview:

The purpose of the Material and Element Standards is to ensure and maintain a consistent, high-quality built environment in the Lakefront Neighborhood as a new mixed-use neighborhood which supports the vision for the redevelopment of Downtown Columbia and exemplifies the character and experiences of the best urban spaces.

The Material and Element Standards include criteria for the following components of street design:

- Hardscape
- Landscape
- Street Furnishings
- Lighting
- Bridges and Culverts

All applicable building codes, laws, Acts, life safety codes, ADA, environmental regulations, development approval processes, Howard County, State, and Federal regulations and permitting processes, and similar regulations must be adhered to and are not superseded by the *Lakefront Neighborhood Design Guidelines*.

Developers shall follow the alternative compliance procedures found in the Howard County Landscape Manual and submit landscape plans prepared by a registered landscape architect certifying that the landscape plans meet the design intent specified in these guidelines, including plant species selection or comparable alternative.

Throughout the *Guidelines*, the use of the word “shall” identifies mandated criteria. “Must,” “required,” and “mandated” are additional words with the same meaning. The use of the word “encouraged,” “should,” or “recommended” identify criteria which are desired. In some instances, words such as “prohibited” and “not permitted” identify practices, materials, or systems which are not allowed in the Lakefront Neighborhood redevelopment.

Sidewalks

A primary streetscape sidewalk material, pattern, and color should be consistent throughout Lakefront Neighborhood with the restrained use of different paving options to denote the different zones and uses of sidewalk areas by varying material, pattern, color, and/or texture. For example, where a sidewalk adjoins a plaza seating area, a change in paving type differentiates a movement zone from an area of rest. Unlike the more uniform streetscape, hardscape areas within amenity spaces are encouraged to differ from and contrast with the typical sidewalk paving (**see Amenity Space Types, pages 75-83 for additional information and for criteria specific to Shared-Use Paths (SUP)**).

Materials:

Streetscape sidewalk shall be constructed of concrete or brick pavers, stone, exposed aggregate concrete, scored concrete, or brushed concrete. Porous pavement systems are encouraged where appropriate, however, pervious asphalt is not allowed for sidewalks.

Details:

Streetscape sidewalk materials shall meet or exceed all mobility and accessibility requirements. Changes to paving material, pattern, color, and/or texture are encouraged between different zones and uses of the sidewalk, and, where an amenity space abuts the sidewalk.

Crosswalks

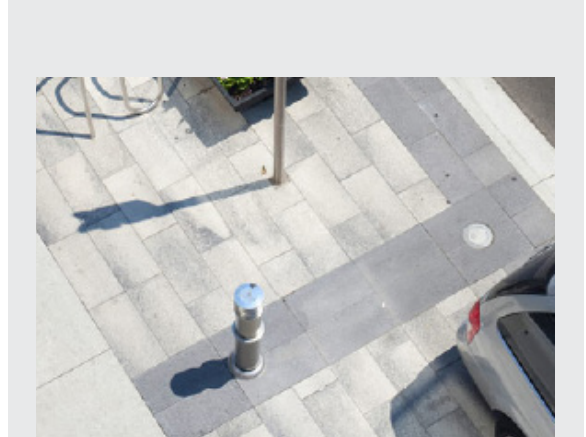
All new street intersections will include crosswalks to existing sidewalks or new sidewalks, except in limited situations, where there is no traffic control device.

Crosswalks of a different paving material, texture, or color from the street paving material are encouraged for all crosswalks, particularly in areas of retail concentration.

It is envisioned that crosswalks throughout Downtown should be uniform in material.

Details:

Crosswalk paving materials and textures should be chosen for ease of pedestrian movement, safety, and maintenance. Crosswalks shall conform to the Howard County Design Manual requirements and be a minimum of 8 feet wide, but typically 10 feet wide.





Bike Lanes

When included in a street section, bike lanes shall conform to the On-Road Bicycle Facilities criteria in Appendix A.2.



Vehicle Travel Lanes

Travel lanes in streets intended to be dedicated as public right-of-ways, either at the time of construction or at a future date, shall conform to the Howard County Design Manual requirements for paving materials and construction details unless appropriate waivers have been obtained. Where streets are to remain private (rather than dedicated public right-of-ways), alternative sustainable paving systems may be investigated, but shall be chosen for durability and ease of maintenance. On private streets designed for slow-vehicle speeds (with posted speeds of 25 mph or less), travel lanes should incorporate, where possible, areas of differentiated paving materials or colors and/or other design features that promote reduced vehicular travel speeds. All street travel lanes should be designed to accommodate both private and transit vehicles, as well as emergency equipment. For a three-lane street section, where a center turn lane is incorporated, a change in paving material or color is encouraged to visually define the lane.



Parallel Parking

Parallel parking paving shall be either consistent in material with the travel lane paving, or, differentiated through a change in material (preferred). Additionally, an edge band denoting the border between the travel lane and parallel parking spaces is encouraged and can be differentiated by either color or material. Porous pavement systems are encouraged.



Materials:

Parallel parking shall be constructed of concrete or brick pavers, porous pavement, or asphalt. Lightly colored or high albedo materials for parallel parking paving are encouraged.

Street Trees:

Street trees should be planted at regular intervals along streets appropriate to the particular character and function of the street. In general, trees should be planted 25 to 35 feet on center, but no more than 40 feet on center, or, to shade at least 40% of the sidewalk within 10 years. Variation in tree spacing may be appropriate in some circumstances, depending on location and adjacent uses, signage, building entries, underground utilities, and above ground structures.

Within the Lakefront Neighborhood, along Little Patuxent Parkway, a second row of street trees in the Planting Zone is encouraged where space allows and where views to retail will not be obstructed, to further differentiate the Boulevard from other Street types (see pages 37-39). Along Sterrett Place, a double row of street trees is required for the Warfield Promenade (see pages 75-78)

Regularly spaced street trees are not required along the side of a Lakefront Neighborhood street that abuts a natural area.

Primary street trees of the same genus and species should be planted continuously and along both sides of an entire street. However, Genus and species should differ from street to street to add variety and interest. In some instances, where a natural change in species seems logical due to an adjoining amenity space, civic building, or other important feature, a change in species may be appropriate.

From the list to the right, Large Trees should be used for the typical street trees; Medium and Small Trees should be used for medians.

Details:

Street trees should have straight, true trunks, limbed to 8 feet clear. Multi-trunk trees are not recommended as street trees. Flowering street trees should be selected for areas where limited pedestrian and/or outdoor dining activity is anticipated to minimize the impact of bees, insects, and falling debris.

LARGE TREES	
<u>GENUS SPECIES</u>	<u>COMMON NAME</u>
<i>Acer rubrum</i>	Red Maple
'Armstrong'	
'Autumn Flame'	
'Bowhall'	
'October Glory'	
'Red Sunset'	
<i>Acer saccharum</i>	Sugar Maple
'Green Mountain'	
'Legacy'	
<i>Aesculus hippocastanum</i> 'Baumann'	Baumann Horsechestnut
<i>Celtis occidentalis</i>	Common Hackberry
<i>Fagus grandifolia</i>	American Beech
<i>Gleditsia triacanthos inermis</i>	Thornless Honeylocust
'Imperial'	
'Shademaster'	
<i>Liriodendron tulipifera</i>	Tulip Poplar
<i>Liquidambar styraciflua</i> 'Rotundiloba'	Rotundiloba Sweetgum
<i>Platanus x acerifolia</i>	London Plane
'Bloodgood'	
'Columbia'	
<i>Platanus occidentalis</i>	Sycamore
<i>Quercus alba</i>	White Oak
<i>Quercus coccinea</i>	Scarlet Oak
<i>Quercus phellos</i>	Willow Oak
<i>Quercus rubra</i>	Northern Red Oak
<i>Quercus velutina</i>	Black Oak
<i>Tilia americana</i> 'Redmond'	Redmond American Linden
<i>Tilia cordata</i>	Littleleaf Linden
'Chancellor'	
'Greenspire'	
<i>Ulmus americana</i>	American Elm
'Princeton'	
'Valley Forge'	
MEDIUM TREES	
<u>GENUS SPECIES</u>	<u>COMMON NAME</u>
<i>Amelanchier canadensis</i>	Shadblow Serviceberry
<i>Betula lenta</i>	Sweet Birch
<i>Betula nigra</i>	River Birch
<i>Cladrastis kentukea</i>	Yellowwood
<i>Nyssa sylvatica</i>	Blackgum
<i>Robinia pseudoacacia</i> 'Globe'	Globe Black Locust
<i>Sorbus americana</i>	Mountain Ash
SMALL TREES	
<u>GENUS SPECIES</u>	<u>COMMON NAME</u>
<i>Chionanthus virginicus</i>	White Fringetree
<i>Cercis canadensis</i>	Eastern Redbud
<i>Cornus alterniflora</i>	Alternate-leaf Dogwood
<i>Crataegus crusgalli</i> 'Inermis'	Thornless Cockspur - Hawthorne
<i>Carpinus caroliniana</i>	Ironwood
<i>Viburnum lentago</i>	Nannyberry



Tree/Planting Pits

Tree/planting pits should be regularly spaced along the streetscape to include street trees. Pits shall be a minimum of 25 square feet and a minimum of 4 feet wide; 5 feet by 8 feet is recommended. These Tree/Planting Pits may serve as stormwater management facilities (see pages 56-59). In some instances, such as along residential streets or where limited pedestrian activity is anticipated, pits may be elongated to accommodate 2 or more trees.

In addition to street trees, pits may be planted with preferably native, low ground cover and/or shrubs. Planting pits may also be planted with perennials and annuals; again, native or adaptive plant species are encouraged. Tall plantings that block visibility and create safety concerns shall be avoided. Pits may be raised, with a 4 inch to 6 inch curb or border, or they may be flush with the sidewalk. They may include a low, 8- to 12-inch decorative fence. The design should be consistent along the street and for the entire block. However, the design of pits may vary from block to block, as long as the primary street tree species remains constant along the street length and the rhythm is logical.

Where tree grates are used in lieu of plantings, the minimum 25 square feet is still required. This area may include multiple tree grates that cover the planting pit, allowing for air and water circulation, while still accommodating intense pedestrian activity. In some instances, a portion of the square footage not covered by the tree grate may be permeable paving and/or hand set pavers or granite blocks with spacing that allows for water percolation. For additional criteria on tree grates, see page 65.

Foundation Planting

Along a street, where the foundation of a building does not have storefront and/or entry doors, such as a residential building or an office building with raised windows, foundation plantings are encouraged. Foundation plantings should complement the streetscape. Native shrubs, groundcover, perennials, and annuals are encouraged. In some instances, if the space allows, small flowering trees may be permissible. All plantings should be selected so that their mature height does not extend excessively above the ground level window sill. Plants should be selected and placed within the planting area creating a layered composition with lower shrubs/groundcover at the sidewalk edge transitioning to taller shrubs near the building.

See also Rainwater Planters-Building Edge, pages 60-61.

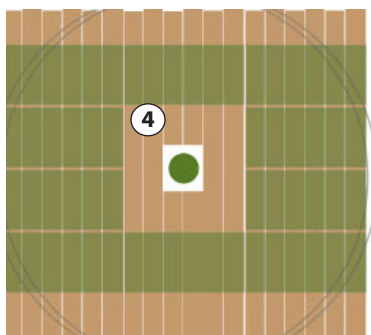
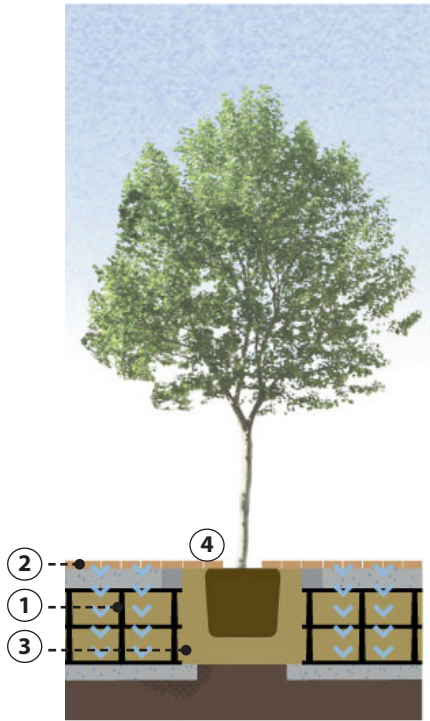
Rainwater Tree Pits

Rainwater tree pits, as illustrated on the facing page, can provide two advantages over the typical tree pit: tree longevity and stormwater infiltration. Rainwater tree pits capture and infiltrate stormwater along a street. When combined with a structural grid (such as Silva Cells or other MDE approved system) the capacity to capture rainwater is increased, creating a cavity to store additional water while allowing tree root growth. The structural grid supports the hardscape and pedestrian or vehicular loads above while keeping the soil around tree roots from compacting and stunting the growth of the tree.

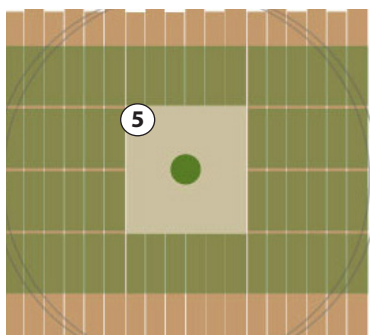
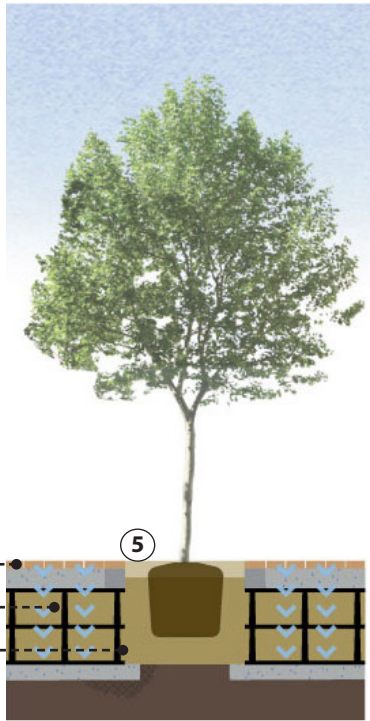
Details:

Rainwater tree pits can be detailed in three ways, with tree grates, permeable pavers, or plant materials at the surface (see diagrams on the facing page). The method should be chosen appropriate to the volume of pedestrian traffic, the surrounding materials, and soil conditions.

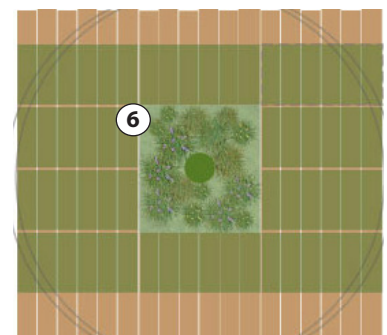
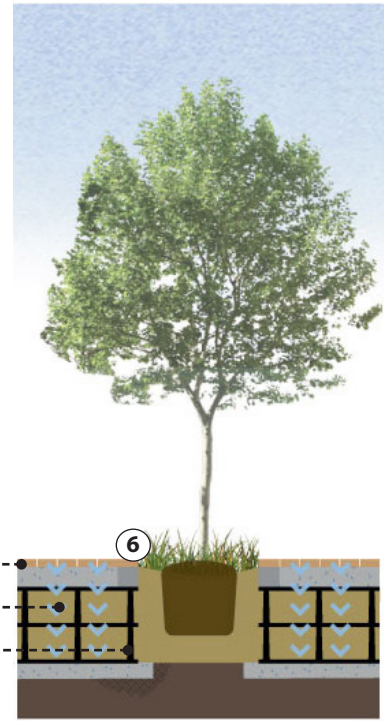




Rainwater Tree Pit: Pavers



Rainwater Tree Pit: Grates



Rainwater Tree Pit: Plantings

- ① Silva Cell or other MDE approved systems
- ② Permeable Sub-base
- ③ Uncompacted Soil Media
- ④ Porous Pavement/Pavers
- ⑤ Grates
- ⑥ Plantings (Native plantings are preferred)

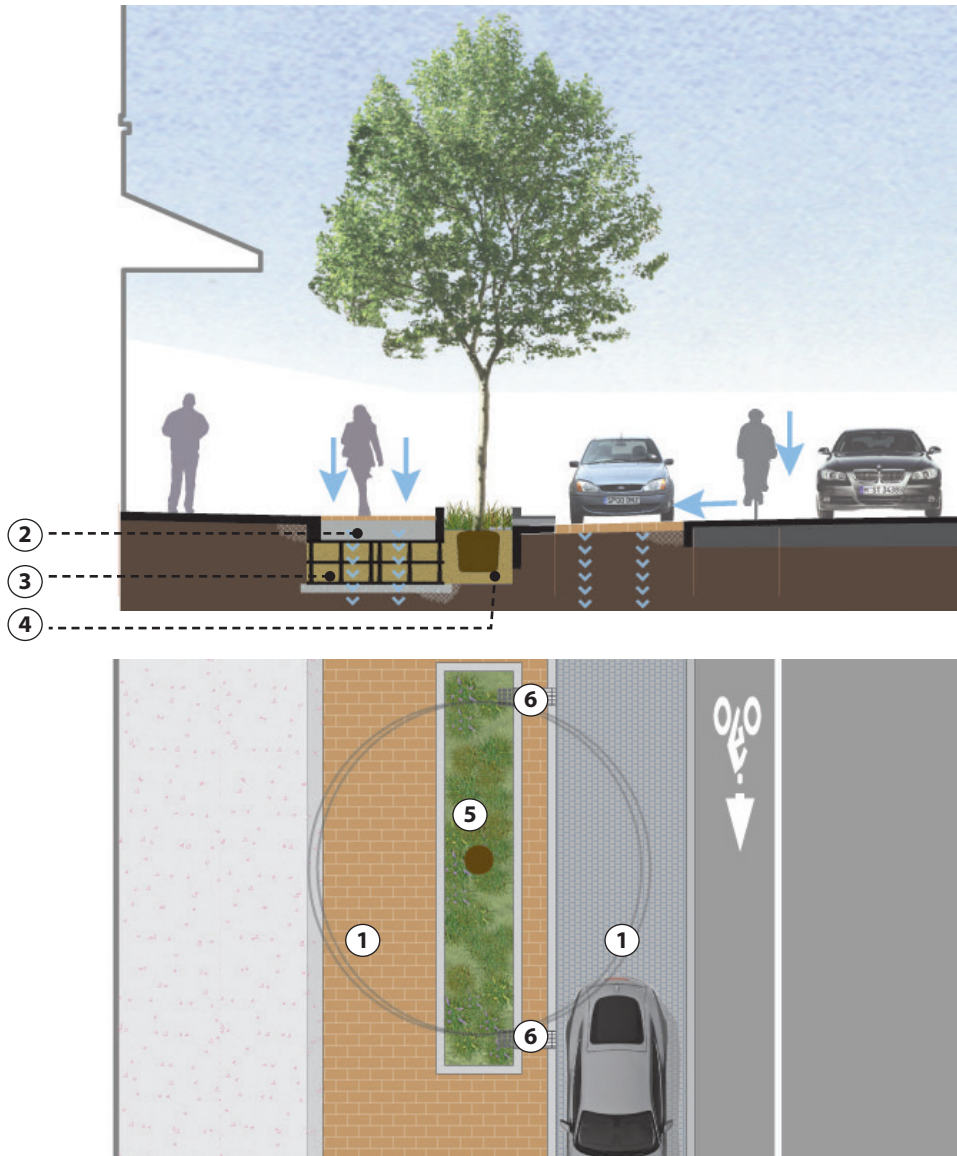
Rainwater Planters - Street Edge:

Rainwater planters shall be used throughout the Lakefront Neighborhood as a means of capturing, treating, and returning rainwater to the ground or allowing for evaporation. Along streets, rainwater planters shall be incorporated to increase the permeability of the ground plane and capture stormwater runoff from paved areas. These planters shall be integrated into the overall design of the streetscape.

Details:

- Rainwater planters should be regularly spaced along the streetscape. Rainwater planters shall be a minimum of 25 square feet and a minimum of 4 feet wide; 5 feet by 8 feet is recommended. Along residential streets or where limited pedestrian activity is anticipated, planters may be elongated.
- Rainwater planters shall be recessed to accommodate stormwater collection, with a 4-6 inch curb or border, or a low, 8-12 inch fence.
- The design should be consistent along the street and for the entire block. However, the design of rainwater planters may vary from block to block, as long as the placement and rhythm is logical.
- Narrow, street edge rainwater planters should have a more formal planting arrangement.
- Transition zones close to natural or restoration areas or amenity spaces should have a more informal planting plan arrangement.
- Utilize plant species native to Maryland and the Piedmont physiographic province (preferably native to Howard County).
- Choose plants that are tolerant of well-drained conditions, periods of drought, and periodic inundation, depending on the hydrologic design of the stormwater practice, per MDE regulations.
- Select shade tolerant, partial shade, or full sun tolerant species based on site location, orientation, and proximity to tree cover and buildings.
- Consider maintenance and management (weeding) when designing and allow for access needs.
- Consider plant height at maturity and include consideration for sight lines (e.g., vehicular and pedestrian), safety and security, access to sidewalks, and overhead height restrictions.
- Along the street edge, trees shall be limbed to 8 feet clear for visibility and safety.
- Design for complementary mixtures of foliage, to provide interest and contrast in form, texture, and color; Select plants that provide diverse seasonal color and texture, as well as fragrance.





- ① Porous Pavement (optional, where feasible)
- ② Permeable Sub-base
- ③ Uncompacted Soil Media
- ④ Silva Cell or other MDE approved systems
- ⑤ Rainwater Planter
- ⑥ Curb Inlet

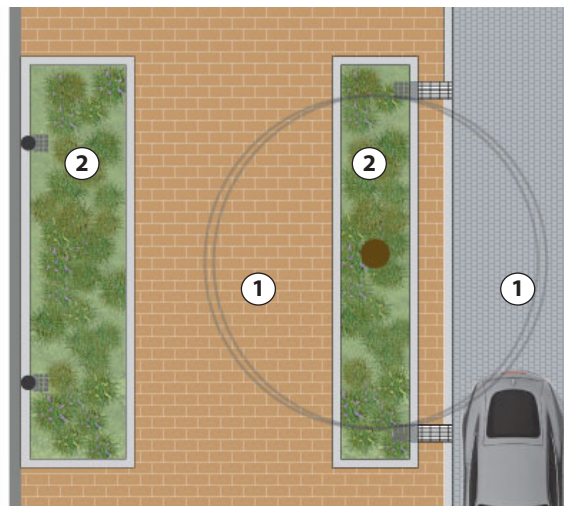
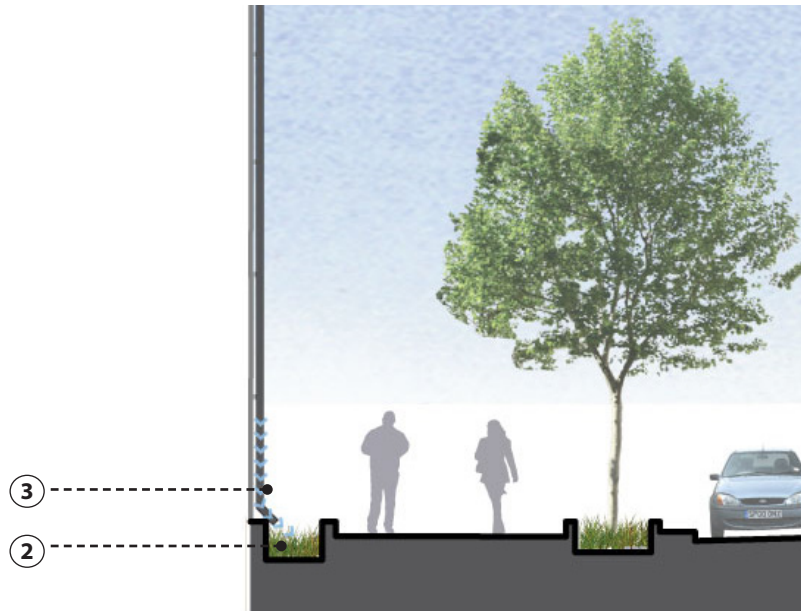
Rainwater Planters - Building Edge:

Rainwater planters shall be used throughout the Lakefront Neighborhood as a means of capturing, treating, and returning rainwater to the ground or allowing for evaporation. Along the building edge, rainwater planters shall be incorporated to increase the permeability of the ground plane and capture stormwater runoff from paved areas. These planters shall be integrated into the overall design of the streetscape and the architecture.

Details:

- Rainwater planters shall be a minimum of 25 square feet and a minimum of 4 feet wide.
- Rainwater planters shall be recessed to accommodate stormwater collection, with a 4-6 inch curb or border, or; a low, 8-12 inch fence.
- Utilize plant species native to Maryland and the Piedmont physiographic province (preferably native to Howard County).
- Choose plants that are tolerant of well-drained conditions, periods of drought, and periodic inundation, depending on the hydrologic design of the stormwater practice, per MDE regulations.
- Select shade tolerant, partial shade, or full sun tolerant species based on site location, orientation, and proximity to tree cover and buildings.
- Consider maintenance and management (weeding) when designing and allow for access needs.
- Consider plant height at maturity and include consideration for sight lines (e.g., vehicular and pedestrian), safety and security, access to sidewalks, and overhead height restrictions.
- Select plants with a mature height that does not extend excessively above the ground level window sill.
- Consider geometric forms of plantings to compliment the structural design.
- Design for complementary mixtures of foliage, to provide interest and contrast in form, texture, and color; Select plants that provide diverse seasonal color and texture, as well as fragrance.
- Design for distinct pockets or groupings of color, height, and texture; include showy floral perennials as visual focal points near entrances and gathering areas.
- When appropriate, a hedge can be created with upslope shrubs (requires regular pruning).





- ① Porous Pavement (optional, where feasible)
- ② Rainwater planter
- ③ Downspout

Transit Shelters

Shelters should be included at all existing transit stops and planned at all future transit stops within the Lakefront Neighborhood. As part of the street furnishings, transit shelters should be consistent with the neighborhood street furnishings aesthetic. However, opportunities for transit shelters to serve as public art pieces are strongly encouraged (see below).

Materials: Transit shelters shall be constructed of long-life, durable materials. Green roofs, white, or light material, may be used to meet sustainability goals. However, for transit shelters also serving as public art, other materials may be approved.

Details: Shelters may be either pre-fabricated or custom-designed, however if custom-designed, they shall be designed to correspond to and complement the architectural character of the neighborhood. Minimally, a structure shall provide a roof and seating for patrons. Waste and recycling receptacles shall be located adjacent to all transit stop structures. The final locations of transit shelters shall be determined at the time of Site Development Plan approval and are subject to Howard County approval.



Benches, Tables, and Chairs

Outdoor seating is an important element in a vibrant, urban neighborhood, providing places for social interaction and recreation. When outdoor seating is comfortable, clean, and convenient, visitors will be encouraged to stay and enjoy Downtown. Benches along the street edge that are part of the street furnishings shall be uniform and consistent throughout Downtown. Benches, tables and chairs belonging to commercial tenants shall be unique and expressive of the overall composition and character of the building or storefront. In particular, restaurants are encouraged to select furniture which reflects their individual design. Opportunities for benches to serve as public art pieces are strongly encouraged.

Materials: Benches along the street edge that are part of the street furnishings shall be metal (aluminum, steel, or cast iron) and consistent in material, style, and color with the other street furnishings, including street lights, transit shelters, bollards, and trash/recycling receptacles. Benches, tables and chairs belonging to commercial tenants shall be metal (aluminum, steel, or cast iron), a combination of wood and metal, stone, or other durable material. Materials with a high percentage (75% or more) of recycled content are encouraged. For benches also serving as public art, other materials may be approved.

Details: Benches should be surface-mountable or able to be embedded in paving. Tables and chairs may be either permanently placed/mounted or moveable.



Pots and Planters

Pots and planters should add interest, color, and pedestrian scale to the streetscape. Low-maintenance planters with perennial and annual plantings are highly encouraged throughout Lakefront Neighborhood, but shall be appropriate to the overall design of the streetscape. Moveable pots and planters shall be used where permanent planters may limit the versatility and use of a sidewalk area.

Details: Pots and planters shall be of a durable, low maintenance material. Materials with a high percentage (75% or more) of recycled content are encouraged. Pots and planters shall not impede pedestrian circulation or block visibility.

Fencing and Site Walls

Fences and site walls can be used to define private spaces, mediate grade, and conceal parking, loading, service, and trash areas.

Materials:

Fences and gates within the Streetscape Zone shall be metal (aluminum, steel, or cast iron) and consistent in material, style, and color with the other street furnishings, including street lights, transit shelters, benches, and trash/recycling receptacles. Chain link fencing (except where required by law for temporary security), barbed wire, and paneled materials are not permitted. Fences and gates located beyond the Streetscape Zone shall be unique and expressive of the overall composition and character of the related building or amenity space (see Section 4.0 Amenity Space on pages 71-95 or Section 5.0 Architecture on pages 97-127).

Site walls shall use materials, patterns, and colors consistent with the surrounding streetscape materials and, if visible from streets or amenity space view, should be brick, pre-cast, cast stone, or vegetated screen wall. Straight-faced block retaining wall may also be used if site condition warrant.

Details:

Fence terminal posts (at corners, opening, and ends) shall be wider and taller than other posts.



Bollards

Bollards shall be used along streets primarily to protect pedestrians from vehicles, but may also be used to add visual interest and provide ground-level lighting.

Materials:

Bollards along the street edge that are part of the street furnishings shall be metal (aluminum, steel, or cast iron) and consistent in material, style, and color with the other street furnishings, including street lights, transit shelters, benches, and trash/recycling receptacles. Bollards belonging to commercial tenants shall be unique and expressive of the overall composition and character of the building or storefront and shall be of a durable, low maintenance material.

Details:

Bollards may be permanent or removable, depending on the desired limits of access. Removable bollards are recommended where possible in order to provide maximum flexibility.



Tree grates

Tree grates are appropriate along streets with high pedestrian traffic. In the Lakefront Neighborhood, tree grates are recommended for use near transit stops, plazas, and other appropriate locations.

Materials: As part of the streetscape, tree grates shall be consistent throughout Downtown and consistent in material, style, and color with the other street furnishings, including street lights, transit shelters, bollards, and trash/recycling receptacles. Tree grates shall be metal (steel or cast iron). Materials with a high percentage (75% or more) of recycled content are encouraged.

Details: Tree grates shall be properly maintained and cleaned for the safety of visitors and for the welfare of the trees they protect.

Waste/Recycling Stations

Waste and recycling receptacles shall be coupled together and shall be conveniently located along all streets.

Materials: Trash/recycling receptacles along the street edge that are part of the street furnishings shall be metal (aluminum, steel, or cast iron) and consistent in material, style, and color with the other street furnishings, including street lights, transit shelters, benches, and bollards. Trash/recycling receptacles belonging to commercial tenants shall be metal (aluminum, steel, or cast iron), a combination of wood and metal, or other durable material. Materials with a high percentage (75% or more) of recycled content are encouraged.

Details: For sanitation purposes, receptacles shall have a rain guard over the main opening and shall conceal the main recycling or trash container.

Smoking Receptacles

A non-smoking environment should be a goal of the Lakefront Neighborhood; however, proper disposal of tobacco products is necessary to avoid littering and fire hazards.

Materials: Smoking receptacles shall be metal.

Details: In most instances, smoking receptacles shall be placed adjacent to or nearby waste receptacles. Any exterior designated smoking areas shall be located at least 25 feet away from building entries, outdoor air intakes, and operable windows.



Bicycle Racks

Bike racks shall be installed along streets to promote cycling as a means of travel. Locations of bike racks are contingent on site conditions and placement should refer to Appendix A.3, Shared-Use Path Guidelines. In all cases, bike racks should be located without interfering with pedestrian movement and building and retail entrance areas. Additionally, participation in the Howard County Bikeshare program, with stations located within the Lakefront Neighborhood, should be considered.

Materials:

Bike racks along the street edge that are part of the street furnishings shall be metal (aluminum or steel) and consistent in material, style, and color with the other street furnishings, including street lights, transit shelters, benches, and trash/recycling receptacles. Bike racks belonging to commercial tenants or a residential building shall be unique and expressive of the overall composition and character of the building or storefront.

Details:

Bike racks shall be permanently installed.

*** See Appendix A.2 On-Road Bicycle Facilities for additional criteria.**



Street Design: Street Lights

Street lights shall be selected and placed to create an even rhythm and consistent, safe light levels along streets. Street lights shall be selected with the consideration of being used as the standard fixture throughout Downtown. As such, street light types shall be selected with the developer, the County, and BGE participation. The County will have final approval. Pedestrian-scaled street lights of approximately 14 to 22 feet in height are encouraged; although, higher poles up to 30 feet in height may be required to adequately light wider street intersections to provide additional illumination at crosswalks for safety. Light levels and quality of light should be appropriate for the street type, character, and use. Lighting should be selected from a family of the same design-related fixtures.

Materials:

All light poles should be fiberglass. If metal poles are desired by the developer, breakaway bases will be required. All lighting fixtures are encouraged to be Dark Sky compliant, as defined by the International Dark Sky Association (IDA). LED fixtures are recommended with a target wattage in the range of 70 to 100 watts for the pedestrian-scaled light pole locations. Higher wattage fixtures may be used on the 30' pole locations.

Details:

The location layout of all street lights installed in the County right-of-ways will be determined by Howard County DPW/Traffic Engineering. Street lights installed on private roadways or in private areas adjacent to any roadways will be determined by the developer and/or BGE with the County's input regarding any glare issues onto the public roadways. Banners can be integrated, where appropriate, but are recommended mainly on the 30' pole locations.

At Site Development Plan (SDP) level, street tree placement will be reviewed by the County to ensure adequate light levels are maintained with consideration of the street tree mature height, canopy, and foliage density. Street lights shall be located first, followed by street trees, and finally street furnishings.



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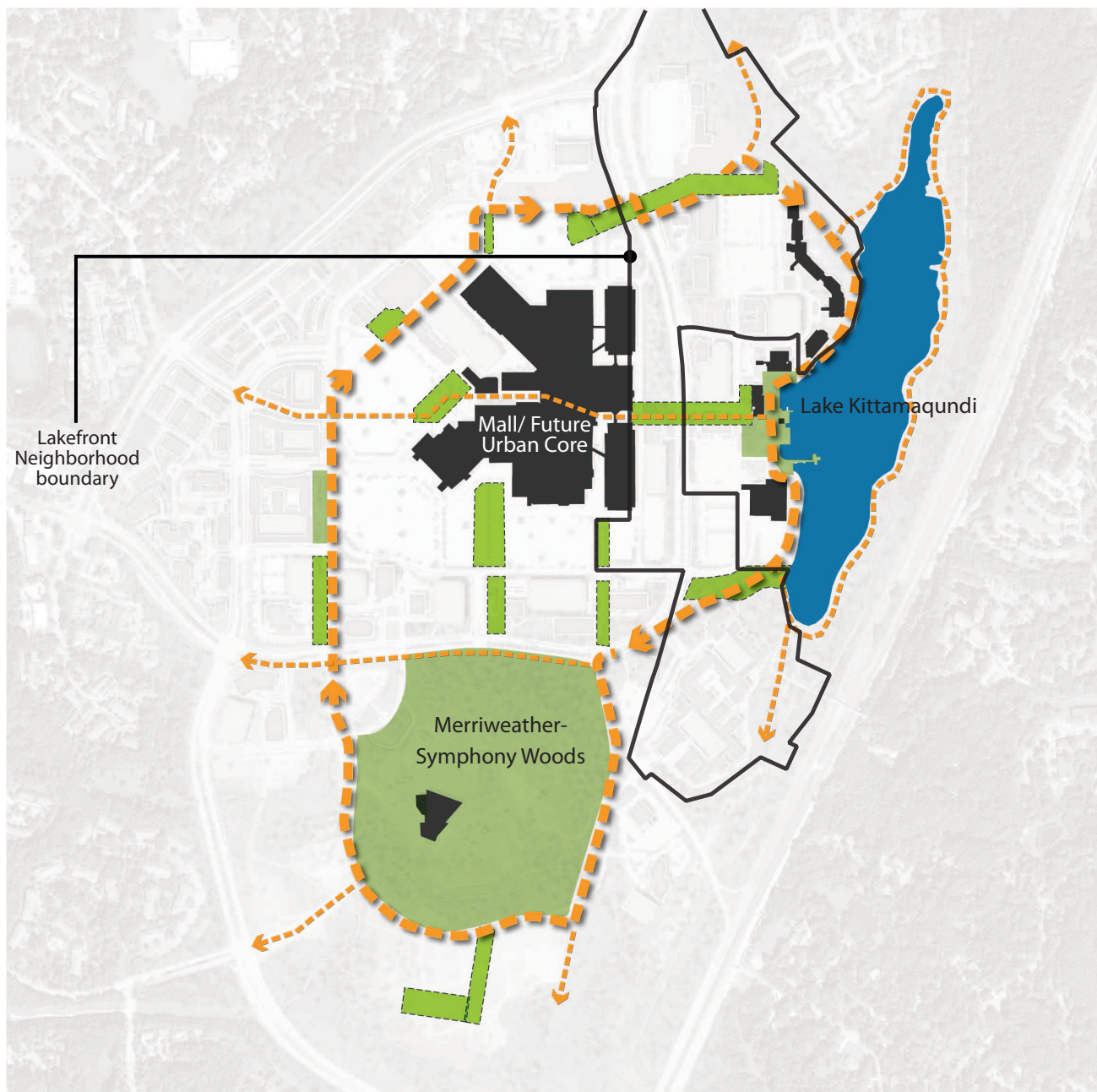
4.0 AMENITY SPACE

INTRODUCTION
AMENITY SPACE TYPES
MATERIALS AND ELEMENTS

Amenity Space Introduction

Overview

The amenity spaces within Downtown Columbia are integral components of the overall plan and include plazas, squares, greens, mews, promenades, parks and playgrounds, as well as preserved natural areas. From Columbia's inception, Downtown has been envisioned as a setting of natural beauty, with Lake Kittamaquindi and Symphony Woods Park as major attractions within an extensive open space network that serves and connects to all of Columbia. New components of the open space system will create public gathering spaces; provide ideal locations for public art, seating, fountains, and planting; preserve and restore existing streams, wetlands, and woodlands; offer locations for passive and active recreation; establish a Community Commons for each neighborhood; and contribute to the overall character and success of the Downtown. For additional information on the Lakefront Neighborhood amenity space network, see 1.3 The Vision for Lakefront Neighborhood, page 6.



Purpose

The primary purpose of the Amenity Space Criteria for the Lakefront Neighborhood is to guide the design and character of amenity spaces, both primary and secondary, that will be used by the public. The new amenity spaces in the Lakefront Neighborhood, and all neighborhoods, should be designed as a system of places that link to one another and to nearby neighborhoods through a kit of parts as outlined in this document. Variations in amenity space type, size, use, and design should occur within each neighborhood and from neighborhood to neighborhood. The design and character of the Lakefront Neighborhood amenity spaces should support the vision established for the neighborhood (see the Introduction, 1.3 Vision, p. 5-9).

Sustainability Goals

One of the objectives of the development of Downtown Columbia amenity spaces is to create attractive spaces and landscape features that increase biodiversity and provide fresh air and shade from the sun to meet sustainability goals. Using native plants and reducing turf grass and other water intensive plants, reduces the need for potable water for irrigation and supports native birds and pollinators of the mid-Atlantic region. Stormwater runoff will be reduced and improved before leaving the site through best management practices, such as rainwater planters, bioswales, and porous pavement, reducing impurities from stormwater before it drains into the Chesapeake Bay. Trees and plants should be selected and sited to encourage pedestrian use by providing shade and resting areas. Finally, vegetation in amenity spaces should be selected and managed to foster health by limiting the use of pesticides, herbicides, and fertilizers. Landscaping in amenity spaces should be designed and managed to foster sustainable landscape management practices.

Primary sustainability measures for the amenity spaces include:

- Create spaces for active and passive recreation to promote human health and well being.
- For stormwater runoff quality and groundwater recharge, consider using rainwater tree pits, rainwater planters, porous pavement, and vegetated buffer areas. Groundwater recharge is encouraged.
- Limit potable water use in landscape areas; consider harvesting rainwater or filtered grey water from the building for landscape irrigation. Use native and adaptive plants, and, amend and maintain soil health to retain water.
- Maximize site design to reduce building heating and cooling energy use; provide desirable landscape microclimates using landscaping trees within 30 feet of the south facing building facade where practical; and create a diversity of sun and shade areas in amenity spaces.
- Reduce environmental impacts from landscape and site energy; consider reducing energy use by at least 15% from base-line energy use.
- Create a green infrastructure network through urban forestry, soil health conservation, integrated stormwater management, and patches of native habitat.

For reference, the *Downtown Columbia Sustainability Program and Guidelines*, as developed for the *Downtown-wide Design Guidelines*, can be found in Appendix A1.

Components

The Amenity Space Criteria include General Provisions that provide guidance for all of the amenity spaces within the Lakefront Neighborhood. The Amenity Space Framework Diagram shows recommended locations for the amenity spaces in the Lakefront Neighborhood. The Amenity Space Types provide definitions and design criteria as well as illustrative examples. The Material and Element Standards include criteria for the following components of amenity spaces: hardscape, landscape, site furnishings, and lighting.

See also Appendix A.4 Downtown Community Commons Policy, for additional Secondary Amenity Space requirements.

General Provisions

The following general provisions apply to all external amenity spaces.

1. Sustainability shall be a primary criteria in the design and maintenance of all amenity spaces.
2. Stormwater will be treated using Environmental Site Design (ESD) practices to the Maximum Extent Practical (MEP). In general, the landscape as a whole will be employed as a means of reducing stormwater volumes, filtering runoff and recharging groundwater through infiltration practices where possible. If inadequate area is available within the landscape for meeting the ESD volume, rainwater harvesting represents a possible alternative for capturing the difference to meet the MEP. Water stored within cisterns will be managed in accordance with MDE criteria. Elaborating on the proportion of water being used or required is best left for Site Development Plan when footprints and water demands are better known, computations can be presented and ESD concepts developed.
3. Amenity spaces should be open and visible, designed to invite people of various ages and mobility.
4. Amenity spaces should not be overly designed with structures and landscaping that block visibility to storefronts, public art, or important vistas.
5. Amenity spaces should be designed with consideration for adjacent building heights and sun angles during different seasons of the year; plant species should be selected based on site-specific sun exposure.
6. Amenity spaces should be designed for their intended function, i.e., plazas should be designed with adequate amounts of hardscape to accommodate large groups of people, and, large greens/parks should not include excessive amounts of hardscape areas that will generally appear unoccupied and uninviting.
7. Amenity spaces should provide for a variety of seating locations, orientations, and arrangements, including secondary seating in the form of steps, planters, and walls.
8. Place seating where sitters can watch passersby.
9. Seating walls should be approximately 16-18 inches in height.
10. Paving materials and installation methods should take accessibility needs into consideration.
11. Frame views from amenity spaces, where appropriate, to visually link to other areas of Downtown.
12. Amenity spaces shall be maintained by the property owner or pursuant to a maintenance agreement.

Amenity Space Types

The primary amenity space types in Downtown Columbia include:

Green: Greens are large and small spaces available for public use and enjoyment and are typically, but not required to be, defined by building frontages and/or streets. Greens typically consist of more planted landscape areas rather than paved hardscape areas but include paths or sidewalks for pedestrian crossings. Greens are typically informal in their design and help create an identity for areas of the neighborhood outside the core. Greens are spaces for public leisure and informal programming.

Promenade: A promenade is an extended and often celebrated walkway typically providing a formal connection between important destinations, used for spontaneous and active recreation. Promenades often, with some exception, align edges of streets, lawn areas, and/or lakes and watercourses and may include tree allees, gathering areas (plazas along the promenade), small structures, rails (at edges of water), benches, public art, lighting, and decorative paving and stairs. Views should be framed rather than blocked by plantings or structures. Promenades may be designed to facilitate small outdoor events such as festivals, seasonal markets and vendors, and street performers as well as outdoor dining. Provisions for lighting, sound, and similar infrastructure needs should be considered.

Plazas: Plazas are public amenity spaces, typically located at important intersections, trailheads, between buildings along a street or sidewalk, and/or adjacent to important commercial or civic buildings. These spaces are intended as civic gathering spaces and can be used formally or informally by the public. Generally, plazas are circumscribed on all sides by building frontages and/or streets. Plazas may contain large areas of hardscape, as well as, furniture, public art, fountains, and trees. Often located at the core of the neighborhood and intended for large gatherings and events, provisions within plazas for lighting, sound, and similar infrastructure needs should be considered.

Natural Areas: Natural areas are reserved for the protection and enhancement of environmental resources including lakes, streams, wetlands, buffers, woodlands, steep slopes, floodplain, and similar environmentally-sensitive areas that often will connect to the aforementioned Amenity Spaces. The largest and most significant natural areas in Downtown Columbia include the Little Patuxent River and Lake Kittamaquidi. Certain areas may be conducive to recreation including hiking, jogging, and biking and may help to link to the Downtown amenity space network. Additionally, trails and Shared-Use Paths (SUPs) within the Lakefront Neighborhood will help to connect the various development parcels separated by natural areas.

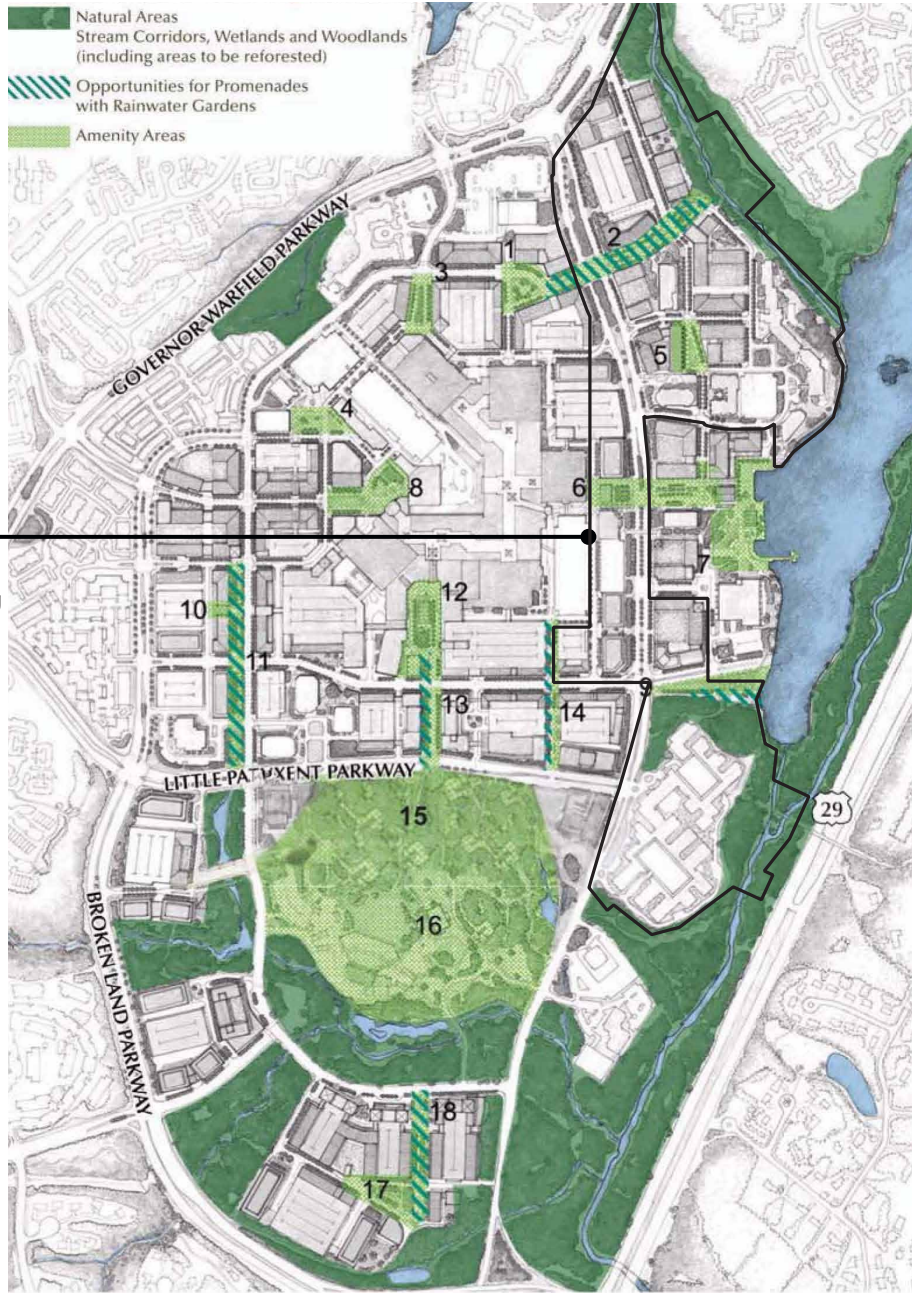
See Appendix A.4 Downtown Community Commons Policy, for additional Secondary Amenity Space requirements.

Per Exhibit G, Primary Amenity Space Framework Diagram, from the *Downtown Columbia Plan*, the following Primary Amenity spaces are required in the Lakefront Neighborhood. Amenity Space square foot (sf) area is calculated from face of curb to face of building and includes walkways, fountains, public art, and similar elements, but excludes any drive lanes intended for vehicular use.

- Warfield Promenade no minimum area requirement
- Wincopin Green 4,100 sf (0.09 acres)
- Lakefront Terrace 43,500 sf (1.00 acres)
- Lakefront Connection area requirement to be based on a linear distance percentage of 68,600 sf

A minimum of 5% Net New Downtown Community Commons shall be provided, per Section 125.A.9.g.4 of the Howard County Zoning Ordinance. The 5% Community Commons may be a combination of both Primary and Secondary Amenity Spaces. Final locations and configuration will be determined at the Site Development (SDP) phase.

Amenity Space Types



Downtown Columbia Plan - General Plan Amendment; Primary Amenity Space Framework Diagram

* Final square footage, location, and design of each new Amenity Space will be determined at the SDP phase

	Net new SF		Net new SF		Net new SF
1. Warfield Green.....	15,500 sf	7. Lakefront Plaza.....	(existing)	13. Symphony Promenade.....	11,300 sf
2. Warfield Promenade.....	(TBD)	8. Warfield Plaza.....	11,300 sf	14. East Promenade.....	(TBD)
3. Warfield Mews.....	7,600 sf	9. Lakefront Terrace.....	43,500 sf	15. Symphony Woods Park.....	(TBD)
4. Warfield Square.....	12,900 sf	10. Warfield Playground.....	6,000 sf	16. Merriweather Park.....	(existing)
5. Wincopin Green.....	4,100 sf	11. West Promenade.....	63,800 sf	17. South Crescent Park.....	25,300 sf
6. Lakefront Connection.....	68,600 sf	12. Market Square.....	30,700 sf	18. South Crescent Promenade.....	11,000 sf

The *Downtown Columbia Plan, General Plan Amendment*, shown above, indicates that the Lakefront Neighborhood’s amenity space network will include the Warfield Promenade, Wincopin Green, and Lakefront Terrace, as well as Natural Areas. The Lakefront Neighborhood Amenity Space Plan is guided by this intent and locates the three required primary amenity spaces within Lakefront Neighborhood (with some minor location shifts to accommodate new existing conditions, as noted on pages 78-80), along with the neighborhood’s required 25,000 sf Community Commons.



Lakefront Neighborhood Amenity Space Plan

PRIMARY AMENITY SPACES:

- A** WARFIELD PROMENADE
- B** WINOPIN GREEN
- C** LAKEFRONT CONNECTION
- D** LAKEFRONT TERRACE
- NATURAL AREAS
- EXISTING TRAIL/PATHWAY
- PROPOSED TRAIL/PATHWAY

REQUIRED 5% MINIMUM NET NEW DOWNTOWN COMMUNITY COMMONS* 113,714 sf
 Less Proposed Primary Amenity Spaces (84,902) sf
 Required Secondary Amenity Spaces (min.) ** 28,812 sf

* Downtown Community Commons provided in excess of the 5% requirement can be credited towards the Downtown Community Commons obligation on a subsequent FDP per Section 125.0.A.9.g4(g).

** Secondary Amenity Spaces will include the Neighborhood Square and any other spaces that meet the criteria of the Downtown Community Commons Policy (see Appendix A.4). The secondary amenity spaces shown hereon are for illustrative purposes only; the final location, configuration, size, design and character of these spaces will be shown on the applicable Site Development Plan(s) and will vary from what is shown hereon.

Warfield Promenade, Neighborhood Square and Wincopin Green (Plaza)



Precedent: Hardscape and landscape along the promenade should create a formal, active corridor linking the Mall to the Lakefront.



Precedent: Where the Wincopin Promenade joins the Neighborhood Square, the site furnishings and plantings should transition to become less formal.

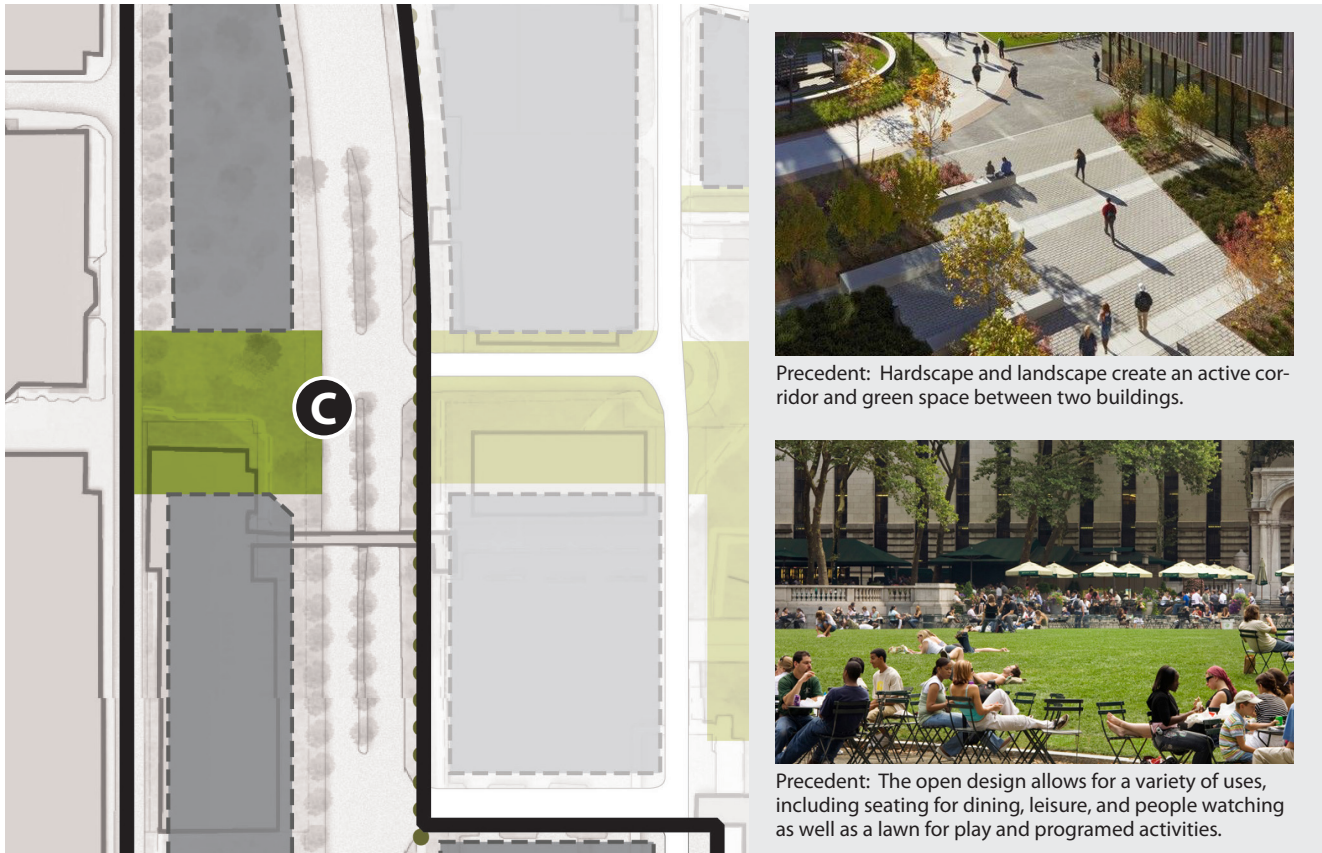
Warfield Promenade, Neighborhood Square, and Wincopin Green (Plaza) Diagram & Precedent Images - For illustrative purposes only

A Warfield Promenade & Neighborhood Square: The Warfield Promenade is located on a Primary Pedestrian Street and is envisioned as a connection between the Mall and the Lakefront Neighborhoods, with a wide sidewalk, or Promenade, along the north side of Sterrett Place, to shade pedestrians with a double row of trees. Tree and any vertical structure placement and selection should consider framing and directing, rather than obstructing, views east or obscuring the adjacent retail frontage. A formal alley of trees, limbed to 8 feet clear of the sidewalk, along with low plantings are preferred in this area. Site furnishing should create moments of interest and rest along the route. The Neighborhood Square terminates the Promenade to the east adjacent to the natural area with the stream and woods as a backdrop. The Square is envisioned as a large gathering place, accommodating both spontaneous activities and programmed neighborhood events. A connection to the existing Lake-to-Lake-to-Lake Trail will continue to the east, bridging the stream (if approved by the Maryland Department of the Environment (MDE)).

B Wincopin Green (Plaza): Wincopin Green (Plaza) is envisioned as a corner plaza located at the intersection of the northern extension of Wincopin Circle and Sterrett Place. Anchoring Wincopin to the north, the Plaza along with the Promenade and Square form a counterpart to the Lakefront Plaza and Whole Foods to the south. These dynamic points of interest north and south along Wincopin will help create a welcoming, vibrant streetscape essential to revitalization of the Lakefront. In the Downtown Columbia Plan, Wincopin Green was envisioned as a passive, triangular amenity space along the northern extension of Wincopin Circle, a block south of Sterrett Place. Due to the realignment and straightening of Wincopin to avoid terminating the street on a service area of the newly-constructed Little Patuxent Square development, the jog that formed the triangular green was removed. Therefore, Wincopin Green evolved and was reimagined as a Plaza one block north. In its new location, the plaza will be a passive gathering space off Wincopin Extended where shade trees, seating, and outdoor dining can occur adjacent to the space.

For all amenity spaces, walkways and hardscape elements should be pervious where suitable and should consider accessibility concerns. Pavers with higher Solar Reflectance Index (SRI) values are preferred. Lighting, site furnishing, and/or public art elements should also be incorporated, consistent with the design character of the spaces. Where the Promenade joins the Square to the east, the site furnishings, plantings, public art, and similar amenities should transition to become less formal and more expressive, relating to the Square's use and its adjacency to the natural area.

Lakefront Connection



Precedent: Hardscape and landscape create an active corridor and green space between two buildings.

Precedent: The open design allows for a variety of uses, including seating for dining, leisure, and people watching as well as a lawn for play and programmed activities.

Lakefront Connection Diagram and Precedent Images - For illustrative purposes only

C Lakefront Connection:

Lakefront Connection is envisioned as a connection between the Lakefront and Lakefront Core Neighborhoods and specifically from the Mall to Columbia's esteemed Lake Kittamaquidi. A signalized pedestrian crossing at Little Patuxent Parkway may be desirable to ensure a safe route from the Mall to the Lake.

An Attached Green by type, this Primary Amenity Space spans eastward across Little Patuxent Parkway, from the Mall's east entrance towards the Teachers Building and the Lake, providing a connection to Lakefront Plaza. The portion within the Lakefront Neighborhood is located between the Mall and Little Patuxent Parkway; the existing 10320 Little Patuxent Parkway building holds the southwest corner with sloping lawn to the north and east.

The space will be punctuated and defined by a wide green which will feature seating and attractive landscape for people watching, strolling, and informal public gathering. The space should support a variety of uses for shoppers, residents, office workers, and visitors, as well as enhance the retail environment planned in the adjacent buildings. Accommodation of planned and spontaneous activity should be considered in the design of this space. Site furnishing should create intimate moments for interaction and leisure. Tree placement and selection as well as the selection or design of any vertical structures should consider framing and directing, rather than obstructing, views towards Lake Kittamaquidi. Native meadow style plantings are preferred in this area for aesthetic intent and sustainability.

Walkways and hardscape elements should be pervious where suitable and should consider accessibility concerns. Pavers with higher Solar Reflectance Index (SRI) values are preferred. Lighting, site furnishing, and/or public art elements should also be incorporated, consistent with the design character of the space.

(See page 83-94 for additional information regarding amenity space hardscape, lighting, and site furnishing criteria.)

Lakefront Terrace



Precedent: Terraced steps and ramps will be required to transition down the slope to the lake.



Precedent: Tree placement should consider framing and directing, rather than obstructing views east towards the lake.

Lakefront Terrace Diagram and Precedent Images - For illustrative purposes only

D Lakefront Terrace:

Lakefront Terrace is envisioned and described in the *Downtown Columbia Plan* as a major visual connection from the Symphony Overlook Neighborhood to Lake Kittamaqundi and will provide pedestrian access from Little Patuxent Parkway to the water's edge. As envisioned, moving west to east, a lawn area will transition to a series of terraced steps and ramps passing through wildflower gardens down to the lake and trails.

It should be noted that this area contains steep slopes and stream buffers and may need to evolve as environmental constraints are investigated further and discussions with the County and Maryland Department of the Environment (MDE) occur. The final location of the Lakefront Terrace and/or a determination of its constructability will be determined at the time of SDP review or in connection with a request for alternative CEPPA compliance.

Landscape plantings should be informal and incorporate native and adaptive plantings. Tree placement and selection as well as the selection or design of any vertical structures should consider framing and directing, rather than obstructing views east towards the Lake. Similarly, seating and other site furnishings should be placed to enjoy rather than block views, with seating placed at areas of rest and accompanied by shade trees where appropriate. Other structures such as tents can be temporarily located in the lawn area to the west, for events or festivals.

See page 83-94 for additional information regarding amenity space hardscape, lighting and site furnishing criteria.



Plazas

In Lakefront Neighborhood, plazas are envisioned as public amenity spaces that provide for both programmed and impromptu activities. The main plaza for all of Downtown is and will remain the Lakefront Plaza. Other smaller plazas, as secondary amenity spaces, may be located at important focal points, intersections, along sidewalks with heavy pedestrian traffic, and near commercial or civic uses to provide additional support space.

See p. 41, Bicycle Circulation Plan, for additional information.

Plazas shall generally be mostly hardscape, activated by both planned and spontaneous activities, and attached minimally on one side. Plazas may contain large areas of durable hardscaping as well as furniture, public art, water features, and trees, all formally arranged.

Size: 1/8–1 acre

Natural Areas

Natural areas within and surrounding the Lakefront Neighborhood include stream corridors and other features that should be preserved and enhanced. These areas within the neighborhood are reserved for the protection and enhancement of environmental resources including streams, wetlands, buffers, woodlands, steep slopes, floodplain, and similar environmentally-sensitive land.

The natural areas within the Lakefront Neighborhood are envisioned to include pathways as trails or boardwalks (where required) to strengthen the pedestrian and bicycle connections through the neighborhood, as well as, the overall Downtown Columbia open space network.

Natural areas generally consists of a landscape that acts as a vegetated buffer protecting natural habitats and environmentally sensitive areas. Trails within the natural areas may be paved or unpaved and accommodate a variety of users including walkers, joggers, and bicyclists. Boardwalks may be installed to span streams, wetlands, and other sensitive areas where required by Maryland Department of the Environment (MDE). All paths through natural areas are subject to MDE approval.

Size: There is no minimum size requirement for the natural areas within the Lakefront Neighborhood.

Amenity Space: Material and Element Standards

Overview:

The purpose of the Amenity Space Material and Element Standards is to ensure and maintain a consistent, high-quality built environment across the Lakefront Neighborhood as a new mixed-use neighborhood which supports the vision for the redevelopment of Downtown Columbia and exemplifies the character and experiences of the best urban spaces.

The criteria on pages 83-94 apply to all planned Amenity Spaces including Primary and Secondary Amenity Spaces.

The Material and Element Standards include criteria for the following components of amenity spaces:

- Hardscape
- Landscape
- Site Furnishings
- Lighting

Internal or Rooftop Amenity Space: In accordance with the Downtown Community Commons Policy (See Appendix A.4 for the full policy), permanent internal or rooftop space that is available for public use and which supports community interaction and public gathering, performance, viewing, spontaneous and planned use, pause, rest, or play may be considered on a case-by-case basis for credit towards Downtown Community Commons requirements. Such space may be publicly or privately owned and must be accessible to all segments of the public without charge. Although such space must be permanently available as an amenity to the community, specific uses, artistic displays, performances and similar elements may vary over time, provided the space is available to the public without charge and is intended to support community interaction and gathering. Internal and rooftop amenity spaces must be open during normal business hours except for temporary closures for exhibit rotation, special events, and similar activities. Appropriate directional signage must advise the public of the presence of the community amenity space and its location. **See Appendix A.4 Downtown Community Commons Policy, for additional Secondary Amenity Space requirements.**

All applicable building codes, laws, Acts, life safety codes, ADA, environmental regulations, development approval processes, Howard County, State, and Federal regulations and permitting processes, and similar regulations must be adhered to and are not superseded by the *Lakefront Neighborhood Design Guidelines*.

Developers shall follow the alternative compliance procedures found in the Howard County Landscape Manual and submit landscape plans prepared by a registered landscape architect certifying that the landscape plans meet the design intent specified in these guidelines, including plant species selection or comparable alternative.

Throughout the *Guidelines*, the use of the word “shall” identifies mandated criteria. “Must,” “required,” and “mandated” are additional words with the same meaning. The use of the word “encouraged,” “should,” or “recommended” identify criteria which are highly desired. In some instances, words such as “discouraged,” “avoid,” and “not permitted” identify practices, materials, or systems which are not allowed in the Lakefront Neighborhood redevelopment.

Overview:

Throughout the Lakefront Neighborhood, various paving types shall be employed to denote the different zones and uses of hardscape areas. For example, where a sidewalk adjoins a plaza seating area, a change in paving type differentiates a movement zone from an area of rest. The hierarchy of spaces is encouraged to be reinforced through the creative, yet restrained, use of different paving options by varying material, pattern, color, and/or texture. Unlike the more uniform streetscape, hardscape areas within amenity spaces are encouraged to differ from and contrast with the typical street sidewalk paving. Hardscape areas within amenity spaces shall contribute to the overall design intent and character of the space and compliment the adjacent architecture (see Amenity Space Types p. 75-81 and Architecture Section 5.0)

Materials:

Hardscape shall be constructed of concrete or brick pavers, stone, exposed aggregate concrete, or brushed concrete. Porous pavement systems are encouraged where appropriate, however, pervious asphalt is not allowed in amenity spaces (with the exception of Shared-Use Paths when approved by the County). Shared-Use Paths along the front of development blocks shall be concrete. Local materials are encouraged and should be selected when feasible. Lightly colored or high albedo materials for paved surfaces are encouraged for reducing heat absorption with knowledge and sensitivity to the visual appearance and effect for the inhabitants of the space.

Details:

Hardscape paving materials shall meet or exceed all mobility and accessibility requirements. Changes to paving material, pattern, color, and/or texture should occur, but are not excluded to, between different zones and uses of the amenity space areas.

Trails

The Lakefront Neighborhood trail system comprise both at-grade paths as well as boardwalk sections and shall be a minimum of 10' wide. All trails through natural areas are subject to MDE approval.

Materials: At-grade paths shall be asphalt (except for Shared-Use Paths along the front of development blocks which shall be concrete). For boardwalk portions of the trail, the superstructure should have a recycled/composite walking surface and, where a rail is required, a combination wood and metal should be used. Where the boardwalk approaches grade and a rail is not required, a low curb of wood or metal may be used. Alternatively, a pressure-treated wood or reclaimed hardwood may also be suitable for the walking surface. The boardwalk substructure is envisioned to be steel screw piles.



Overview:

Throughout the Lakefront Neighborhood, various tree and plant types shall be employed to denote the different zones and uses of landscape areas. For example, shade trees shall be used to shelter seating areas, long swathes of perennials or grasses may edge movement zones, and grass lawn areas may occur in quiet, informal gathering areas. The hierarchy and character of each open space is encouraged to be expressed through the creative use of different plant materials (see Amenity Space Types). Tree species used for street trees shall not be employed randomly (out of alignment along the street edge) in adjacent open spaces (see Street Design section). With a focus on native and adaptive plantings, the criteria below shall guide the plant material palette for the amenity spaces. Vegetation on the list of Maryland Species of Concern shall not be used.

Shade Trees: ①

Tree Crown: Density of tree crowns should be considered when choosing tree species and used where appropriate. Crown density and spacing of trees can negatively affect street lighting, cleanliness, shade density, sight lines to retail and buildings, and safety, when used inappropriately. Shade trees used in plazas, greens, and courtyards should reflect the intended use of the space and balance between ecological function and aesthetic value. Shade trees in amenity areas should consider the desire for adequate filtered sunlight reaching the ground plane and understory plantings. A variety of species and/or sizes at time of planting are desired.

Soil Compaction: Preventing soil compaction should be considered in tree species selection and placement, especially in urban settings. Avoidance of excessive movement over tree root zones and the use of root protection materials (such as Silva Cells or other MDE approved systems) should be considered, to allow stormwater infiltration and promote tree longevity.

Color and Texture: Color variation and textural qualities should be noted and considered when selecting certain shade trees. A variety of seasonal color and/or seasonal color varying among amenity spaces should be considered. Certain species have been cultivated to be thornless, fruitless, disease and insect resistant, and are preferred in high-use and stressed environments. Shade trees known for excessive plant litter and weak limbs should be avoided in high-use pedestrian and vehicular areas, in order to prevent injury and utility damage. In these high-use areas, shade trees should be pruned to not impair specified circulation routes for pedestrians, cyclists, and vehicles.





Zone Hardiness: Appropriate hardiness of shade tree species should reflect the climate zone of the intended planting area. Although the site's climate zone may be consistent, microclimates within the site may exist and will inform specific plant selection based on sun exposure, slope, and soil condition.

Rainwater Planters and Tree Pits: Trees should be able to withstand both heavy water inundation and drought conditions.

Growth Habit: Trees known for root upheaval, water sprouts, or knees should be planted in areas away from pedestrian movement, to prevent personal injury or circulation disruption (unless alternative root protection, root barrier, or root growth methods are implemented). Invasive trees should be avoided to prevent spread of noxious seeds, roots, or rhizomes (refer to local invasive plant species list). Appropriate scale of the shade trees' eventual growth (both eventual height and root mass) should be taken into consideration when deciding tree species, spacing, and proximity to buildings, parking, and utilities.

Biodiversity: A variety of trees should be used to promote local bio-diversity and healthy resiliency against insects and diseases. In an urban setting, for both streetscape and amenity areas, the same tree genus should not be used for more than approximately ten percent of the entire planting design.

The Standards for Street Trees (i.e., trees along a street curb line) differ from Amenity Space trees; **for Street Tree requirements, see p. 54.**

Specimen/Ornamental Trees: ②

Tree Crown: The crown and density of specimen/ornamental trees will vary greatly. Selection and placement/spacing of trees should support the desired design aesthetic, whether in small clumps for accent, in rows to reinforce linear references, or in random/organic patterns to strengthen a natural aesthetic. Specimen trees may be used to denote a place of significance, frame views, accentuate a façade or sculptural piece, or add visual and seasonal variation to a planting area. Specimen/ornamental trees should not be overused. Appropriate scale of specimen/ornamental trees, eventual growth (both eventual height and root mass) should be taken into consideration when deciding tree species, spacing, and proximity to buildings, parking, and utilities.

Soil Compaction: Same as above, under Shade Trees.

Amenity Space: Landscape

Color and Texture: “Specimen/ornamental tree” refers to any tree specially noted for its high visual quality of bloom color, foliage color, texture, visibility, or placement in the landscape. Typically, specimen/ornamental trees are lower growing trees, single or multi-stemmed, which can be planted in massings, small clusters, individually, or in large planters. Specimen/ornamental trees are noted for flowers, color, and texture. Avoid overuse of specimen/ornamental trees that bloom at the same time of year and consider a staggering of species and bloom times that last for different durations and begin and end at different times.

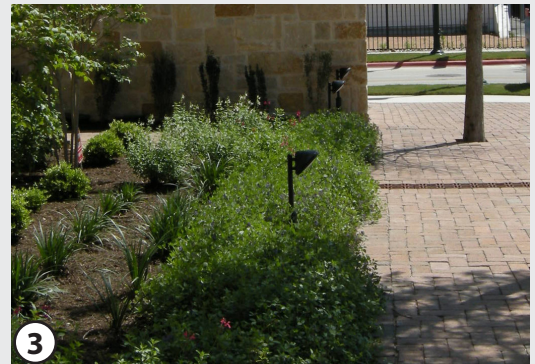
Zone Hardiness: Same as above, under Shade Trees.

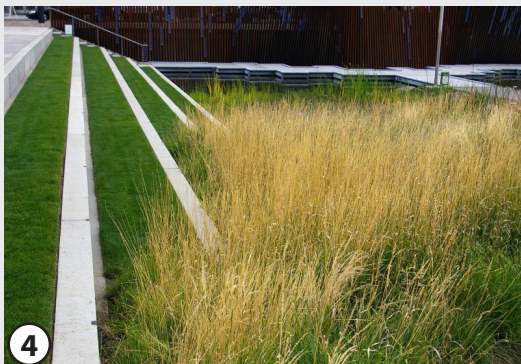
Growth Habit: Invasive trees should be avoided to prevent spread of noxious seeds, roots, or rhizomes (refer to local invasive plant species list). Trees known for root upheaval, water sprouts, or knees, should be planted in areas away from pedestrian movement, to prevent personal injury or circulation disruption (unless alternative root protection, root barrier, or root growth methods are implemented). Those with fragrant flowers may attract stinging insects and should be located an appropriate distance out of reach from pedestrians. Maintenance costs and considerations should be weighed when choosing ornamental tree species that require constant attention.

Biodiversity: Same as above, under Shade Trees.

Shrubs: ③

Design Objectives: Planting areas, massings, and large planters are typically the best locations for shrubs. They may be used to control circulation by guiding the movement of pedestrians and cyclists. Shrubs may be used for screening against views, wind, sun, and similar. Shrubs should grow to (or be maintained at) a height that will not obstruct views, block visibility, or create unsafe areas. Shrubs should be spaced for eventual growth and expansion, depending on size of the plant upon installation. Evergreen and deciduous shrubs should be used to create year-round range of colors, textures, and interest in the landscape. Shrubs used in masses or as hedges should be of the same genus and species and not intermixed. However, intentionally naturalized areas or designs that intend to mimic a more organic or natural environment may be mixed.





Color and Texture: A variety of evergreen and deciduous shrubs are recommended. Leaf color, texture, and flowers, as well as growth habit, should be varied and selected to support a particular design aesthetic. A shrub’s fragrance, whether pleasant or odious, should be considered; unpleasant fragrant shrubs should be avoided.

Zone Hardiness: same as above, under Shade Trees.

Growth Habit: Shrubs with poisonous berries or shrubs that attract stinging insects should be located an appropriate distance out of reach from pedestrians and children. Importantly, shrub plantings around playgrounds and playscapes shall avoid thorns, bright berries, and insect-attracting flowers. Invasive plants should be avoided to prevent spread of noxious seeds, roots, or rhizomes (refer to local invasive plant species list).

Rainwater Planters: Shrubs should be able to withstand both heavy water inundation and drought conditions.

Biodiversity: Same as above, under Shade Trees. Native and drought tolerant shrubs are desired.

Grasses and Perennials: 4

In this section, “grasses” refers to a blend of native and ornamental grasses other than sod. Grasses and perennials may be planted in massings, clusters, grids, or borders, but should not be planted alone unless in planters or pots. A blend of non-invasive, native, and exotic grasses should be used to exhibit regional character while adding exotic interest and variety. Grasses that grow above 48” should be avoided for security and wildlife issues.

Growth Habit: Invasive plants should be avoided to prevent spread of noxious seeds, roots, or rhizomes (refer to local invasive plant species list).

Rainwater Planters: Grasses intended for rainwater planters should be able to withstand both heavy water inundation and drought conditions.

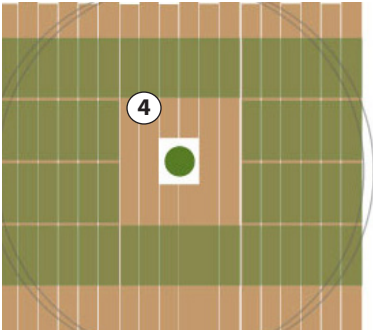
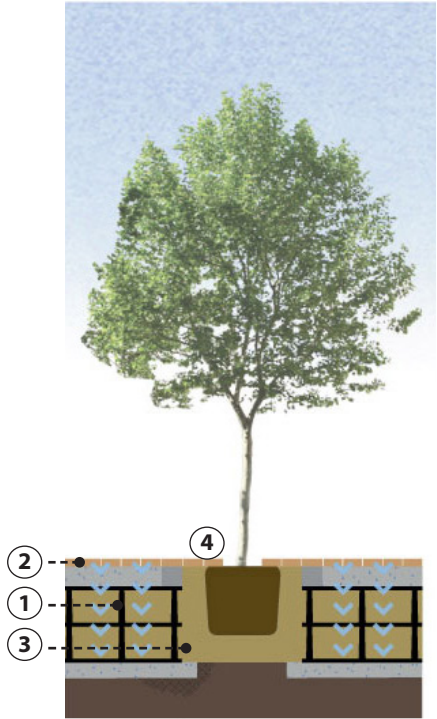
Rainwater Tree Pits

Rainwater tree pits, as illustrated on the facing page, can provide two advantages over the typical tree pit: longevity and stormwater infiltration. Rainwater tree pits capture and infiltrate stormwater along a street. When combined with a structural grid (such as Silva Cells or other MDE approved system) the capacity to capture rainwater is increased, creating a cavity to store additional water while allowing tree root growth. The structural grid supports the hardscape and pedestrian or vehicular loads above while keeping the soil around tree roots from compacting and stunting the growth of the tree.

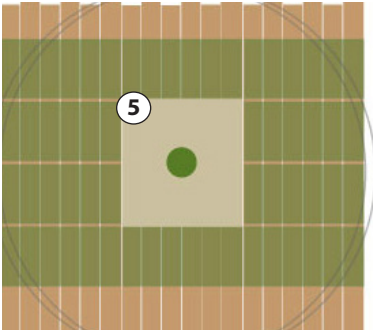
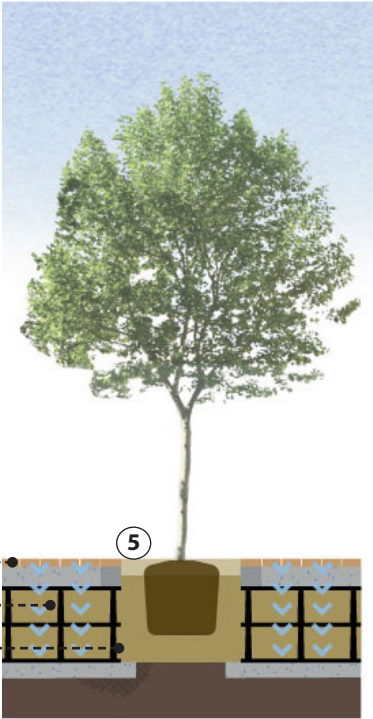
Details:

Rainwater tree pits can be detailed in three ways, with tree grates, permeable pavers, or plant materials at the surface (see images on the facing page). The method should be chosen appropriate to the volume of pedestrian traffic, the surrounding materials, and soil conditions.

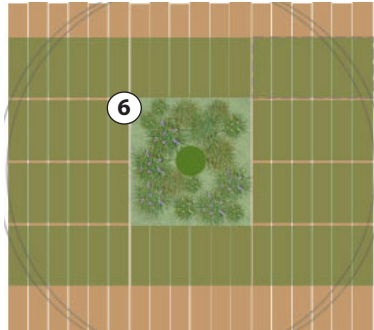




Rainwater Tree Pit: Pavers



Rainwater Tree Pit: Grates



Rainwater Tree Pit: Plantings

- ① Silva Cell or other MDE approved systems
- ② Permeable Sub-base
- ③ Uncompact Soil Media
- ④ Permeable Pavers
- ⑤ Grates
- ⑥ Plantings

Benches, Tables, and Chairs

Outdoor seating is an important element in a vibrant, urban neighborhood, providing places for social interaction and recreation. When outdoor seating is comfortable, clean, and convenient, visitors will be encouraged to stay and enjoy Downtown. Benches, tables, and chairs within the Lakefront Neighborhood amenity spaces, away from the street edge, shall be differentiated from the typical street furnishings. Whereas the street furnishings shall be uniform and consistent throughout Downtown, furnishings within the amenity spaces shall be unique and expressive of the overall composition and character of the space. Opportunities for benches to serve as public art pieces are strongly encouraged, as are a variety of styles, materials, and colors. Restaurants are encouraged to select furniture which reflects their individual design.

Materials: Benches shall be metal (aluminum, steel, or cast iron), a combination of wood and metal, stone, or other durable material. Materials with a high percentage (75% or more) of recycled content are encouraged. Other materials may be used for benches that serve as public art by special exception.

Details: Benches should be surface-mountable or able to be embedded in paving. Tables and chairs may be either permanently placed/mounted or moveable. Seat height and armrests should be considered depending on the expected population.

See criteria for individual Amenity Space Types on pages 75-81.



Fountains/Water Features



Water features may be incorporated into the Lakefront Neighborhood amenity spaces to act as focal points and public art. Beyond simply adding visual interest, water features may be used to activate a space or create white noise. Water features shall be designed to be integral to the overall composition and character of the open spaces. Integrating rainwater harvesting and use within the water features design is encouraged.

Materials: Water features shall be constructed of long-life, durable materials.



Details: Water features are encouraged to be designed with consideration of year-round attraction and amenity and shall be designed in consideration of safety, accessibility, and maintenance.

See criteria for individual Amenity Space Types on pages 75-81.

Pots and Planters



Pots and planters should add interest, color, and pedestrian scale to the amenity space. Low-maintenance planters with perennial and annual plantings are highly encouraged throughout the Lakefront Neighborhood, but shall be appropriate to the overall design of the amenity spaces in which they occur. Moveable pots and planters shall be used where permanent planters may limit the versatility and use of an open space.

Details: Pots and planters shall be of a durable, low maintenance material. Materials with a high percentage (75% or more) of recycled content are encouraged. Pots and planters shall not impede pedestrian circulation or block visibility.



Bollards

Bollards shall be used in amenity spaces primarily to protect pedestrians from vehicles, but may also be used to add visual interest and provide ground-level lighting. Sculptural and artistic bollards are encouraged where appropriate.

Details: Bollards shall be of a durable, low maintenance material. Bollards may be permanent or removable, depending on the desired limits of access. Removable bollards are recommended where possible in order to provide maximum flexibility.

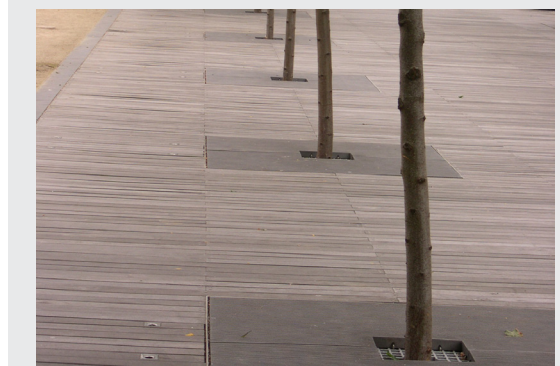


Tree grates

Tree grates are appropriate in amenity spaces with high pedestrian traffic. In the Lakefront Neighborhood, tree grates should be used near transit stops, plazas, and other appropriate locations. As part of the streetscape, tree grates shall be consistent throughout Downtown; when used in the Lakefront Neighborhood amenity spaces away from the street edge, tree grates may be of a different design coordinated with the amenity space character. Consideration of tree growth should be considered when designing tree grates. Removable rings or removable portions of the tree grate are desired.

Materials: Tree grates shall be metal (steel, aluminum, or cast iron). Materials with a high percentage (75% or more) of recycled content are encouraged.

Details: Tree grates shall be properly maintained and cleaned for the safety of visitors and for the welfare of the trees they protect.



Waste/Recycling Stations

Materials: Waste and recycling receptacles shall be metal or a combination of wood and metal.

Details: Waste and recycling receptacles shall be coupled together and shall be conveniently located in all public amenity spaces. For sanitation purposes, receptacles shall have a rain guard over the main opening and shall conceal the main recycling or trash container.



Smoking Receptacles

A non-smoking environment is the goal of the Lakefront Neighborhood; however, proper disposal of tobacco products is necessary to avoid littering and fire hazards.

Materials: Smoking receptacles shall be metal.

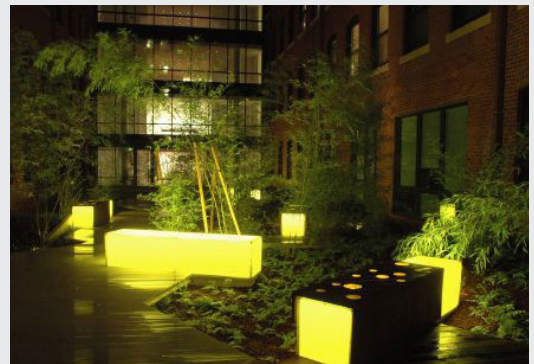
Details: In most instances, smoking receptacles shall be placed adjacent to or nearby waste receptacles. Any exterior designated smoking areas shall be located at least 25 feet away from building entries, outdoor air intakes, and operable windows.



Amenity Space: Lighting

Lighting in amenity spaces shall change in scale and type according to the adjacent use and the scale and character of the space. Light fixtures used as standard types for streets shall not be employed randomly (out of alignment, away from the street edge) in adjacent amenity spaces (see Street Design, page 68). A variety of lighting types are encouraged in amenity spaces and may include pole-mounted, bollard, sconce, step, and similar types. Artistic and atmosphere-enhancing lighting is encouraged.

Materials: All light poles and fixture housings shall be metal. All lighting fixtures are encouraged to be Dark Sky compliant, as defined by the International Dark Sky Association (IDA). Lamp color and quality should be Ceramic Metal Halide, 80+ CRI, and 3000 to 3500 K. For these pedestrian-scale area lights, lamping of 70-100 watts shall be used. Alternatively, LED fixtures are encouraged with a lamp color near 4000 K.



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5.0 ARCHITECTURE

INTRODUCTION
BUILDING TYPES
BUILDING FORM
STOREFRONT STANDARDS
MATERIALS & ELEMENTS

Architecture Introduction

Overview

The Design Guidelines include architectural criteria to ensure and maintain a consistent, high-quality built environment in the Lakefront Neighborhood as a new and revitalized mixed-use neighborhood that respects the surrounding built and natural context, supports the vision for the redevelopment of Downtown Columbia, and exemplifies the character and experience of the best downtowns in the United States.

Purpose

The purpose of the architectural criteria is to guide the design and character of all built structures in the Lakefront Neighborhood. The criteria include both text and diagrams that specify: 1) acceptable building materials, 2) methods of application or configuration of the materials, and 3) acceptable techniques for construction.

Sustainability Goals

Per the *Downtown Columbia Sustainability Program*, buildings within the Lakefront Neighborhood shall be designed to holistically address sustainability. A balanced approach is desired; each project shall aim to be environmentally sound, functional and effective, and financially viable. Buildings shall be healthy and good stewards, using natural resources, such as water and energy, efficiently. In addition to being healthy and good stewards, sustainable buildings create spaces that are comfortable, engaging, beautiful, and inspiring.

Displays explaining the green building systems and facilities should be visible in buildings and shall be educational and engaging, facilitating the participation of tenants, employees, residents, and visitors in sustainable practices.

Per agreement with Howard County, all new construction by HRD shall achieve LEED certification from the US Green Building Council of a certified-level rating or higher, with LEED Silver targeted where economically feasible. The Leadership in Energy and Environmental Design (LEED®) Green Building Rating System™ is a nationally accepted benchmark for the design, construction, and operation of high performance, green buildings. It encourages and accelerates global adoption of sustainable green building and development practices through the creation and implementation of universally understood and accepted tools and performance criteria. LEED promotes a whole-building approach to sustainability by recognizing performance in five key areas of human and environmental health: sustainable site development, water savings, energy efficiency, materials selection, and indoor environmental quality.

Additional green building standards or programs may be referenced as well, such as the Living Building Challenge and the Sustainable Sites Initiative.

Primary measures of architectural sustainability include:

- Create buildings which limit impact to natural resources and are healthy for the environment and the people.
- Promote walkable neighborhoods; on primary streets, where possible, a building's street level facade should incorporate wall openings such as windows and doors.
- Improve stormwater runoff quality and groundwater recharge; consider green roofs for a reduction in stormwater runoff through storage, vegetative uptake, evaporation, and plant transpiration.
- Reduce potable water use in landscape areas; consider harvesting rainwater or filtered grey water from the building for landscape irrigation.
- Facilitate and encourage bicycling; provide secure storage in commercial, retail, and residential areas. Further, provide weather-protected bike storage in multifamily residential buildings and in office buildings over 10,000 square feet.

- Reduce building heating and cooling energy use; when possible, orient buildings to maximize southern exposure for passive solar gain and use roof and window shades to screen summer sun on the south, east, and west sides of buildings.
- Reduce impacts from the use of fossil fuels; consider alternative energy production at the building, including solar photovoltaic, solar thermal, and micro wind turbine. Consider using photovoltaic panels as shade structures on building awnings and on the top level of parking structures.
- Integrate building design into the green infrastructure network through integrated stormwater management and patches of native habitat within the urban fabric (including green roofs).
- Avoid material and resource waste; at the design stage, consider to use or plan for the reuse of 90% or more of the purchased or acquired construction materials. Further, design buildings based on material availability and standard dimensions.
- Reduce the embodied energy in materials; consider acquiring 50% or more of construction materials (including site materials) from reused, recycled content, regional, and rapidly-renewable sources.
- Reduce heat island effect; use light-colored and/or high albedo shade structures, pergolas, landscape plantings, and/or photovoltaic arrays over dark-colored and/or low albedo surfaces such as the top level of parking structures.
- Reduce the amount of construction waste sent to landfills; consider diverting 80% or more of non-hazardous construction waste from landfills or incineration.

For reference, the *Downtown Columbia Sustainability Program*, as developed for the *Downtown-wide Design Guidelines*, can be found in Appendix A1.

Components

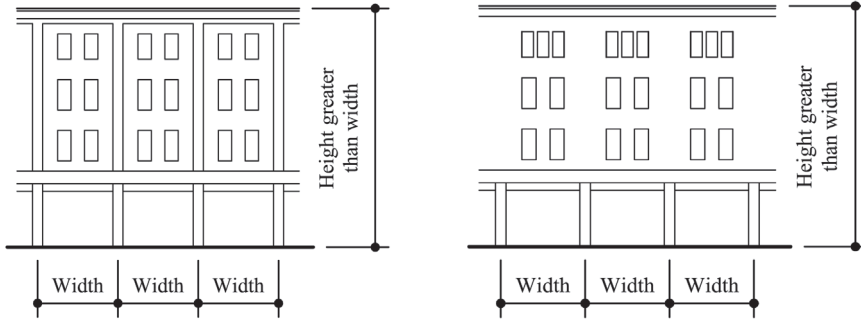
The Architectural Design Criteria comprise the following sections, covering the redevelopment goals for Downtown and standards for the elements of building:

- Building Typologies
- Building Form
- Storefront Standards
- Material and Element Standards

General Provisions

The general provisions below apply to all buildings with the exception of civic buildings:

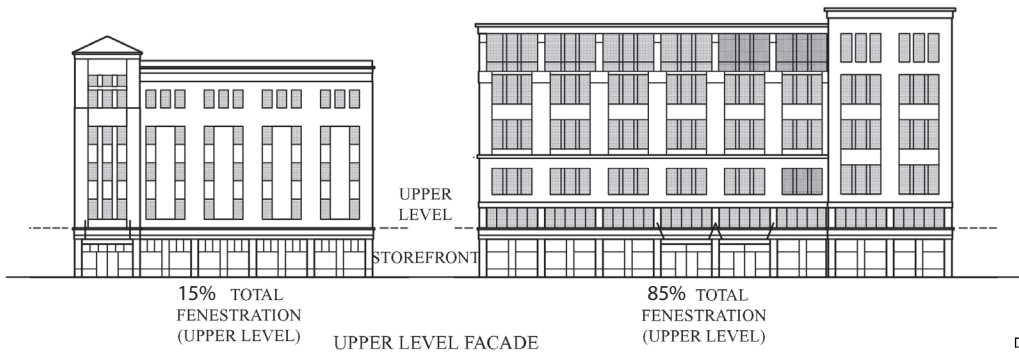
1. Buildings entries shall be located on primary streets (**see Urban Design, pp. 12-13**). Further, along Wincopin and Sterrett Place (**see Urban Design, pp. 8-9 and 18-19**), active building frontage (which may include retail, restaurant, lobby, interior amenity space and similar active uses) shall occupy the buildings' ground floors. In the Lakefront Neighborhood, due to the proximity of two parallel primary streets (Little Patuxent Parkway and Wincopin Circle), retail and restaurant space should only be located where viable and should be weighted to the Lakefront side. Where buildings front a secondary street, they are not required to have active building frontage at the ground level.
2. Buildings exceeding 120 feet in any horizontal dimension shall set up an implicit or explicit system of bays. Implicit systems use window groupings in the base, intervening floors, and the cornice area to denote bays. Explicit systems use columns or pilasters on the principal facade to accentuate smaller increments and individual storefronts. Implicit systems use material changes horizontally and within the base of the building or storefront to accentuate smaller increments. **②**
3. The frontage elevations of all buildings should be divided into architecturally distinct sections in which the height is equal to or greater than the width, using material changes, window groupings, columns, or pilasters to create vertically proportioned bays, as appropriate to the architectural character.
4. Entrances should be visually identifiable within the facade and articulated within the base or bays in which they occur.
5. Corners of buildings at important intersections are encouraged to have special articulation, such as a change in fenestration, a change in the height of the base or top, a change in material, or similar. (See also Urban Design, p.18)
6. Ground floors shall have a minimum interior ceiling height of 12 feet; 14 feet preferred, excepting residential ground floor area, or parking garages and back of house spaces not visible from the primary facade.
7. No less than 15% nor more than 60% of the upper level facades shall be glazed openings in residential. No less than 40% nor more than 90% of the upper level facade shall be glazed openings in office. Storefront openings shall be a maximum of 90% glazed openings. **⑦**
8. All buildings shall have a base, middle, top/cap, as follows: **⑧**
 - a. All Downtown buildings should have a clearly defined base that should have a visual appearance of greater height than other floors;
 - b. Buildings 2 to 3 stories in height should have a clearly defined base and an articulated cornice or parapet; these buildings should not have a distinguished middle and top.
 - c. Buildings 4 to 6 stories in height should have a 1-story base, a distinguished middle, and a 1/2 or 1-story top.
 - d. Buildings 7 to 9 stories in height should have a 1 or 2-story base, a distinguished middle, and a 1 or 2-story top.
 - e. An expression line (such as a horizontal band, projecting material, or regulating line) should delineate the division between base, middle, and top. (See Horizontal Elements, p. 112)
 - f. The top should be distinguished from the middle by changing the window rhythm, material, setback, floor height, or similar.
 - g. Setbacks in the building elevation should occur at a horizontal expression line. (see Horizontal Elements, p. 112)
 - h. In addition to the base, middle, and top criteria noted above, all buildings should have a distinctive cap, such as a cornice or parapet, trellis or shade device, sloped roof, or penthouse.



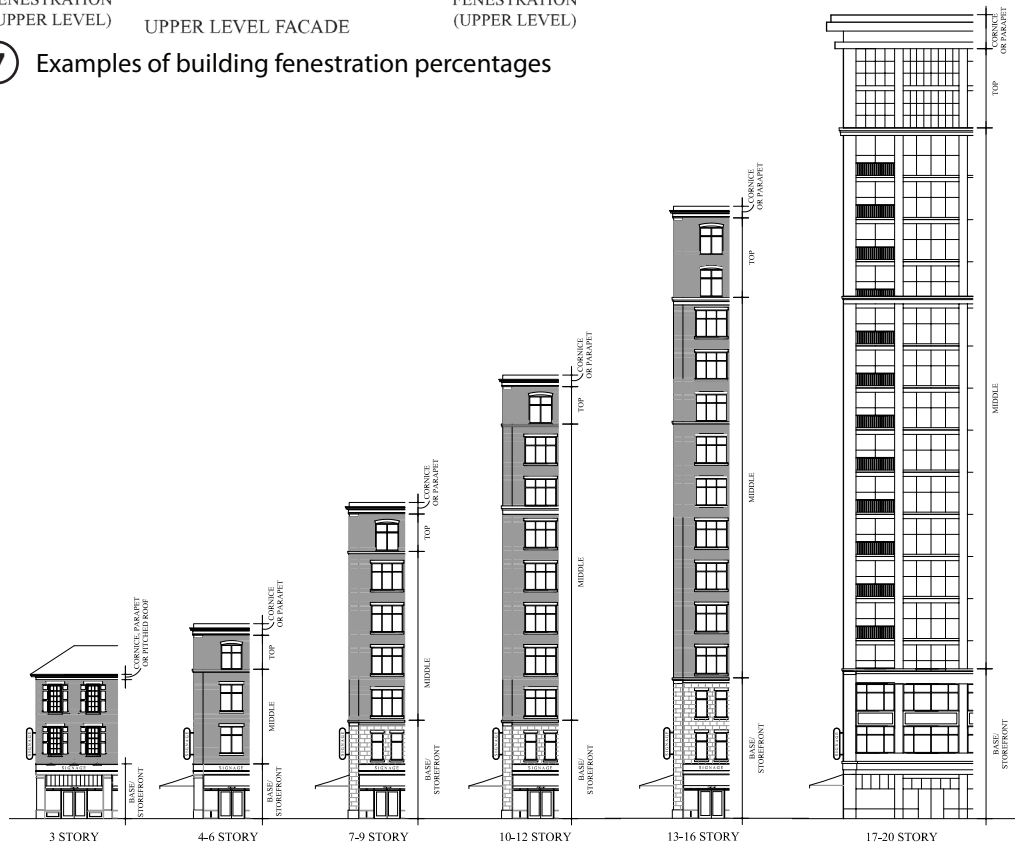
EXPLICIT SYSTEMS USE COLUMNS OR PILASTERS ON THE PRINCIPAL FACADE TO ACCENTUATE SMALLER INCREMENT BUILDINGS AND STOREFRONTS WITH VERTICAL PROPORTIONS.

IMPLICIT SYSTEMS USE WINDOW GROUPINGS IN THE BASE, INTERVENING FLOORS, AND THE CORNICE AREA TO DENOTE BAYS USING VERTICAL PROPORTIONS.

② Examples of implicit and explicit bay systems



⑦ Examples of building fenestration percentages



⑧ Base, middle, and top diagram

Building Types

The primary building types in the Lakefront Neighborhood may include:

Civic: Civic buildings are operated by not-for-profit organizations dedicated to arts, culture, education, recreation, government, transit, and municipal parking, or for use approved by the Planning Board.

Signature Building: Signature buildings are not use-specific, however, are significant and unique due to location on prominent sites and shall place premier attention on architectural design.

Residential/Residential over Retail: The Residential over Retail building type has ground-level retail or building amenity space for the majority of the building frontage along the primary street(s) and residential units above. As a mixed-use type, residents and retail patrons and employees, together, occupy the building around the clock, providing vitality to this Downtown neighborhood. Shared uses within a building also provide the opportunity to share parking, reducing the need for extra, under-utilized parking spaces. Parking is typically accommodated in garages above or below grade. (See Urban Design, p. 24). For this building type, where retail is not incorporated or partially incorporated, residential amenity space or units occupy the ground level. Individual residential unit entries with stoops or recessed entry ways are encouraged. Visitability is encouraged for all residential units in the Lakefront Neighborhood to promote aging in place, socializing, and prevent the isolation of people with mobility limitations. The term “visitability,” as described by www.visitability.org, refers to a residential unit designed in such a way that it can be lived in or visited by people who have trouble with steps or who use wheelchairs or walkers.

Office over Retail: Similar to the Residential over Retail building, this type combines uses, with ground-level retail or building amenity space for the majority of the building frontage along the primary street(s) and office space above. The shared uses of office and retail within a building provide the opportunity to share some parking. Parking is typically accommodated in garages above or below grade.

Hotel: As a building welcoming visitors to Downtown, a hotel should have a distinctive character from other types. The primary entry shall have a prominent architectural read and a guest drop-off area, either curb-side or with a pull-off lane(s) separated from the street. The ground level may accommodate retail and restaurant spaces, as well as building amenity and meeting spaces. Guest rooms on the upper levels shall have a residential fenestration pattern.

Retail: Stand-alone retail buildings, whether with a single tenant or multiple tenants, are not anticipated as a primary type in the Lakefront Neighborhood, however, small pavilion-scaled retail buildings with restaurants or shops may be located in or near amenity spaces to provide activity and serve people in the adjacent buildings or visiting the Lakefront.

Structured Parking: New stand-alone structured parking garages are not encouraged as a building type in Downtown. Structured parking, integrated wholly or partially within new buildings, is anticipated in the Lakefront Neighborhood. In the Lakefront Neighborhood, some exposure of garages to primary or secondary streets is anticipated; on primary streets, such as Little Patuxent Parkway, exposed garages shall be treated appropriately. (See Urban Design, page 24)

See the following pages for criteria specific to each building type.

Civic and Signature Buildings



Civic Overview

Civic buildings serve the public and may include libraries, museums, civic and association headquarters, visitor or exhibit centers, and similar. When planned, civic buildings should be located on prominent sites terminating key intersections or primary vistas, or located to serve visitors.

In order to encourage a distinctive read, civic structures are exempt from build-to-line or frontage coverage requirements. Additionally, civic structures may be exempt from other *Lakefront Neighborhood Design Guidelines* criteria, as approved by the Planning Board. Lobby entrances should be highlighted as a strong, legible element of the façade as it relates to site location.

Signature Building Overview

Signature buildings are not use-specific, however, due to location on prominent sites terminating key intersections or views, the architecture in these locations should have distinctive articulation or massing, such as a unique facade, lobby entrance, vertical element, or other special treatment. The Whole Foods building (former Rouse Headquarters Building) is an existing signature building within the Lakefront Neighborhood.

See Appendix A.5 Preservation Guidelines (Rouse Co. Headquarters), for additional criteria for adjacent development.

See the Lakefront Neighborhood Gateways and Vistas Diagram on page 19 for signature building locations.

Standards:

- Architectural bays shall read in elevation.
- Typically, a strong base shall be defined and shall be delineated from upper stories by a cornice or other horizontal banding element.
- Walls, piers, and/or columns at the building base should visually transfer the wall load above, through the storefront, to the ground plane and shall relate in alignment to the wall areas above.
- The lobby entrance shall be highlighted as a strong, legible element of the façade.
- Window types and patterns shall be varied in a logical, restrained manner.
- Wall and roof elements shall be employed to screen roof mechanical equipment.

See the Material & Elements Standards section for additional criteria.

Residential/Residential over Retail

Overview

In the Lakefront Neighborhood, Residential/Residential over Retail building heights shall range from 9-20 stories. Where retail is included, this type will be designed as residential stories over a tall retail base story; 2-story retail is also permitted. The dual goals of animating the ground-floor retail while creating a subdued environment for residential living demand thoughtful design. The upper stories should have a more calm and repetitive rhythm, while the ground level should express the individual character of the retail and restaurant tenants. Along the primary street(s), the ground-level use should be predominantly retail or amenity space (see Urban Design, p.13). The residential lobby may be placed on the same street as the retail, but shall have a separate, distinct lobby as a legible element of the facade. In Residential building types, individual stoop entrances to ground-floor residential units may be incorporated (see Streetscape, Residential A, p. 50). Balconies and rooftop terraces are encouraged as are green roofs. Parking is typically accommodated in garages above or below grade. Above-grade garages are ideally located mid-block, wrapped on all sides, but may include some conditions where a portion of the garage facade is exposed to the street, in which case the exposed portion shall be screened. Separate, but direct access from mid-block parking to the retail and restaurants and to the residential units is desired and shall be welcoming, safe, and well-lit. Visitable units that can be lived in or visited by people with mobility impairments are encouraged.

Standards:

- Architectural bays shall read in elevation.
- Typically, a strong base shall be defined and shall be delineated from upper stories by a cornice or other horizontal banding element.
- Walls, piers, and/or columns at the building base should visually transfer the wall load above, through the storefront, to the ground plane and shall relate in alignment to the wall areas above.
- Window types and patterns shall be varied in a logical, restrained manner.
- A residential unit is visitable when it meets the following three basic requirements: on the main living level, one zero-step entrance, doors with 32 inches of clear passage, and one bathroom that you can maneuver into in a wheelchair (to note, a fully accessible bathroom is not a requirement).
- Outside noise from surroundings, including nearby event spaces, should be considered in residential design; Sound Transmission Class (STC) glass or other measures may be used where noise is an issue.
- Wall and roof elements shall be employed to visibly screen roof mechanical equipment from street-level view.

See the Material and Element Standards on the following pages for additional criteria.



Office over Retail



Overview

Similar to the Residential over Retail building type, the design of the Office over Retail type requires a balanced approach. The ground floor level should animate the streetscape while the upper floor levels should convey a professional office environment. Along the primary street(s), the ground level use shall be predominantly retail or lobby/amenity space. 2-story retail is permitted. The office lobby should be distinct and have a strong presence on the street. The upper story office elevations should have more glazing, as compared to residential elevations, to reflect the building's use and to provide more natural daylighting for the office workers. Parking is typically accommodated in garages above or below grade. Where structure parking fronts primary streets, the majority of the facades shall be clad in masonry or solid or perforated metal panels or screens. Direct access from mid-block parking to the retail and the office lobby is desired and shall be welcoming, safe, and well-lit.

Lakefront is envisioned as a Health/Wellness/Fitness district and, therefore, General as well as Medical Office is anticipated. While many of the type characteristics are similar between General and Medical Office (and both uses may be mixed within one building), Medical Office has some unique design considerations that need to be taken into account and accommodated. For example, Medical Office floor plates may be deeper and/or taller than General Office; drop-off and entry needs to be conveniently located with an elevated focus on accessibility for mobility-, visual-, or hearing-impaired patients; and parking has a higher demand and turn-over rate compared to General Office.

Standards:

- Architectural bays shall read in elevation.
- A strong base shall be defined and shall be delineated from upper stories by a cornice or other horizontal banding element.
- Walls, piers, and/or columns at the building base should visually transfer the wall load above, through the storefront, to the ground plane. The walls, piers, and/or columns at the base shall relate in alignment to the wall areas above.
- The office lobby entrance shall be highlighted as a strong, legible element of the façade.
- Flat roofs may incorporate green roof systems and terraces where visible from other buildings or where views to the lake provide further visual amenity.
- Wall and roof elements shall be employed to visibly screen roof mechanical equipment from street-level view.

See the Material and Element Standards on the following pages for additional criteria.

Hotel

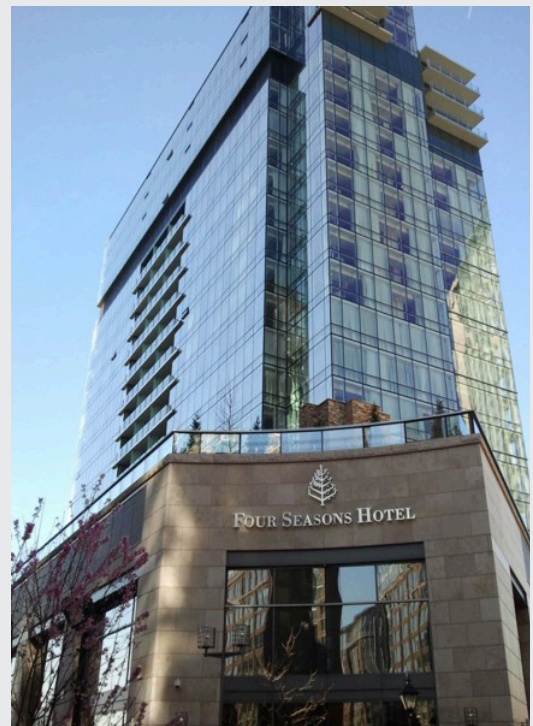
Overview

As a building welcoming visitors to Downtown, a hotel should have a distinctive character from other types. The primary entry shall have a prominent architectural read and a guest drop-off area, either curb-side or with a pull-off lane(s) separated from the street. Along the primary street(s), the ground level should be activated where feasible and may accommodate retail and restaurant spaces as well as building amenity and meeting spaces. Guest rooms on the upper levels shall have a residential fenestration pattern. Penthouse guest rooms, large meeting and ball rooms, and rooftop terraces are encouraged at the top of the building. Parking is typically accommodated in garages above or below grade. Where structure parking fronts primary streets, the majority of the facades shall be clad in masonry or solid or perforated metal panels or screens. Direct access from parking to the retail and the hotel lobby is desired and shall be welcoming, safe, and well-lit.

Standards:

- Architectural bays shall read in elevation.
- A strong base and top shall be expressed and shall be delineated from the middle stories by a cornice or other horizontal banding element.
- The hotel lobby entrance shall be highlighted as a strong, legible element of the façade.
- Flat roofs may be used to incorporate green roof systems and terraces. Where visible from hotel common spaces and other buildings or where views to the lake exist, green roofs may provide further visual amenity.
- Wall and roof elements shall be employed to screen roof mechanical equipment.

See the Material and Element Standards on the following pages for additional criteria.



Retail



Overview

Additional, new stand-alone retail buildings, whether with a single tenant or multiple tenants may be included the Lakefront Neighborhood. Small pavillion-scaled buildings with restaurants or shops may be located in or near amenity spaces to provide activity and serve people in adjacent buildings or visiting the lakefront. Retail buildings may vary in massing, but, will typically be limited to 1-3 stories in height as their programs necessitate. Although the program requirements vary, the goal for the Lakefront Neighborhood should be to enliven the streetscape and/or amenity space with significant glazing on the ground and upper floors. Solar orientation should also be considered.

Standards:

- Storefronts should be provided in all building elevations with primary street frontage (see Urban Design, p. 13). Display cases, semi-transparent glass, or other methods may be used where storefronts with full glazing are not feasible due to specific program requirements.
- Significant glazing shall be incorporated, where possible, in the upper stories of all building elevations with primary street frontage.
- Canopies, awnings, and storefronts shall be varied per building.
- Vertical proportions and architectural details appropriate to the architectural character shall be incorporated to enliven the façade and provide greater interest on street frontage elevations.
- Vehicular and pedestrian visibility from streets and/or amenity spaces shall be established to ensure the viability of the retail.

See the Material and Element Standards on the following pages for additional criteria.

Structured Parking

Overview

The goal of the structured parking within the Lakefront Neighborhood is to provide parking for new development as well as existing uses. Structured parking, whether as traditionally-configured deck levels or as automated parking, is ideally integrated wholly or partially within new buildings. In the Lakefront Neighborhood, exposure of garages to primary or secondary streets is anticipated. On primary streets within the neighborhood or Little Patuxent Parkway, the majority of the exposed garage facades shall be clad in masonry or solid or perforated metal panels, screens, or other treatments designed to increase compatibility. (See Urban Design, p. 24) Ground-floor retail, where feasible and viable, should occur where a building fronts primary streets or amenity spaces. Screening measures such as walls, screens, green (vegetated) screens, and/or landscaping may also be used, providing sufficient setbacks to accommodate rainwater planters for landscape screening or green screens. Greening methods such as green roofs and green screens are permitted on parking structures for stormwater management, shading, and aesthetic benefits. Solar panels on the top decks of garages are permitted to offer shade and provide power to recharge stations for electric vehicles.

Standards:

- Parking decks exposed to the public realm on primary streets or amenity space should be designed to be compatible with adjacent buildings to the extent practical and shall be screened with walls, architectural detailing, green (vegetated) screens, landscaping, or other treatments.
- Garage entries shall be strongly signed but shall be carefully designed to not impact the continuity of the streetscape or retail storefront, by continuing the sidewalk materials across the access the entry.
- Stairs and elevator cores shall be designed to provide a welcoming and safe environment; glazing is encouraged on stair towers. Pedestrian entrances to parking shall be well-articulated.
- Lighting (interior and exterior) shall be designed to avoid glare and excessive brightness (**see Streetscape Lighting section page 68, for additional criteria**).

See the Material and Element Standards on the following pages for additional criteria.



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Building Form

The primary building form elements can be described as follows:

Massing: The combined height and width of a building, including changes in plane such as projections, recesses, tower and corner elements, and similar. **(See additional Massing criteria on p. 22.)**

Horizontal Elements: Any horizontal band line on a building elevation used to demarcate the boundaries between the base, middle, and top; a change in plane; or a change in materials. Horizontal elements include cornice lines, belt or water table courses, and band or skirt boards.

Recesses and projections: Any horizontal change in plane affecting a building's elevation.

Corner Elements: A pronounced building element, either recessed or projected and either taller or shorter than the surrounding building elevations, located at the intersection of two of the building's facades, typically at an important street intersection and/or gateway entrance to the neighborhood.

Solid/Void: On a building elevation, the relationship between continuous wall surface (solid) and openings (voids) such as windows and doors.

Massing



Overview

With the goal of emulating the best vibrant downtowns, development within the Lakefront Neighborhood should reflect the urban form found in these precedents. Within the developable areas, the streetscape should be fairly continuous and breaks between buildings should be limited. Building mass should predominantly define the perimeter of each block and amenity spaces.

Building form also plays an active role in animating neighborhood blocks. Modulation will occur with breaks in buildings, individual programmatic requirements for buildings and sites, and the articulation of special corners and long elevations. With the potential of buildings up to 20 stories in height, building profiles deserve additional consideration to ensure the Lakefront Neighborhood development maintains a human scale. **(See additional Massing criteria on p. 22.)**

Full-block and tower buildings can benefit from step backs at upper floor levels to animate the massing, frame amenity spaces or important views, improve solar exposure, and reduce wind tunnel effect.

Standards:

- Buildings shall predominantly define the perimeter of the developable blocks, built to the setback line.
- Full-block and tower buildings should investigate step backs at upper floor levels to animate the massing, frame amenity spaces or important views, improve solar exposure, and reduce wind tunnel effect.
- Buildings shall be a minimum of 2 stories or 30' measured from the ground plane to the eave.
- Buildings shall be no taller than 9 stories, not to exceed 145' (excluding mechanical, penthouse, and tower elements).
- Typically, each building should have a clearly defined base, middle, and top. Although the base of the building typically corresponds to the ground floor, on buildings taller than five stories, the base may be approximately two stories high. Similarly, on taller buildings, the top may be more substantial than the top floor alone. On buildings of five stories or less, the top may be defined as an enlarged frieze and cornice. See General Provisions, page 100.
- Typically, architectural bays should read in elevation.
- Certain important walls, piers, and/or columns at the building base should visually transfer the wall load above, through the base, to the ground plane. The walls, piers, and/or columns at the base should relate in alignment to the wall areas above.
- Long elevations shall be visually broken into smaller sections through material and plane changes, variations in window groupings, and/or the addition of bays.

See the Material and Element Standards on the following pages for additional criteria.

Horizontal Elements

Overview

Building compositions of base, middle, and top relate to the human form (correlating to the feet, body, and head) and, therefore, follow a natural order. Horizontal elements, such as cornices or caps at the building top and belt or watertable courses below, delineate the zones of a façade and give emphasis to the composition. They define the proportions of the building elevation while allowing for material transitions (much as a belt transitions between pants and a shirt). Continuous belt or watertable courses may be used to unify portions of elevations. Similarly, cornices and roof lines may be continuous to unify an elevation or differentiated to break up continuous massing. Horizontal elements may include shading devices such as canopies and brise-soleils.

Standards:

- In building compositions with a base, middle, and top, cornices at the top and belt or watertable courses below shall delineate between a building's elevation zones.
- Continuous belt or watertable courses may be used to unify portions of elevations.
- Similarly, cornices and roof lines may be continuous to unify an elevation or differentiated to break up continuous massing.
- A horizontal band line shall be used on an elevation where there is a change in primary materials or colors.
- Furthermore, transitions between primary elevation materials shall occur along horizontal lines.

See the Material and Element Standards on the following pages for additional criteria.



Recesses and projections



Overview

Creating building frontage along primary streets and amenity spaces is a priority for redevelopment within the Lakefront Neighborhood. However, with the building types envisioned, long elevations may result. Recesses and projections may be used to animate long elevations by creating shadow lines and relief. Further, recesses and projections may create a visual rhythm on an elevation such as with a series of bays undulating across a flat façade. Additionally, recesses and projections may offer shading and cooling opportunities as well as locations for balconies.

In order to transition between materials appropriately, changes in materials should occur only at changes in plane. Recesses and projections can mitigate some of these transitions. While transitions between primary elevation materials shall occur only along horizontal lines, additional material changes may occur at recesses and projections. For example, materials may terminate and change at an inside corner of a recess or when butting into a projecting element such as a bay. In short, material transitions require definite starting and stopping points.

Standards:

- Long elevations shall be visually broken into smaller sections through material and plane changes including recesses and projections, variations in window groupings, and/or the addition of bays.
- Recesses and projections may be used to reinforce a vertical read; however, for large gestures, they should be used sparingly for emphasis.
- Recesses and projections should be reflected in variations in the roofline.
- Recesses and projections may be used to provide shading and cooling opportunities as well as location for balconies.
- Changes in materials should occur only at changes in plane.

For information on Arcades, see page 125.

See the Material and Element Standards on the following pages for additional criteria.

Corner Elements

Overview

New Lakefront Neighborhood buildings at Little Patuxent and Sterrett Place shall act as gateway markers (**see also Urban Design, pages 8-9 and 18-19**). The buildings at these locations shall respond in design with the appropriate corner elements that announce the neighborhood and welcome visitors. Secondary intersections may have less pronounced or smaller scale corner elements as warranted.

The proportions of corner elements are important in achieving the correct read and impression of the Downtown. Corner elements, especially towers, shall be vertical in proportion and may be used to anchor a building to the ground.

Standards:

- At prominent locations, tower or other corner elements shall be used to terminate an important view or as a focal element.
- Corner elements shall be vertical in proportion with a minimum 3:1 ratio of height to width.
- Corner elements may be used as transitions to segue between varying building heights or between non-perpendicular building faces.

See the Material and Element Standards on the following pages for additional criteria.



Solid/Void



Overview

The relationship between solid and void is critical to the read and function of a building. For example, the ratio of glazing to wall surface shall be greater in retail conditions compared to residential. Additionally, the placement and groupings of windows and doors can order an elevation and provide hierarchy. A horizontal grouping of openings emphasizes the relationship between base-middle-top massing while a vertical grouping of openings may be used to highlight a portion of the elevation. Regardless of the arrangement, openings shall occur in rhythm with the building’s architectural bays.

Standards:

- The relationship between solid and void is critical; the ratios shall vary according to the use (e.g., the ratio of glazing to wall surface shall be greater in retail and office conditions compared to residential).

Percentage of openings (void)

Ground Floor Retail:	60-95%
Ground Floor Commercial:	40-90%
Ground Floor Residential:	15-40%
Upper Floor Office:	40-90%
Upper Floor Residential:	15-85%
Upper Floor Hotel:	25-75%

- The placement and groupings of windows and doors shall be used to provide hierarchy and order to building elevations.
- Openings shall occur in rhythm with the architectural bays.
- The shape and proportion of the openings shall be in harmony with the architectural style.

See the Material and Element Standards on the following pages for additional criteria.

Storefront Standards

Overview

In order for the mixed-use environment envisioned in Downtown Columbia to function and thrive, proper attention shall be paid to the storefronts. Transparency in and out of storefronts is key for retail to prosper, for a vibrant street life, and to maintain eyes on the street. Storefront design shall balance the needs of the tenant's individual expression with the overall aesthetic quality and sense of place. Additionally, storefront shall not intrude upon or obscure architectural elements such as columns, cornice lines, sills, and similar.

The Storefronts criteria comprise the following sections:

- Storefront Zone
- Materials
- Colors
- Door and Frames
- Windows
- Awnings and Canopies

STOREFRONT ZONE

The Storefront Zone is an area available for shop owners to extend their merchandising past the building plane without obstructing pedestrian circulation (see Sidewalk Zones on pages 42-50). The Storefront Zone, measured horizontally from the building wall out to the curb, is minimally two feet (2') in depth. The Storefront Zone is also limited vertically from the ground plane to the top of the building base (typically at the second floor level) and/or to a maximum of twenty six feet (26'). The Storefront Zone is reserved for the shop tenant/owner and may be used for signage, sidewalk displays, benches, and planters. This zone also accommodates door swings and projecting window bays.

REQUIRED:

- Building projections, such as bay windows or entryways, shall be a maximum of four feet (4') in depth (measured horizontally from the building wall out to the curb) and a maximum of twenty two feet (22') in width (measured parallel to the building wall). Projecting elements shall be separated from one another a minimum distance equal to the projection depth (e.g., two bays which are each four feet (4') deep shall have a minimum of four feet (4') of separation between them).
- All elements in the Storefront Zone are limited to twenty six feet (26') in height, measured vertically from the ground plane.

ENCOURAGED:

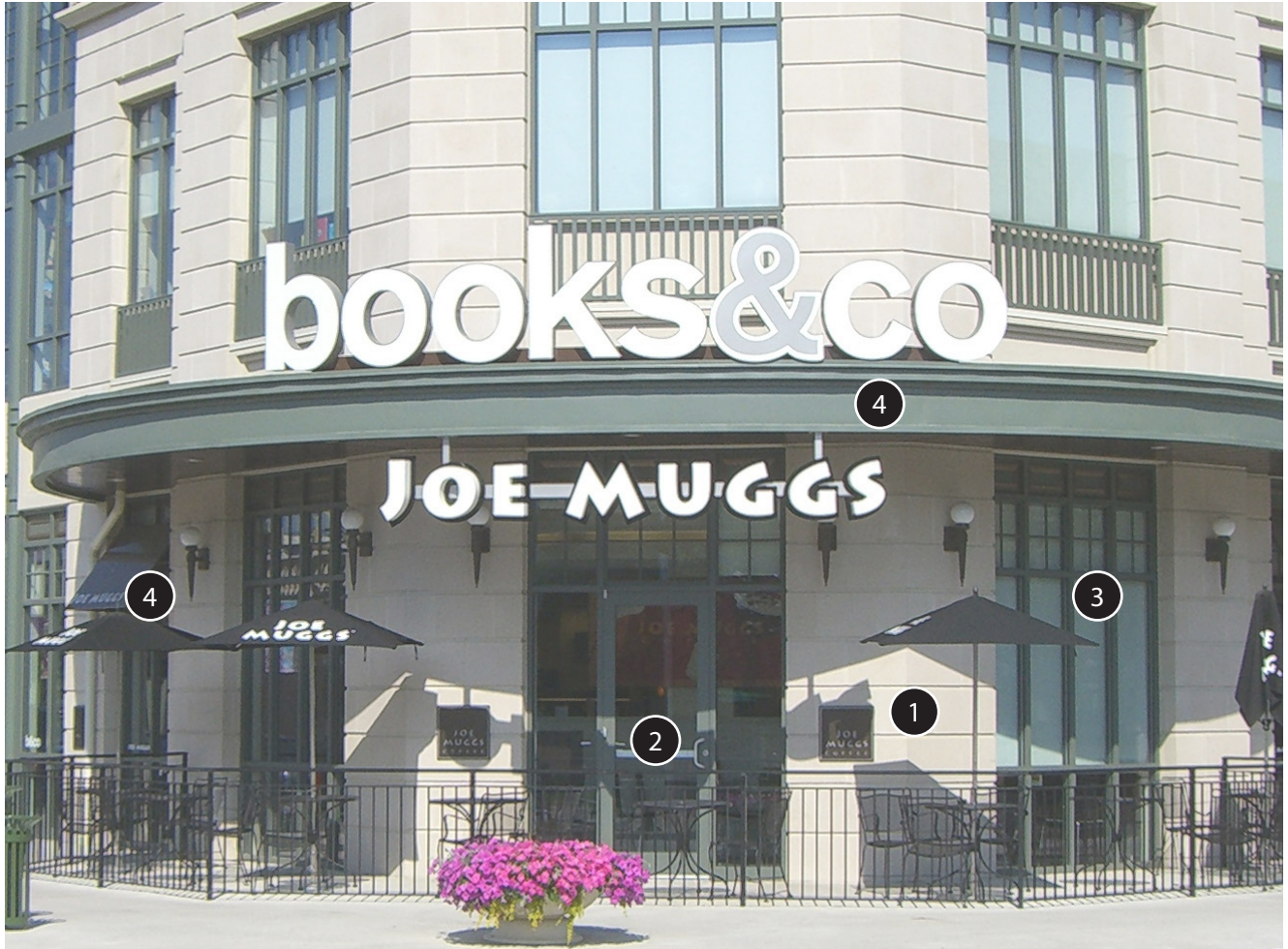
- The Storefront Zone may include semi-permanent elements such as benches, pots with flowers or shrubs, small awnings, bay windows, banners, blade signs, and merchandising displays. These elements shall reflect the quality and character of the shop or restaurant.

NOT PERMITTED:

- "Strip center," uniform storefront systems are not permitted. Storefronts shall be designed for and unique to each establishment.

See the Material and Element Standards on the following pages for additional criteria.

Storefront Components Diagram



Storefront Components

- 1 Materials/Colors
- 2 Doors/Entry
- 3 Windows
- 4 Awnings/Canopy

Storefront Standards

Materials

Overview

Each restaurant and shop has the opportunity to uniquely display its merchandise to attract passing customers. The choice of storefront material is a key component of creating an alluring retail environment that reflects the individuality of a business. To this end, the fit and finish of all storefront components shall be of the highest quality.

REQUIRED:

- Storefronts shall be metal, stone, cast stone, glass pre-cast, and/or durable, smooth exterior grade hardwoods, or other high quality commercial materials.

NOT PERMITTED:

- Softwoods, EIFS, and pressure treated lumber are not permitted.



Color



Overview

Flexibility and variety in storefront colors help create engaging streetscapes and welcoming retail environments. Therefore, the choice of colorful materials or paint is very important. Colors are encouraged to be complementary and reflect the store's unique character.

RECOMMENDED:

- A coordinated color palette should be used to tie all parts of the storefront's architecture together.
- Generally, muted colors are more appropriate for large areas and backgrounds while bright colors should be considered for accents.
- The color scheme of the storefront should take into consideration and complement the color of the upper levels of the building as well as adjacent storefronts.

NOT ENCOURAGED:

- The use of more than three main colors on an individual storefront, conflicting color schemes on adjacent storefronts, or the same color on adjacent storefronts are not encouraged.

Doors and Frames

Overview

The entry to a shop or restaurant is one of the most important parts of any storefront as it helps provide identity and sets the tone for a patron's experience. Consider a door's shape, size, style, weight, and hardware when designing the storefront.

REQUIRED:

- Doors shall be compatible with, and complementary to, the overall storefront design.
- All doors shall conform to ADA regulations and consider various levels of mobility to accommodate all users.
- Doors shall have a high percentage of glass to increase visibility into the store's interior and out to the street.
- The primary entrance shall be clearly marked and sheltered a minimum of 30 inches via a recessed entryway, awning, or canopy. Secondary or side entrances may be unsheltered.
- Clear glass should be used for maximum visibility.

ENCOURAGED:

- Restaurants are encouraged to have additional doors to connect with their outdoor seating areas.

NOT PERMITTED:

- Tinted glass, opaque glass, highly-reflective glass, plexiglass, and adhesive window film (except on a temporary basis) are not permitted.



Windows



Overview

Transparent storefronts contribute to safety, vibrancy, and merchandising. Large, clear glass areas provide visual connection between people inside and outside and contribute to the actual and perceived safety and pedestrian-friendly quality of the neighborhood environment. Removable windows or exterior storefront panel elements enhance the interaction between interior and outdoor street experience. Windows provide an opportunity for shop owners and restaurateurs to merchandise to passing pedestrians and motorists. They shall be used to display products and services as well as to enliven the sidewalk with light, character, and color.

REQUIRED:

- Glass should be clear glass. Opaque, smoked, or reflective glass may be used for accent/spandrel elements only.
- Opaque, semi-translucent, or fritted glass may be used for accent or spandrel elements only.
- Glazing shall be at least 60% (and no more than 95%) of the storefront surface area. Certain tenants, such as jewelry stores or other establishments with heightened security concerns, will be permitted to incorporate smaller display windows subject to design review approval.
- Glazing shall start no higher than 30 inches above the sidewalk grade.
- Window glazing shall be flush with the window frame or slightly recessed up to 8 inches.

RECOMMENDED:

- High light quality, Low Emissivity (Low-E) rated glass is recommended to minimize discoloring of merchandise and moderate heat transfer for energy conservation.
- Large display windows are encouraged to establish a visual connection between the interior and the exterior.
- Removable windows are encouraged to enhance interaction between the interior and the exterior street experience.

NOT PERMITTED:

- Tinted glass (excepting for office use where the glass may be lightly tinted), opaque glass, highly-reflective glass, plexiglass, and adhesive window film are not permitted.

Awnings and Canopies

Overview

Awnings shall be selected in a manner that balances the goals of merchant identity, vibrancy of the streetscape, and coherence with the building's architecture. Both fixed and retractable awnings are permitted as well as canopies. Awnings and canopies emphasize entrances and support the tenant's image. They add texture to the streetscape and introduce variety to the building façade, while also providing weather protection to patrons and protecting storefront displays from sun exposure.

REQUIRED:

- Materials shall be durable, fire-resistant, and fade-resistant.
- Awnings shall project a minimum of two feet up to twelve feet (2'-12')* from the building façade, but shall be limited to the storefront width. Canopies shall project a minimum of two feet up to twelve feet (2'-12')* from the building facade; canopies designed to be integral to the building's architecture may be continuous across the building facade; individual storefront canopies shall be limited to the storefront width.
 - * For awnings located within the Storefront, Amenity, and Pedestrian zones, see Street Design section page 41.
- Awnings shall be mounted above display windows and below base cornices, awning between lower storefront glazing and transom allowed.
- Awnings and canopies shall be a minimum of nine feet (9') above the sidewalk, measured from the ground plane to the lowest point of the awning.

RECOMMENDED:

- The structural supports of an awning or canopy should be finished to match or complement the awning fabric.
- Native vegetation is encouraged on permanent awnings/canopies.

NOT PERMITTED:

- Vinyl awnings are not permitted.
- Continuous awnings across several storefronts are not permitted.
- Bottom (soffit) panels on awnings are not permitted.
- Awnings shall not be backlit.



Architecture: Material and Element Standards

Overview

All construction within the Lakefront Neighborhood shall comply with the following criteria, excepting storefronts; **for storefront materials and components criteria, refer to the Storefront Standards section on pages 116-122.**

All applicable building codes, laws, Acts, life safety codes, ADA, environmental regulations, development approval processes, Howard County, State, and Federal regulations and permitting processes, and similar regulations must be adhered to and are not superseded by the Lakefront Core Neighborhood Design Guidelines.

Throughout the Guidelines, the use of the word “shall” identifies mandated criteria. “Must,” “required,” and “mandated” are additional words with the same meaning. The use of the word “encouraged,” “should,” or “recommended” identify criteria which are desired. In some instances, words such as “prohibited” and “not permitted” identify practices, materials, or systems which are not allowed in the Lakefront Neighborhood redevelopment.

EXTERIOR WALLS

This section applies to all exterior wall surfaces, excepting storefronts and parking structures. **For storefront criteria, see the Storefront Standards section on pages 116-122.** For parking structure criteria, see the parking structure, service, and loading criteria below.

- Exterior walls with street or amenity space frontage shall be brick (brick veneer), cast stone, pre-cast, glass, and/or metal components. For buildings of five stories or less, glass, masonry, or metal shall be the predominant building material. Additionally, cementitious siding or panels in a smooth or stucco finish or metal panels may be used at the second floor level and above where residential is the primary use.
- Exterior walls, as they turn the corner from a street or amenity space frontage condition to a service or courtyard condition, shall be consistent in material and detail with the street or open space frontage façade to a minimum depth equal to the width of the alley, access, or service way (measured building to building).
- Building walls facing interior courtyards, service lanes, or parking structures (excepting as noted in the criteria above) shall be brick, architectural concrete block (excluding split-face), pre-cast, or cast stone on the ground level; upper levels shall be masonry (brick, pre-cast, or cast stone), glass, metal components, stucco, and/or cementitious siding or panels in a smooth or stucco finish. Exposed foundation walls may additionally be parged concrete or other approved finish.
- Vinyl and aluminum siding products are not permitted.
- While not encouraged, the use of EIFS on an exterior wall above 22 feet (measured vertically from grade) is allowed; the use EIFS on an exterior wall within 22 feet of grade is not permitted. The EIFS color(s) shall be complimentary, but not identical, to adjacent materials.
- Building walls, between the foundation and the eave, shall be no more than three primary materials.
- Materials shall terminate or transition only in the following ways:
 1. Along horizontal lines consistent with the base, middle, and top of the building;
 2. At changes in building plane; or
 3. At pilasters, engaged columns, or other similar architectural elements.

Additionally, the lighter appearing material (lighter in color, texture, and/or weight) shall be used above the heavier appearing materials.

- Arcades, piers, and columns shall be stone, cast stone, pre-cast, brick, or composite material (e.g., Permacast or equivalent).
- Arches shall have a distinctive thickness (on both the inside and outside surfaces) and width.
- All keystones and voussoirs shall be masonry and shall have sides radial to the arch.

Architecture: Material and Element Standards

- Trim shall be metal, wood, cementitious fiber board, fiberglass composite, polymer composite, or solid cellular PVC (e.g., Azek, Versatex, or similar). The use of aluminum trim on an exterior wall within 10 feet of grade is not permitted.
- For all masonry, mortar shall compliment the masonry color and/or be a light earthy color such as beige, sand, light warm grey, or similar color. Cool gray mortar is not permitted.
- Masonry units shall have butt joints at outside corners with a minimum three inch overlap (i.e., no mortar joints within three inches of an outside corner).
- Brick shall be coursed in common, Flemish, herringbone, basket weave, or horizontal running bond. However, patterned brick detailing and special brick shapes may be used as accents. Mortar joints shall be weathered, concave, V-shaped, or grapevine and shall not be greater than a half inch (½") in dimension. A variety of traditional brick colors are encouraged; glazed, faced, and painted brick are permitted as appropriate to the façade.
- Precast concrete and cast stone masonry units shall be in a running bond pattern. Precast concrete and cast stone masonry units shall have a smooth, ground, or molded finish resembling natural stone. Additionally, rustication may occur on the ground floor or building base.

WINDOWS

- Windows shall be wood, aluminum-clad wood, aluminum, or architectural-grade vinyl.
- Windows shall be single-, double-, or triple-hung, fixed, or casement.
- Windows shall be operable where residential is the use.
- Window openings, frames, lites, and sashes shall be square or rectangular in configuration and vertical in orientation. Circular, half-round, irregular, or elliptical accent windows may be used sparingly as accent windows only. Paired quarter-round windows may be used flanking an architectural feature.
- Muntins (grilles) shall be real (as with true divided lites), permanently affixed to the exterior and interior, or permanently affixed to the exterior.
- Windows shall not be closer than the width of the window to the corner of the building unless the windows wrap the corner as part of an architectural element, or are appropriate to the architectural style.
- Windows shall align vertically within a façade, excepting at an attic story where windows or dormers may align with the centerline between two windows below, unless where appropriate to the architectural character.
- Windows shall be recessed to develop shadow lines, when appropriate to the architectural style.
- On all walls clad with materials other than masonry or metal, a minimum four inch (4") nominal head and jamb trim shall be used. In addition, sill trim shall be differentiated from the jamb trim.
- Glass shall not be tinted or mirrored excepting for office use on upper floors. Glass shall not be tinted or mirrored on the ground floor regardless of occupancy use.

SHUTTERS

Shutters are not anticipated on buildings in the Lakefront Neighborhood; however, if used, shall comply with the following:

- Shutters, where used, shall be wood or solid cellular PVC composite (e.g., Timberlane Endurian, Atlantic Premium shutters, or similar).
- Shutters shall be, or appear to be, operable and shall be of the required size both horizontally and vertically to cover the opening if closed.

DOORS AND ENTRIES

- All building addresses shall be visible from the street (and must comply with fire code requirements).
- Primary building entries shall be distinct and enhance the building façade. Residential lobby entries may be secondary but shall be identifiable from the street.
- Individual residential unit entry doors shall be steel and shall be painted. All residential entry doors shall have glass, recessed panel(s), or both.
- Roll down doors shall be painted and/or designed to blend with the building façade.

ROOFS

- Roofs shall be flat preferably, or symmetrically pitched between a 6:12 and 12:12 slope and only in the configuration of gables and hips.
- Flat roofs shall be a white or light membrane material, shall have light-colored pavers, or aggregate and/or shall be vegetated. Sloped roofs shall be real or artificial slate, architectural shingles, copper, or standing seam metal in a green, gray, brown, or similar neutral color. Copper, if used, shall be allowed to age naturally. Green (vegetated) roofs and cool roofs are encouraged.
- Skylights shall be located only on the backside of the roof ridge or on nearly flat roofs.
- Rooftop mechanical equipment shall be screened from street and amenity space view using sloped roofs, parapets, and/or screens.

GUTTERS, DOWNSPOUTS, AND ROOF FLASHING

- Gutters and downspouts shall be constructed of aluminum, galvanized metal, steel, or copper. Copper, if used, shall be allowed to age naturally. Aluminum, steel, or stainless steel shall be pre-finished in a powder-coated color coordinated with adjacent materials (e.g., bronze downspouts on medium or dark brick, eggshell downspouts on light trim, and similar).
- Downspouts should be located at the rear of the building, unless required by specific conditions to be located elsewhere, or unless integral to an expressed stormwater management system.
- Attic vents shall not be visible from streets or amenity spaces.
- All flashing shall be painted to match the adjacent material, or, shall be stainless steel or copper and allowed to age naturally.

ARCHITECTURAL ELEMENTS

- Bays shall be brick (brick veneer), cast stone, pre-cast, glass, and/or metal components. Additionally cementitious panels and trim are allowed where the use is residential.
- Bay(s) on façades fronting streets and amenity spaces shall extend to the ground, extend to the retail cornice, or be structurally supported by brackets (unless counter to the architectural character).
- Arcades of masonry may be incorporated, with the county's approval, on a building's ground floor along a street or open space to help provide pedestrians shade and shelter. For proper use along streets, arcades should encompass/extend over the full pedestrian clear zone (**for additional criteria on Pedestrian Zones, see pages 48-50**). Upper floors may extend fully over the arcade.
- Trellises, pergolas, and similar shall be metal, polymer composite, solid cellular PVC (e.g., Azek, Versatex, or similar), or exterior-grade wood. **See Exterior Walls above for pier and column materials.**
- Privacy screens shall be consistent with the architectural style of the building in color and material.
- Terraces on podium roofs (occupiable space above the commercial ground floor level) shall have pavers of concrete, brick, slate, flagstone, or tile and/or shall be vegetated.

ARCHITECTURAL LIGHTING

- Individual expression of storefronts and highlighting of certain, prominent building elevations or corners are permitted. However, the emphasis of lighting shall be on the public realm and the streetscape.
- Strong, featured lighting emphasis on prominent corners and main entrances is encouraged.
- In buildings where the upper stories are residential, wall washers and other building lighting above the ground floor commercial shall be avoided, excepting as mentioned above.
- Retail Lighting: Storefront facades, recessed doorways, window display areas, and passageways are encouraged to be lit at all times. However, the interior lights beyond the window display area should be on automatic timers to conserve energy. **(See Signage pages 132-133 for signage illumination criteria.)**
- Event Lighting: lighting may be used to announce a special event or time of year. Event lighting shall be limited in duration and time-controlled.
- All building lighting fixtures shall be Dark-Sky compliant as approved by the International Dark Sky Association (IDA).
- Lighting controls and timers should be used to conserve energy for all non-essential exterior architectural lighting.

PARKING STRUCTURES, SERVICE, AND LOADING

- Where structured parking, whether as traditionally-configured deck levels or as automated parking, is located mid-block but exposed to a street or amenity space for a distance greater than forty feet (40') (measured parallel to the street or amenity space edge), the parking garage elevation shall be clad predominantly in masonry (brick, pre-cast, cast stone, or architectural concrete block) compatible with adjacent buildings. Additionally, screening measures which may include green (vegetated) screens and/or landscaping shall be used to minimize the view of the parking deck and maintain the streetscape or amenity space edge.
- In the event that structured parking is fronting a primary street or amenity space, retail, office, or residential shall line the ground floor to the extent practical/viable and the deck shall be architecturally compatible with adjacent buildings in character and materials. Additionally, details shall be incorporated to minimize the building bulk and break up long façades.
- Garage entries shall be strongly signed but visually minimized from street or amenity space view. The entrance to garages shall be carefully designed to not impact the continuity of the streetscape or retail storefront.
- Accessibility to sidewalks, amenity spaces, and building entries shall be provided from parking garages to the greatest extent possible.
- Bicycle parking should be provided in structured parking garages with decks based on a site-by-site needs basis. Appropriate location, number of racks, and level of access for each facility depends on the anticipated use of the site or building. Conformance to LEED or similar green/sustainable development criteria for bicycle parking is strongly encouraged.
- Trash enclosures and other ancillary structures shall be located away from streets and amenity spaces and screened from view using walls and/or landscaping. Enclosure walls shall be brick, architectural concrete block, or steel.
- Trash collection shall be accommodated in alleys, service courts, or enclosed loading bays.
- Service entries and loading areas shall be located in the interior of blocks and screened from direct public view from a street or amenity space by walls, fences, and/or landscaping, or, along a street edge screened by an overhead door. Service for small businesses and retail establishments (under 8,000 sf) may be permitted at the front door provided such service is not during primary business hours and does not adversely disrupt traffic movement.
- Ramps visible from streets or amenity spaces shall be architecturally compatible with the building (i.e., surface and wing wall materials and railings shall coordinate with the building materials).

UTILITIES AND MECHANICAL EQUIPMENT

The visual and noise impacts of utilities, mechanical equipment, data transmission dishes, towers, and similar equipment shall be minimized through the following design and installation criteria:

- All permanent utility lines shall be installed underground.
- Above-ground utility equipment shall be located away from primary street and amenity space view to the greatest extent possible. Additionally, transformers shall be located away from major pedestrian routes and outdoor seating areas. If equipment is located within fifteen feet (15') of the front façade of a building, screening measures shall be utilized to ensure that the equipment is visually minimized.
- Commercial antenna and communication towers should be permitted, subject to applicable zoning and other regulations.
- Electrical and mechanical equipment, other equipment, enclosed stairs, storage spaces, blank walls, and other elements that are not pedestrian-oriented should be located in alleys.
- See roofs section above for additional mechanical equipment criteria.

SITE WALLS

- Site walls (including screening, retaining, and accent walls) shall use materials, patterns, and colors consistent with the adjacent building(s) and, if directly visible from streets or amenity space view, shall be brick, pre-cast, cast stone, straight-faced Keystone or equivalent, or vegetated screen wall.

RAILINGS, FENCING, AND GATES

- Railings, fences, and gates shall typically be metal. Metal materials shall be pre-finished in a powder-coated color coordinated with adjacent materials, or, painted a low-luster, dark neutral color. Any field welding shall be ground smooth and cleaned before painting.
- Terminal posts (corners, openings, and ends) shall be wider and taller than other posts.
- Railing picket spacing shall be no more than four inches (4") on center and must comply with life-safety code requirements.
- Chain link fencing (except where required by law or for temporary security), barbed wire, and paneled materials are not permitted.

PARKING/SERVICE ACCESS LANES AND SURFACE PARKING

- On-street parking should be provided on most retail streets to reduce the speed of traffic and to provide short-term convenience parking. **(See the Street Design section for additional on-street parking criteria.)**
- Access to sidewalks, amenity spaces, and building entries shall be provided from on-street parking to the greatest extent possible.
- Parking/Service access lanes shall be constructed of scored concrete or concrete or brick pavers complimentary to the sidewalk paving material.
- Access lane and parking pavement shall have a grade slope no greater than six percent (6%). Pavement from the front building face of the street shall have a grade slope less than five percent (5%).

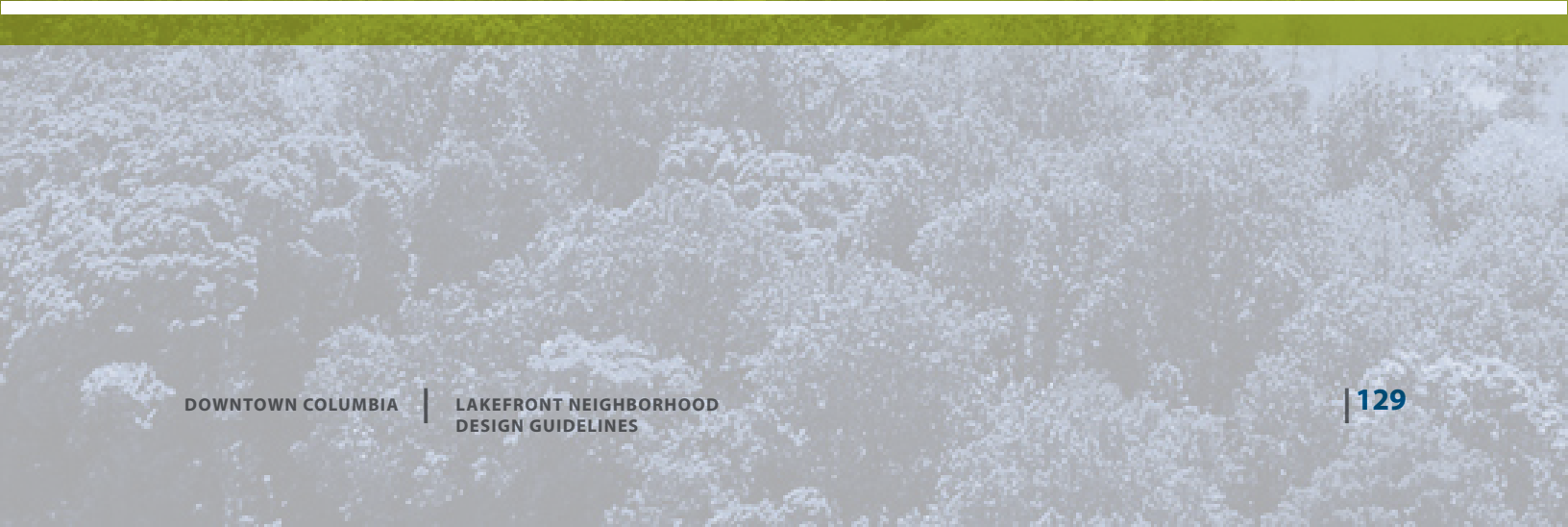
See the Streetscape section beginning on page 36 for additional information and criteria.

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6.0 SIGNAGE

INTRODUCTION
SIGN TYPES



Signage Introduction

Overview

The provisions governing signage in Downtown Columbia are intended to ensure that signs are an integral part of an overall plan aimed at achieving an aesthetically pleasing and high quality visual environment that reinforces the intended character of each of the six neighborhoods.

Signage criteria shall enable easy identification and wayfinding for pedestrian, bicycle, and vehicular traffic and establish a coordinated and harmonic urban streetscape while at the same time providing a signature environment for each unique neighborhood.

The provisions in the *Downtown-wide Design Guidelines*, (CR 138-2010) are aimed at achieving well-designed, coordinated signage and a process that encourages creativity in the use of signage to enhance the urban experience.

Purpose

The intent of the Signage criteria is to facilitate the overall vision for Downtown Columbia by creating a coordinated and aesthetically pleasing sign program for the Lakefront Neighborhood that will be consistent with the envisioned character of Howard County's urban center.

These criteria encourage the use of artistic imagery, lighting, color, texture, graphics and materials to inspire creative design for signage to be implemented throughout the Lakefront Neighborhood. Signage shall inform, direct and orient the public in a thoughtful and meaningful way. It shall also improve the aesthetic qualities of a building, a streetscape or landscape while having a positive visual impact on the entire neighborhood.

These criteria are intended to convey required standards and to provide visual and textual examples of a variety of signs that should be used to interpret the community's expectation for quality signage.

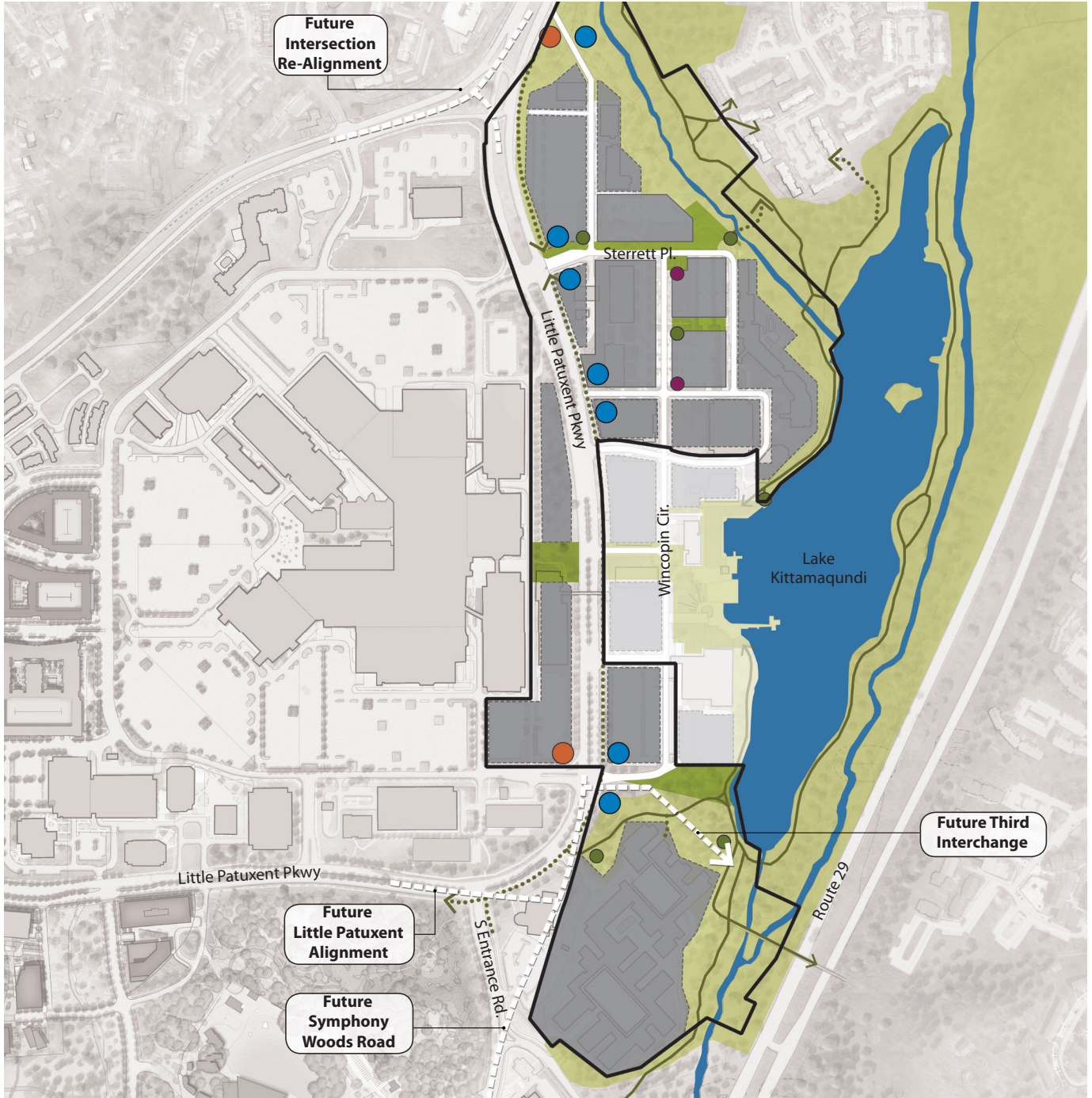
Goals

The goals of the Signage criteria are to accomplish the following:

- Promote an aesthetically pleasing, high-quality visual environment by encouraging signs that reinforce the planned character of the area, are complementary to their surroundings, and effectively communicate their message.
- Establish reasonable design standards for business identification and wayfinding.
- Encourage creative and innovative approaches to signage within the established framework.
- Assist property and business owners in understanding community expectations.
- Promote economic vitality.
- Include informational/educational signs highlighting sustainable methods and elements. These signs should be placed and designed as site-specific or building specific signage.

General Notes

These Signage Criteria build upon the Sign Guidelines in *Downtown-wide Sign Design Guidelines*. However, the current Howard County Maryland Sign Code for Downtown Columbia Maryland, Bill No. 56-2010 shall serve as the overriding document for all square footage requirements, sign setbacks, height limitations and any other sign descriptions found within this document. Maryland Transit Administration (MTA) and Regional Transit Authority (RTA) signs are not subject to these Signage Criteria. The Howard County Sign Code for Downtown Columbia shall be referenced and will serve as the final basis for approval by Howard County for the fabrication and installation of any sign item to be located with the Lakefront Neighborhood in Downtown Columbia.



Lakefront Neighborhood Signage Framework Plan*

- PERMANENT IDENTIFICATION SIGNAGE
- VEHICULAR DIRECTIONAL SIGNAGE
- PEDESTRIAN DIRECTIONAL SIGNAGE
- DIRECTORY SIGNAGE

* Final sign location to be determined during Site Development Plan (SDP) phase.

General Provisions

The following items listed below are general provisions that shall apply to all sign items to be fabricated and installed within the Lakefront Neighborhood. These provisions are in addition to the sign type specific guidelines listed within this document.

1. Signs should be designed, fabricated, and maintained comparable to signage found in first class, mixed-use projects in major metropolitan areas. The Lakefront Neighborhood shall contain an eclectic mix of signage types that provide a layer of authenticity to this vibrant area within Downtown Columbia. While control and uniformity is needed for the signage in the Lakefront Neighborhood, it shall not restrict the creative and artistic approach to signage design – individual expression and creativity is strongly encouraged.
2. Signs should be designed with the purpose of promoting retail and street activity while enhancing the pedestrian experience.
3. Signs should respect the immediate context of the building's location and the overall character of the Lakefront Neighborhood.
4. Signs should relate to their surroundings in terms of size, shape, color, texture and lighting so that they are complementary to the overall design of buildings and their uses.
5. Signs should be located in logical "signable areas" which relate to the architectural pattern of the facade or storefront. Signage areas are often, but not always, continuous wall surfaces uninterrupted by doors, windows, or architectural detail.
6. Signs should enhance and relate to, not obscure, the architectural features of buildings.
7. Signs are to be kept in good repair such that they are always in clean, working condition and the copy text and graphics is not obscured or damaged.

Content

1. Signs that incorporate creative logos or graphic elements along with the business identity are encouraged.
2. Signs for businesses shall promote the "Trade Name" only. Tag lines, bylines, merchandise, or service descriptions shall not be used.
3. Signs, copy and graphic elements shall fit comfortably into sign area, leaving sufficient margins and negative space. Thickness, height, and color of sign lettering shall be visually balanced and in proportion to other signs located on the same building façade.

Illumination

Lighted signs help create the night streetscape while assisting with identification and wayfinding. It is important to illuminate signage carefully to ensure safety.

1. No internally illuminated, acrylic or flexible-vinyl faced box signs are allowed as a single identifying sign. Such signs may be allowed as a secondary or supportive identifying sign or feature.
2. Backlit, halo-lit illumination, or reverse channel letters with halo illumination are highly encouraged for lighting purposes. Such signs convey a subtle and attractive appearance and are very legible under moderate ambient lighting conditions.
3. Projecting light fixtures used for externally illuminated signs shall be simple and unobtrusive in appearance. They should not obscure the graphics of the sign and should be designed as part of the architecture of the sign.
4. Sign lighting shall be designed and installed to achieve appropriate illumination of the particular sign type and condition. Effort should be made to only illuminate the graphic surfaces, background and letterforms of the sign, while limiting light spill over to other adjacent uses, buildings, pedestrians, and vehicles and keep night sky effects and light pollution to a minimum.
5. Lighting for all business signage shall be turned off or reduced during certain non-business hours – to be determined.
6. All electrical connections, including junction boxes, transformers, conduit, raceways and tubing required for any

sign items, shall not be exposed; they shall be concealed and out of public view. Where the attachment of a sign may severely damage or impact the facade of a building or canopy, an architectural signage raceway may be allowed. If allowed, the raceway shall be fabricated to minimum dimensions to conceal all electrical wiring components and painted to match adjacent sign and/or building facade.

7. A sign shall not have blinking, flashing, or fluttering lights or other illuminating devices which have a changing light operated to create an appearance or illusion of writing or printing.
8. Sign illumination shall promote energy conservation by utilizing energy efficient illumination techniques. This may include, but are not limited to, LED lighting components and solar-based illumination techniques where applicable.

Sign Design & Materials

1. Quality materials and creative design shall be used as a means to attract attention rather than excessively bright colors or over-scaled letters.
2. Dimensional signs, letterforms, and decorative brackets are encouraged.
3. Sign letters should be pin-mounted and have dimensional returns to give the appearance of solid dimensional material.
4. Internally lit plastic letters or plastic box signs are not allowed.
5. Signage for the Lakefront Neighborhood shall employ numerous materials and illumination including:

- Painted aluminum/metals
- Natural finish metals, including bronze, aluminum, steel, and stainless steel
- Etched and polished metals
- Cast metals/plaques
- Metal screens, grids, and mesh
- Natural, opaque, hard surface materials, such as granite and stone
- Glass – including frosted, colored, patterned and clear
- Exterior grade vinyl materials
- Exterior grade fabric materials, such as Sunbrella Fabric or equal
- Acrylic, poly-resin materials
- High Density Urethane
- LED illumination
- Neon illumination
- Concealed fluorescent illumination

Prohibited Sign Types

1. Internally illuminated awnings
2. Conventional, plastic faced box or internally illuminated signage cabinet
3. Formed, plastic faced box or injection molded plastic signs
4. Signs with exposed raceways, conduit, junction boxes, transformers, lamps, tubing, or neon crossovers of any type (unless part of the overall design)
5. Rotating, animated, and flashing signs
6. Rooftop signs mounted above the building roof line, unless artfully composed as a design element (e.g., the Anthem House rooftop sign in Baltimore), supported by the Design Advisory Panel (DAP), and approved by the county.
7. Signs placed within the public right-of-way, outside of the individual business' allowable sign area, including placement of signs on public items such as benches, fences, trash cans, bus shelter, etc.
8. Any sign designed to be mobile and moved from place to place (excepting sandwich boards and similar)
9. Balloons or inflatable signs
10. Signs that emit sound or odor

General Provisions

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- Glass – including frosted, colored, patterned and clear
- Exterior grade vinyl materials
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8. Any sign designed to be mobile and moved from place to place (excepting sandwich boards and similar)
9. Balloons or inflatable signs
10. Signs that emit sound or odor

Signage Types

The primary types of signage in the Lakefront Neighborhood will include:

Permanent Identification Signs: Located at key perimeter locations, these signs announce the primary entry points (or gateways) to Downtown Columbia and the Lakefront Neighborhood. This sign type shall be part of a designed family of signs and shall be integrated with the overall wayfinding plan for the neighborhood and the Downtown District.

Directional Signs: Promote convenient wayfinding throughout Downtown and the neighborhoods.

1. Vehicular Directional Signs
 - a. Vehicular Wayfinding Directional Signage
 - b. Parking (Site) Directional Signage
 - c. Downtown Columbia Street Name Signage
2. Pedestrian Directional Signs
3. Informational Wayfinding Directories

Free-Standing Monument signs: Have a lower height configuration and are used for building complexes that are separated from adjacent streets by setbacks.

Building Mounted Signage: Signs affixed securely to a building wall, that should be legible and easily distinguished and serve to guide and orient pedestrian and vehicular traffic going to the building.

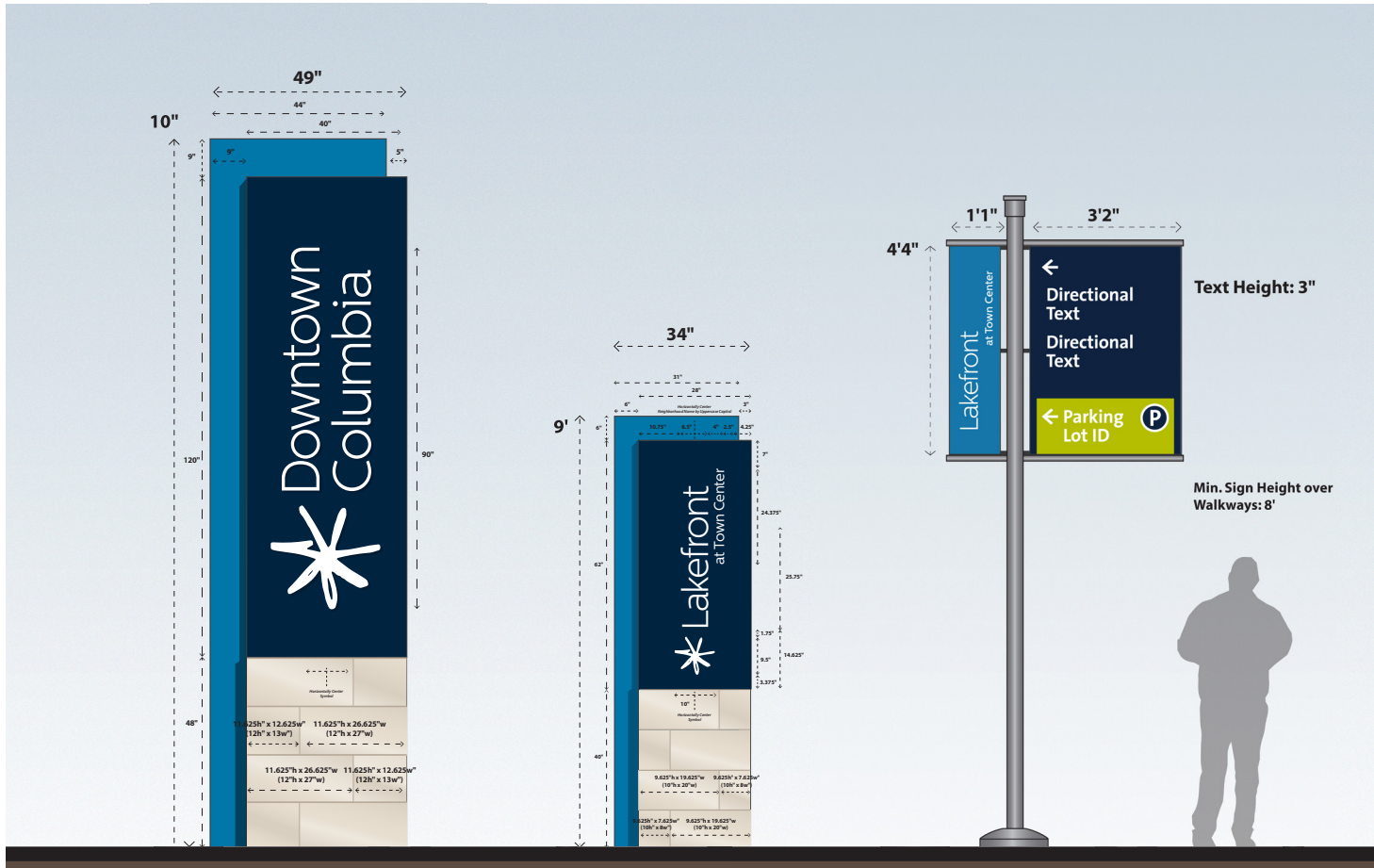
1. Flat Wall Signs
2. Projecting Signs
 - a. Blade Signs
 - b. Grand Blade Signs
 - c. Awning (Canopy) Signs
 - d. Under Canopy Signs
3. Marquee Signs
4. Roof Signs
5. Tall Building Signs
6. Storefront Window Signs

Banners: Permanent, temporary, seasonal signs that add visual interest and color to facades of buildings and/or streetscapes. They are vertically oriented and compatible with the overall character and color of the building/streetscape.

1. Building Mounted Permanent Banners
2. Pole Mounted Seasonal Banners
3. Temporary Banners

Digital Displays: Electronic signs that are integrated into the overall wayfinding signage program of the Lakefront Neighborhood or used by individual businesses. These signs can be used to identify or provide direction, such as providing up-to-date parking availability within a parking structure. Electronic signs can also be implemented and used within an informational directory.

Per Section 3.502A of the Sign Regulations, Digital Displays may also be used to advertise a business and its services, as long as they are integrated into the surrounding architecture and does not adversely impact any residential area adjacent to.



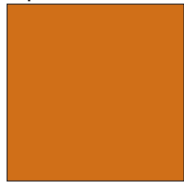
Permanent Identification:
Downtown Columbia*

Permanent Identification:
Lakefront Neighborhood*

Vehicular Directional*

Color Palette

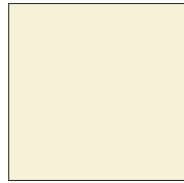
Option 1



Pantone 167c



Pantone Black 2c



Pantone 7500c

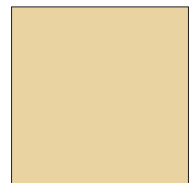
Option 2



Copper Metallic

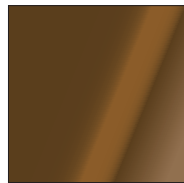


Pantone 8624c

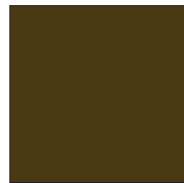


Pantone 7502c

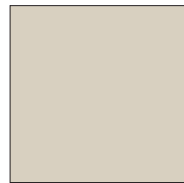
Option 3



Dark Bronze Metallic



Pantone 7533c



Pantone 7529c

Option 4



Pantone 7690c



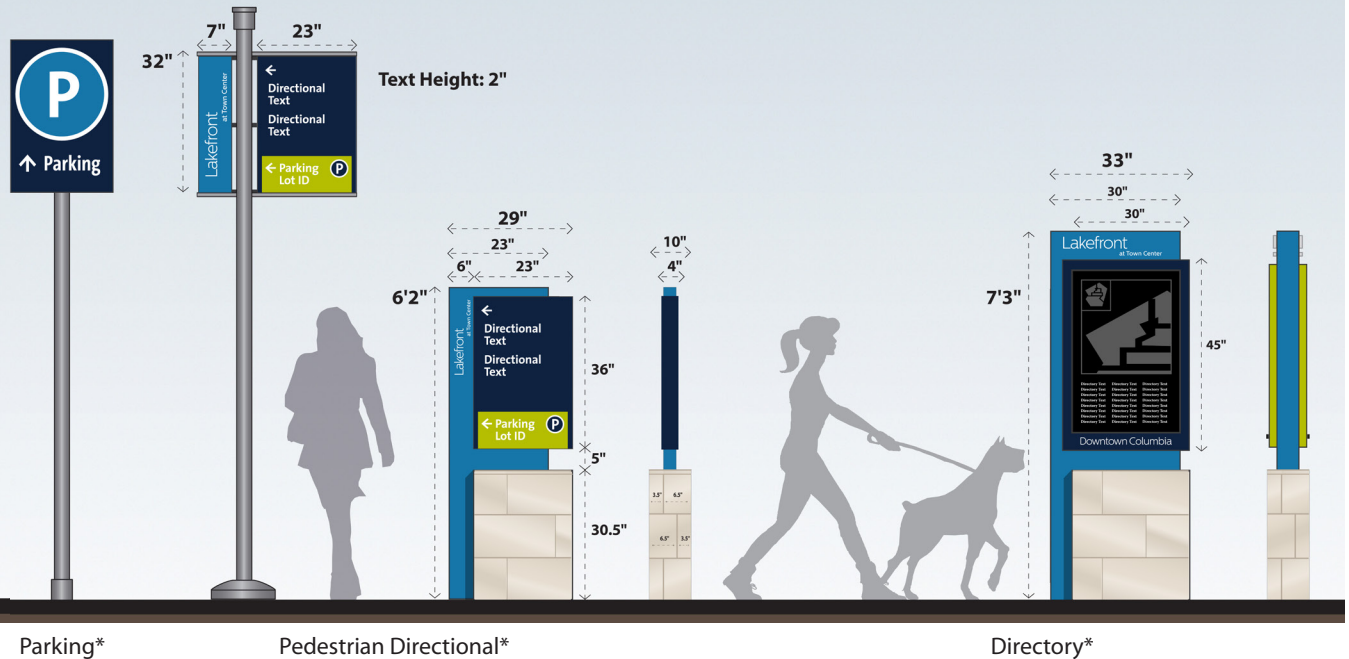
Pantone 289c



Pantone 390c

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Typefaces Palette

Downtown and Neighborhood Name Fonts:

**ABCDEFGHIJKLMNOPQRSTUVWXYZ
VWXYZ &?.\$
abcdefghijklmnopqrstuvwxy
123456789**

Centrale Sans Light

**ABCDEFGHIJKLMNOPQRSTUVWXYZ
VWXYZ &?.\$
abcdefghijklmnopqrstuvwxy
123456789**

Centrale Sans Medium

Identifying and Directional Information Fonts:

**ABCDEFGHIJKLMNOPQRSTUVWXYZ
WXYZ &?.\$
abcdefghijklmnopqrstuvwxy
123456789**

The Sans Bold

**ABCDEFGHIJKLMNOPQRSTUVWXYZ
WXYZ &?.\$
abcdefghijklmnopqrstuvwxy
123456789**

The Sans Condensed Bold

Permanent Identification Signs

Overview:

Located at key perimeter locations, these signs announce the primary entry points (or gateways) to Downtown Columbia and the Lakefront Neighborhood. This sign type shall be part of a designed family of signs and shall be integrated with the overall wayfinding plan for the neighborhood and the Downtown.

General Description:

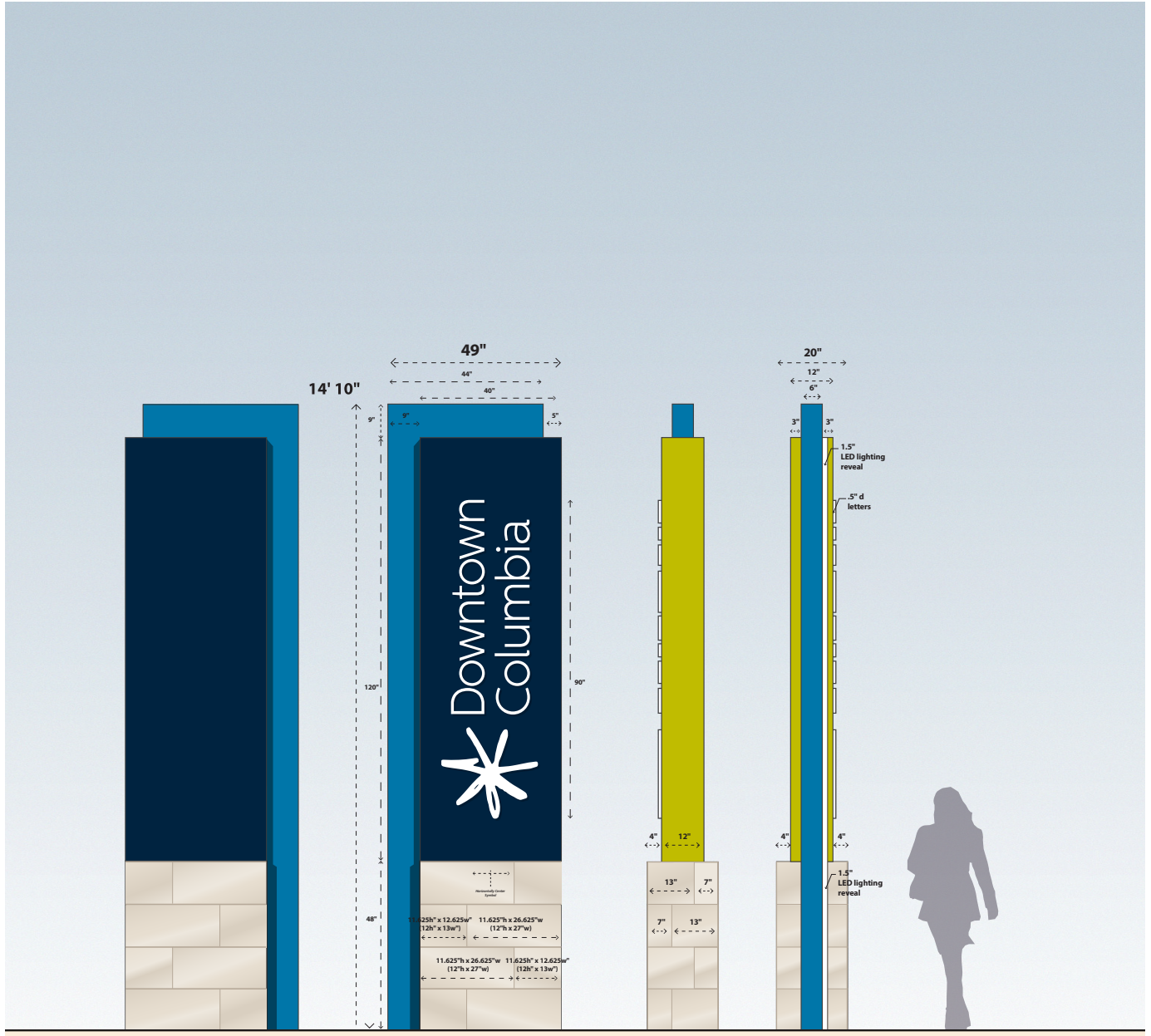
- Shall be designed as an integral part of the Neighborhood hardscaping and landscaping
- Shall be compatible with the architecture of the Downtown Columbia neighborhoods.

Sign Materials and Requirements:

- Sign Materials may include, fabricated aluminum, natural metals, stone, masonry and glass
- Messages on Downtown Columbia and Downtown Columbia Neighborhood Identification Signs shall be limited to the Downtown Columbia or Neighborhood Name (“Lakefront”)
- Signs may contain internal and/or remote illumination.
- The current Howard County Sign Code for Downtown Columbia, shall serve as the over-riding regulating document for all square footage requirements, sign setbacks, height limitations.



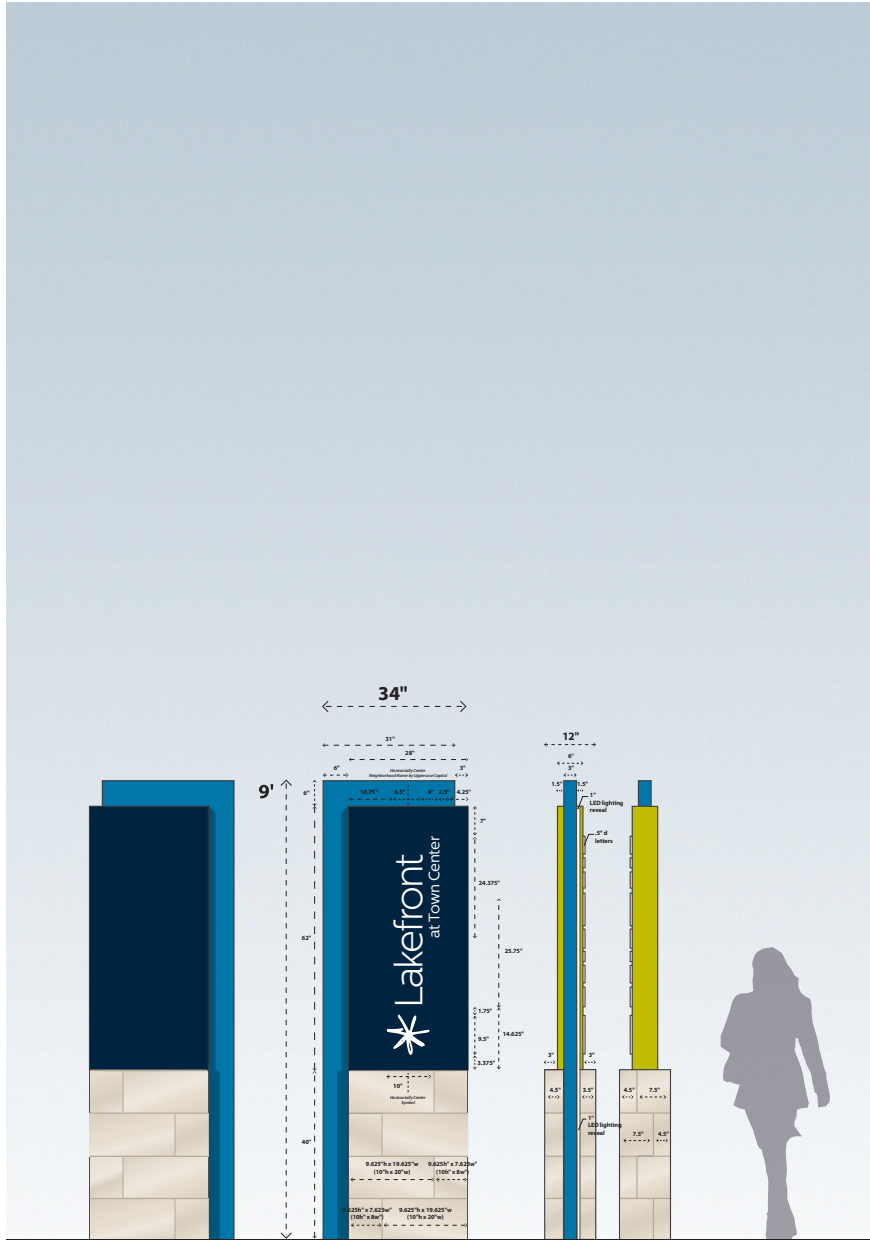
Permanent Identification Signs



Permanent Identification Sign Diagram * - Proposed Concept Design

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Permanent Identification Signs



Permanent Identification Sign Diagram for Lakefront Neighborhood * - Proposed Concept Design

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Permanent Identification Signs



Permanent Identification Sign Diagrams - Night View * - Proposed Concept Design

Directional Signs

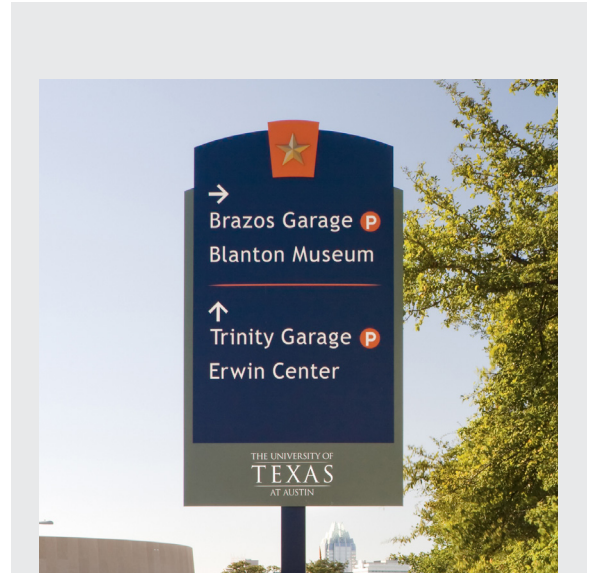
Overview:

These signs shall implement the overall wayfinding sign plan for Downtown Columbia and the Lakefront Neighborhood. The directional signs shall promote convenient wayfinding within the neighborhood and Downtown, helping to create a pedestrian-friendly environment that is easy to navigate.

Designed and constructed as a family of signs, the Directional Signage program for the Lakefront Neighborhood shall first welcome the visitor arriving by car and then easily navigate them to public parking facilities. After the Lakefront Neighborhood visitor has exited their car, they will be introduced to the pedestrian signage items that will help expedite movement by providing direction to key areas throughout the neighborhood and Downtown Columbia.

Designed and constructed as a family of signs, Directional Sign Types shall include:

1. Vehicular Directional Signs
 - a. Vehicular Wayfinding Directional Signage
 - b. Parking (Site) Directional Signage
 - c. Downtown Columbia Street Name Signage
2. Pedestrian Directional Signs
3. Informational Wayfinding Directories



Directional Signs

Signage Wayfinding System: Charlotte, NC



Vehicular Directional Sign



Vehicular Directional Sign



Pedestrian Directional Sign



Informational Wayfinding Directory

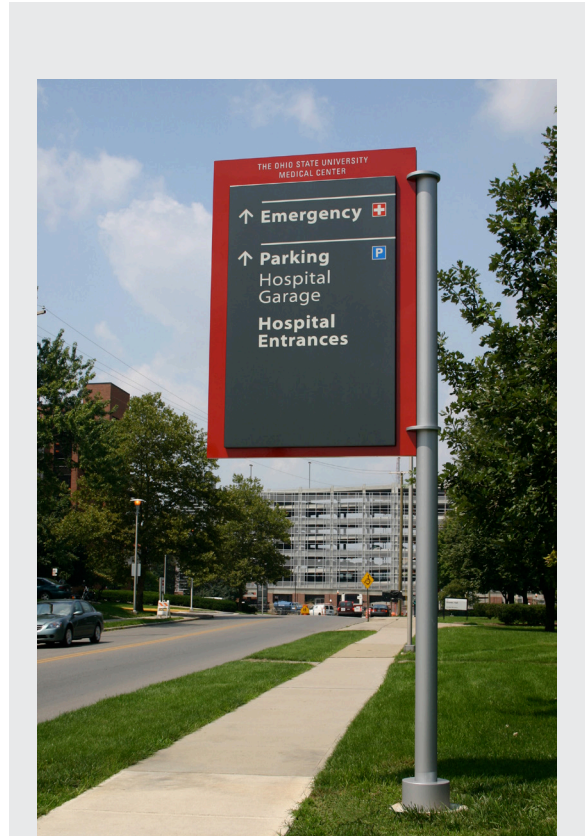
1a. Vehicular Directional Signs

Overview:

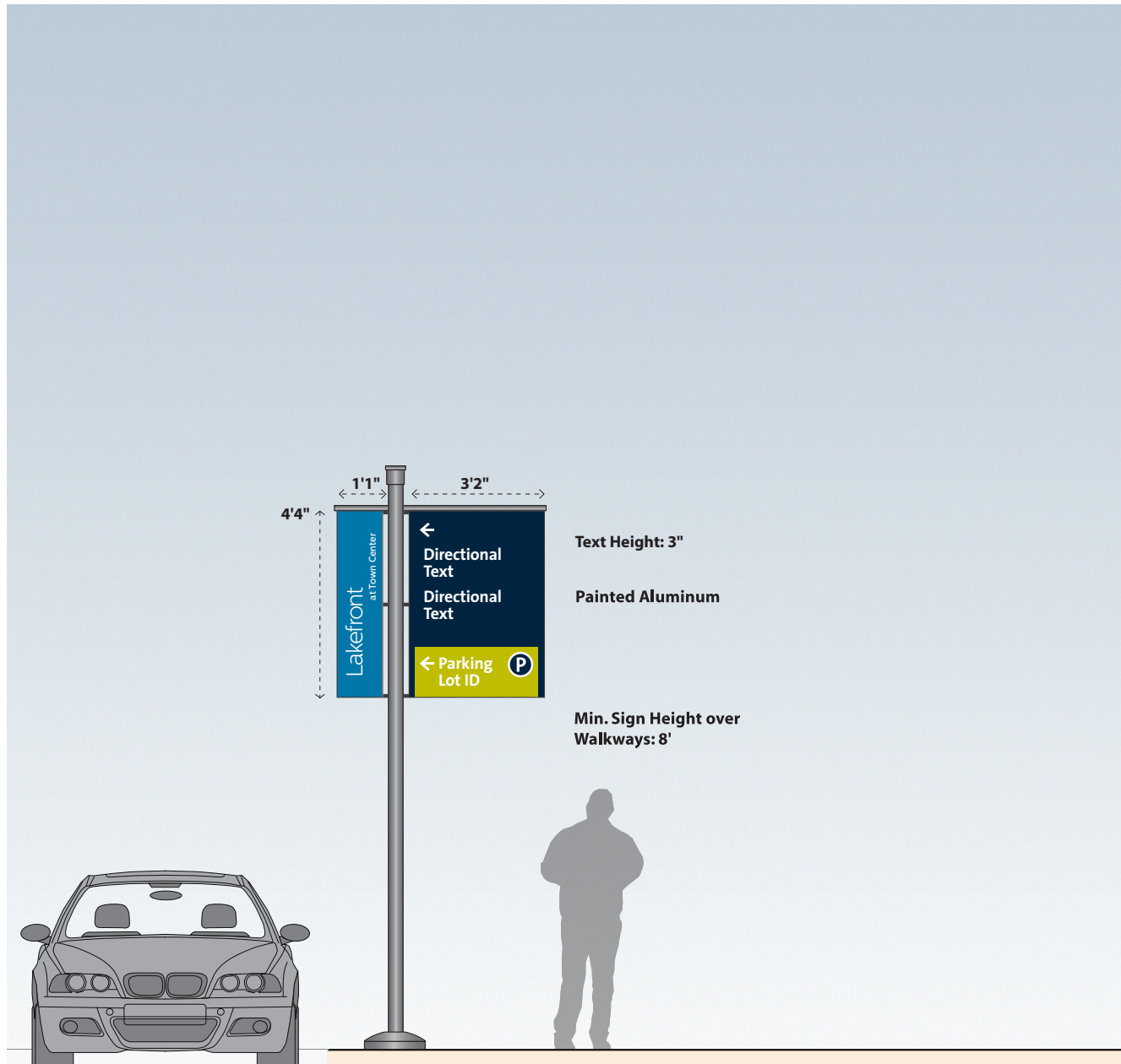
- Shall be designed with an emphasis on clarity and readability for vehicular occupants, taking into account vehicular speeds and sightlines.
- Signs shall be placed to expedite movement throughout the Lakefront Neighborhood and Downtown Columbia.
- Signs may contain the "Lakefront", "Downtown Columbia" or coordinated logotype.
- Vehicular directional signage shall be designed to be consistent and uniform throughout Downtown Columbia and shall not be designed to be neighborhood specific with exception to the allowable inclusion of the neighborhood name and or logotype.
- Directional text shall contain generic uses (such as "Parking", "Library", "Plaza", "Shops", "Hotel", "Restaurants", "Grocery", "Theatre", etc.) and wording of a directional nature, or public service information (such as information concerning transit routes and schedules, transportation demand management activities, community events, weather, and similar information).
- Signs may be placed on private land or in the public right-of-way, subject to Howard County approval.

Materials and Standards:

- Fabricated aluminum ground and/or post mounted signage panel located within the urban streetscape context.
- As per the MUTCD, an alternative background color other than the normal guide sign color of green (blue, brown or white) may be used for vehicular directional signage. This is dependent upon the approval from the Howard County jurisdictional authority for roads.
- Any projecting overhead sign item located within the public streetscape shall be mounted no less than eight feet above the ground level.
- Signs shall not contain internal illumination, to be illuminated by ambient or remote sources.
- Text for signage shall be fabricated and/or cast painted aluminum letters and applied vinyl.
- All text shall take vehicular speed and sightline visibility into consideration when determining the appropriate font sizes to be used. A minimum text height of three inches is recommended. This has a readable distance for maximum impact of thirty feet and a maximum readable distance of one hundred feet.
- The current Howard County Sign Code for Downtown Columbia, shall serve as the over-riding regulating document for all square footage requirements, sign setbacks, height limitations.



1a. Vehicular Directional Signs



Vehicular Directional Sign Diagram * - Proposed Concept Design

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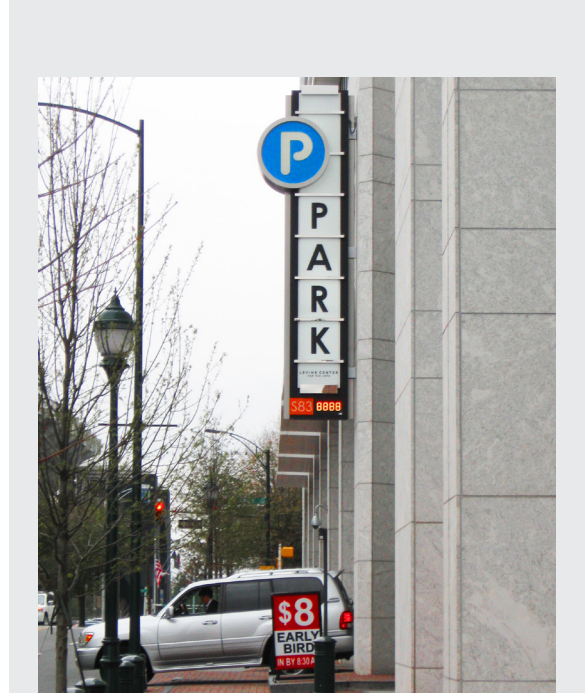
1b. Parking (Site) Directional Signage

Overview:

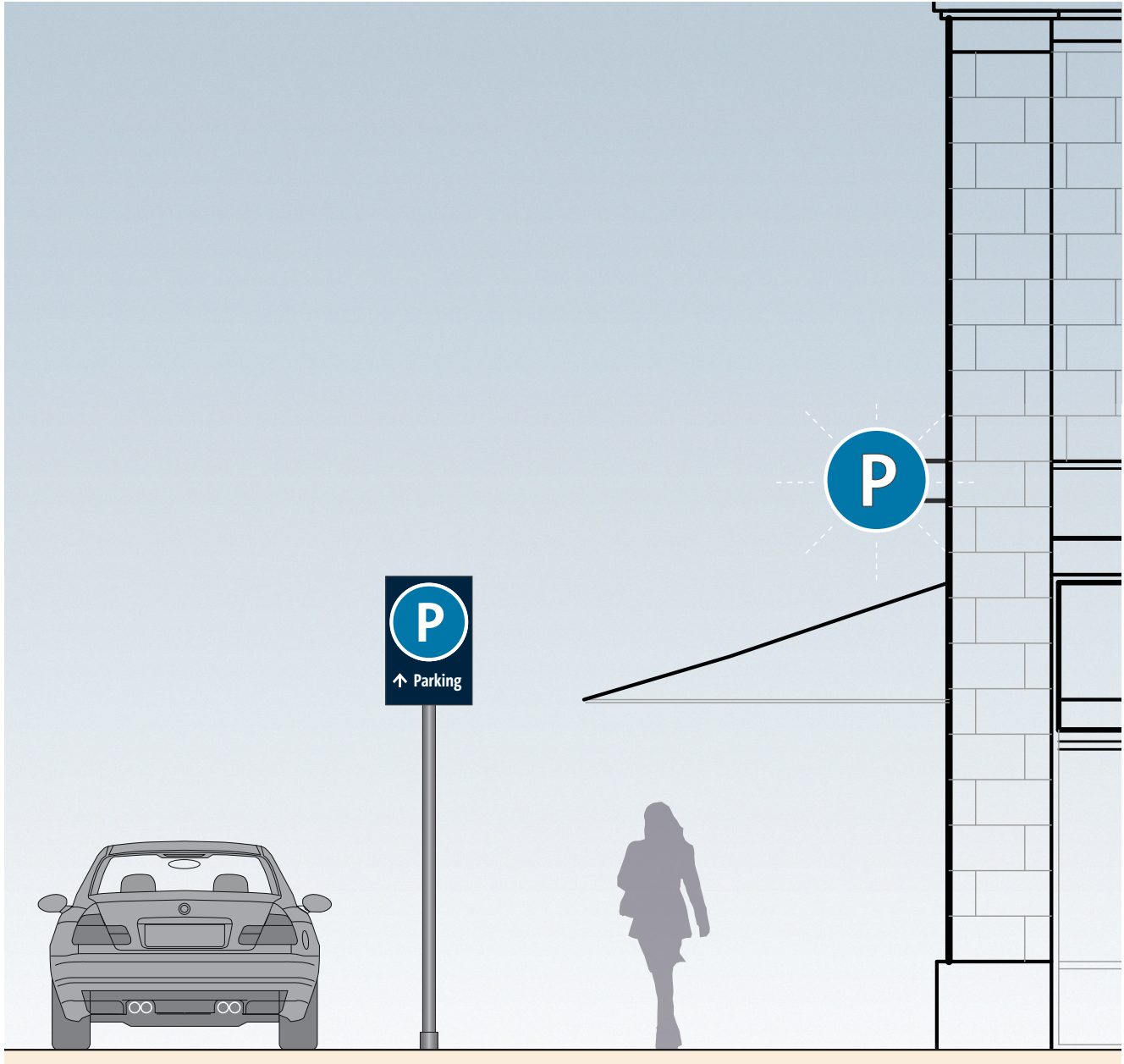
- Shall be designed with an emphasis on clarity and readability for vehicular occupants, taking into account vehicular speeds and sightlines.
- Parking Identification signage shall be designed to be consistent and uniform throughout Downtown Columbia and shall not be designed to be neighborhood specific.
- Signs shall not contain any message other than the directional text.
- Each sign may contain an arrow or graphic to accentuate its' message.
- Signs may be placed on private land or in the public right-of-way, subject to Howard County approval.

Materials and Standards:

- Fabricated aluminum ground, post mounted or building mounted signage panel located within the urban streetscape context.
- Any projecting overhead sign item located within the public streetscape shall be mounted no less than eight feet above the ground level.
- A projecting building mounted sign may not project more than forty-eight inches from a wall of a building.
- Signs may contain internal illumination or can be illuminated by ambient or remote sources.
- The current Howard County Sign Code for Downtown Columbia, shall serve as the over-riding regulating document for all square footage requirements, sign setbacks, height limitations.



1b. Parking (Site) Directional Signage



Parking (Site) Directional Sign Diagram * - Proposed Concept Design

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1c. Downtown Columbia Street Name Signage

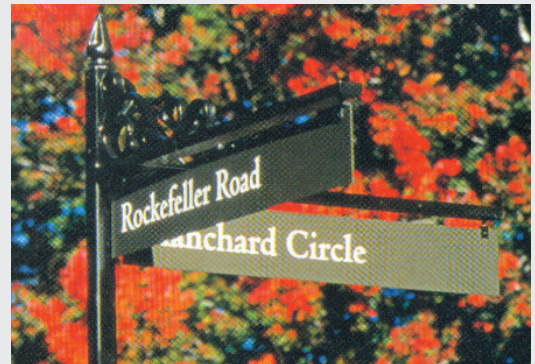
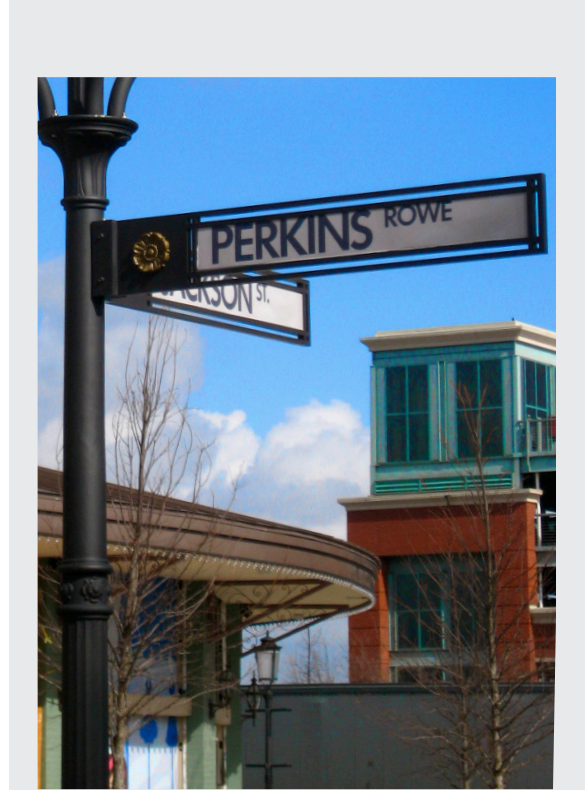
Overview:

- Shall be designed with an emphasis on clarity and readability for vehicular occupants, taking into account vehicular speeds and sightlines.
- Street signs shall be designed to be consistent and uniform throughout Downtown Columbia and shall not be designed to be neighborhood specific.
- All design standards shall follow the Manual on Uniform Traffic Control Devices and the Howard County Code.

Materials and Standards:

- Fabricated aluminum post mounted panel containing white reflective vinyl text.
- As per the MUTCD, an alternative background color other than the normal guide sign color of green (blue, brown or white) may be used for Street Name Signs. This is dependent upon the approval from the Howard County jurisdictional authority for roads.
- Recommended Minimum Letter Heights for post-mounted street signs:

Multi-lane Street:	40 mph or less:
Initial Upper-Case Min. Height	6 inches
Lower-Case Min. Height	4.5 inches
Two-lane Street:	25 mph or less:
Initial Upper-Case Min. Height	4 inches
Lower-Case Min. Height	3 inches
- Any projecting overhead sign item located within the public streetscape shall be mounted no less than eight feet above the ground level or eighteen feet above any road, driveway or alley.
- The current Howard County Sign Code for Downtown Columbia, shall serve as the over-riding regulating document for all square footage requirements, sign setbacks, height limitations.



1c. Downtown Columbia Street Name Signage



Downtown Columbia Street Name Sign Diagram * - Proposed Concept Design

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2. Pedestrian Wafinding Directional Signage

Overview:

- Signs shall be designed and constructed as a family of signs that enhances the pedestrian experience.
- Shall be pedestrian in scale and height.
- Shall be used to direct and inform pedestrians throughout the Lakefront Neighborhood.
- Signs may contain the “Lakefront”, “Downtown Columbia” or coordinated logotype.
- Pedestrian directional signage shall be designed to be consistent and uniform throughout Downtown Columbia and shall not be designed to be neighborhood specific with exception to the allowable inclusion of the neighborhood name and or logotype.
- Directional text shall contain generic uses (such as “Parking”, “Library”, “Plaza”, “Shops”, “Hotel”, “Restaurants”, “Grocery”, “Theatre”, etc.) and wording of a directional nature, or public service information (such as information concerning transit routes and schedules, transportation demand management activities, community events, weather, and similar information).
- Signs may be placed on private land or in the public right-of-way, subject to Howard County approval.

Materials and Standards:

- Fabricated aluminum ground and/or post mounted signage panel located within the urban streetscape context.
- Any projecting overhead sign item located within the public streetscape shall be mounted no less than eight feet above the ground level.
- Signs shall not contain internal illumination, to be illuminated by ambient or remote sources.
- Text for signage shall be fabricated and/or cast painted aluminum letters and applied vinyl.
- All text shall take sightline visibility into consideration when determining the appropriate font sizes to be used. A minimum text height of one inch and maximum cap text height of three inches is recommended.
- The current Howard County Sign Code for Downtown Columbia, shall serve as the over-riding regulating document for all square footage requirements, sign setbacks, height limitations.



2. Pedestrian Wayfinding Directional Signage



Pedestrian Wayfinding Directional Sign Diagram * - Proposed Concept Design

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3. Informational Wayfinding Directories

Overview:

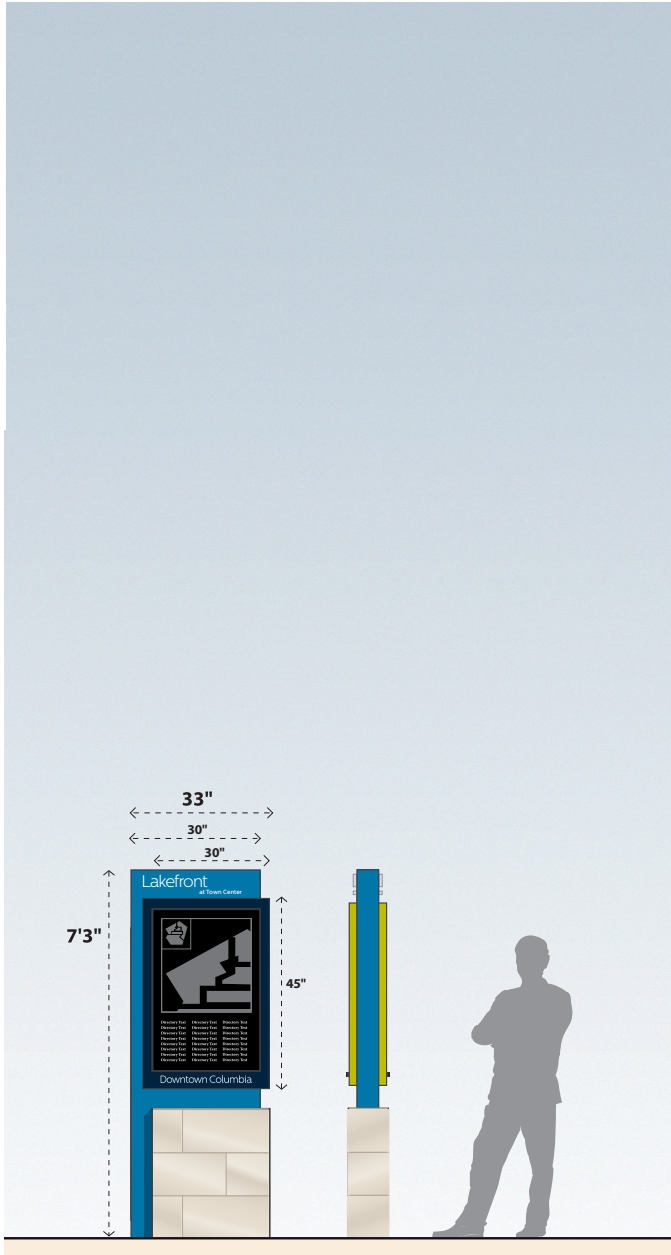
- Signs that shall contain specific retail and/or office tenant names and information, directional information and/or public service information (such as information concerning transit routes and schedules, transportation demand management activities, community events, weather and similar information)
- Shall be scaled to inform pedestrians.
- Directories may contain the “Lakefront”, “Downtown Columbia”, building name, building address or coordinated logotypes.

Materials and Standards:

- Directories shall be constructed of materials that compliment its surroundings and its use.
- Materials may include fabricated aluminum, acrylic, glass and digitally printed graphic panels.
- To be mounted flush against a wall surface or incorporated into a freestanding sign.
- Signs may contain internal or remote illumination.
- The current Howard County Sign Code for Downtown Columbia, shall serve as the over-riding regulating document for all square footage requirements, sign setbacks, height limitations.



3. Informational Wayfinding Directories



Informational Wayfinding Directories Diagram * - Proposed Concept Design



200% Enlargement

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Free-Standing Monument Signs

Overview:

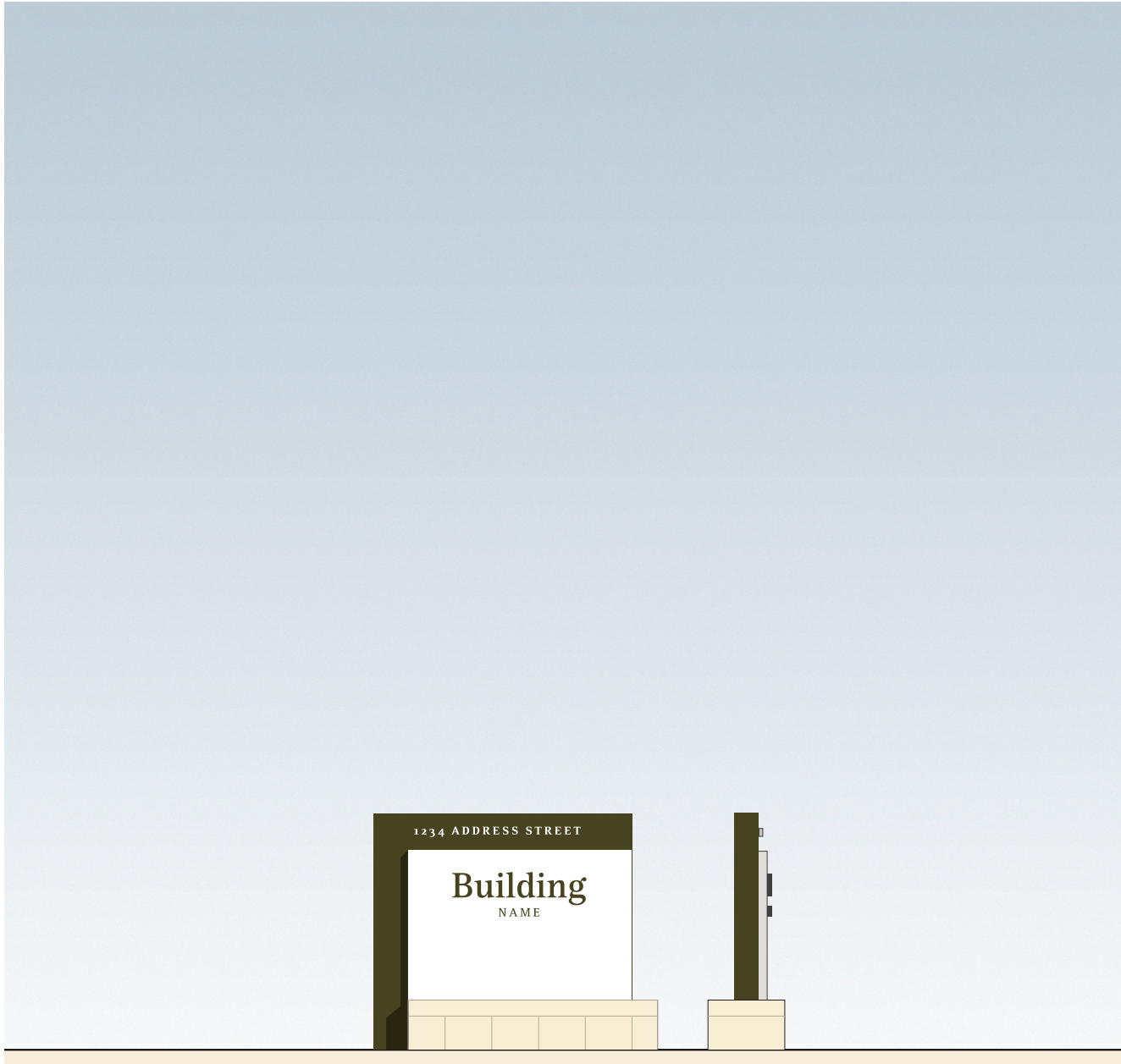
Free-standing Monument Signs may be used within the Lakefront Neighborhood for building complexes that are separated from adjacent streets by setbacks. Placement is subject to Howard County approval.

Materials and Standards:

- Signs shall be constructed of materials that complement building structures and their uses.
- Materials may include, but are not limited to, natural stone, aluminum, stainless steel and glass.
- Signs shall have architectural lines that complement the building.
- Shall have a low profile and be flanked by either columns or decorative uprights, or have a solid base at the ground.
- Signs shall be illuminated either by external fixtures designed to complement the appearance of the sign, backlit to create a halo effect around the lettering or internally lit so that only the lettering and logo are visible after dark.
- Internally illuminated plastic faced signage cabinets are not allowed.
- Information shall be limited to the building or project name, logos, and the business address.
- Signs may be placed on private land only.
- Signs are exempt from setback requirements, subject to Howard County approval.
- Allowable size: A Monument Building Sign, including its structure, shall not be more than six feet in height. The maximum sign area for a Monument Building Sign is thirty square feet per side or face.



Free-Standing Monument Signs



Free-Standing Monument Sign Concept Diagram *

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Signage Types

Building Mounted Signage

Overview:

The following sign items pertain to signs that identify an individual tenant or business within the Lakefront Neighborhood that are directly attached to the building façade in which they occupy.

These sign types include:

1. Flat Wall Signs
2. Projecting Signs
 - a. Blade Signs
 - b. Grand Blade Sign
 - c. Awning (Canopy) Signs
 - d. Under Canopy Signs
3. Marquee Signs
4. Roof Signs
5. Tall Building Signs
6. Storefront Window Signs



1. Flat Wall Signs



Overview:

Flat Wall Signs are affixed securely to a building wall. These signs should be legible and easily distinguished from other signage on each building and serve to guide and orient pedestrian and vehicular traffic going to the building.

Materials and Standards:

- Signs shall be placed within a clear signable area.
- Sign locations shall respect the design of a building, including the arrangement of bays and openings.
- Signs shall not obscure windows, grillwork, piers, pilasters and ornamental features. Typically, wall signs should be centered on horizontal surfaces (i.e. over a storefront opening).
- Acceptable signage materials and applications may include::

Painted aluminum/metals

Natural finish metals to include bronze, aluminum, steel, stainless steel

Etched and polished metals

Cast metals/plaques

Metal screens, grids and mesh

Natural opaque hard surface materials, such as granite and stone

Glass – frosted, colored, patterned and clear

Exterior grade vinyl materials

Acrylic, poly-resin materials

High Density Urethane

LED illumination

Neon illumination

Concealed fluorescent illumination

- The current Howard County Sign Code for Downtown Columbia, shall serve as the over-riding regulating document for all square footage requirements, sign setbacks, height limitations.

2. Projecting Signs

Overview:

Projecting Signs are signs that are affixed perpendicularly to a building. In the Lakefront Neighborhood and throughout Downtown Columbia, Projecting Signs include the following:

- a. Blade Signs
- b. Grand Blade Sign
- c. Awning (Canopy) Signs
- d. Under Canopy Signs



2a. Projecting Signs: Blade Signs



Overview:

Blade Signs are affixed perpendicularly to the face of a building. These signs bring creativity and fun to the streetscape and shall be oriented to pedestrians passing on the sidewalk in front of buildings. A Blade Sign is typically mounted adjacent to a storefront at or above the entrance within the first level streetscape environment. This sign type is intended to be viewed at the pedestrian level.

Materials and Standards:

- Blade Signs should complement the architecture of each building, or portion thereof, or relate to the design of a storefront.
- Signs shall reflect the character of each business while fitting comfortably with other adjacent signage.
- Signs shall be creatively designed with visually interesting elements such as geometric or irregular outlines with painted or applied letters, two or three dimensional symbols or icons and/or internal cutouts.
- Signs shall have mounting hardware that is attractive and integral to the sign design.
- Signs can be internally illuminated, illuminated from attached fixtures or illuminated by surrounding ambient lighting
- Materials may include:
 - Painted aluminum/metals*
 - Natural finish metals to include bronze, aluminum, steel, stainless steel*
 - Etched and polished metals*
 - Cast metals/plaques*
 - Metal screens, grids and mesh*
 - Natural opaque hard surface materials, such as granite and stone*
 - Glass – frosted, colored, patterned and clear*
 - Exterior grade vinyl materials*
 - Acrylic, poly-resin materials*
 - High Density Urethane*
 - LED illumination*
 - Neon illumination*
 - Concealed fluorescent illumination*
- The current Howard County Sign Code for Downtown Columbia, shall serve as the over-riding regulating document for all square footage requirements, sign setbacks, height limitations.

2b. Grand Blade Signs

Overview:

These Blade Signs are affixed perpendicularly to the face of a building, but unlike a typical street level blade sign, these signs are larger and intended to be viewed from a distance. These signs are mounted above the first floor, typically near the ends or corner of buildings. This sign type is used to announce and identify an individual tenant's identity and/or brand. This sign type is used to aid in orienting pedestrian and vehicular traffic going to a particular business.

Materials and Standards:

- Blade Signs should complement the architecture of each building, or portion thereof, or relate to the design of a storefront.
- Signs shall reflect the character of each business while fitting comfortably with other adjacent signage.
- Signs shall be creatively designed with visually interesting elements such as geometric or irregular outlines with painted or applied letters, two or three dimensional symbols or icons and/or internal cutouts.
- Signs shall have mounting hardware that is attractive and integral to the sign design.
- Signs can be internally illuminated, illuminated from attached fixtures or illuminated by surrounding ambient lighting
- Materials may include:
 - Painted aluminum/metals*
 - Natural finish metals to include bronze, aluminum, steel, stainless steel*
 - Etched and polished metals*
 - Cast metals/plaques*
 - Metal screens, grids and mesh*
 - Glass – frosted, colored, patterned and clear*
 - Exterior grade vinyl materials*
 - Acrylic, poly-resin materials*
 - High Density Urethane*
 - LED illumination*
 - Neon illumination*
 - Concealed fluorescent illumination*
- The current Howard County Sign Code for Downtown Columbia, shall serve as the over-riding regulating document for all square footage requirements, sign setbacks, height limitations.



2c. Projecting Signs: Awning (Canopy) Signs



Overview:

Awning signs are printed on, applied vinyl or attached to an awning or canopy above a business door or window. They generally serve to bring color to the streetscape and are oriented towards pedestrians.

While only the signage on an awning is regulated by the Howard County Sign Code, the following design advice is presented to ensure well-built, aesthetically pleasing awnings and canopies as the backdrop for the awning signs.

Materials and Standards:

- Awnings and canopies must be sturdy and permanently attached to buildings.
- Awnings must be mounted at a height, which ensures that when under canopy signs are included, they will be a minimum of eight feet from ground level at the base of the building.
- Open-ended awnings are preferred.
- Awnings should be designed to project over individual window and door openings and not project as a single continuous feature extending over masonry piers or arches.
- Materials shall include: metal, glass, outdoor-grade marine fabric/canvas, vinyl mesh and applied vinyl graphics.

2d. Projecting Signs: Under Canopy Signs

Overview:

Under Canopy Signs are similar to blade signs except that they are suspended below a marquee or under an awning or canopy. These signs are generally smaller than blade signs and are oriented to pedestrians passing under them.

Materials and Standards:

- These signs shall be permanently attached to an overhead canopy or awning.
- Signs shall be used primarily at ground floor locations but can be considered for upper floor businesses with covered entry porches and balconies.
- Signs shall impart a sense of creativity in their design.
- Blade Signs should complement the architecture of each building, or portion thereof, or relate to the design of a storefront.
- Signs shall reflect the character of each business while fitting comfortably with other adjacent signage.
- Signs shall be creatively designed with visually interesting elements such as geometric or irregular outlines with painted or applied letters, two or three dimensional symbols or icons and/or internal cutouts.
- Signs shall have mounting hardware that is attractive and integral to the sign design.
- Signs can be internally illuminated, illuminated from attached fixtures or illuminated by surrounding ambient lighting
- Materials may include:
 - Painted aluminum/metals*
 - Natural finish metals to include bronze, aluminum, steel, stainless steel*
 - Etched and polished metals*
 - Cast metals/plaques*
 - Metal screens, grids and mesh*
 - Glass – frosted, colored, patterned and clear*
 - Exterior grade vinyl materials*
 - Acrylic, poly-resin materials*
 - High Density Urethane*
 - LED illumination*
 - Neon illumination*
 - Concealed fluorescent illumination*
- The current Howard County Sign Code for Downtown Columbia, shall serve as the over-riding regulating document for all square footage requirements, sign setbacks, height limitations.



3. Marquee Signs



Overview:

A marquee sign is aligned with a building façade and affixed to the face of a building marquee (a permanent canopy often of metal and glass projecting over an entry). This sign type is used to accentuate primary building entrances, major tenant entrances or other significant building entry points and aid in orienting pedestrian and vehicular traffic going to the building.

Materials and Standards:

- Sign shall compliment the architecture of the marquee or canopy structure.
- Signs shall be designed as an integral part of the overall building or storefront architecture.
- Signs shall be scaled so that the signs appear proportional to and well supported by the marquee.
- Theaters, cinemas and performing arts facilities are encouraged to utilize this sign type.
- In Downtown Columbia, marquee signs may project below or above the vertical face or a marquee or structural canopy, provided a vertical clearance of eight feet is maintained between the bottom of the sign and the grade below.
- The horizontal clearance between a marquee or structural canopy and the street curb line shall not be less than three feet.
- Materials may include:
 - Internally illuminated channel letters*
 - Face-lit letters, illuminated by a remote source*
 - Backlit halo-illuminated letters*
 - Painted aluminum/metals*
 - Natural finish metals to include bronze, aluminum, steel, stainless steel*
 - Etched and polished metals*
 - Metal screens, grids and mesh*
 - LED illumination*
 - Neon illumination*
 - Concealed fluorescent illumination*
- The current Howard County Sign Code for Downtown Columbia, shall serve as the over-riding regulating document for all square footage requirements, sign setbacks, height limitations.

4. Roof Signs

Overview:

Roof Signs are flat signs mounted at the top of a building that enhance the skyline by announcing the identity of a building. These signs are intended to be easily seen from a distance both day and night.

Materials and Standards:

- Single-faced signs shall be permitted on the front profile of a building provided that the top of the sign does not exceed the height of the building, as defined in the Howard County zoning regulations, unless artfully composed as a design element (e.g., the Anthem House rooftop sign in Baltimore), supported by the Design Advisory Panel (DAP), and approved by the county.
- Signs shall be integrated with distinctive building type whenever possible.
- Logos and logotypes shall be used over lengthy business names as clear identifiers.
- Signs shall be constructed of high quality, durable materials that are compatible with the building materials. Materials may include fabricated aluminum and other natural metals.
- Signs shall consist of channel letters that are pin-mounted and backlit creating an illuminated halo effect.
- The current Howard County Sign Code for Downtown Columbia, shall serve as the over-riding regulating document for all square footage requirements, sign setbacks, height limitations.



credit: Hill Now



5. Tall Building Signs



Overview:

Tall Building Signs are flat signs mounted at the top of a building that is over one hundred feet tall. They shall enhance the skyline by announcing the identity of a tenant or building name. These signs are intended to be easily seen from a distance both day and night.

Materials and Standards:

- On a flat-topped building, tall building sign shall be located between the top of the windows on the topmost floor and the top of the roof parapet or within sixteen feet below the top of the roof parapet.
- Shall be located on a wall and may not be located on a roof, including a sloping roof, and may not block any windows.
- A building may have tall building signs and the area of all tall building signs is included in the computation of the building's allowed tall building sign area. If a building has tall building signs on two or more sides of the building, the signage on each side shall consist of the same combination of names or corporate logos, provided that the names and logos on the signs need not be identical in appearance.
- The area for tall building signs are not counted toward the total sign area of the building.
- Signs shall be integrated with distinctive building top whenever possible.
- Signs shall consist of channel letters that are individually pin-mounted.
- Signs shall be constructed of high quality, durable materials that are compatible with the building materials. Materials may include fabricated aluminum and acrylic faces where applicable.
- Illumination. Channel letters shall be internally illuminated only, either backlit creating an illuminated halo effect, face lit or a combination of both illumination methods.
- DILP shall review specific area calculation exemptions proposed for Tall Building Signs.
- The current Howard County Sign Code for Downtown Columbia, shall serve as the over-riding regulating document for all square footage requirements, sign setbacks, height limitations.

6. Storefront / Window Signs

Overview:

Window Signs are professionally painted, posted, displayed, or etched on interior translucent or transparent surfaces, including windows or doors. This type of signage generally contains only text but can express a special business personality (or brand) through the use of graphic logos or images combined with color.

Materials and Standards:

- Permanent window signs may cover up to 20% of the glass area and should be designed so that visibility into and out of the window is not obscured.
- Window signs shall be created from high-quality materials, which may include: paint, gold leaf, transparent, opaque and frosted vinyl materials.
- Window signs may also utilize techniques such as sandblasting and etching.
- Window Signs shall be applied directly to the interior face of the glazing or hung inside the window concealing all mounting hardware and equipment.
- The current Howard County Sign Code for Downtown Columbia shall serve as the over-riding regulating document for all square footage requirements, sign setbacks, height limitations.



Banner Signs



Overview:

Banners can add color and visual interest to the Lakefront Neighborhood streetscape environment. In Downtown Columbia. Permanent and temporary banners are allowed on private land and may be mounted on buildings, streetlights, and similar pole-like structures.

Banner types include:

1. Building Mounted
2. Pole Mounted
3. Temporary

1. Building Mounted (Permanent) Banner Signs

Overview:

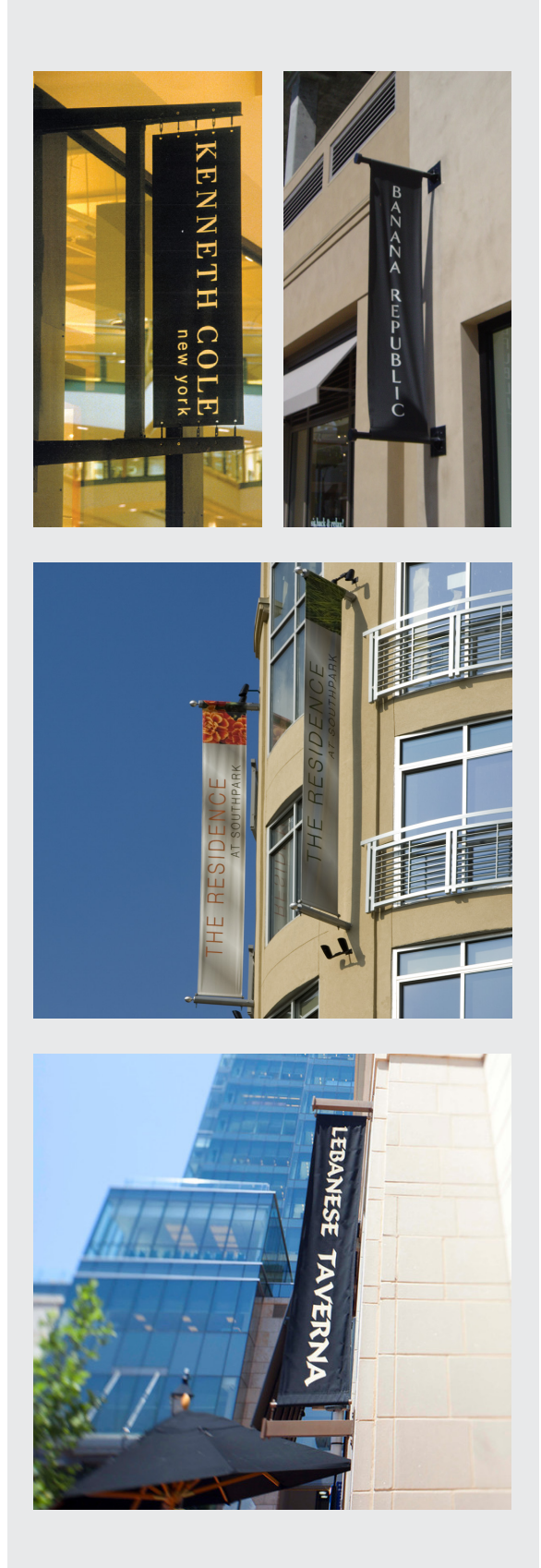
Banners mounted on a building façade can help add dimension, interest and color. They shall be vertically oriented and compatible with the overall character and color of the building.

Materials and Standards:

- Banners shall look or complement purposeful elements of the building.
- Materials may include:

Durable heavy weight exterior grade canvas fabric
Exterior grade, digitally printed vinyl and vinyl mesh materials
Metal
Glass

- Banners shall be mounted perpendicularly to the building façade at both the top and bottom from metal brackets of a size and design that are appropriate to the banner and the architectural character of the building.
- Banners shall contain easily recognized business names and/or logos
- A Building Mounted Banner is a projecting sign, therefore the requirements for projecting signs within Downtown Columbia shall apply, they include:
 - A projecting sign or supporting structure shall not project more than forty-eight inches from the wall of a building, nor be less than eight feet from the ground level at the base of the building and eighteen feet above any road, driveway, or alley.
 - The horizontal clearance between a projecting sign and the curb line shall not be less than three feet.
 - A projecting sign shall not be higher than the parapet line of the building or twenty-five feet from the ground level to the top of the sign, whichever is less.



1. Building Mounted (Permanent) Banner Signs



- The current Howard County Sign Code for Downtown Columbia, shall serve as the over-riding regulating document for all square footage requirements, sign setbacks, height limitations. Banners are counted towards the total sign area of a building.
- Building mounted seasonal banners are permitted and may be displayed up to ninety days and do not count towards the total sign area of a building, provided the banner does not identify any specific commercial business. Seasonal Banners shall not exceed sixteen square feet per side. Seasonal Banners shall be coordinated as to size, style and placement.



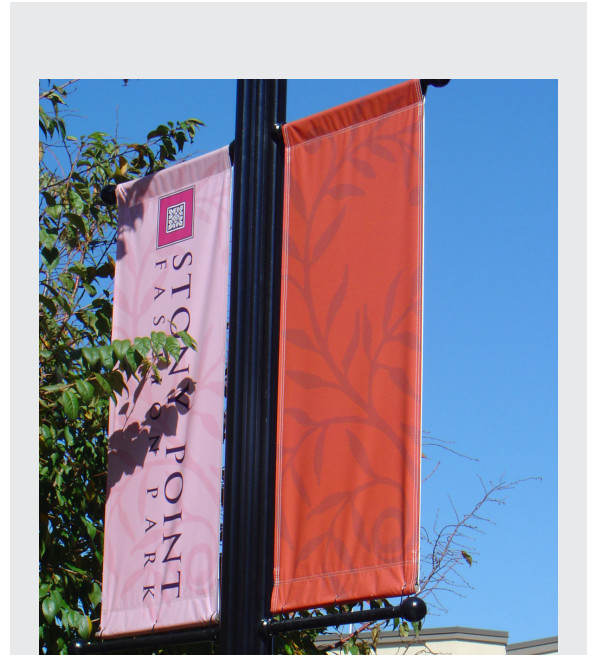
2. Pole-Mounted Seasonal/Event Banners

Overview:

Banners added to the streetscape environment of the Lakefront Neighborhood will help enliven, add color and promote a sense of community. This can be done by using banners to help celebrate holidays and advertise community events.

Materials and Standards:

- Pole-Mounted Seasonal/Event Banners may be displayed up to ninety days.
- Banners shall be scaled for both pedestrians and vehicular occupants.
- Materials may include:
 - Durable heavy weight exterior grade canvas fabric*
 - Exterior grade, digitally printed vinyl and vinyl mesh materials*
- Size: Banners shall be appropriately scaled to the light post to which they will attach, taking wind load into consideration. Banners shall not exceed sixteen square feet per side.
- Pole Mounted Banners shall not be mounted less than eight feet above grade.
- Pole Mounted Banners shall be coordinated as to size, style and placement.



3. Temporary Banners



Overview:

Temporary Banners, whether building or fence mounted, may be used to announce a grand opening, entertainment, or other event and do not count towards the total sign area of a building. Temporary banners shall be removed after ninety days.

Materials and Standards:

- Materials may include:

*Durable heavy weight exterior grade canvas fabric
Exterior grade, digitally printed vinyl and vinyl mesh
materials*

- Banners shall not be mounted less than eight feet above grade.

Digital Displays

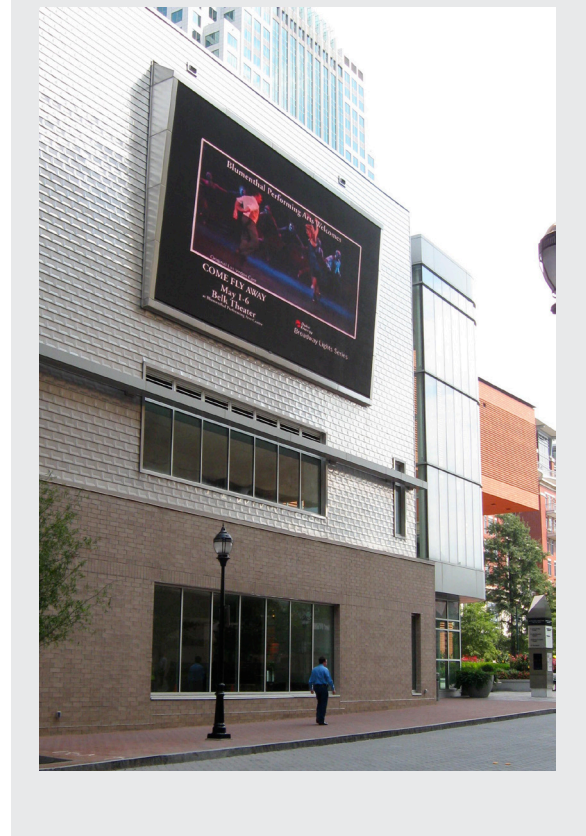
Overview:

Digital Displays allow electronic display of text, images, video, animation, motion images and interactivity. It is envisioned that this technology will primarily be used to enhance the overall experience in Downtown Columbia by displaying creative images, graphics and other information to complement the distinctive, vibrant and dynamic character envisioned for Downtown.

Selective and imaginative use of digital displays as part of the overall signage plan the Lakefront Neighborhood will help create a sense of place that is unique to Howard County and will further the continuing evolution of Downtown Columbia as the County's urban center.

Materials and Standards:

- Digital displays shall employ unique designs to include creative imagery that emphasizes graphics and color over text.
- Shall be programmed to include public service messaging and other programming designed to enhance the streetscape and provide a benefit to the community.
- Utilize LED, LCD, plasma displays, projected images and other emerging technologies.
- Signs shall complement and enhance the architectural elements of buildings and be of a size that is in scale with the setting and intended audience.
- These sign types shall be located in such a way that existing communities surrounding Downtown Columbia are not adversely impacted.
- Signs shall be placed so as to avoid visual clutter.
- Although not the primary use, digital displays may also identify or advertise businesses, products and services. Advertising should be designed to emphasize the unique and creative capabilities of this technology.
- Digital signs including advertising shall be located on private land only.
- The current Howard County Sign Code for Downtown Columbia, shall serve as the over-riding regulating document for all square footage requirements, sign setbacks, height limitations.

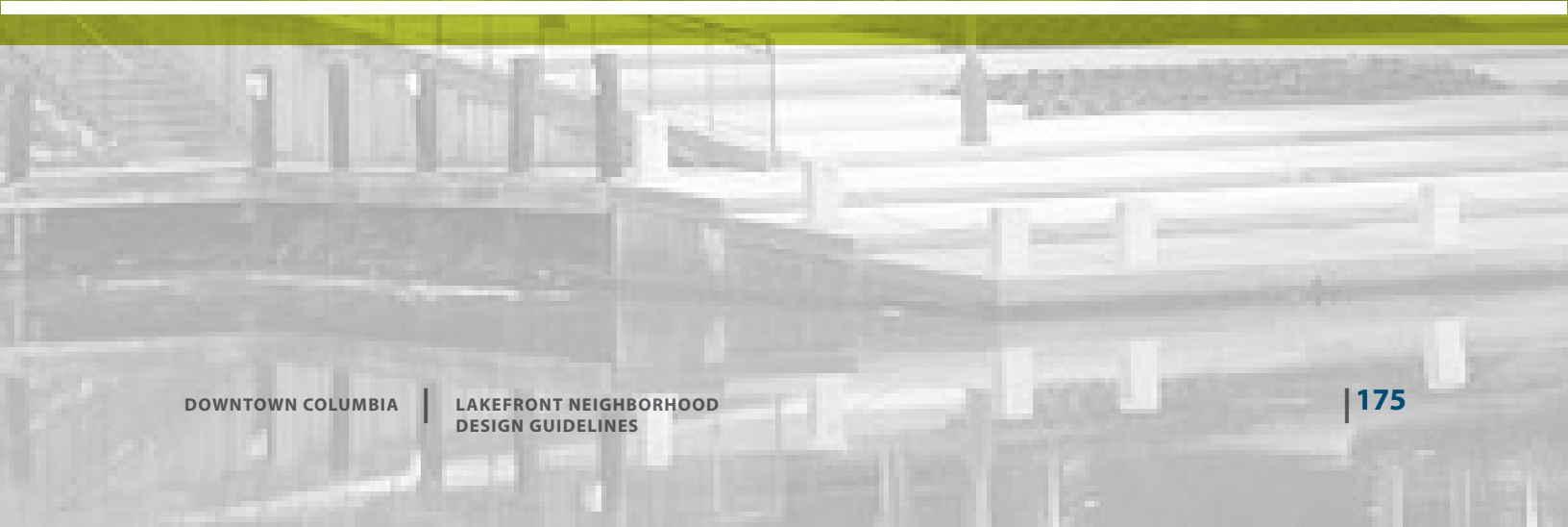


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7.0 DEFINITIONS



Definitions

The definitions in Section 103.A of the Howard County Zoning Regulations are to be applied to the terms used in the Lakefront Neighborhood Design Guidelines. The following definitions explain terms used in the Lakefront Neighborhood Design Guidelines that are either not defined in the Zoning Regulations or have a different meaning in the Guidelines.

Alley: A street that typically has one or two lanes and is designed to provide access to parking garages and service areas.

Amenity Space: A separate lot or indoor or outdoor area designated for plazas, promenades, greens, gardens, parks, and other spaces intended to support community interaction and gatherings, including rooftop and indoor gallery or performance space, pedestrian and bicycle circulation systems, enhanced streetscapes, and Downtown Arts, Cultural and Community uses.

Arcade: A continuous walkway or passageway adjacent to a building, which runs parallel to and opens to a street or Amenity Space, or a passageway within a building open to public use, usually covered by a canopy or permanent roofing.

Avenue: A street that typically has 2 to 4 lanes, intended to provide access to or links between Downtown neighborhoods.

Bioswale: Landscape element designed to remove silt and pollutants from surface runoff water in open areas. Swales are typically lined with stone and are planted with wet/dry tolerant vegetation in order to filter and infiltrate rainwater, allowing for improvements in water quality and reduction in volume before discharge to water bodies.

Block: An increment of urban land, typically circumscribed by thoroughfares and/or streets.

Boulevard: A divided street that typically has 4 lanes and a center median.

Building Height: In the Lakefront Neighborhood, Building Height shall be measured relative to median grade along the Primary Street with the highest classification, as indicated on the Street Framework Plan. **(See the Street Framework Plan on p. 31, the Building Height Plan on p.21, as well as additional Massing criteria on p. 22.)**

Build-To-Line: A line established on a parcel to indicate the placement of the principal structure upon the parcel, parallel to the frontage and/or right-of-way, facing a street or Amenity Space. The intent of the build-to-line is to align structures framing a street or Amenity Space.

Civic Building: A structure whose principal purpose is a public or civic use, such as government offices, school, post office, Columbia Association headquarters, meeting house or community center.

Downtown Arts, Cultural and Community Use: Land areas, uses, and facilities established for cultural, civic, recreation, educational, environmental, entertainment or community use or benefit, whether or not enclosed and whether publicly or privately owned or operated for profit, including, but not limited to, libraries, fire stations, schools, museums, galleries, artistic work, transit facilities and eating, seating and gathering areas.

Downtown Building Frontage: Means each linear segment of a building perimeter located within Downtown Columbia which adjoins a private street, public right-of-way, Downtown Community Commons, or Downtown Parkland.

Downtown Columbia: Means that area defined as "Downtown Columbia", in the Howard County Zoning Regulations.

Downtown Columbia Illustrative Master Plan: The Downtown Columbia Illustrative Master Plan identifies possible locations and configurations of uses, the potential layout and dimension of streets, blocks, and amenity spaces, within the six distinctive neighborhoods.

Downtown Columbia Plan: The General Plan Amendment for Downtown Columbia approved by County Council Bill No. 58-2009.

Downtown Signature Building: An existing or proposed structure which requires premier attention to its architectural design because of its cultural significance or prominent location in relationship to the public realm, such as its position on a street or open space, or as the terminus of a vista.

Expression Line: An architectural treatment extending or offset from the surface plane of the building wall, or change of material, color or other treatment of the facade. Expression Lines typically delineate the transition between floor levels and base-middle-top of a building.

Frontage Coverage: The percentage of a block occupied by building facades. The frontage coverage is calculated as the sum of the length of the building facades divided by the block length.

Frontage Facade: The front facade of a built structure parallel to a street or public right-of-way and coinciding with the build-to-line.

Frontage Street: The street bordering on a property toward which the front facade and main entrance are oriented.

Green Roof: A roof that is partially or completely covered with vegetation and a growing medium, typically placed over a drainage layer above the roof's waterproofing. Benefits include reduction in stormwater runoff, increase in roof life span, heat and noise insulation value, reduction of the urban heat island effect, and creation of wildlife habitat.

Mixed-Use Building: A structure consisting of multiple uses, whose ground floor use is typically, but not limited to, retail, restaurant or similar service businesses, with residential, office or other uses on upper floors.

Porous Pavement: Permeable pavement such as porous asphalt, concrete, and pavers to be considered for pedestrian walkways and bike paths, plazas, and low traffic volume streets and parking lanes. Benefits include water quality treatment and infiltration, storm water flow control, reduction of water pooling/ponding on paved surfaces and reduction of urban heat island effect by cooling paved surfaces. For pervious pavements a standard section per MDE shall be used, and any deviation from that standard shall require approval from MDE.

Primary Pedestrian Street: A Primary Pedestrian Street is intended to be the focus of pedestrian activity. Primary Pedestrian Streets typically have wide sidewalks with amenity spaces, or other pedestrian features.

Private Street: A privately-owned roadway including, Alleys, Driveways, Avenues, Streets, or Boulevards that provide access to and through Downtown.

Rainwater Planter: An area designed to capture stormwater runoff from sidewalks, roadways, and other paved areas, in order to reduce peak stormwater flows, volume, and pollution. Plant beds along street edges and walks might be designed as a series of small infiltration beds filled with plants and linked to drainage systems in natural areas by means of covered channels below the pavement.

Definitions

Storefront: The facade or portion of a building's front facade (typically the ground level only) with business or retail uses typically aligned along the frontage line with the entrance to the business or retail use at sidewalk grade.

Street: A roadway that typically has 2 lanes and is designed to provide local access and disperse traffic within Downtown. **Street and Block Plan:** The Street and Block Plan frames a possible layout and dimension of streets, blocks, open spaces, and illustrates how buildings, streets and landscape support and reinforce the urban grid of Downtown Columbia.

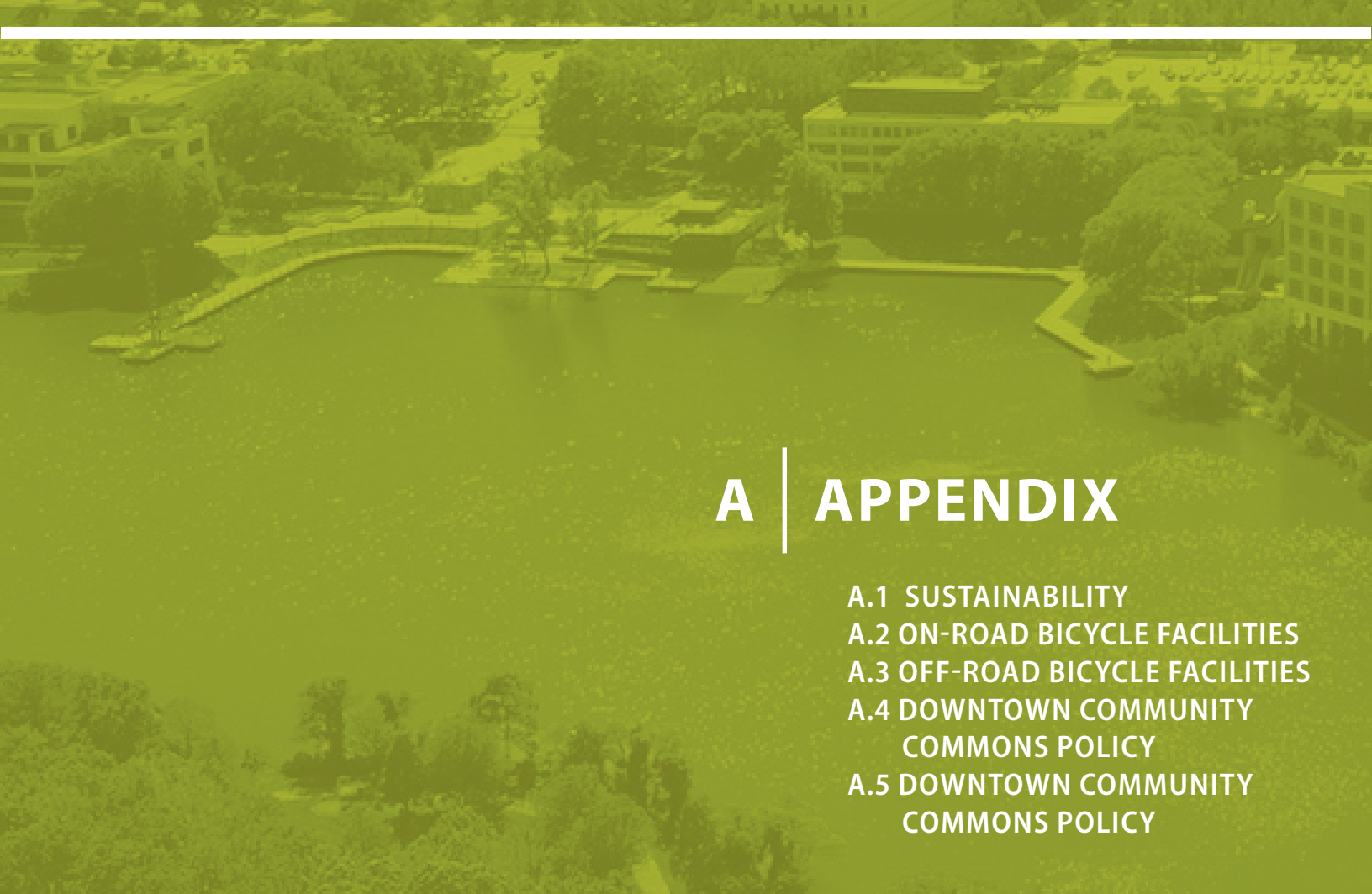
Streetwall: The vertical plane of a building façade along a roadway.

Street Type: A street classification based on the distinctive character of the roadway and sidewalks, which may be defined by number of potential lanes, and the presence of medians or other special treatment of the vehicular and pedestrian ways.

Vista: A view framed by buildings, landscape, or other structures.

Vista Terminus: A building, significant feature of a building, or site element that terminates or punctuates a framed view. Civic buildings, sculptural pieces, iconic natural areas, and special building elements serve as the most appropriate view terminators.

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A | APPENDIX

- A.1 SUSTAINABILITY
- A.2 ON-ROAD BICYCLE FACILITIES
- A.3 OFF-ROAD BICYCLE FACILITIES
- A.4 DOWNTOWN COMMUNITY COMMONS POLICY
- A.5 DOWNTOWN COMMUNITY COMMONS POLICY

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A.1 SUSTAINABILITY





SUSTAINABILITY GUIDELINES

INTRODUCTION AND OVERVIEW

THE DOWNTOWN COLUMBIA SUSTAINABILITY PROGRAM

The Sustainability Program is an ambitious effort to use holistic thinking to guide further development of Downtown Columbia and the design of a livable community. A sustainable community is a place that pursues a quality of life, for all life, now and into the future. Attributes that support a community’s effort toward becoming sustainable include:

- Public spaces and amenities where residents can socialize, work, shop, and play
- An increased ease in mobility, where residents can walk to accommodations or access public transit more readily
- Buildings that are healthy and use natural resources, such as water and energy, efficiently
- A healthy environment with clean water, clean air, and increased connections to the natural environment

The Downtown Columbia Sustainability Program establishes goals for Downtown Columbia and is comprised of many integrated and codependent programs, philosophies, and guidance documents which will inform the design, construction, operations and programming of land and building development in Downtown Columbia. The intent of the Program is to fulfill a vision for a livable, socially, economically, and environmentally sustainable urban community. Collectively, the Sustainability Program consists of the following six documents and guidance tools, representing a “kit of parts”, that strives to deliver the most comprehensively sustainable development possible. These documents (described on the following page) include:

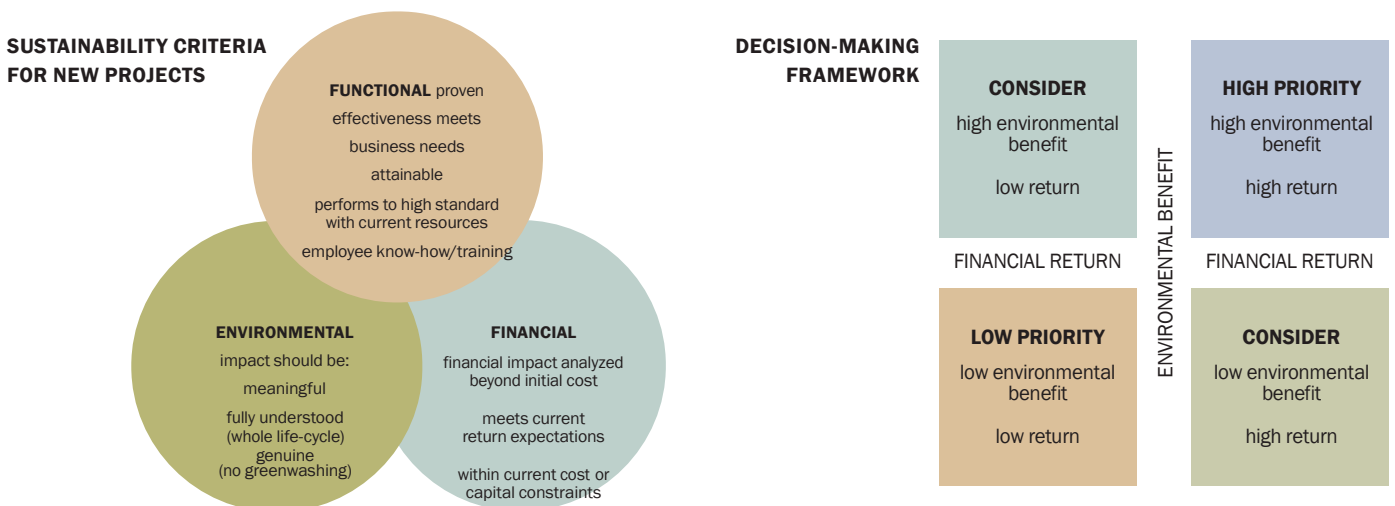
1. The original Columbia plan
2. Smart Growth Principles
3. The Downtown Columbia Sustainability Guidelines (The Land Component & The Community Component)
4. The Howard County Green Building Law
5. Town Center Merriweather and Crescent Environmental Enhancements Study, September 2008
6. Best Management Practices for Symphony Stream and Lake Kittamaqundi Watersheds, September 2008

The program aims to establish goals to be pursued as each phase or project in Downtown progresses toward full build out over the ensuing years. As new technology emerges, innovative strategies will be pursued to conserve natural resources. The sustainability program is designed to allow future flexibility, to learn, adapt and evolve as the project moves from developer, to builder, to community ownership.

The plan recognizes the importance of realistic criteria to sustainability which must meet multiple business goals. Each project must be:

- Functional and effective to meet the needs of the business and perform as designed
- Environmentally sound to reduce impact in a meaningful way throughout the project's life cycle
- Financially viable considering all risks and ensuring initiatives to achieve return on investment

Those initiatives which can realize a high environmental benefit as well as high return are priorities. Solutions that are of a genuine and meaningful benefit to the environment should become priority projects versus ineffective but highly visible solutions.



THE SUSTAINABILITY PROGRAM GUIDANCE DOCUMENTS

1. **The original Columbia plan** - Columbia is unique in that it was originally designed and developed to embody some of the key elements of sustainability. In fact, one of the main objectives was to “create a comprehensively balanced community”, planning for people while respecting “the stream valleys, the forests, the southeastern slopes ... allowing the land to impose itself as a discipline on the form of the Community.” These principles continue to guide Downtown development through a balance of natural and open spaces, commercial uses, housing, public amenities, arts as well as an economically sustainable tax and profit base.
2. **Smart Growth Principles** – Smart Growth is a phrase coined in Maryland by Governor Parris N. Glendening. It is now a common term used nationwide to describe the desire and strategy to accommodate new growth and development in the most suitable areas while protecting our most vital natural resources. Since 1997, with the passage of the Smart Growth and Neighborhood Conservation initiative, Maryland has led the nation in this endeavor. Maryland’s efforts were recognized by Harvard University in 2000 as one of the ten most innovative governmental programs in the country. The concept of Smart Growth embodies the following ten principles:
 - Smart Growth Planning - Mix of land uses
 - Takes advantage of existing community assets
 - Creates a range of housing opportunities and choices
 - Fosters "walkable," close-knit neighborhoods
 - Promotes distinctive, attractive communities with a strong sense of place
 - Includes the rehabilitation and use of historic buildings
 - Preserves open space, farmland, natural beauty, and critical environmental areas
 - Strengthens and encourage growth in existing communities
 - Provides a variety of transportation choices;
 - Makes development decisions predictable, fair, and cost-effective
 - Encourages citizen and stakeholder participation in development decisions

The Downtown Columbia plan approved in Howard County Council Bills 58-2009 and 59-2009 as well as its enabling and conforming legislation was crafted around these ten principles as a part of the foundation for its sustainability program.

3. **The Downtown Columbia Sustainability Guidelines** – These guidelines are comprised of two interdependent subsections: the Land Component and the Community Component. The Land Component focuses on the land development elements of sustainability that are the result of land planning, site design, construction and management: water, transportation, energy, ecology, materials and livability. The Community Component addresses social elements of sustainability, such as justice, relationships, collaboration, stewardship, vitality and service. The Community Component and its elements must be developed, refined, implemented and managed by the community itself through an extensive community stakeholder effort over time that could include the Community, the Downtown Partnership, the County’s Environmental Sustainability Board and others..
4. **The Howard County Green Building Law** – As part of the Downtown Columbia plan conforming legislation, all Downtown Columbia new construction 10,000 square feet or larger will achieve a LEED certification from the US Green Building Council of certified-level rating or higher. This guidance will assure that all major vertical building development in Downtown will target compliance with the USGBC’s five environmental categories: Sustainable Sites, Water Efficiency, Energy and Atmosphere, Materials and Resources, Indoor Environment as well as creative design and building expertise through additional Design Innovations.
5. **Town Center Merriweather and Crescent Environmental Enhancements Study, September 2008** – A natural resources assessment was performed by General Growth Properties on over 5000 linear feet of streams and 120 acres in the Merriweather-Symphony Woods & Crescent neighborhoods of Downtown Columbia. The report describes the findings of the assessment and articulates proposed environmental improvements to streambeds, wetlands, forests and vegetation management. These mitigations and improvements to be implemented by property Owners in these neighborhoods strive to enhance the ecological environment by restoring and maintaining the current Symphony Stream and Little Patuxent River riparian corridors. The environment will be enhanced through corridor management activities such as invasive species management, reforestation, stream bed restoration, wetlands enhancement and creation, and understory plantings.
6. **Best Management Practices for Symphony Stream and Lake Kittamaqundi Watersheds, September 2008** - General Growth Properties and its ecological consultant Biohabitats, performed watershed assessments for the three Columbia sub watersheds of Symphony Stream, Wilde Lake and Lake Kittamaqundi located up stream of *Downtown Columbia’s Town Center Merriweather and Crescent Environmental Enhancements Study* area. Watershed assessments were performed to target storm water retrofits and riparian corridor restoration opportunities for the watersheds of the two streams flowing through Downtown Columbia. The Land Component of the Downtown Columbia Sustainability Guidelines identifies the locations of those projects and the Downtown Columbia Plan makes specific recommendations about their implementation.

THE DOWNTOWN COLUMBIA SUSTAINABILITY GUIDELINES LAND COMPONENT

The Downtown Columbia Sustainability Guidelines Land Component focuses on physical or built elements of the community, as it is planned, designed, constructed and managed. It is principally crafted to provide residents and businesses with the tools to reduce their environmental footprint that will enable them to live lightly on the land.

The Land Component is fully integrated with the Downtown Columbia Design Guidelines. The Land Component is comprised of six Elements: Livability, Water, Transportation, Energy, Ecology, and Materials. Each Element is guided by an overarching goal and split into topics and sub-topics. Each sub-topic includes goals, targets, and strategies.

Although Downtown Columbia will achieve many sustainability targets at its outset, some targets will require the participation and partnership of other stakeholders. These stakeholders include Howard County, the Columbia Association, Maryland Transit Authority, future developers and the community at large. Moreover, some targets and the means of achieving them must be evaluated through the lens of a cost benefit life cycle analysis.

Designing a more sustainable community requires understanding the interrelationships among the primary physical design elements that power, shelter, move, nourish and sustain life.

- Vitality and health are encouraged by producing space that is comfortable, engaging, beautiful and inspiring
- Dense and compact mixed use development allows easy access to stores, entertainment, services, jobs and recreation
- Air and water are naturally purified by a native living landscape, providing habitat for wildlife and natural cooling
- Natural energy and water resources will be harvested for use and conserved preciously with innovative technology and high performance buildings.
- Downtown Columbia seeks to learn and mimic nature’s processes to produce a community that is responsible, beautiful, inspiring, healthy, productive and enduring.

A sustainable community is not an endpoint; rather it is a continuous process of adapting and improving, so that each generation can progressively experience a higher quality of life. Like nature, Columbia must have the resources and flexibility to adapt and evolve. Moving toward sustainability requires recognition that today’s practices may yet be improved. Downtown Columbia redevelopment aims to address many needed improvements while planning for an enriching future. This Plan strives to reach beyond green buildings and technology and consider all of the elements that comprise the fabric of the community.

<p>6 ELEMENTS AREAS</p> <p>The Sustainability Guidelines Land Component is organized by 6 elements:</p> <ul style="list-style-type: none"> 1 LIVABILITY 2 WATER 3 TRANSPORTATION 4 ENERGY 5 ECOLOGY 6 MATERIALS 	<p>TOPICS AND GUIDELINES</p> <p>Each of the 6 elements are split into topics and sub-topics. Each sub-topic includes goals, targets, and strategies:</p> <p>0.0 TOPIC</p> <p>SUB-TOPIC</p> <p>Goal: Sub-topic goals state the intention for specific targets and strategies, working towards the larger element goal.</p> <p>Target:</p> <ul style="list-style-type: none"> • Targets list measurable metrics to achieve goals <p>Strategy:</p> <ul style="list-style-type: none"> • Strategies list techniques to achieve targets 	<p>SUPPORTED FRAMEWORKS & REFERENCES</p> <p>The guideline goals, targets, and strategies are based on, and support, relevant County legislation and sustainability frameworks including:</p> <ul style="list-style-type: none"> • Howard County Code Green Building Law • Howard County CB58-2009 • Howard County CB59-2009 • Howard County Green Neighborhood Guidance Document for Sites • USGBC LEED for New Construction (NC) • USGBC LEED for Neighborhood Development (ND) • Living Building Challenge • Sustainable Sites Initiative
<p>OVERARCHING GOALS</p> <p>Overarching goals for each of the 6 elements guide this document.</p>		

I. LIVABILITY

Goal: Downtown Columbia will be a vibrant, walkable, and economically sustainable community in which to live, work and play. Its ability to nurture and establish connections among people and the land will create a distinct attachment to place. With a focus on meeting the needs and desires of its diverse inhabitants, Downtown Columbia embodies a commitment to equality and healthy environments.

II. WATER

Goal: Downtown Columbia will work to restore natural hydrologic processes that sustain surrounding ecosystems. New development should be designed to reduce and optimize water consumption while improving its quality upon release.

III. TRANSPORTATION

Goal: Downtown Columbia seeks to reduce regional transportation impacts by planning dense compact neighborhood facilities and fostering choice and convenience in a variety of transportation modes. Downtown Columbia will strive to restructure transportation systems to promote walking, bicycling and transit.

IV. ENERGY

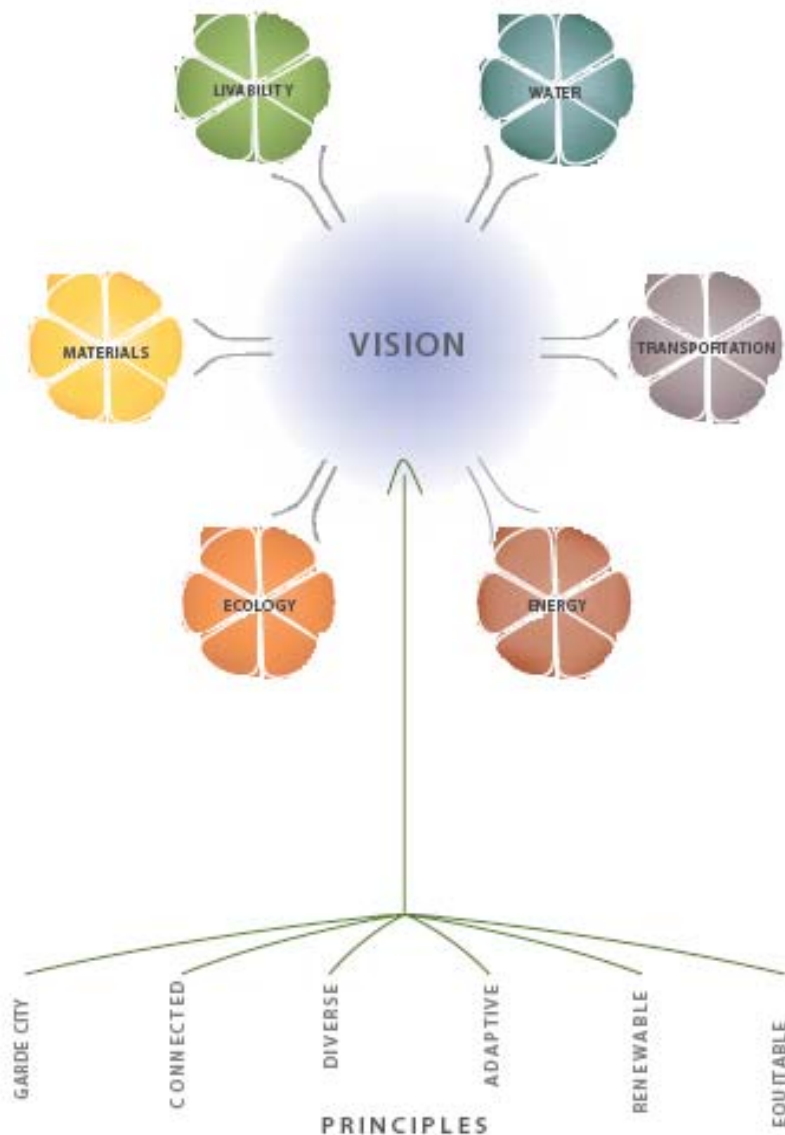
Goal: Downtown Columbia should strive to meet its energy needs through renewable sources towards becoming a carbon neutral community.

V. ECOLOGY

Goal: Downtown Columbia will work to restore and maintain a resilient, self-sustaining and diverse site ecology. The site will exist as a whole system that connects and complements the biodiversity of the region. The urban core will include a vital ecology for both humans and wildlife that focuses on healthy soil, air and water.

VI. MATERIALS

Goal: Downtown Columbia should seek to utilize materials that have been responsibly sourced, harvested and manufactured. Materials will be chosen to limit direct and indirect impacts to human health and natural systems. Downtown Columbia will be designed to be adaptable so that changes in use, maintenance, and management are easily facilitated, limiting future material needs and waste.



LIVABILITY

1.1 SENSE OF PLACE

SENSE OF PLACE

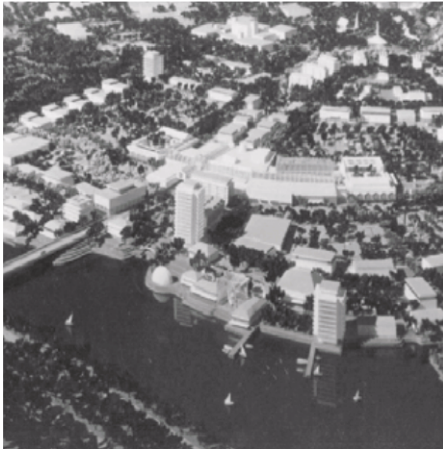
Goal: Preserve and emphasize the distinctive qualities that make Downtown Columbia unique

Target:

- Preserve and restore existing cultural elements and amenity spaces

Strategy:

- Make Lake Kittamaqundi and Symphony Woods Park the primary open space elements of Downtown Columbia by activating pedestrian spaces
- Preserve and restore forest and waterways and native plant communities
- Preserve such art and artifacts as “the People Tree”, “the Bear”, “the Hug”
- Commission a study to preserve and renovate the former Rouse Company Headquarters as a signature building
- Use appropriate 'artisan-quality' fixtures and outdoor furnishings



1.2 HOUSING

DIVERSITY, AFFORDABILITY, AND PROXIMITY

Goal: Create a full spectrum housing program for Downtown Columbia that will establish a flexible model that aspires to make new housing in downtown affordable to individuals earning across all income levels.

Target:

- Establish the Downtown Columbia Community Housing Foundation (“DCCHF”), as detailed in CB 58, to satisfy affordable housing requirements for downtown.

Strategy:

- Establish the DCCHF and fund the program through contributions as outlined in the Downtown Columbia CB 58-2009
- The DCCHF should be notified by the developer or joint venture of land for all residential units offered for initial sale in each new residential or mixed use building in Downtown Columbia
- The DCCHF also should be notified by the developer of all apartment units offered for rental in each new residential or mixed-use building containing rental units
- Use of DCCHF funds will be limited to providing full spectrum, below market housing in Downtown Columbia that may include, but is not limited to, funding new construction; acquiring housing units; preserving existing homes; financing rehabilitation of rental housing; developing senior, family or special needs housing; providing predevelopment, bridge, acquisition and permanent financing; offering eviction prevention and foreclosure assistance



1.3 GREEN BUILDINGS

Goal: Create buildings which limit impact to natural resources and are healthy for the environment and people

Target:

- All buildings over 10,000 gross feet or more of gross floor area, as detailed in CB 14-2010, will comply with energy and environmental site design standards of the Howard County Green Building Law

Strategy:

- Use an appropriate green building standard, such as the United States Green Building Council LEED rating system, in accordance with CB 58-2009, Howard County Code Green Building Law, and CB 14-2010



1.4 RECREATION AND RELAXATION

RECREATION AND RELAXATION

Goal: Create spaces for active and passive recreation within Downtown Columbia to promote human health and well being

Target:

- Provide a primary amenity space of at least 25,000 square feet for each neighborhood.
- Provide a minimum of 5% of the land (excluding designated open space or public right of way) within Downtown Columbia as community commons

Strategy:

- Provide a diversity of parks, promenades, plazas, or other public or semi-public open spaces connected and accessible by sidewalks



1.5 ACCESSIBILITY

ACCESS TO SERVICES, TRANSPORTATION, AND RECREATION

Goal: Provide safe and secure access between housing and diverse services, transportation, and recreation areas

Target:

- Create a density of 50 dwelling units per net acre or more in Downtown Columbia
- Provide access to retail services within 3/4 mile or less for 90% of Downtown Columbia residents
- Locate 100% of all residential and commercial activity within a 1/4 mile of a bus or transit stop*

Strategy:

- Use mixed-use development to integrate housing, businesses, and services provide neighborhood retail and community spaces
- Integrate transportation networks throughout Downtown Columbia
- Provide adequately sized pedestrian and bicycle routes with appropriate lighting designed to meet Downtown Columbia's Pedestrian and Bicycle Guidelines



*Requires coordination with Howard County

1.6 HUMAN SCALE AND PEDESTRIAN-ORIENTED DESIGN

WALKABILITY

Goal: Promote walkable neighborhoods for economic vitality and healthy lifestyles

Target:

- Include sidewalks for all primary pedestrian streets as specified in the Design Guidelines and Design Manual
- Design sidewalks with at least the minimum width as specified in the Design Guidelines and Design Manual per street type
- Limit driveways and sidewalk breaks on commercial and retail streets
- Provide amenities for safety, comfort and aesthetics on all sidewalks and pathways specified in the Design Guidelines and Design Manual
- Design all Downtown Columbia Neighborhoods to be within a 15 minute walk or less of the Downtown Core and a transit hub

Strategy:

- Create mixed-use neighborhoods
- Provide diverse building street frontages and ground floor use
- At least 50% of total linear feet of mixed-use and nonresidential street facades is within 1 foot of a sidewalk or equivalent provision for walking
- Comprise $\geq 75\%$ of building's street level facade of wall openings such as windows and doors on primary pedestrian streets
- Provide street trees, appropriate landscaping, and furnishings on pedestrian streets
- Provide adequate width for accessibility and sidewalk furnishings such as light standards, benches and bike racks;
- Plant street trees at a maximum of 40 foot intervals or to shade at least 40% of the sidewalk within 10 years;
- Provide seating and landscape furnishings at regular intervals as specified in the design guidelines
- Provide clear way finding signage and visual cues for pedestrian navigation



1.7 HEALTHY FOOD

ACCESS TO LOCAL AND SUSTAINABLE FOOD

Goal: Provide access to healthy and sustainable local foods

Target:

- Do not restrict the growing of produce and fruit or nut trees on individual properties or on balconies or other outdoor private spaces
- Facilitate a farmers market within Downtown Columbia or within a 1/2 mile walk distance of Downtown Columbia

Strategy:

- Allow space for community gardening in parks or other public spaces
- Allot space for a community farmers market



WATER

2.1 STORMWATER

STORMWATER QUALITY AND GROUNDWATER RECHARGE

Goal: Improve stormwater runoff quality and groundwater recharge

Target:

- Use a combination of impervious area reduction and Environmental Site Design to reduce and treat stormwater runoff from at least 50% of the existing impervious area, including buildings, roads, sidewalks, and parking lots, in Downtown Columbia

Strategy:

- Incorporate into new development and retrofit existing infrastructure with a combination of impervious area reduction, Environmental Site Design, and other green technology solutions to water quality and quantity problems from roads, sidewalks, and parking lots
- Use vegetated roadside infiltration swales, structured soil tree pits, stormwater planters, pervious paving, forested wetlands, and vegetated buffer areas
- Consider green roofs for a substantial reduction in stormwater runoff through storage, vegetative uptake, evaporation and plant transpiration
- Implement stormwater management structure Best Management Practices remediation for conditions identified in the [Best Management Practices for Symphony Stream and Lake Kittamaquindi Watersheds](#) study and as identified on the map and chart at the end of this chapter. Work should proceed during any revitalization that includes these identified conditions.



STORMWATER QUANTITY

Goal: Reduce stormwater runoff quantity

Target:

- Do not exceed the average annual pre-development runoff volume on the site

Strategy:

- Reduce impervious cover, capture and reuse rainwater from roofs, and apply other ESD practices

STREAM CHANNEL PROTECTION

Goal: Protect stream channels and reduce sediment load to streams and the lake

Target:

- Prevent future stream channel degradation from stormwater runoff

Strategy:

- Utilize regenerative stormwater conveyance (RSC) systems, or other appropriate design practices, to reduce potential for erosion from stormwater runoff at outfalls while creating unique habitat and improved water quality
- Remediate existing stream channels as outlined in the Downtown Environmental Enhancements documents

2.2 LANDSCAPE WATER USE

POTABLE WATER REDUCTION*

Goal: Reduce potable water use in the landscape

Target:

- No potable water use for irrigation after initial plant establishment
- Minimize potable water use in landscape water features

Strategy:

- Use native and adaptive plants
- Amend and maintain soil health to retain water
- Harvest rainwater for irrigation
- Use filtered grey water or recycled water

WATER QUALITY IMPROVEMENT

Goal: Improve water quality in waterways and receiving water bodies

Target:

- Use landscape management and maintenance practices and materials that will not negatively impact waterways and water bodies
- Use landscape areas to filter and infiltrate stormwater, grey water, and recycled water

Strategy:

- Use native and adaptive plants
- Amend and maintain soil health
- Design and maintain appropriate landscape buffers to protect receiving waters
- Ensure the use of non-synthetic amendments/fertilizers/pesticides in appropriate quantities and application regimes for all landscape planting and maintenance activities

**Potable water efficiency measures in buildings shall be captured by the requirement that all buildings shall be LEED certified*



TRANSPORTATION

3.1 TRANSIT OPTIONS (SYSTEMS/NETWORKS)

DIVERSITY AND CONNECTIVITY OF TRANSPORTATION OPTIONS

Goal: Create a connected and diverse network of transportation options within Downtown Columbia to reduce vehicle miles traveled per individual in single-occupancy vehicles

Target:

- Develop a Transportation Demand Management Program (TDMP)*
- Include sidewalks, bike lanes, and transit stops on all primary pedestrian streets with a maximum block length of 400-600 ft.

Strategy:

- Facilitate pedestrian, bicycle, public transportation, and vehicular traffic within the street grid (Complete Streets)
- Create clearly demarcated lanes for different forms of transportation (bike lanes, etc.)



LOCAL AND REGIONAL CONNECTIONS*

Goal: Link transportation options within Downtown Columbia to other local and regional transportation networks

Target:

- Provide a transit hub as a central point for connections to local and regional transportation networks within Downtown Columbia

Strategy:

- Work with local stakeholders and agencies to map existing or planned local and regional transportation networks outside of Downtown Columbia and plan for local connection hubs
- Prepare transit studies as outlined in CB 58-2009



TRANSIT ACCESS AND ROUTES*

Goal: Provide convenient transit options and routes

Target:

- Establish a Transportation Management Association
- Provide access to a transit hub within a 15 minute walk for all neighborhoods and the Columbia Downtown Core
- Provide transit stops within 1/4 mile walk-distance of all retail districts, within 1/4 mile walk-distance of minimum 50% of dwelling units, and within 1/4 mile walk of all public parks and open space areas

Strategy:

- Work with stakeholders and local agencies to map and determine transportation routes to and from Downtown Columbia
- Provide infrastructure to support safe and accessible bus or shuttle stops



*Requires coordination with Howard County and/or MTA

TRANSIT HUB AND STOP AMENITIES

Goal: Create safe, comfortable, and convenient transit hub and stops to encourage use of public transit system

Target:

- Provide adequate signage, lighting, seating, and shelter from sun, wind, and rain for transit hub and stops

Strategy:

- Provide clear signage to direct transit users to hubs and stops
- Post route maps and schedules at transit hub and stops
- Provide enclosed, sheltered areas for all transit hub and stops with seating



3.2 BICYCLE TRANSPORTATION

BICYCLE INFRASTRUCTURE

Goal: Facilitate and encourage biking as transportation

Target:

- Provide secure bicycle storage for at least 5% of planned occupancy in commercial and retail areas and at least 15% planned occupancy in residential areas
- Designate bike lanes on streets as defined in the Design Guidelines and Design Manual
- Create bike lanes or multi-use pathways to connect all major parks and open space, residential neighborhoods, and commercial centers

Strategy:

- Include bike lanes or multi-use pathways on main commercial and retail streets and neighborhood connector streets
- Provide bike racks on commercial and retail sidewalks and/or on street parking spaces and/or in parking garages
- Provide weather protected bike storage in multifamily residential buildings, and in office buildings over 10,000 square feet
- Encourage bike sharing and rental programs



3.4 CARS AND PARKING

REDUCE VEHICULAR TRIPS AND PARKING

Goal: Reduce vehicular trips through "park once" design scenarios and alternative transportation measures and limit surface parking areas within Downtown Columbia

Target:

- Provide 5% preferred parking for low emission, fuel efficient, car share, and carpool vehicles
- Distribute 80% of parking between on-street parking and parking structures

Strategy:

- Encourage a "park once" scenario for residents and visitors
- Encourage shared parking scenarios
- Promote car-sharing programs
- Provide convenient pedestrian, bicycle, and transit connections for parking structures to promote residents and visitors to park only once within Downtown Columbia
- Promote the shift to transit through incentives and demand management programs such as cash-out programs or price of parking

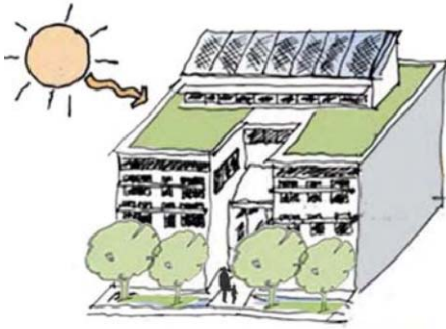


ENERGY

4.1 DEMAND-SIDE MANAGEMENT

BIOCLIMATIC DESIGN

Goal: Maximize site design to reduce building heating and cooling energy use and provide desirable landscape microclimates



Target:

- When possible, orient buildings to maximize southern exposure for passive solar gain
- Use deciduous street trees or landscaping trees within 30 feet of the south facing building façade where practical
- Create a diversity of sun and shade areas in parks and open space
- Plant trees along paved streets and parking areas to maximize shade
- Provide parks with a diversity of solar exposure and shading including amenities such as benches or seating in both sun and shade

Strategy:

- Plan streets and buildings to allow solar access for passive solar gain, and natural lighting
- Use roof and window shades to screen summer sun on south, east and west sides of buildings
- Plant deciduous trees along the south, east and west facing building facades to shade the buildings in summer and allow solar access/gain in winter

INFRASTRUCTURE ENERGY EFFICIENCY*

Goal: Reduce environmental impacts of landscape and site energy use

Target:

- Reduce site infrastructure and landscape energy use by at least 15% from base-line energy use

Strategy:

- Install LED traffic lights
- Install energy efficient street and landscape lighting
- Install street and landscape lighting with photo sensors
- Install street and landscape lighting with integral solar panels
- Install timed lighting or manually controlled additional lighting for occasional special needs in public spaces (sports fields, outdoor theatres, etc.)
- Install energy efficient irrigation and water pump infrastructure of landscape features
- Install photovoltaic systems on public amenity buildings (rest rooms, maintenance, etc.) surface parking areas, and other locations to provide an alternative energy source supplement for infrastructure needs



*Requires coordination with Howard County

4.2 SUPPLY AND HARVESTING

ON-SITE ENERGY GENERATION

Goal: Generate renewable energy at a building, neighborhood, or community scale with appropriate technologies to reduce impacts from use of fossil fuels

Target:

- Provide some form of on-site renewable energy for at least 20% of new buildings by build out

Strategy:

- Facilitate/design/construct a variety of options for alternative energy production including solar photovoltaic, solar thermal, micro wind turbine, district heating and cooling
- Use net metering with local utility
- Covenants, conditions and restrictions (CC&Rs) will not restrict solar thermal or PV installations on rooftops or south facing facades
- Use photovoltaic panels as shade structures on bus stops, surface parking, building awnings, and park facilities



ECOLOGY

5.1 ENVIRONMENTAL ENHANCEMENTS

ENVIRONMENTAL ENHANCEMENTS

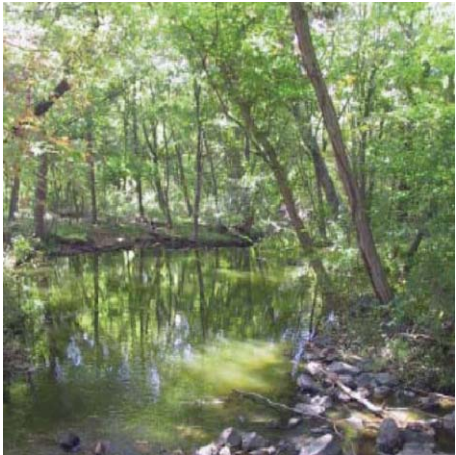
Goal: Restore and enhance the natural environment and ecosystem services provided by natural and formal landscapes and open spaces

Target:

- Complete all environmental enhancements based on the Merriweather and Crescent Environmental Enhancements Study

Strategy:

- Restore native plant communities and remove and manage invasive species by following the recommendations set in the Environmental Enhancements Report
- Provide and ensure long term funding for maintenance



5.2 ECOLOGICAL CONNECTIVITY

Goal: Preserve and restore natural corridors for wildlife, seed dispersal, and ecosystem services

Target:

- Complete all environmental enhancements based on the Merriweather & Crescent Environmental Enhancements Study.

Strategy:

- Enhance Symphony Stream and Little Patuxent River riparian corridors through stream and wetland restoration, invasive species management, reforestation, and under story planting
- Provide low-impact pedestrian trails through ecological corridors for recreation and education
- Provide wildlife corridor roadway crossings through the use of arched bottomless culverts at the locations and as shown in the Merriweather & Crescent Environmental Enhancements Study.
- Provide and ensure long term funding for maintenance



5.3 URBAN ECOLOGY

Goal: Create a green infrastructure network within the Downtown Columbia Core Area through urban forestry, soil health conservation, integrated stormwater management, and patches of native habitat where space allows within the urban fabric

Target:

- Create a connected network of street trees on 90% of streets
- Plant streets with a diversity of tree and other plant species

Strategy:

- Use streets, green areas, open space, and rooftops to create an urban forest with healthy soil for stormwater and habitat benefits
- Use a mix of regionally appropriate native and adaptive species
- Provide and ensure long term funding for maintenance

5.4 PROTECT/RESTORE/ENHANCE LAKEFRONT ECOLOGY

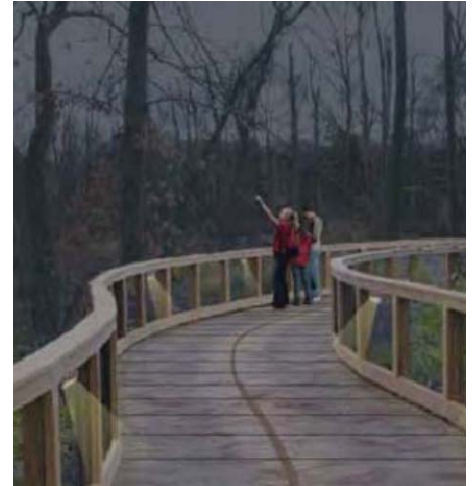
Goal: Enhance the ecology/habitat in and around Lake Kittamaquidi

Target:

- Design lakefront areas to reduce direct stormwater and irrigation runoff to lake

Strategy:

- Provide landscape buffers of native plants or meadow areas adjacent to the lake edge
- Plant native species in bio-regionally appropriate habitat assemblages to improve local ecology and provide desirable bird, butterfly and pollinator species habitat
- Minimize impervious pavement in areas near lakefront
- Create interpretive access points



5.5 LIGHT POLLUTION*

REDUCE LIGHT POLLUTION

Goal: Promote energy-efficient lighting for public safety which minimizes light pollution impacts to habitat and dark sky visibility

Target:

- Utilize photo sensors and/or timers and/or motion sensors
- Use shielded or directional exterior lighting
- Reduce use of directional up-lighting

Strategy:

- Use energy efficient luminaries
- Use luminaries with shield or directional lighting; choose and install accent lighting that will shine directionally on specific locations or objects without light trespass beyond 45 degrees above horizontal
- Use luminaries that comply with ranking published in LEED ND or approved by the International Dark-Sky Association

*Requires coordination with Howard County



6.1 SMART DESIGN

DESIGN BASED ON AVAILABLE MATERIALS

Goal: Avoid creation of material waste at the design stage

Target:

- Use or plan for reuse of 90% or more of purchased/acquired materials in construction

Strategy:

- Design based on material availability and standard dimensions

6.2 CONSTRUCTION MATERIAL SELECTION

USE SUSTAINABLY SOURCED MATERIALS

Goal: Use environmentally preferable materials that minimize toxicity and embodied energy in the design and construction of infrastructure

Target:

- Acquire $\geq 50\%$ of all site construction materials from reused, recycled content, regional, and rapidly renewable sources

Strategy:

- Reuse materials on-site in their original form or location
- Reuse materials on site in another form or location
- Use material with recycled content
- Use materials sustainably sourced or manufactured locally
- Use rapidly renewable materials
- Use materials certified and sustainably harvested
- Choose materials based on a life cycle analysis
- Use materials with non-toxic materials sealants or additives
- Choose materials based on life span, maintenance and recyclability considerations



HEAT ISLAND EFFECT

Goal: Reduce heat island effect from paving

Target:

- Use light-colored and/or high albedo materials with a minimum Solar Reflectance Index of 29 for at least 30% of site hardscape surfaces
- Use light-colored and/or high albedo shade structures over dark-colored and/or low albedo surfaces such as parking and top level of parking structures

Strategy:

- Use lightly colored or high albedo materials for paved surfaces (walkways, plazas, streets, parking lots/structures, etc)
- Use pergolas, trees, and/or photovoltaic arrays to shade surface parking or the top level of parking structures



6.3 CONSTRUCTION WASTE

MANAGE CONSTRUCTION WASTE

Goal: Reduce the amount of construction waste sent to landfills

Target:

- Divert 80% or more of non-hazardous construction waste from landfills or incineration

Strategy:

- Reduce quantity of construction waste through smart design inspect, store and manage materials carefully to prevent damage and rejected materials
- Plan for separation of different types of construction wastes for reuse or recycling



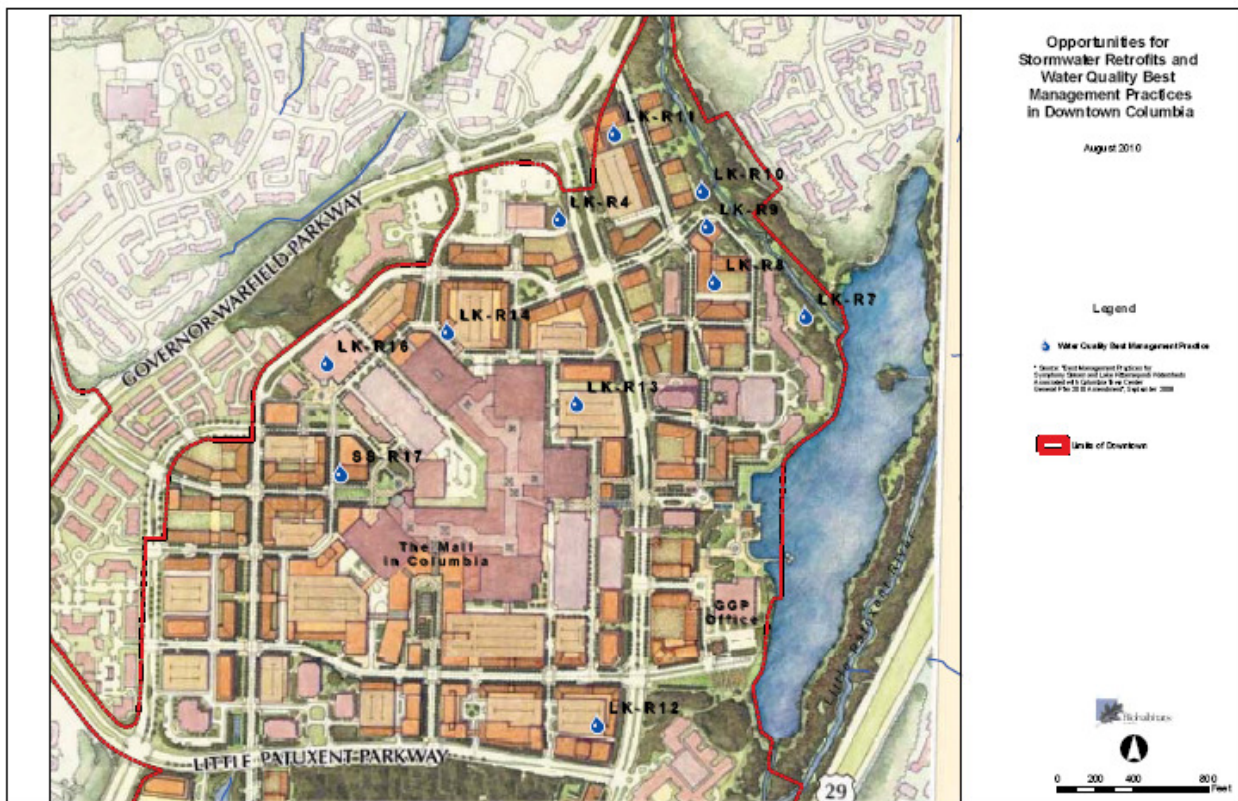
BEST MANAGEMENT PRACTICES FOR SYMPHONY STREAM AND LAKE KITTAMAQUNDI

Remediation locations

General Growth Properties and its ecological consultant Biohabitats, performed watershed assessments for the three Columbia sub watersheds of Symphony Stream, Wilde Lake and Lake Kittamaqundi located up stream of *Downtown Columbia's Town Center Merriweather and Crescent Environmental Enhancements Study* area. Watershed assessments were performed to target storm water retrofits and riparian corridor restoration opportunities for the watersheds of the two streams flowing through Downtown Columbia.

The chart to the right captures projects located within Downtown Columbia from this study. As Downtown develops, property owners should consult this list and the recommendations and suggestions in the Best Management Practices document for ways to include environmental restoration and enhancements in their projects.

Location	Existing Conditions	Drainage Area (acres)	Target Water Quality Volume (cubic ft)
LK-R04 (One Mall North on Little Patuxent Parkway)	West side of parking lot drains to single storm drain inlet that is upstream of an unutilized swale and depression.	1.50	3,790
LK-R07 (Sheraton Hotel)	Outfall conveying flows from hotel, adjacent parking lot, and commercial areas discharges to channel behind the Sheraton. The channel cuts through an open space with trees and grass before crossing the recreational path and entering Lake Kittamaqundi	8.50	17,550
LK-R08 (Sheraton Hotel)	Outfall conveying flows from hotel parking lot and adjacent commercial areas discharges to top of steep streambank.	3.40	9,860
LK-R09 (Parking Lot between Chamber of Commerce and Sheraton Hotel on Little Patuxent Parkway)	Outfall conveying flows from parking lot and commercial areas discharges to top of steep streambank, causing pipe sections to separate and large scour hole and eroded channel.	4.70	8,850
LK-R10 (Chamber of Commerce Office Building on Little Patuxent Parkway)	Existing pond lacks direct inflow and may or may not have been designed for stormwater management.	6.90	14,030
LK-R11 (Chamber of Commerce Office Building on Little Patuxent Parkway)	Small portion of Chamber of Commerce parking lot drains to eroded swale via curb cut.	0.60	1,190
LK-R12 (10-70 Columbia Corp Center)	Outfall conveying flows from parking deck, adjacent parking lot, and commercial areas discharges to open channel/ existing stormwater facility. The vegetated channel cuts through an open space with trees and grass before passing under Governor Warfield P	6.70	13,750
LK-R13 (Columbia Mall)	The east parking structure of the mall appears to drain to the storm sewer system with no stormwater treatment.	1.80	5,560
LK-R14 (Columbia Mall)	The north parking lot of the mall appears to drain to the storm sewer system with no stormwater treatment.	10.20	28,950
LK-R16 (Columbia Mall)	The roof drains of the AMC Columbia 14 Cinemas building appear to drain to the storm sewer system with no stormwater treatment.	1.70	4,930
SS-R17 (Columbia Mall)	The west parking lot of the mall appears to drain to the storm sewer system with no stormwater treatment.	18.70	46,790



COLUMBIA TOWN CENTER MERRIWEATHER AND CRESCENT ENVIRONMENTAL ENHANCEMENTS STUDY

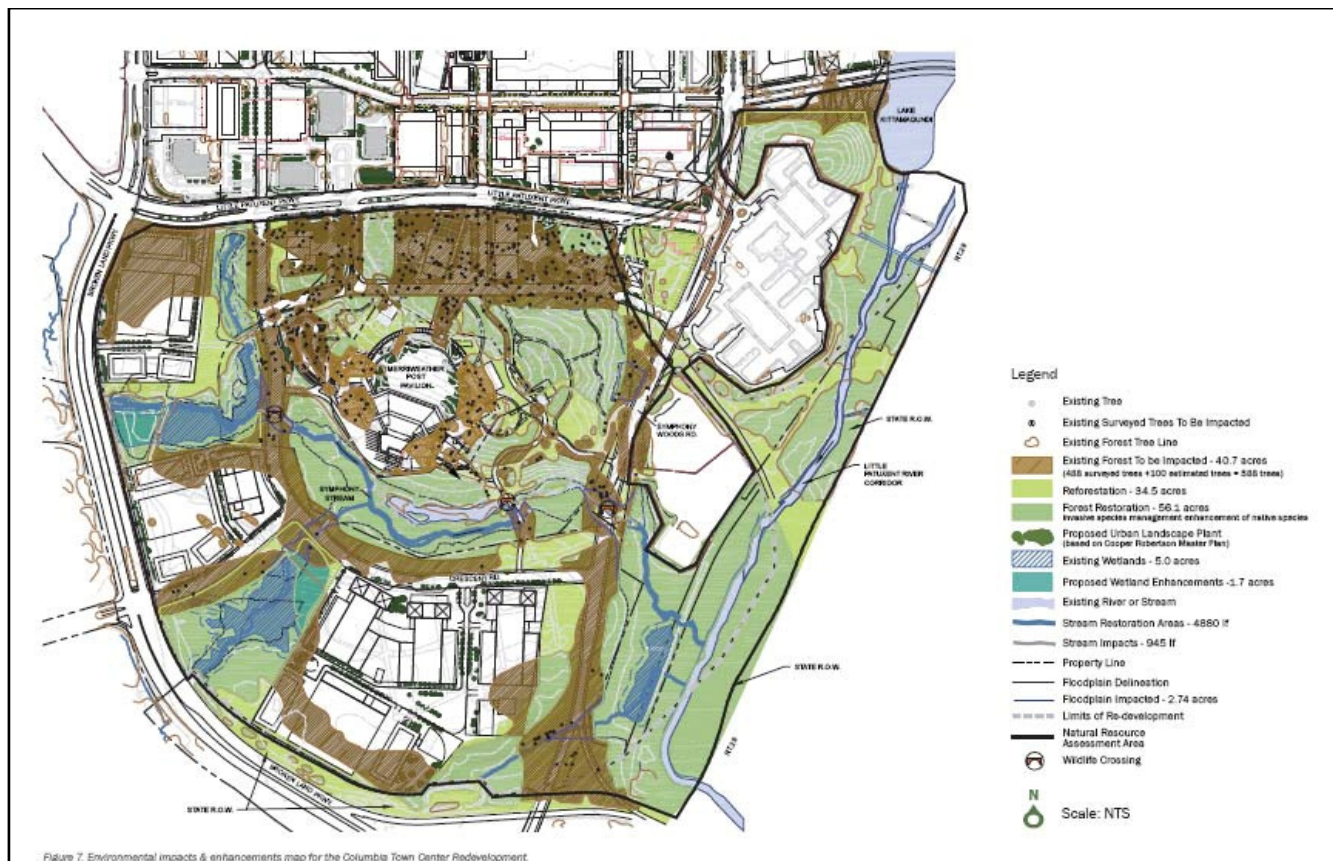
A natural resources assessment was performed by General Growth Properties on over 5000 linear feet of streams and 120 acres in the Merriweather-Symphony Woods & Crescent neighborhoods of Downtown Columbia. The report describes the findings of the assessment and articulates proposed environmental improvements to streambeds, wetlands, forests and vegetation management. These mitigations and improvements to be implemented by property Owners in these neighborhoods strive to enhance the ecological environment by restoring and maintaining the current Symphony Stream and Little Patuxent River riparian corridors. The environment will be enhanced through corridor management activities such as invasive species management, reforestation, stream bed restoration, wetlands enhancement and creation, and understory plantings.

TABLE 5. SUMMARY OF PROPOSED IMPACTS & ENHANCEMENTS
(all numbers approximate)

	EXISTING	IMPACT	RESTORATION		TOTAL
			CREATION	ENHANCEMENT	
Forest (Acres)	106	41	34	56	90
Wetland (Acres)	5	0.1	2	5	7
Stream (Linear Feet)	5000	945	0	4880	4880
Floodplain (Acres)	40	2.74	2	47	49
Trees (Individuals)	1214	588	13600 ¹	5600 ²	19200

¹Based on reforestation using 400 trees per acre. ²Based on supplementation of existing forest using 100 trees per acre.

This plan was created prior to adoption of CB58-2009, may not reflect the actual roadway network or neighborhood configurations identified in the final legislation.





A.2 ON-ROAD BICYCLE FACILITIES



ON-ROAD BICYCLE FACILITIES DESIGN GUIDELINES

Downtown Columbia, MD

ON-ROAD BICYCLE FACILITIES DESIGN GUIDELINES

These guidelines are intended to compliment the Howard County Downtown Columbia Downtown-Wide Design Guidelines and provide supplemental guidance for the planning and design of on-road bicycle facilities and bike parking areas within Downtown Columbia, MD. These guidelines are intended to supplement Federal, State, and local design standards and specifications for the planning and design of bicycle facilities. An Engineering Analysis is recommended when designing all on-road bicycle facilities.

The following guidance and standards are referred within this guideline:

AASHTO Guide for the Development of Bicycle Facilities
AASHTO A Policy On Geometric Design of Highways and Streets
Manual on Uniform Traffic Control Devices (MUTCD), Federal Highway Administration
APBP Bicycle Parking Guidelines, Association of Pedestrian and Bicycle Professionals

Revised: August 29, 2011

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SECTION 1

ON-ROAD BICYCLE FACILITIES

Standard Bike Lanes

Marked Shared Lanes

Buffered Bike Lanes

Cycle Tracks

Standard Bike Lanes

Description / Purpose

On-road bike lanes provide an exclusive space for bicyclists through the use of lines and symbols on the roadway surface. Bike lanes are for one-way travel and are normally provided in both directions on two-way streets and/or on one side of a one-way street. Bicyclists are not required to remain in a bike lane when traveling on a street, and may leave the bike lane as necessary to make turns, pass other bicyclists, or to properly position themselves for other necessary movements. Bike lanes may only be used temporarily by vehicles accessing parking spaces, entering or exiting driveways/alleys, or making turns onto intersecting streets.

Application

Bicycle lanes should be a minimum of 5' wide when adjacent to a curb or parking lane, and 4' wide minimum with no adjacent obstructions. (Bike lane between travel lanes).

Bicycle lanes are normally placed on the right side of the road to reflect the general principle of slower traffic keeping to the right.

Wider bicycle lanes may be desirable when adjacent to a narrow parking lane with high parking turnover, in areas of high bicycle use, or along higher speed roadways.

Design Considerations

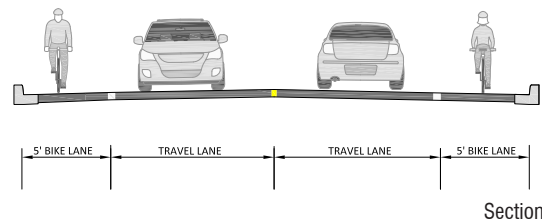
- Where additional space is available, consider providing a buffered bike lane (Refer to Buffered Bike Lanes).
- Bike Lanes should have a smooth riding surface. Utility covers should be adjusted flush with the surface of the lane.
- Bike lanes should be provided with adequate drainage (bicycle-safe drainage grate) or slope to prevent ponding, debris accumulation, and other hazards for bicyclists.
- On streets where sustained downhill grades are long enough to result in faster bicyclist speeds, a bicycle lane may be provided in the uphill direction with a shared lane marking in the downhill direction. (Refer to Marked Shared Lanes).

Sources for Design Guidance

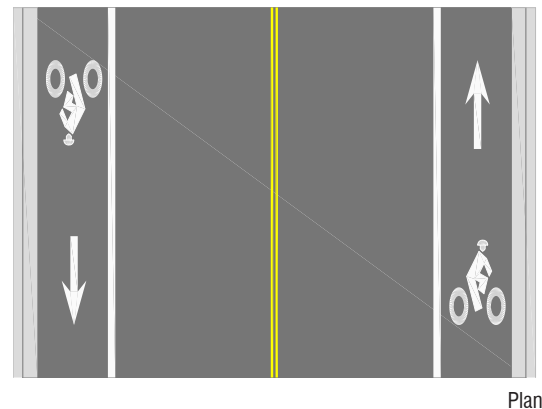
- AASHTO Guide for the Development of Bicycle Facilities
- AASHTO A Policy On Geometric Design of Highways and Streets
- MUTCD



Bike Lane
Source: TDG Library



Bike Lane
Source: TDG Library



Marked Shared Lanes

Description / Purpose

Marked shared lanes are shared lanes that have special bicycle markings to provide a higher level of guidance to bicyclists and motorists. The symbols (called “shared lane markings”) alert motorists of locations where bicyclists should be expected to ride and encourage safer passing behaviors.

Application

Shared lane markings are typically used on streets where right-of-way constraints limit the possibility of providing bike lanes.

On streets with narrow lanes, the shared lane marking is typically placed in the center of the lane to indicate that motorists must change lanes to pass bicyclists.

On narrow travel lanes adjacent to on-street parking, shared lane markings should be placed in a location that is outside of the door zone of parked vehicles.

Shared lane markings can be used to fill a gap between two sections of roadways that have bike lanes or between a shared use path and a nearby destination.

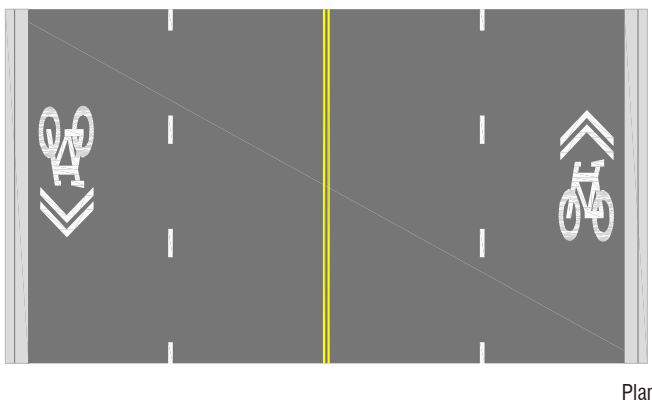
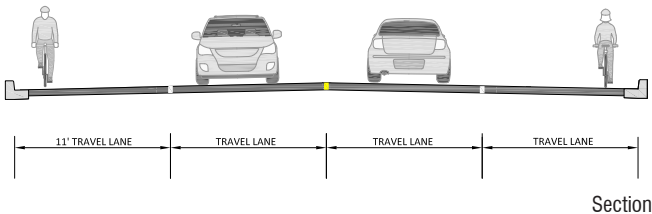
Shared lanes can be used to complete connections between bike lanes and other bicycle facilities.

Design Considerations

- Marked shared lanes should not be used on roads with a speed limit above 35mph.
- Marked shared lanes should be provided only after other measures to provide bike lanes or other facilities have been proven to not be feasible.
- Shared lane markings should be marked on an alignment that represents a practical path of bicycle travel under typical conditions. For some streets, this may be the center of a shared travel lane.
- Minimum marking placement is 11' from face of curb where parking is permitted and beyond door zone, or 4' minimum from face of curb, when parking is not permitted.
- Bike Chevron (sharrows) symbol dimensions are 9'-3" x 3'-3" and should be placed at a minimum at beginning and end of each block, or more frequently.
- Shared lane markings are not appropriate on paved shoulders or in bike lanes.

Sources for Design Guidance

- AASHTO Guide for the Development of Bicycle Facilities
- AASHTO A Policy On Geometric Design of Highways and Streets
- MUTCD



Shared Lane Marking
Source: TDG Library

Buffered Bike Lanes

Description / Purpose

Buffered bike lanes are created by painting a flush buffer zone between a bike lane and the adjacent travel lane. While buffers are typically used between bike lanes and motor vehicle travel lanes to increase bicyclists comfort, they can also be provided between bike lanes and parking lanes in locations with high parking turnover to discourage bicyclists from riding too close to parked motor vehicles.

Application

Buffered bike lanes can be provided on any street with sufficient space for a bike lane and additional separation from either motor vehicle travel ways or parking lanes.

Buffered bike lanes provide space for cyclists to pass other bicyclists without encroaching into the travel lane, mitigate for obstacles in the bike lane (i.e. drainage inlets, debris, or manholes), or provide additional separation on roadways with higher speeds.

Design Considerations

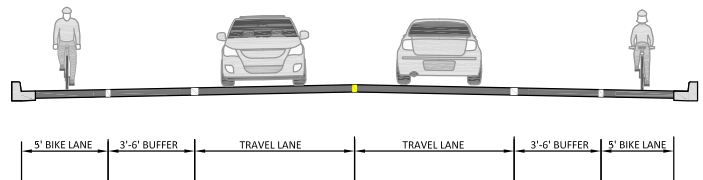
- The buffered space should strive to be 3-ft minimum width, however width may vary depending upon the available space, and need for separation. Buffers should be painted with solid white lines and cross hatches per MUTCD.

Sources for Design Guidance

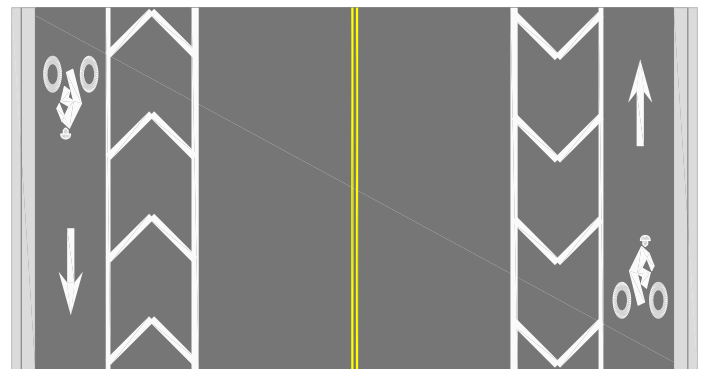
- AASHTO Guide for the Development of Bicycle Facilities
- AASHTO A Policy On Geometric Design of Highways and Streets
- MUTCD



Buffered Bike Lane
Source: TDG Library



Section



Plan

Cycle Tracks

Description / Purpose

Cycle tracks are bikeways that are physically separated from the adjacent roadway through the use of a raised median, striped buffer, or on-street parking. Cycle tracks are for the exclusive use of bicyclists and provide added separation that enhances the experience of bicycling on urban streets. Cycle tracks can either be one-directional or two-directional and can be provided on both sides of two way streets, or on one side of one-way streets.

Application

Cycle tracks are typically installed on streets with higher traffic volumes and speeds, with long blocks and therefore fewer intersections.

Cycle tracks are often placed between a parallel parking lane and the curb.

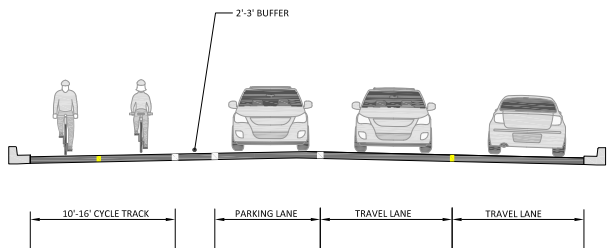
Cycle tracks may be useful on streets that provide connections to off-street trails, since bicyclists on these streets may be more accustomed to riding in a space separated from motor vehicle traffic.

Design Considerations

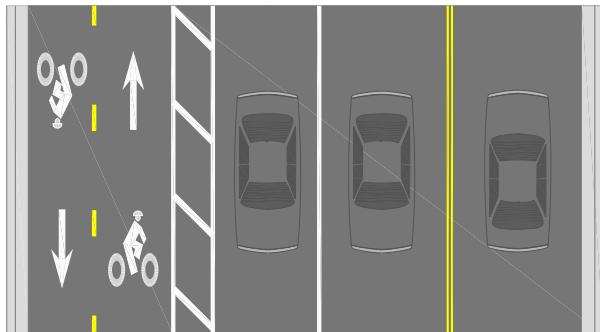
- Intersection design for cycle tracks is complex and requires careful attention to conflicts with turning vehicles, signal phasing and operations, stop bars, crosswalk design, and ADA compliance.
- The desired width of a single directional cycle track is 5 feet, when adjacent to on-street parking. A 3-foot buffer should be provided between parking and the cycle track, which serves as a pedestrian loading and unloading zone.
- In areas with higher bicycle volumes, single direction cycle tracks should be 7 feet wide to allow bicyclists to pass one another.
- At driveway and low volume street crossings, pavement markings should be provided to indicate that bicyclists have the right-of-way.
- Cycle tracks require increased parking restrictions compared to bike lanes to provide for visibility between bicyclists and motorists at intersections.
- When cycle tracks are provided on the same side as transit operations, stops, and waiting areas, a buffer should be provided between the cycle track and the roadway to reduce conflicts between bicyclists and pedestrians loading and unloading.



Cycle Track
Source: TDG Library



Section



Plan

Sources for Design Guidance

- AASHTO Guide for the Development of Bicycle Facilities
- AASHTO A Policy On Geometric Design of Highways and Streets
- MUTCD



Cycle Track
Source: TDG Library

SECTION 2

BICYCLE PARKING

[Standard Bike Rack Design - Exterior](#)

[Bike Rack Site Design - Exterior](#)

[Bike Shelter Design - Exterior](#)

Standard Bike Rack Design - Exterior

Description / Purpose

Bicycle racks allow bicyclists to safely park their bikes if they wish to stop along the way or have arrived at a destination. Bicycle racks also prevent damage to trees and street furniture, as well as keep bicycles in an orderly appearance and from blocking pedestrian passageways. Bicycle parking is an important component in order to encourage and accommodate bicyclists throughout Town Center.

Application

Bike racks should be located in locations easy to locate and access at parking areas, commercial areas, and within close proximity to possible destinations.

A bicycle rack should provide proper support with two or more points of contact on the frame of the bicycle. Bicycle racks that only support the wheel of the bike are not recommended.

Two general bike rack styles include:

Inverted “U” - recommended bicycle rack for most site conditions, allowing the bicycle’s frame to be supported at two points while also holding two bicycles.

Post and Ring - recommended bicycle rack for constrained sites, allowing the bicycle’s frame to be supported at two points of contact. This rack is within the footprint of the bicycle and may also be incorporated into the design of parking meters.

Design Considerations

- Bike racks should be located without interfering with traffic flow or routine maintenance; this includes the space needed for a locked bicycle. (Refer to Bike Rack Site Design - Exterior).
- Bike racks should accommodate the dimensions of a conventional bicycle of 72” in length, 48” in height, and 24” handlebar width.
- Bike racks should be properly located and fit the context of a site’s streetscape and/or landscape setting.
- Opportunities for art or customized racks are possible; however, they should be recognizable as bike parking.
- Racks should be located in highly visible locations to promote usage and security.

Sources for Design Guidance

- APBP Bicycle Parking Guidelines
- AASHTO Guide for the Development of Bicycle Facilities



Post and Ring Bike Rack
Source: TDG Library



“Inverted U” Customized Bicycle Rack
Source: TDG Library



“Inverted U” Bicycle Rack
Source: TDG Library

Bike Rack Site Design - Exterior

Description / Purpose

Bike rack site design should facilitate movement around and between bike racks. Short-term bike parking may consist of a single rack, while long-term parking may include a group of racks beneath a shelter. Specific parking needs should be determined through a site specific needs analysis.

Application

Short term bicycle parking consists of simple bicycle racks located in front of a building or destination, and therefore site design focuses on convenience, utility, and security. Short-term bicycle parking should be convenient to the entrance of the cyclist's destination, visible from the destination to reassure cyclists about the security of the rack, and located in high-traffic areas with passive surveillance or eyes on the street.

Bicycle racks perpendicular to the curb should have a minimum spacing of 36" from the curb.

Bicycle racks parallel to the curb should have a minimum spacing of 24" from the curb.

Typical bicycle rack spacing of 48" is recommended, (36" minimum).

Avoid handlebar/rack/basket conflicts through proper rack spacing.

Allow two feet of clearance around each rack for users to be able to access and securely lock bicycles from the side.

Design Considerations

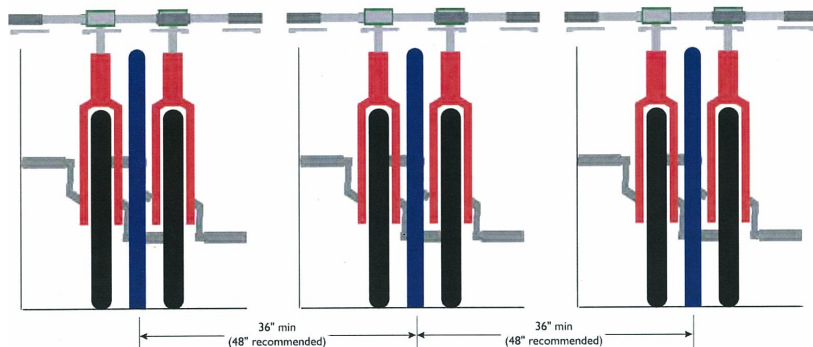
- Racks placed too close together or too close to nearby objects such as walls or trees may be completely unusable.
- Distance to other racks
 - aligned end to end - 96" between racks
 - side by side - 36" minimum, 48" preferred
- Distance from curb
 - perpendicular to curb - 36"
 - parallel to curb - 24" minimum from back of curb
- Ensure adequate end and side clearance for users to maneuver bicycles around the parking area.
- A greater buffer space from moving traffic can be achieved by positioning bicycle racks at a 60 degree angle.
- Bike racks should be placed at locations near front entrances of buildings and should not be hidden from view to prevent theft.
- For long term bicycle parking, shelters are recommended. The location of the shelter is considered by the setback requirements, providing enough space for pedestrians, overhead, and visibility clearances. (Refer to Bike Shelter Design - Exterior)

Sources for Design Guidance

- APBP Bicycle Parking Guidelines
- AASHTO Guide for the Development of Bicycle Facilities



Covered Parking
Source: TDG Library



Typical Rack Spacing
Source: APBP Bicycle Parking Guidelines



Inverted "U" Bicycle Parking
Source: TDG Library

Bike Shelter Design - Exterior

Description / Purpose

Bike Shelters have many benefits for cyclist as well as pedestrians since both parties can benefit from the shelter from inclement weather as well as protection from the sun and cold. Kiosk shelters can also provide cyclists and pedestrians with travel information, such as bicycle maps and transit routes.

Application

Typical bike shelters should be placed on sidewalks or on curb extensions, which minimizes encroachment into the pedestrian path.

Bike shelter roof span should be a minimum of 9 feet to clear the length of the bikes underneath,

Bike shelters should be placed at locations where bicyclists frequently park for longer periods of time. The design of bike shelters should be context sensitive and site specific while considering the character of nearby amenities.

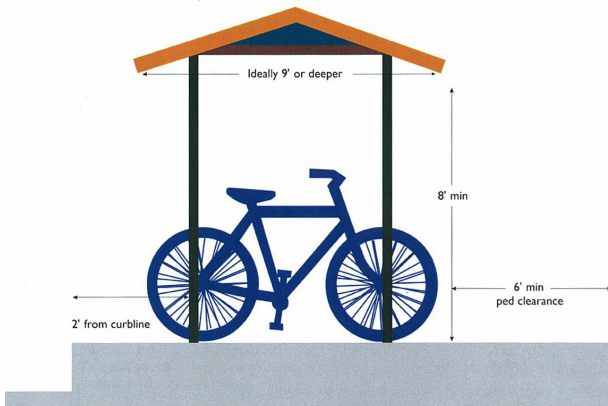
Design Considerations

- Setback, clearances, and building requirements per local and state guidelines should be considered when installing bicycle shelters.
- The consideration of lighting should be taken into account to assure safety in a bike shelter. Glass roofs provide light from street lamps to pass through the shelter.

Sources for Design Guidance

- APBP Bicycle Parking Guidelines
- AASHTO Guide for the Development of Bicycle Facilities

Dimensional Footprint



For maximum visibility, do not build structure within 15 feet of corner property line.

Sample Clearance Guidelines

Source: APBP Bicycle Parking Guidelines



Covered Shelter Bicycle Parking

Source: TDG Library



Covered Shelter Bicycle Parking with Informational Kiosk

Source: APBP Bicycle Parking Guidelines



A.3 OFF-ROAD BICYCLE FACILITIES



SHARED-USE PATH DESIGN GUIDELINES

Downtown Columbia, MD

SHARED-USE PATH DESIGN GUIDELINES

These guidelines are intended to compliment the Howard County Downtown Columbia Downtown-Wide Design Guidelines and provide supplemental guidance for the planning and design of shared-use paths and trail amenity areas within Downtown Columbia, MD. These guidelines are intended to supplement Federal, State, and local design standards and specifications for the planning and design of bicycle and pedestrian facilities.

The following guidance and standards are referred within this guideline:

AASHTO Guide for the Development of Bicycle Facilities
AASHTO Guide for the Planning, Design, and Operation of Pedestrian Facilities
AASHTO A Policy on Geometric Design of Highways and Streets
Manual on Uniform Traffic Control Devices (MUTCD), Federal Highway Administration
APBP Bicycle Parking Guidelines, Association of Pedestrian and Bicycle Professionals
Proposed Right-of-Way Accessibility Guidelines (PROWAG), US Access Board (Draft)
International Dark-Sky Association/Illuminating Engineering Society of North America, (IDA/IESNA)

Revised: August 29, 2011

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SECTION 1

SHARED-USE PATH - DESIGN GUIDELINES

Geometric Elements

Intersection Design

Surface Materials

Warning Signage and Markings

Interpretative/informational Signage & Markings

Fencing, Handrails, and Retaining Walls

Trail Entrance Design

Lighting

Trailheads and Waysides

Trail Amenities

Integration of Public Art

Geometric Elements

Description / Purpose

Shared-use path design criteria are based on the physical and operating characteristics of bicycles and other path users. The usable width, horizontal clearance, horizontal alignment, and grade required for a shared-use path are the primary geometric design considerations.

Application

Trail Width: The appropriate paved width for a shared-use path is dependent on context, volume and mix of users. The minimum recommended paved width for a two-directional shared-use path is 8 feet. Typically, widths range from 8' to 14', with the wider values applicable to areas with high use and/or a wider variety of user groups. In locations where the trail corridor width is restricted and between 8 to 10 feet, the maximum width for the shared use trail is preferred. Wider pathways, typically 11' to 14' are recommended in locations that are anticipated to serve a high percentage of pedestrians (up to 30 - percent of the total pathway volume) and high user volumes (more than 300 users in the peak hour). Wider paths are advisable in the following situations:

- Where there is significant use by in-line skaters, adult tricycles, or other users that use more operating width,
- Where the path is used by larger maintenance vehicles,
- On steep grade to provide additional passing area; or
- Through curves to provide more operating space.

Trail Buffer/Separation: A graded area of at least 3' to 5' with a maximum cross slope of 6:1 should be maintained on each side of the pathway.

Longitudinal Horizontal Alignment: When determining the minimum radius of a horizontal curve the curve should be based on a design speed between 12 to 30 mph (approximately 27' to 166' radius). Within urban trail segments or areas with an increase in grade change or expected changes in pedestrian volumes, a 14 mph design speed should be used. All other areas should follow guidance in AASHTO Guide for the Development of Bicycle Facilities.

Cross Slope: A 1 to 2 percent cross slope is recommended where feasible along shared-use paths.

Grades: For pathways adjacent to roads, pathway grade should match the grade of the adjacent roadway. Grades on shared-use paths in independent corridors should be kept to a minimum especially on long inclines. Grades greater than 5 percent are undesirable because the ascents are difficult for many path users. Grades on paths in independent rights-of-way should be limited to:

- 5.0 percent maximum for any distance
- 8.3 percent maximum for up to 200 feet
- 10.0 percent maximum for up to 30 feet
- 12.5 percent for up to 10 feet

Additionally, no more than 30 percent of the total path length should have a grade exceeding 8.3 percent.

Where grades exceed 5 percent, a resting interval is required at the end of any segment of maximum length as described above.

*Note: This section will need to be revised when US Access Board issues new rules regarding grades within Public Right-of-Way in the future.



Shared-Use Path Buffer Example
Source: Downtown Columbia Design Guidelines

Design Considerations

- Trail width should consider existing or anticipated trail user volumes, mix of users, design speed, and anticipated maintenance emergency and patrol vehicles.
- Trail horizontal and vertical alignments should consider site conditions and design speed.

Sources for Design Guidance

- AASHTO Guide for the Development of Bicycle Facilities
- AASHTO Guide for the Planning, Design, and Operation of Pedestrian Facilities
- PROWAG Proposed Right-of-Way Accessibility Guidelines

Intersection Design

Description / Purpose

The design of intersections between shared-use paths and roadways has a significant impact on users' comfort and safety. Intersection design should not only address cross-traffic movements, but should also address turning movements of riders entering and exiting the path.

Application

The nature of shared-use path traffic, speed variability of each travel mode, and its resulting effect on design values should be considered when recommending design treatments for path/roadway intersections.

Path/roadway intersections should be designed to be accessible to all users.

When determining the appropriate safety and control measures for pathway intersections, it is necessary to first determine what measures are needed for pedestrian safety and access, as it may be determined that a grade separated or signalized crossing is needed.

Sight lines should be maintained to meet the requirements of the traffic control provided, and the least restrictive control that is effective should be used.

High visibility marked crosswalks are recommended at path/roadway intersections, they delineate the crossing location and can help alert roadway users to the potential conflict ahead. Additional crossing measures, such as reducing traffic speeds, shortening crossing distance, enhancing driver awareness of the crossing, and/or providing active warning of crosswalk user presence may be necessary when crossing high speed (>40mph) or multi-lane roadways. In these situations, additional strategies for traffic control may include Hybrid Beacon, Rapid Flash Beacon, or Flashing Warning Beacon.

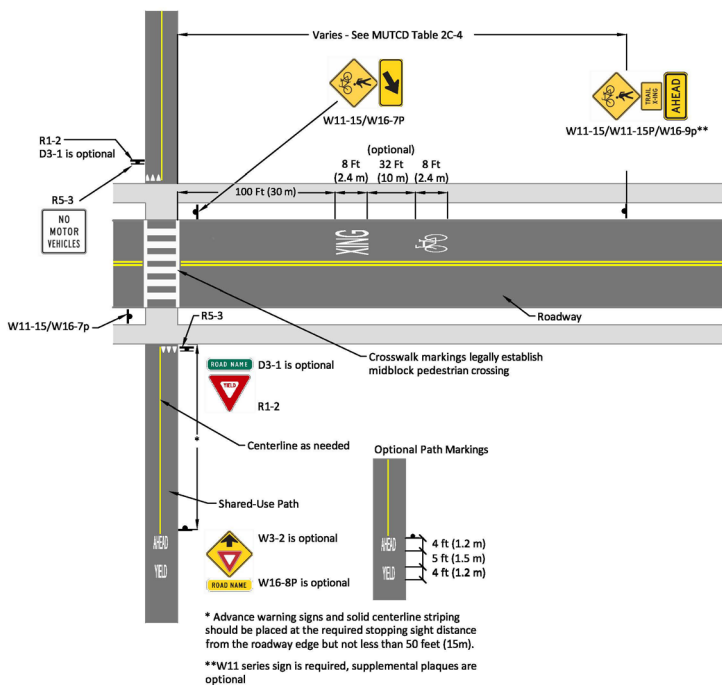
Each approach to a path/roadway intersection should include the appropriate regulatory and warning signage and markings. Signs along shared-use paths should be reduced per MUTCD.

Design Considerations

- Trail and roadway configurations, traffic volumes, and speeds.
- Least restrictive traffic control measures for minor traffic movement.

Sources for Design Guidance

- AASHTO Guide for the Development of Bicycle Facilities
- AASHTO Guide for the Planning, Design, and Operation of Pedestrian Facilities
- PROWAG Proposed Right-of-Way Accessibility Guidelines
- MUTCD



Example of Midblock Path/Roadway Intersection - Path is YIELD Controlled
Source: AASHTO Guide for the Development of Bicycle Facilities



MUTCD Regulatory Signage
Source: MUTCD

Surface Materials

Description / Purpose

Surface materials of a shared-use path should be provided to enable year-round use of the path and minimize maintenance needs. A change in materials indicates a change in location from the main circulation corridor to an adjacent secondary corridor or amenity area.

Application

Hard, all weather smooth pavement surfaces are recommended for shared-use paths intended for a variety of users (bicyclists, in-line skaters, pedestrians, and in particular other wheeled users). In general, the primary trail surface material should be asphalt, which provides a durable all-weather pavement surface. Asphalt is recommended for most segments except where the trail extends through urban areas where concrete may be more appropriate.

Shared-use path structural section shall be a minimum of 4 inches of asphalt concrete on 4 inches of aggregate base, or as otherwise determined by the engineer of record.

At trailheads, waysides, and other amenity areas, alternate paving materials such as brick/concrete pavers, colored concrete, stamped concrete, unit pavers, pervious concrete, and permeable pavers are recommended to create a focal area for trail users. All materials should be context sensitive and coordinated throughout the trail corridor to provide a cohesive network of amenity areas and trail segments.

Where feasible, surface materials which allow water to permeate into the ground are recommended in amenity areas. Pavement section and base material should be evaluated based on geotechnical considerations and should also provide smooth surface conditions for cyclists.

Considerations

- A soils investigation should be conducted to determine load-carrying capabilities of the native soil, infiltration of water, and the need for any special treatments.
- Geotextiles and other similar materials should be considered where subsurface conditions warrant, such as in locations with swelling clay sub grade.
- Path width and surfaces should be constructed to sustain wheel loads of occasional emergency, patrol, maintenance, and other motor vehicles that are expected to use or cross the path.

Sources for Design Guidance

- AASHTO Guide for the Development of Bicycle Facilities



Permeable Concrete
Source: Concrete Network



Brick Pavers at Wayside
Source: Midwest Manufacturing



Brick Pavers at Wayside
Source: Landscape Communications, Inc.



Asphalt Trail
Source: TDG Library

Warning Signage and Markings

Description / Purpose

Warning signs and markings provide guidance to trail users of upcoming conditions, intersections, or features along the trail.

Application

Warning signs should be retroreflective and conform to the color, legend, shape and size for the trail as described in the MUTCD.

Signs along a shared-use path should be reduced in size per MUTCD.

A yellow center line stripe along the path may be used to separate opposite directions of travel where passing is advisable and to alert path users of approaching intersections. Where center line striping is not provided along the entire length of the path, a center line may be particularly beneficial along segments with heavy user volumes, unlit paths where nighttime riding is expected, on curves with restricted sight distance or designated speeds less than 14 mph.

Within 30-feet of a path/roadway intersection, a solid yellow center line is recommended to discourage passing on the approach and departure of an intersection.

A white edge line is recommended on shared-use paths where bicycle traffic is expected during periods of darkness, and may be considered at approaches to intersections to alert path users of changing conditions. Where it is desirable to reduce path users' speed approaching an intersection, edge line stripes may be useful to create a perceived narrowing of the path.

Advanced and supplemental pavement markings are suggested to notify path users of upcoming road/path intersection.

Pavement markings should not be slippery or rise more than 0.16 in. above the pavement.

Design Considerations

- Consider potential hazards along the path.
- Anticipate period of path use (i.e. daytime, nighttime).

Sources for Design Guidance

- AASHTO Guide for the Development of Bicycle Facilities
- AASHTO Guide for the Planning, Design, and Operation of Pedestrian Facilities
- PROWAG Proposed Right-of-Way Accessibility Guidelines
- MUTCD



MUTCD Warning Signage
Source: MUTCD



Warning Sign
Source: TDG Library



Warning Trail Markings
Source: TDG Library

Interpretative/Informational Signage & Markings

Description / Purpose

Directional and wayfinding signs help users find their way along trail corridors and to trailheads, destinations, and other trail amenities.

Application

All interpretative/informational signs should have a consistent design theme as well as be consistent with other trail amenities throughout the trail system.

Informational Signage - A signage system which improves wayfinding, identifies direction, destination, and distance should be provided.

Reference location signs and mile markers allow path users to estimate their progress, promote means for identifying the location of emergency incidents, and are beneficial during maintenance activities. Location signs should be provided at major trail intersections and amenity areas.

Road/path name signs should be placed at all path/roadway intersections.

Mile markers should be provided at each 1/2 mile and embedded in trail surface. It is recommended that mile markers be georeferenced locations along the trail for maintenance and emergencies.

Interpretative Signage - A cohesive interpretative signage system provides opportunities to interpret the local historical, cultural or environmental features along the trail corridor and provide the opportunity for the general public to gain a sense of the community.

All interpretative and informational signage should be placed along the trail at key decision making points and site specific locations for information or interpretation.

Design Considerations

- A consistent design theme is placed throughout trail corridor for information or interpretation.
- All signs should meet ADA guidelines and text should be easy to read with contrasting colors and universal symbols to indicate direction of important amenities.
- All signs should be located to not impede sight lines for trail users or adjacent roadways.
- **Informational Signage** - signs should be located at decision making points and be based on an analysis of circulation routes and decision points or trail intersections.
- **Interpretative Signage** - with a number of signs in a series, a self-guided tour could be created as a healthy and educational amenity within the community.
- Sign design should consider long term maintenance needs.

Sources for Design Guidance

- AASHTO Guide for the Development of Bicycle Facilities
- PROWAG Proposed Right-of-Way Accessibility Guidelines
- MUTCD



Georeferenced Marking
Source: TDG Library



Informational Wayfinding
Source: TDG Library



Trail Mile Marker
Source: TDG Library



Informational Wayfinding
Source: TDG Library



Informational Wayfinding
Source: TDG Library

Fencing, Handrails, and Retaining Walls

Description / Purpose

Fencing and handrails are used to protect users from potential hazards such as steep slopes or to restrict access to and from the trail. Retaining walls allow grading to be manipulated to provide sufficient space for the trail and buffers. Fencing, handrails, and retaining walls are all site design features for trails to ensure sufficient space and protection from potential hazards.

Application

Fencing - should be provided as necessary to protect trail users from nearby hazards. Coated, black or green, chain-link fencing is less visually impacting, while wood gives the impression of a more natural setting. Within urban areas, a black metal railing should be used, while a black metal railing with coated chain-link fence or wood fencing is recommended for non-urban trail segments.

Handrails - should be provided as necessary along the length of ramps and at the top of retaining walls or as required by ADA for steeper slopes or as required per PROWAG for steeper slopes. Black metal is recommended.

Retaining Walls - should be constructed of segmented concrete block or wood, whichever is most context sensitive.

Design Considerations

- The fences, handrails, and retaining wall style should reflect the character of the site in addition to functionality.
- Materials should be chosen for their durability as well as design.
- Wooden fences or handrails will require more maintenance than a metal or composite materials.
- Poorly maintained site features promote a negative image and should be avoided.
- Handrails should include bike rub rails, at approximately 36" above trail surface to prevent bicycle handlebars from catching vertical rails.
- Landscaping should be considered to soften the appearance of fencing and handrails, and retaining walls at trailheads, waysides, and along trails.
- Handrail designs should comply with PROWAG guidelines and be between 34" and 38" height to provide universal access.
- Retaining walls should meet local engineering standards.

Sources for Design Guidance

- AASHTO Guide for the Development of Bicycle Facilities
- PROWAG Proposed Right-of-Way Accessibility Guidelines



Metal Railing
Source: TDG Library



Segmented Concrete Retaining Wall
Source: TDG Library



Wooden Fence
Source: TDG Library

Trail Entrance Design

Description / Purpose

The entrance/exit to a trail or shared use path at a public right-of-way should be designed to provide a safe transfer for trail users as well as alert motorists as necessary.

Application

The opening of a shared-use path at the roadway should be at least the same width as the shared-use path itself, not including side flares if utilized. The path/roadway interface or ramp (if used) should be designed in accordance with PROWAG, including detectable warnings, and should be placed across the full width of the path.

The approach of a shared use path entrance should provide a smooth and accessible transition between the path and the roadway.

A 5-foot radius or flare may be considered to facilitate turns for bicyclists.

Unpaved shared-use paths should be provided with paved aprons extending a minimum of 20-feet from paved road surfaces.

For locations where queuing at an intersection results in crowding at the roadway edge, consideration can be given to widening the path approach. This widening can increase crossing capacity and help reduce conflicts at path entrances.

Proper signage and pavement markings should be provided to inform trail and roadway users at all entrances.

Design Considerations

- Pedestrian and bicycle access to trails should be considered.
- Potential conflicting users and adjacent facilities (i.e. sidewalks and roads) should be considered.
- Bollards are not recommended at shared-use path entrances. A preferred method of restricting entry of motor vehicles is to split the entry way into two sections separated by low landscaping. Each section should be half the nominal path width. Where the need for bollards or other vertical barriers is necessary, measures should be taken to ensure that they are as safe as possible, including marked with retroreflectorized material, a minimum height of 40 inches, set back from the roadway edge a minimum of 30 feet, and in odd quantities, not obstructing the travelways.

Sources for Design Guidance

- AASHTO Guide for the Development of Bicycle Facilities
- AASHTO Guide for the Planning, Design, and Operation of Pedestrian Facilities
- PROWAG Proposed Right-of-Way Accessibility Guidelines
- MUTCD



Intersection Crossing
Source: TDG Library



Trail Entrance
Source: TDG Library

SHARED-USE PATH DESIGN GUIDELINES

Lighting

Description / Purpose

Lighting provides nighttime visibility along trail corridors and within amenity areas for trail users.

Application

Lights should be installed along the trail corridor, at trailheads, way-sides, and trail/roadway crossings or activity areas.

Post-top and/or bollard style light fixtures with black posts should be utilized as appropriate to the site.

Lighting should be provided during summer months (June-Sept.) between dusk to 11 P.M. and 5 A.M. to dawn. During winter months, lighting from dusk to 9 P.M. and 6 A.M. to dawn is recommended. Photocells may be used to provide the hours of operation.

Design Considerations

- The design and material of lighting poles and fixtures should be consistent with the design of other site amenities, and be scaled for pedestrian users.
- A lighting analysis should be completed to determine required lighting levels along the trail at amenity areas and trail/road crossings.
- Solar powered lighting is a good option that is ultimately less expensive to operate, but has a greater initial capital cost.
- Lighting fixtures should be tamper resistant and be made to withstand vandalism.
- Typical post-top pole spacing ranges from 40' to 60', with a height of 12' to 16'.
- Bollard light spacing ranges from 10' to 20', with a height of 48" to 52".
- Consider energy efficient LED light fixtures and other energy efficient materials when appropriate to minimize maintenance and operation costs.
- Lighting levels should comply with local ordinances and should have cut-offs to shield light from adjacent properties.

Sources for Design Guidance

- AASHTO Policy for the Geometric Design of Highways and Streets
- IDA/IESNA



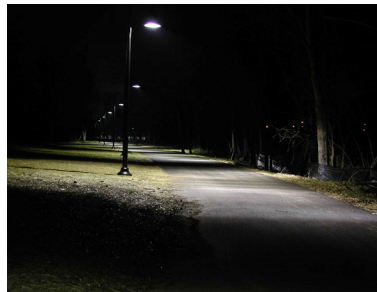
Post-top Fixture
Source: TDG Library



Solar Powered Lighting
Source: Philips Hadco Lighting



Bollard Style Fixture
Source: TDG Library



Night Lighting
Source: TDG Library



Post-top Fixture
Source: Philips Hadco Lighting

Trailheads and Waysides

Description / Purpose

Trailheads are locations where trail users can enter or exit a trail network. These locations are clearly marked with signage and other visual cues such as, informational kiosks, interpretation, rest rooms, parking, and other trail amenities.

Trail waysides are locations similar to trailheads except they are amenities located along a trail network, rather than a starting/ending point on the trail.

Application

Trailheads – Provide an access point to trail network with various trail amenities, as well as an access point for emergency and maintenance personnel. Trailheads should be installed at major trail/roadway intersections and significant entrance points throughout the trail network to provide public access.

Trail Waysides – Areas along a trail which include trail amenities including seating, interpretation, and bicycle parking.

All Trailheads and Waysides are to be placed at approximately 0.25 to 0.5 mile intervals along the trail and at site specific locations.

Design Considerations

- Available space for trailheads and waysides to ensure sufficient space for trail users to disembark, rest, and enjoy amenity areas.
- Vantage points of adjacent landscape or scenic areas, waterways/lakes.
- Trailheads should be located at easily accessible and identifiable locations that offer safe and convenient access, near major roadways, transit stops, and community amenities.
- Waysides should be located at an easily and identifiable location that offers safe and convenient space to rest.
- Location and quantity of trailheads and access points should be considered for emergency and maintenance access trail.
- Pavement texture, surface, color, and materials should be distinguishable between trail route and amenity areas to alert trail users of wayside or trailhead areas.
- Minimum Area for Trailheads and Waysides: 10' x 10'.
- Local requirements for emergency and maintenance access.

Sources for Design Guidance

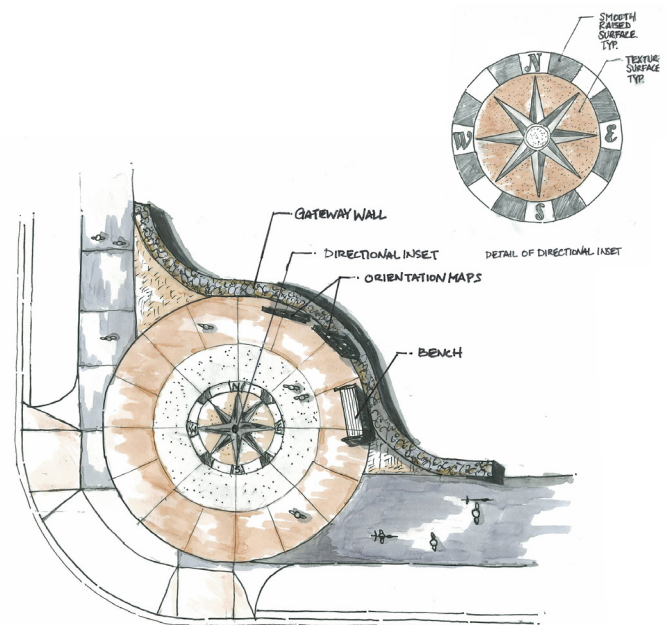
- PROWAG Proposed Right-of-Way Accessibility Guidelines



Example Trail Wayside Design
Source: TDG Library



Example Trail Wayside
Source: TDG Library



Example Trailhead
Source: TDG Library

Trail Amenities

Description / Purpose

Trail amenities include items such as benches, trash receptacles, tables, drinking fountains, and dogipot stations that encourage trail use by providing an experience that is safe, comfortable, and convenient. Amenities should be accessible to all users, vandal resistant, and placed in safe, visible, and convenient locations.

Application

Amenities should be placed away from bicycle and pedestrian circulation paths at least 3-feet from the trail edge to allow adequate room for people's outstretched legs. There should be a clear level space where a person using a wheelchair can rest adjacent to seated people. This area should be at least 30" by 48" and should be located adjacent to site furniture.

Trail Amenities should be metal, painted black, and vandal resistant.

Benches provide people of all ages and abilities a place to sit and rest along the trail.

Trash/Recycling Receptacles should be placed along more heavily traveled trail segments near other trail amenities and in areas to provide ease of maintenance.

Tables should be provided at critical resting points along the trail, especially at trailheads and major waysides.

Drinking Fountains provide water for people and pets. Fountains should be installed near rest rooms to optimize the use of combined utilities.

Dogipot Stations provide biodegradable waste bags and trash receptacles to provide materials for trail users to easily take after their pets along the trail and are placed at easily accessible points along the trail to provide ease of maintenance.

All amenities are to be placed along the trail at site specific locations where appropriate.

Design Considerations

- Balance initial capital costs of trail amenities with long-term maintenance needs.
- Trail amenities should have a consistent design throughout individual trail corridors and should have similar colors, materials, and overall design theme to evoke a consistent or notable element to the trail.
- Amenities should be vandal resistant and should be of a type and color that can be quickly repainted if vandalism occurs.
- Frequency of trail amenities along the trail should be site specific and be placed at locations for a respite.
- **Benches** – Benches should accommodate all users and should include back and arm rests. Typically, the seat of a bench is 16" to 18" above the ground.
- **Trash/ Recycling Receptacles** – Receptacles require a 30" to 48" clear space, with ADA accessible lids and an opening height of 15" to 36". Lids should be hinged, tamper resistant, and lockable.
- **Tables** – Tables should be constructed of durable materials, such as vinyl coated expanded metal which require minimal maintenance. They should be secured to a paved, accessible surface so they are universally accessible. The height of the table top should be 30" high with 18" to 20" high benches.
- **Drinking Fountains** – The design of drinking fountains should incorporate the needs of all potential users with spigot heights of 36" and 42" above the ground for ADA access. Additional considerations include, installing steps to the side of the standard spout to accommodate children and to include an additional spigot at the base which allows people to fill water bottles and also basins for pets or uses other than drinking.
- **Dogipot Stations** – Dogipot stations and trash receptacles should be placed along segments of the trail frequently used by dog walkers and easily accessible for maintenance.

Sources for Design Guidance

- PROWAG Proposed Right-of-Way Accessibility Guidelines



Drinking Fountain
Source: TDG Library



Trash Receptacle
Source: Victor Stanley



Wayside with Trail Amenities
Source: TDG Library



Bench
Source: Victor Stanley



Trash Compactor
Source: TDG Library

Integration of Public Art

Description / Purpose

Connectivity along a trail corridor is strengthened through the promotion of art, since it calls people to explore and experience segments of the entire trail corridor as well as moves them from one installation to another. Public art also encourages local investments into the trail by people of all ages.

Application

Public art continues a common theme or thread along the trail from neighborhood to neighborhood or village center to village center.

The trail network is strengthened through the promotion of art, as it allows people to explore the corridor through a common thread.

Design Considerations

- When integrating public art into the trail, designers should engage local schools or community groups to participate in a community driven art process or an art competition should be set up to engage nationally unknown artists to complete an installation along the trail within a particular theme or installation piece.
- An overall theme or program should be defined to ensure sufficient space for installation along the trail corridor is allocated.
- In addition to decorative elements, incorporate public art into functional elements as well, (for example: light poles, manhole covers, sidewalks, tree grates, and site furniture).



Public Art Installation
Source: Bike Iowa



Public Art Sidewalk
Source: TDG Library - Oakland Mills Village Center



Public Art Installation
Source: Neighborhood Design Center - Maryland



Public Art Tree Grate
Source: Neighborhood Design Center - Maryland

SECTION 2

SHARED-USE PATH - OPERATION AND MAINTENANCE

Maintenance Schedule and Responsibilities

Maintenance Equipment

Patrolling/Security

Maintenance Schedule and Responsibilities

Description / Purpose

Trail maintenance and management involves a variety of activities including coordinating with various stakeholders to provide maintenance and surveillance support. Trail surfaces and amenity areas should be inspected on a regular basis to identify hazardous conditions as well as issues related to maintenance, repairs, and events of vandalism.

Application

Trail maintenance includes ongoing regular tasks up to reconstruction/resurfacing of trail segments as needed. The table below outlines the typical maintenance activity and frequency for maintenance scheduling.

MAINTENANCE ACTIVITY	DESCRIPTION	FREQUENCY
Trash Removal	Removal of trash from trail corridor and priority areas, including removing ground debris, and emptying trash receptacles.	Daily / Weekly
Vegetation Pruning & Leaf Removal	Pruning of vegetation to maintain adequate sight distances and clearances. Removal of dead trees and leaves along trail corridor to maintain trail tread way.	Light pruning in Summer Major pruning Annually (Oct. to Dec.) Leaf Removal Monthly (Oct. to Dec./As Needed)
Trail Sweeping / Plowing	Sweeping of debris and sediment, plowing/sweeping snow from trail to maintain tread way.	Weekly / As needed
Mowing / Edging	Mowing and edging grass buffers to prevent encroachment of plant materials onto trail surface.	Weekly during growing season (Spring-Fall) Annually
Resurfacing, Resealing & Restriping	Resurface, reseal and restripe asphalt trail to maintain trail tread way.	Resurface - 15 to 20yrs Reseal - 5 to 10yrs Restripe - As needed Pothole Repair - As needed
Vandalism & Graffiti Removal	Make repairs due to damage or theft, remove graffiti.	Immediately

Design Considerations

- Maintaining a trail is a year round effort and the role of a trail manager should include combining permanent maintenance staff support and volunteer/stewardship program efforts.
- Overall volume and typical habits of trail users should be considered when scheduling maintenance activities to ensure that the appropriate attention is applied to the most deserving areas of the trail.
- Maintenance costs are entirely contingent upon the environmental conditions (for example: forested, open fields, wetlands, or adjacent to roadways) as well as the quantity of trailheads, waysides, and amenities within the corridor.
- Maintenance and Operations Departments with appropriate equipment and personnel to regularly maintain trail with dedicated trail managers is recommended.
- General maintenance and operations costs range (from \$2,500 to \$4,250/mile) monthly and from (\$30,000 to \$51,000/mile) annually.



Example of Trail Cleanup Effort
Source: Los Angeles County Metropolitan Transportation Authority



Volunteers help to maintain trail
Source: Georgetown University

Maintenance Equipment

Description / Purpose

Trail maintenance includes a variety of tasks from day-to-day cleanup to trail repair requiring construction equipment. The appropriate equipment for trail maintenance is necessary to ensure reliable, efficient, and sufficient maintenance is completed.

Application

The table below outlines the typical equipment required for various maintenance tasks.

EQUIPMENT TYPES	EXAMPLES
Hand Tools	Shovel, Rake, Hoe, Broom, Tamper, Axe, Hand Saw
Power Tools	Walk Behind Mower, String Trimmer, Chain Saw, Sickle Bar Mower
Power Equipment	Street Sweeper, Tractor with attachments (mower, blade, loader, sickle, brush)
Large Power Equipment	Bobcat Skid Steer / Utility Vehicle, Roller, Chipper, Grader, Loader / Backhoe

Design Considerations

- Equipment operations should be appropriate to task at hand.
- Proper personnel experience levels and capabilities should be considered.
- Preparation of areas for larger equipment.
- Maintenance and storage of equipment should be completed by experienced personnel to ensure longevity of investment.



Trail Pruning Maintenance
Source: Georgetown University



Walk behind Street Sweeper
Source: TDG Library



Example of a Bobcat Skid Steer
Source: Eagle Rentals Inc.

Patrolling/Security

Description / Purpose

Trail patrol/security is an important component of ensuring that the trail is safe and secure for trail users. Utilizing a combination of municipal, community, association, and volunteer groups are the heart of almost every trail patrolling effort. On-going patrolling and managing of trail operations is important to address any user conflicts that may arise.

Application

User security can be augmented by citizen volunteers through cooperative arrangements with other County programs. The key to effective trail policing is coordination; among the government police forces as well as with private security operations and civic groups.

Volunteer groups such as a “friends of the trail group”, “neighborhood watch”, or other citizen groups increase voluntary participation, interest, and investment.

Various patrol methods (motor vehicle, bicycle, foot) may be required along different segments of the trail. In general, bicycle mounted patrols are most effective along a trail, while motor vehicle patrols are effective when a trail is adjacent to a street.

Special patrol is not needed if the trail is in a public location.

Design Considerations

- Coordination with various County agencies, community associations, and stakeholders to provide patrolling and surveillance support, and ensure on-going coordination and information exchange among interested stakeholders.
- Coordinating security issues with maintenance forces to quickly address concerns or repair issues.
- Geolocated signs should be placed along the trail at regular intervals, in coordination with mileage markers. These markers provide identifiable locations for emergency and first responder personnel.
- Coordination and communication with the local police department to ensure presence along the trail.
- Implementing a “Friends of the Trail” group or other volunteer group to adopt the trail.
- Organize regular trail cleanup days or events and develop promotional incentives to increase interest and awareness of the trail.
- Frequent patrolling of trail by bicycle patrols and surveillance from roadways creates more eyes on the trail, increasing perception of safety and awareness of the trail.



T-3 electric vehicle Security Patrol
Source: New Haven Independent



Geolocated Sign
Source: TDG Library



Bicycle Patrol
Source: Macomb Orchard Trail, Macomb County Police



Motorized Patrol
Source: Dade City, FL Police

SECTION 3

BICYCLE PARKING

[Standard Bike Rack Design - Exterior](#)

[Bike Rack Site Design - Exterior](#)

[Bike Shelter Design - Exterior](#)

Standard Bike Rack Design - Exterior

Description / Purpose

Bicycle racks allow bicyclists to safely park their bikes if they wish to stop along the way or have arrived at a destination. Bicycle racks also prevent damage to trees and street furniture, as well as keep bicycles in an orderly appearance and from blocking pedestrian passageways. Bicycle parking is an important component in order to encourage and accommodate bicyclists throughout Town Center.

Application

Bike racks should be located in locations easy to locate and access at parking areas, commercial areas, and within close proximity to possible destinations.

A bicycle rack should provide proper support with two or more points of contact on the frame of the bicycle. Bicycle racks that only support the wheel of the bike are not recommended.

Two general bike rack styles include:

Inverted “U” - recommended bicycle rack for most site conditions, allowing the bicycle’s frame to be supported at two points while also holding two bicycles.

Post and Ring - recommended bicycle rack for constrained sites, allowing the bicycle’s frame to be supported at two points of contact. This rack is within the footprint of the bicycle and may also be incorporated into the design of parking meters.

Design Considerations

- Bike racks should be located without interfering with traffic flow or routine maintenance; this includes the space needed for a locked bicycle. (Refer to Bike Rack Site Design - Exterior).
- Bike racks should accommodate the dimensions of a conventional bicycle of 72” in length, 48” in height, and 24” handlebar width.
- Bike racks should be properly located and fit the context of a site’s streetscape and/or landscape setting.
- Opportunities for art or customized racks are possible; however, they should be recognizable as bike parking.
- Racks should be located in highly visible locations to promote usage and security.

Sources for Design Guidance

- APBP Bicycle Parking Guidelines
- AASHTO Guide for the Development of Bicycle Facilities



Post and Ring Bike Rack
Source: TDG Library



“Inverted U” Customized Bicycle Rack
Source: TDG Library



“Inverted U” Bicycle Rack
Source: TDG Library

Bike Rack Site Design - Exterior

Description / Purpose

Bike rack site design should facilitate movement around and between bike racks. Short-term bike parking may consist of a single rack, while long-term parking may include a group of racks beneath a shelter. Specific parking needs should be determined through a site specific needs analysis.

Application

Short term bicycle parking consists of simple bicycle racks located in front of a building or destination, and therefore site design focuses on convenience, utility, and security. Short-term bicycle parking should be convenient to the entrance of the cyclist's destination, visible from the destination to reassure cyclists about the security of the rack, and located in high-traffic areas with passive surveillance or eyes on the street.

Bicycle racks perpendicular to the curb should have a minimum spacing of 36" from the curb.

Bicycle racks parallel to the curb should have a minimum spacing of 24" from the curb.

Typical bicycle rack spacing of 48" is recommended, (36" minimum).

Avoid handlebar/rack/basket conflicts through proper rack spacing.

Allow two feet of clearance around each rack for users to be able to access and securely lock bicycles from the side.

Design Considerations

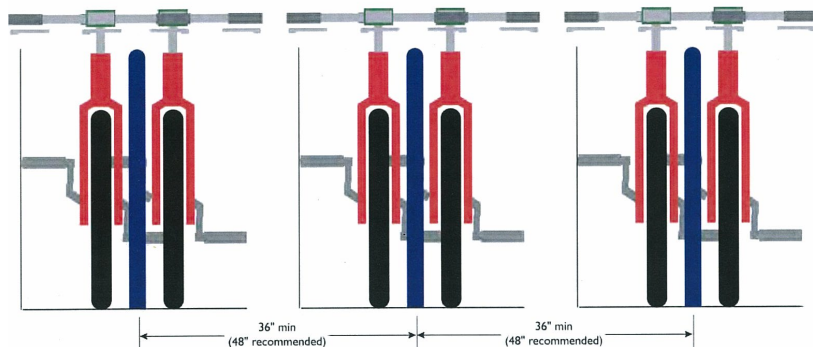
- Racks placed too close together or too close to nearby objects such as walls or trees may be completely unusable.
- Distance to other racks
 - aligned end to end - 96" between racks
 - side by side - 36" minimum, 48" preferred
- Distance from curb
 - perpendicular to curb - 36"
 - parallel to curb - 24" minimum from back of curb
- Ensure adequate end and side clearance for users to maneuver bicycles around the parking area.
- A greater buffer space from moving traffic can be achieved by positioning bicycle racks at a 60 degree angle.
- Bike racks should be placed at locations near front entrances of buildings and should not be hidden from view to prevent theft.
- For long term bicycle parking, shelters are recommended. The location of the shelter is considered by the setback requirements, providing enough space for pedestrians, overhead, and visibility clearances. (Refer to Bike Shelter Design - Exterior)

Sources for Design Guidance

- APBP Bicycle Parking Guidelines
- AASHTO Guide for the Development of Bicycle Facilities



Covered Parking
Source: TDG Library



Typical Rack Spacing
Source: APBP Bicycle Parking Guidelines



Inverted "U" Bicycle Parking
Source: TDG Library

Bike Shelter Design - Exterior

Description / Purpose

Bike Shelters have many benefits for cyclist as well as pedestrians since both parties can benefit from the shelter from inclement weather as well as protection from the sun and cold. Kiosk shelters can also provide cyclists and pedestrians with travel information, such as bicycle maps and transit routes.

Application

Typical bike shelters should be placed on sidewalks or on curb extensions, which minimizes encroachment into the pedestrian path.

Bike shelter roof span should be a minimum of 9 feet to clear the length of the bikes underneath,

Bike shelters should be placed at locations where bicyclists frequently park for longer periods of time. The design of bike shelters should be context sensitive and site specific while considering the character of nearby amenities.

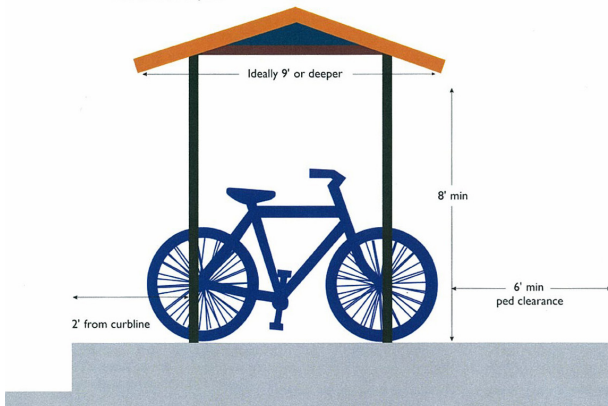
Design Considerations

- Setback, clearances, and building requirements per local and state guidelines should be considered when installing bicycle shelters.
- The consideration of lighting should be taken into account to assure safety in a bike shelter. Glass roofs provide light from street lamps to pass through the shelter.

Sources for Design Guidance

- APBP Bicycle Parking Guidelines
- AASHTO Guide for the Development of Bicycle Facilities

Dimensional Footprint



For maximum visibility, do not build structure within 15 feet of corner property line.

Sample Clearance Guidelines

Source: APBP Bicycle Parking Guidelines



Covered Shelter Bicycle Parking with Informational Kiosk
Source: APBP Bicycle Parking Guidelines



A.4 DOWNTOWN COMMUNITY COMMONS POLICY





Howard County

Department of Planning and Zoning

Subject: **Downtown Columbia – Policy for Downtown Community Commons
(Section 125.0.A.9.g of the Howard County Zoning Regulations)**

To: DLD Staff; Downtown Columbia Developers and Builders

Through: Marsha McLaughlin, Director
Department of Planning and Zoning *mm*

From: Kent Sheubrooks, Division Chief *KS*
Division of Land Development

Date: October 22, 2013

Per Section 125.0.A.9.g of the Zoning Regulations, 5% of land located within Downtown Columbia that has not been previously designated as open space or public right of way shall be provided as new Downtown Community Commons for public amenity spaces (further defined below). This policy seeks to clarify what features must be present to be counted toward the 5% Downtown Community Commons requirement.

The Downtown Columbia Plan includes a Primary Amenity Space Framework Diagram (attached), which is a planning document illustrating a network of amenity spaces including parks, promenades, natural areas, squares, plazas, mews, greens and paths that form the Downtown Columbia Amenity Space System. It is acknowledged by the County and by Howard Hughes Corporation that the amenity spaces shown in this diagram do not equal to 5% of land area within the downtown area not previously designated as open space or public-right-of way. Instead this illustration highlights potential locations of major amenity areas that are located along prominent pedestrian and bicycle routes with the knowledge that additional areas will be required. For the purpose of providing clarity for conformance with the Downtown Columbia Plan, amenity areas shown on this diagram have received the moniker "Primary Amenity Space". Additional amenity areas that are to be designated to make up the remaining 5% land area requirement have received the moniker "Secondary Amenity Space", but the term "secondary" is not meant to imply that these spaces do not have similar community function and design intent as the spaces identified in the Primary Amenity Framework Diagram. Together, these amenity spaces constitute new Downtown Community Commons.

NOTE: This policy is specific to SECONDARY COMMUNITY COMMONS; for guidance on the design intent and function of PRIMARY AMENITY SPACES, please see the Downtown Columbia Plan, the Downtown Wide Design Guidelines, and any applicable recorded neighborhood design guidelines.

As defined in Section 103.0.D. of the Zoning Regulations and outlined in the requirements of Section 125.0.A.9.g(4), for an area to be designated and counted toward the Downtown Community Commons requirement, the space is permanent in availability for public use, must support community interaction and create opportunities for activities such as public gathering, viewing, performance, spontaneous and planned use, pause, rest and play. While variations in the type, size and character should occur across neighborhoods, similar function and design intent are inherently present. Design elements may include several features within a broad amenity space typology: **"Amenity spaces such as plazas, promenades, greens, gardens, squares, and other pedestrian-oriented areas, whether publically or privately owned, that are intended for community interaction and may include spaces for seating, walking, eating, gathering, fountains, public art, way-finding signage, kiosks, or other similar public amenities."** However, a space that has one of these features does not alone make it a Downtown Community Commons

area. "New Downtown Community Commons shall include sites of character and location that are generally consistent with the amenity spaces shown on the Downtown Primary Amenity Space Framework Diagram and other sites which shall be identified and improved to enhance neighborhood development." Downtown Community Commons also **must** be accessible to the public without charge.

The following list has been compiled to clarify what other pedestrian-oriented areas will be considered for credit toward the Downtown Community Common requirement on a case-by-case basis during DPZ review of Neighborhood Documents, a Final Development Plan or Site Development Plan to ensure the proposal meets community function and design intent:

1. Outdoor amenity spaces strategically located at the intersection of pedestrian ways, sightlines, streets and terminating vistas;
2. Parklets, pocket parks and similar small urban spaces serving as sidewalk extensions for public amenities;
3. Amenity areas at gateway entrances/thresholds into neighborhoods, adjacent to primary open spaces, and/or along primary pedestrian streets;
4. Shared Use/Multi-Use Paths not required by CEPPAs;
5. Areas along shared-use paths, trails, and pathway nodes such as trailheads and waysides ;
6. Courtyards with at least one side open to a public or private street on a designated primary pedestrian or bicycle route and accessible for use by building inhabitants and the general public. (Amenity areas proposed on secondary pedestrian routes will be reviewed on a case-by-case basis);
7. Other areas including indoor spaces, rooftop spaces, or similar such spaces **must** be accessible to the public without charge;
8. Areas used for outdoor café seating which physically and visually function as extensions of a larger Downtown Community Commons and provide greater interaction among uses may be included toward the credited community commons area;
9. Walkways that are designed to enhance and be an integral part of directly adjoining credited Downtown Community Commons may be included for credit **IF** the walkway functions as part of the amenity space itself;
10. Open space and natural areas, designed for active and passive recreation, including walkways within natural areas, with the exception of areas noted below. Downtown Community Commons may be proposed on land area that was previously designated as open space on a recorded FDP but not credited toward the New Town 36% minimum open space requirement.

In addition to community design intent and function, sites should, when possible, be directly or indirectly connected to the overall Downtown amenity network, as suggested in the Downtown Columbia Plan.

Except as described above, the following will NOT be considered for credit toward the 5% Downtown Community Common requirement as secondary amenity spaces:

1. Walkways that serve the primary purpose of pedestrian movement and block circulation from one location such as an intersection or entrance to another. Adjacent streetscape zones such as curb step-off, planting, amenity and building zones that are not integral parts of adjacent amenity space are also excluded (not including types of amenities and areas described in the section above);
2. Areas or other amenities required by CEPPAs (With the exception of the Lakefront Terrace (CEPPA 19) which is part of the Primary Amenity Space Framework Diagram);
3. Residential stoops, porches, etc.;
4. An area containing only one amenity feature such as a street furnishing, planting or similar;
5. Private courtyards/amenities that are not accessible from the street for public use including but not limited to residential courtyards, gardens, pools or similar features;

(Downtown Columbia Downtown Community Commons -Continued)

6. Other areas proposed may be denied by DPZ staff if determined they do not meet the conditions outlined in the Zoning Regulations;
7. Environmentally Sensitive Areas as defined in Section 103.0.D. of the Zoning Regulations and as outlined in Section 125.0.A.9.g.(4)(b);
8. Land designated as open space on a recorded FDP for the purpose of fulfilling the 36% minimum open space requirement in the NT District;
9. As directed in the definition of Downtown Community Commons (Section 103.0.D. of the Zoning Regulations), a Downtown Community Common shall not include drive lanes for vehicular traffic such as private streets, driveways, alleys and public roads. Areas such as streets that can be periodically closed to accommodate pedestrian activity are also not eligible for credit.

Important Note: This policy is effective as of the date of this memorandum. The provisions outlined in this policy memorandum will be formally incorporated into the Zoning Code in a future edition. In the interim, the process as explained above will be enforced through this policy.

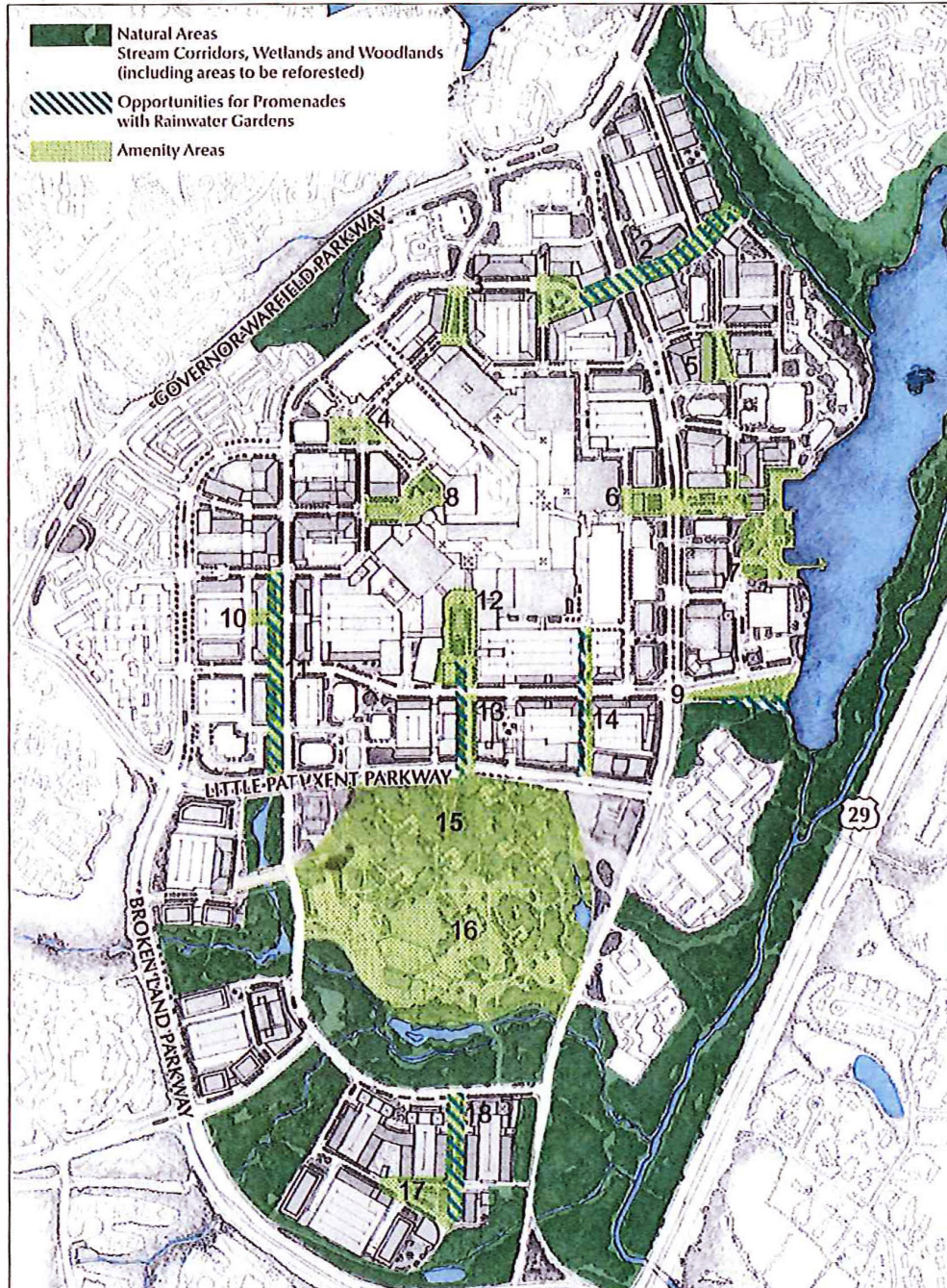
For More Information Contact: The Department of Planning and Zoning at (410)-313-2350 or at http://www.co.ho.md.us/DPZ/DPZ_HomePage.htm or visit DPZ's Public Service Desk located on the first floor of the George Howard Building, 3430 Courthouse Drive, Ellicott City, Md. 21043, Monday through Friday from 8:00 am until 5:00 pm.

Attachment: Primary Amenity Space Framework Diagram from Downtown Columbia Plan

cc: Marsha McLaughlin, Director
Mark Thompson, Director of Downtown Redevelopment
Kimberley Flowers, Deputy Director
William Mackey, Chief DCCP

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EXHIBIT G. PRIMARY AMENITY SPACE FRAMEWORK DIAGRAM



New Primary Amenity Spaces = 7.2 Acres *

Net new SF	Net new SF	Net new SF
1. Warfield Green..... 15,500 sf	7. Lakefront Plaza.....(existing)	13. Symphony Promenade..... 11,300 sf
2. Warfield Promenade (TBD)	8. Warfield Plaza11,300 sf	14. East Promenade (TBD)
3. Warfield Mews 7,600 sf	9. Lakefront Terrace43,500 sf	15. Symphony Woods Park..... (TBD)
4. Warfield Square 12,900 sf	10. Warfield Playground6,000 sf	16. Merrilweather Park..... (existing)
5. Wincopin Green 4,100 sf	11. West Promenade.....63,800 sf	17. South Crescent Park..... 25,300 sf
6. Lakefront Connection..... 68,600 sf	12. Market Square.....30,700 sf	18. South Crescent Promenade. 11,000 sf

* Does not include existing previously designated Downtown Open Space of approximately 90 acres, or secondary amenity spaces that may be associated with individual development parcels. Final square footage, location and design of each new Amenity Space will be determined at Final Development Plan.

Design Collective

ARCHITECTURE
PLANNING
INTERIORS
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GRAPHICS

601 East Pratt Street, Suite 300
Baltimore, Maryland, 21202
P 410.685.6655 | www.designcollective.com

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