

1 *Building Design*

2 **Scale, Massing and Orientation**

3 Redevelopment in Gateway is intended to achieve a compact, urban form with
 4 multi-story buildings that contribute to the formation of a human-scaled physical
 5 environment. The bulk and massing of buildings should be designed with sensitivity
 6 to their impact on light, shadow and wind patterns in surrounding areas and the
 7 public realm. Buildings should use a context-responsive design, with massing
 8 articulations to relate to surroundings, including parks and natural areas. Additional
 9 guidance regarding building massing, which should be further explored and refined
 10 through the creation of development standards, includes:

11 + Buildings located within and around the Columbia Gateway Drive (CGD) loop
 12 should be designed to frame the streets.

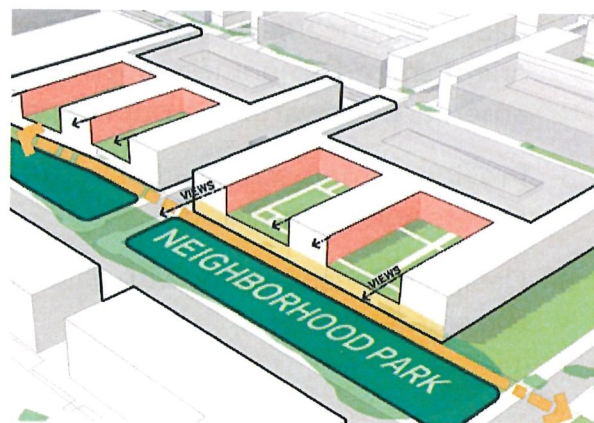
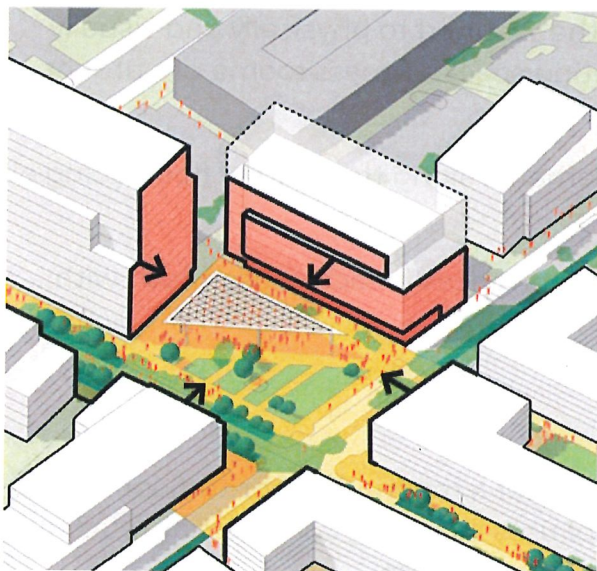
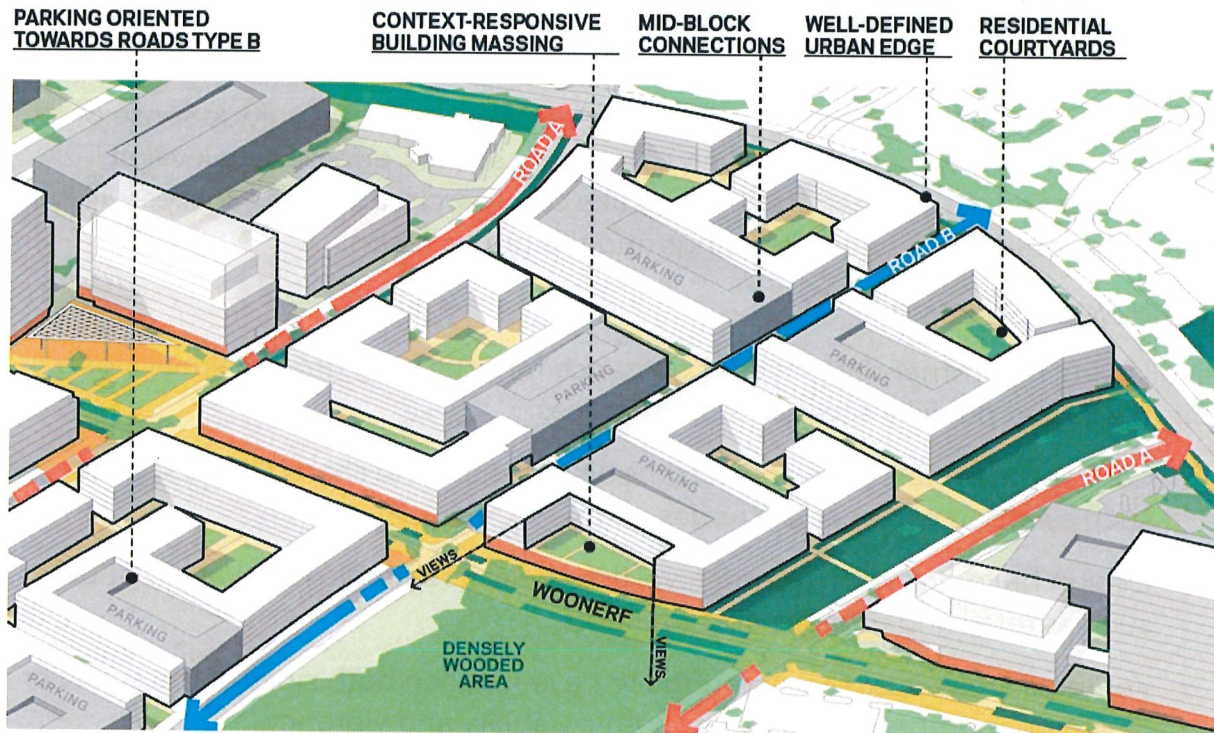
13 + An appropriate ratio of street width to building height should be identified
 14 along the Woonerf to ensure minimal impact on light, shadow, and wind
 15 patterns (see Fig. 20).

16 + Mixed-use residential buildings may introduce façade step backs to break up
 17 massing.

18 + Stacked townhomes should be integrated alongside multi-family residential
 19 buildings to emphasize site integration and establish a unified neighborhood
 20 pattern.

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Compact urban form and street pattern (top); buildings oriented to frame key open spaces (bottom left); and building massing responsive to surroundings (bottom right)

Compact urban form and street pattern (top); buildings oriented to frame key open spaces (bottom left); and building massing responsive to surroundings (bottom right)

Locations of all buildings and open spaces shown on graphics are conceptual

Ground Floors and the Public Realm Edge

The design of buildings at the street level will be essential for establishing a walkable urban environment, fostering human interaction, and creating a unique sense of community in Gateway. Elements such as building entries, appropriate level of transparency and activity-generating uses like commercial and retail spaces will help activate the interface between buildings and the public realm.

Ground Floor Activation

The following recommendations offer guidance for activating ground floors along public roads and publicly accessible open spaces.

- Concentrate retail, civic, and community uses around shared open spaces such as urban plazas at the nodes.
- Design buildings with ground-level floor heights suitable for a variety of uses, such as retail and other flexible functions.
- For retail areas, it is recommended to have retail on both sides of the street or clustered together to ensure economic viability and vibrancy.
- Allow and encourage buildings along the Woonerf to physically and visually orient shared amenities—such as meeting spaces, fitness rooms, or outdoor amenities—towards the public space.
- Provide human-scaled architectural elements along the ground floor facing all streets and open spaces.
- Design for accessibility, with all primary entrances for active uses flush with the sidewalk level.

Ground Floor Height

Building ground floors should be designed to meet a minimum floor-to-floor height and floorplate depth to allow for a full range of uses including commercial, retail, civic/community, and any other ground floor activating use.



Locally serving retail spaces concentrated around urban plazas (top right); sidewalk cafes and dining (top left); active use frontages (middle left); double-sided retail streets (bottom right); ground level retail and commercial uses above (bottom left)

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Locally serving retail spaces concentrated around urban plazas (top right); sidewalk cafes and dining (top left); active use frontages (middle left); double-sided retail streets (bottom right); ground level retail and commercial uses above (bottom left)

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1 Ground Floor Facades

2 Storefront facades should have a minimum transparent glazing. To the degree
3 possible, office, R&D, and other non-residential uses located at the ground level of
4 buildings along the Woonerf, or shared open spaces, are encouraged to maximize
5 glazing to reveal their inner workings to the public realm. This visual connection will
6 enhance the pedestrian experience by allowing visibility from the sidewalk into a
7 building.

8 Ground-level residential uses should prioritize privacy by utilizing lower transparency
9 levels. Residential lobbies and shared amenities can feature a higher transparency
10 level to provide a visual connection to the public.

11 Long expanses of solid walls without fenestration, entries or windows should be
12 minimized as they are detrimental to the pedestrian experience. These inactive
13 facades should be minimized when facing a public road or a shared open space,
14 especially along the Woonerf. However, some sensitive uses may require maximum
15 privacy, and when located at the ground level, associated inactive facades should
16 feature a special design treatment or be screened with landscaping and open
17 spaces for employees. Standards for special design treatments should be developed
18 for these inactive facades.



Building integrating commercial and community uses at street level (top); ground-floor residential with landscape screen for privacy (bottom right); and examples of uses that allow physical and visual activation of the ground level (bottom left)

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Building integrating commercial and community uses at street level (top); ground-floor residential with landscape screen for privacy (bottom right); and examples of uses that allow physical and visual activation of the ground level (bottom left)

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Parking Facility Design

The master plan encourages projects to explore alternatives to surface parking to promote a more efficient use of the land and create new opportunities for urban infill, where appropriate. Some examples include stand-alone parking garages and integrated parking structures – such as below grade or partially below grade parking, and above grade parking facilities.

The master plan recommends lining parking garages with uses, or utilize screening, when parking garages face primary streets and open spaces. Incentives could be put into place to encourage parking facilities to be adaptable for alternative uses.

Parking facilities shared by multiple buildings are allowed and encouraged.

Incentives may be considered for parking facilities that integrate EV charging stations, solar PV panels, and dedicated spaces for car-pooling and low-emission vehicles. For more information about parking strategies, refer to section 3.7

Transportation and Mobility.



Parking garage lined with commercial uses at the ground level

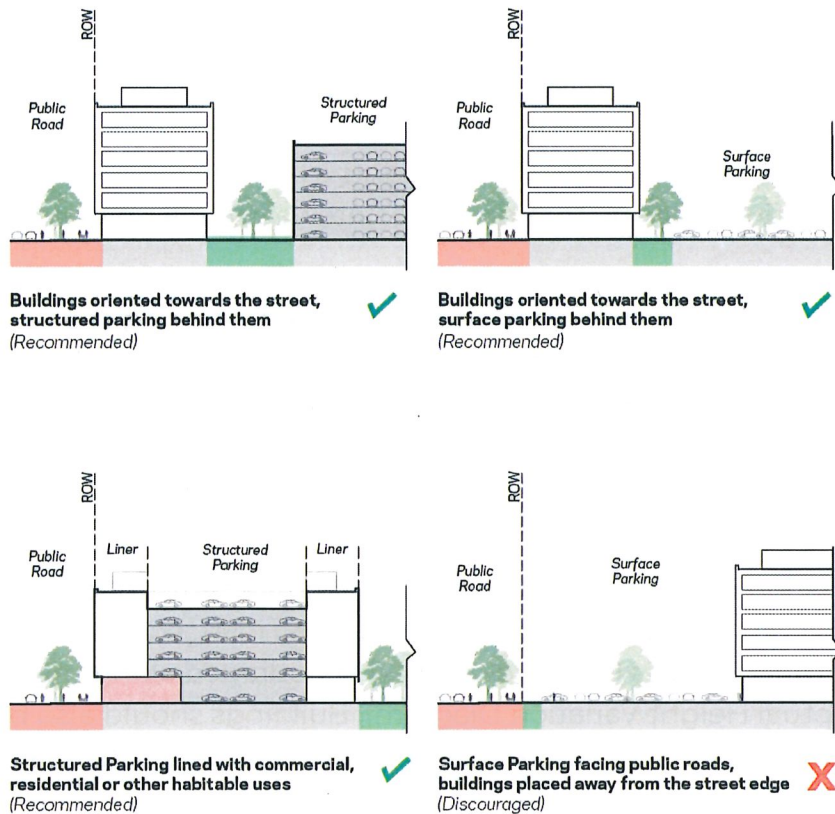


Figure 21: Parking Locations Recommendations

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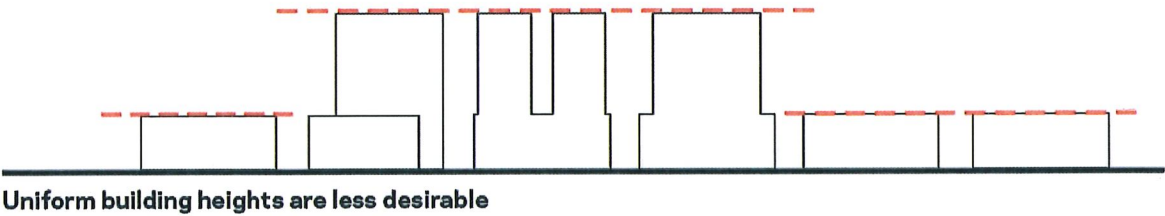
Building Heights

For Gateway, the vision calls for a physical environment that embraces a variety of building forms and heights, concentrating taller and greater density at nodes, along major roadways, and in or near areas with visibility from external roads such as Interstate 95 and Route 175. Allowing flexible building heights in certain areas will help create focal points and define a skyline that provides Gateway with a unique identity.

The maximum building height in Gateway is envisioned to be 250 feet along the northern and eastern edges of the site, specifically in subareas 1, 2 and 5. At nodes, the recommended maximum building height is 170 feet, and elsewhere structures should not exceed 100 feet in height (as illustrated on Map 13: Conceptual Height Zones Map). These maximum height zones are conceptual and do not indicate a specific form, location, orientation or number of buildings.

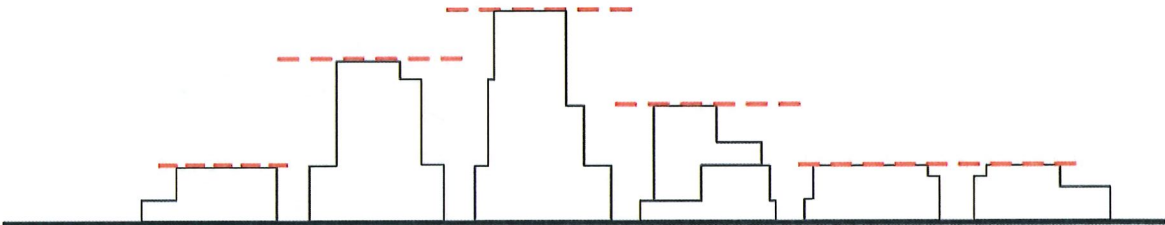
Signature buildings and variation in height are allowed and encouraged at nodes, to either create gateways, frame the urban plazas, or accentuate key intersections. Variation in building heights and forms is both allowed and encouraged along the Woonerf (see Fig. 22: Conceptual Height Variation Diagram). Buildings should also be designed to minimize their impact on light, shadow, and wind in surrounding areas and the public realm.

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Uniform building heights are less desirable

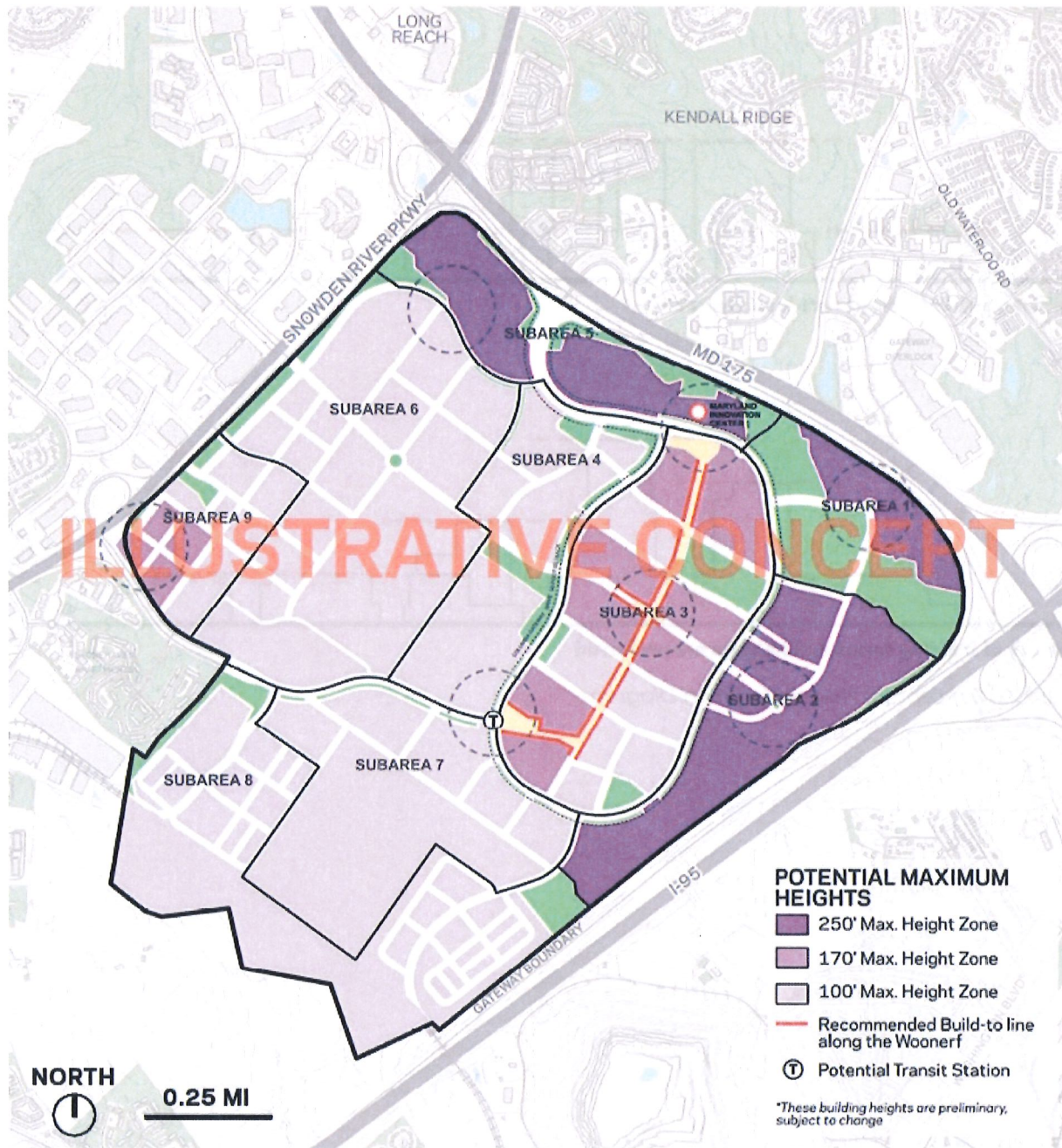
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Variety of building forms and heights are preferred

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Figure 22: Conceptual Height Variation Diagram



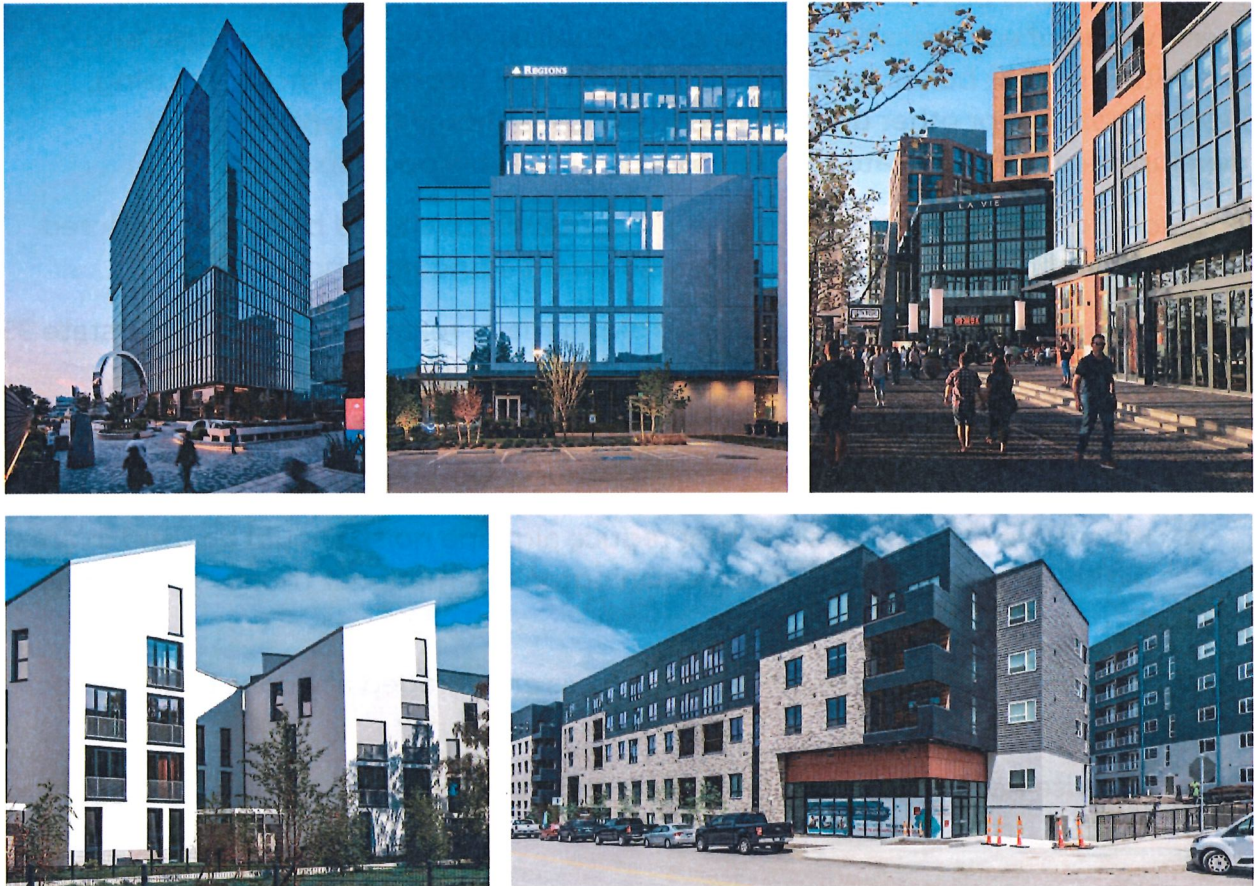
Map 13: Conceptual Height Zones Map

1 Taller buildings and greater densities may be considered in exchange for investment
2 in infrastructure/amenities that provide benefits to the public. Examples include
3 going above and beyond existing requirements for LEED certification and the
4 preservation of ecologically sensitive areas, publicly accessible open spaces and
5 amenities, land or buildings for public facilities, and income-restricted housing.
6 Density bonuses or other development incentives should be considered for
7 developments that allocate land for publicly accessible open spaces.

8 Additional guidance regarding building heights, which should be further explored
9 and refined through the creation of development standards, includes:

- 10 o Taller buildings should be allowed along major roadways (such as Interstate 95
11 and Route 175) to take advantage of the visibility from outside Gateway.
- 12 o Taller structures (>201 feet) should further coordinate approval, as needed,
13 with the Maryland Aviation Administration (MAA).
- 14 o Innovative building designs that reduce airplane noise should be used in areas
15 highly impacted by Baltimore/Washington International Thurgood Marshall
16 Airport operations.
- 17 o Variation in building heights and forms is encouraged at nodes to create focal
18 points.
- 19 o Mid-rise neighborhoods are encouraged to use a variety of building heights.

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Examples of building height variation in medium to high density urban environments

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Baltimore/Washington International Thurgood Marshall Airport Flight Paths

As identified in HoCo By Design, Gateway is located within certain flight paths for the Baltimore/Washington International Thurgood Marshall Airport (BWI Airport). The impact of flight paths in terms of noise and building heights was recommended for consideration by the master plan.

Though Gateway is outside the BWI Airport Noise Zone (ANZ), Gateway is adversely impacted by noise caused by NextGen flight paths and future development should be required to utilize best practices in building standards for attenuating noise, as called for in the General Plan. Structures with a height greater than 200 feet may require further coordination with the Maryland Aviation Administration. The Gateway area is outside the boundaries of the Airport Noise Zone (ANZ) for BWI Airport, which was created “to control the incompatible land development around BWI Airport and develop a Noise Abatement Plan (NAP) to minimize the impact of aircraft noise on people living near the Airport.” While the entire Gateway area is outside the Airport Noise Zone, structures with a height greater than 200 ft. may require further coordination with the Maryland Aviation Administration (MAA). However, based on initial review, above ground development heights of up to 400 feet should be possible at Columbia Gateway.

Though Gateway is outside the ANZ, future development that falls directly under NextGen flight paths should utilize best practices in building standards for attenuating noise, as called for in the general plan. As further stated in HoCo By Design, this is particularly important given recent studies on the impact of airport noise conducted at the request of the Maryland General Assembly, and FAA’s consideration of changes to noise measurement policies.

1 *Design Vision for Nodes*

2 The framework for the long-term transformation of Gateway integrates “nodes” in
 3 key areas to establish focal points and concentrate higher development intensities
 4 and taller buildings. Some nodes could be the earliest locations for development
 5 activity to occur in Gateway. Key areas can be defined by assets (like an Innovation
 6 Hub or transit center) or geographic locations (like a key intersection in the future
 7 grid of streets). These nodes are intended to become identifiable and vibrant urban
 8 spaces in Gateway, places where people will get together. Each node should feature
 9 an urban plaza – essentially a scaled-down version of a town square – serving as a
 10 signature open space. The nodes should be hubs for retail, civic/community and
 11 other ground-activating uses. Buildings in nodes are encouraged to vary in height
 12 and form, and their placement should help shape the public realm.

13 As redevelopment may occur anywhere in Gateway, these areas offer more flexibility
 14 for new activity centers to emerge in multiple subareas. Nodes can potentially focus
 15 on a specific employment-industry like Cybersecurity, or contain a broader variety of
 16 uses. They may be anchored by existing assets (such as the Maryland Innovation
 17 Center – MIC), new assets, or a combination of both. The envisioned nodes include,
 18 but are not necessarily limited to:

- 19 ○ **MIC/Innovation Hub Node** – envisioned to be located on the north end of
 20 the woonerf, anchored by the MIC and the Innovation Hub
- 21 ○ **Mid-point Node** – a mixed-use node envisioned to be located near the
 22 mid-point along the woonerf
- 23 ○ **Transit-oriented Development (TOD) Node** – this node accentuates the
 24 terminus of Robert Fulton Drive and is envisioned to be anchored by a
 25 potential transit station
- 26 ○ **John McAdams Node** – envisioned near the intersection of John McAdams
 27 Drive and the future extension of Benjamin Franklin Drive
- 28 ○ **Benjamin Franklin Node** – envisioned at the intersection of the extended
 29 street, a focal point in Subarea 2
- 30 ○ **Other future nodes** – envisioned at the Lee Deforest Drive and Robert
 31 Fulton Drive intersection, and in Subarea 5 close to Alexander Bell Drive



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The vision for the nodes includes a greater development intensity, taller buildings and an urban plaza that concentrates retail and other ground-floor activating uses

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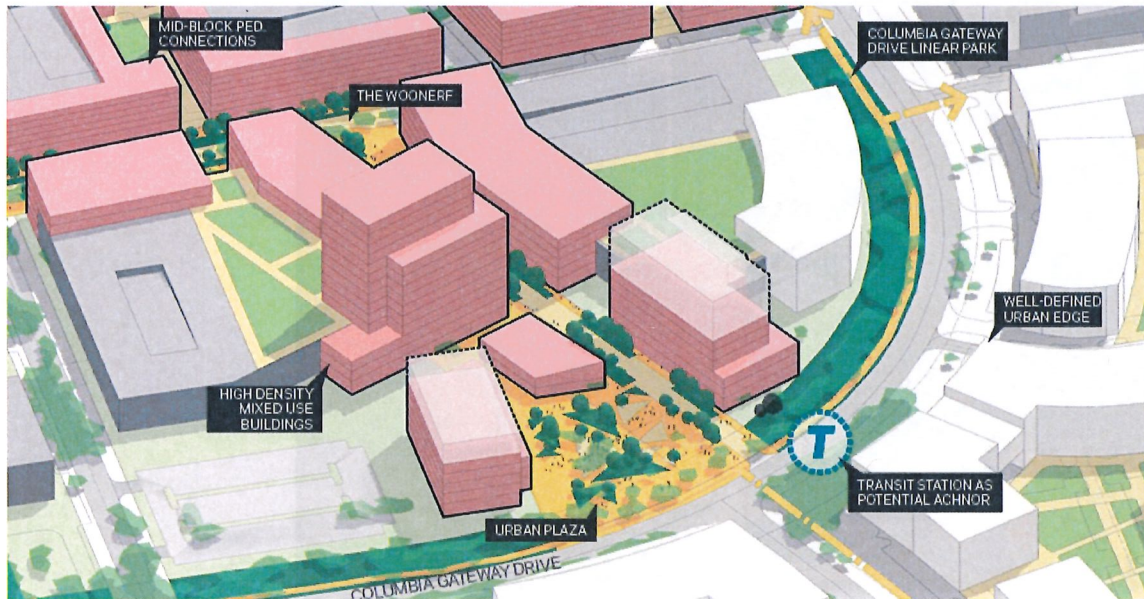


Figure 23: Illustrative Diagram – TOD Node (Artist Rendering)

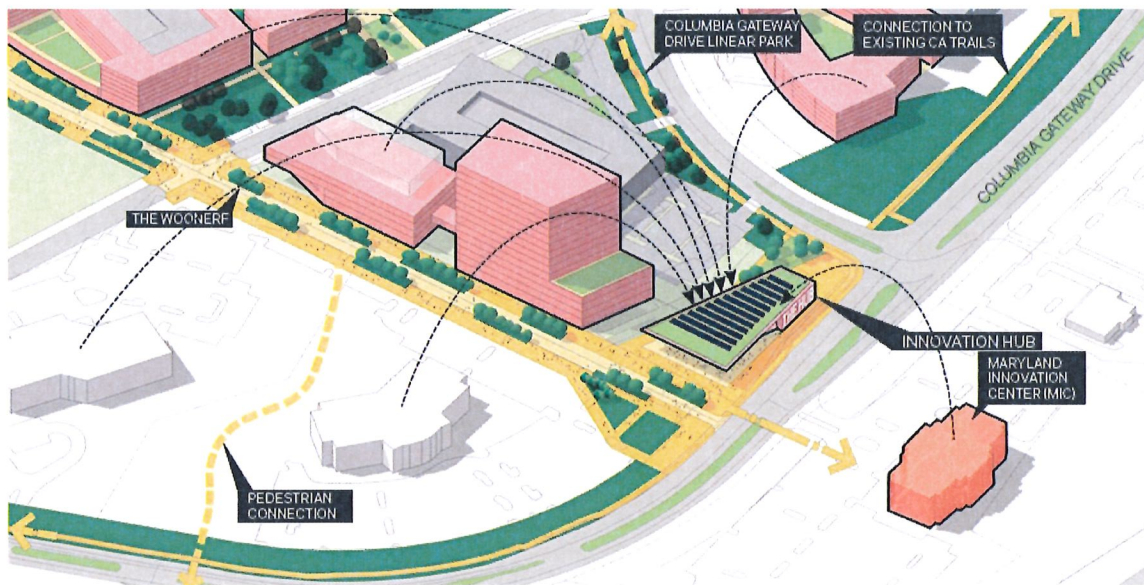


Figure 24: Illustrative Diagram – Innovation Node (Artist Rendering)

Key Recommendations:

- + Encourage and incentivize development standards that meet the envisioned form
- + Create a new grid of streets with walkable blocks
- + Separate loading and service functions from pedestrian movements
- + Minimize building setbacks to help create an urban form, while providing design options for uses requiring privacy or buffers, depending on neighboring uses
- + Design buildings with sensitivity to light, shadow, and wind patterns in the public realm
- + Allow and encourage ground-floor activating elements, particularly in the nodes and along the Woonerf, while offering design options for inactive facades
- + Line parking garages with uses, or use screening, when parking garages face primary streets and open spaces
- + Allow taller buildings along highways (for visibility) and in nodes (to serve as focal points for retail)
- + Consider taller buildings and greater densities in exchange for investment in infrastructure and amenities that provide benefits to the public

3.4 Public Realm and Open Space

The Gateway Master Plan envisions establishing an interconnected network of open spaces, providing workers, residents, and visitors convenient access to shared amenities such as parks, plazas, courtyards, walking and biking trails, and other recreational features. Integrating these amenities into the physical environment is essential for transforming Gateway from a traditional business park to a vibrant, well-connected community that fosters creativity and innovation. This approach is key in establishing an attractive destination where people can work, live, and play while cultivating a unique sense of community.

The following goals are intended to guide the creation of standards for design and development of open spaces, as redevelopment opportunities emerge:

Convenient: Shared open spaces should be easily accessible and strategically located to ensure every user in Gateway can access a green space within a short walking distance from their place of work or residence.

Connected: The vision for Gateway is to establish a green network, a comprehensive system of parks and open spaces that connect all subareas.

Multigenerational, Universally Accessible: Welcoming open spaces for users of all age groups and all abilities.

Social and Flexible: Places designed for people to gather, socialize, and relax, while remaining flexible to accommodate a variety of activities, ensuring they stay vibrant and engaging throughout the day and year.

Healthy: Maximizing the benefits of access to nature—for physical, mental and social health—and promoting a healthy lifestyle in Gateway.

Sustainable and Resilient Open Spaces: Increased tree canopy cover, use of native species and/or species adapted to the region, and integration of nature-based solutions into the landscape design.



CONVENIENT



CONNECTED



ACCESSIBLE



SOCIAL



HEALTHY

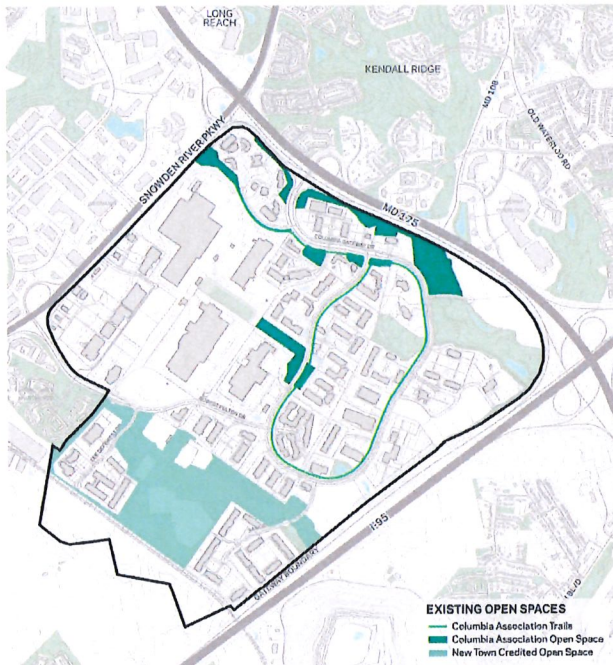


SUSTAINABLE

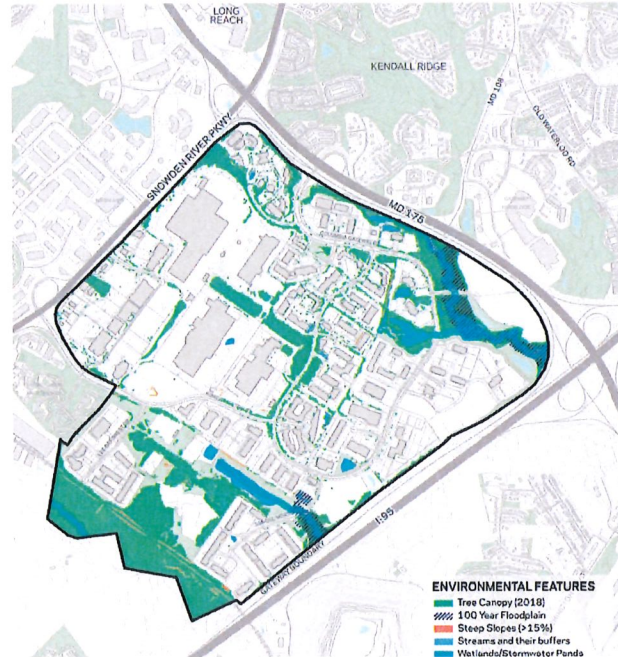
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Open Space Context

The Gateway area is predominantly privately owned, except for the county-owned parcel where the Maryland Innovation Center (MIC) is located. Currently, there are no designated public open spaces, however, Columbia Association land and trails comprise a publicly accessible open space network (as depicted on Map 14: Existing Open Spaces Map). These spaces have the potential to link to new open spaces as Gateway redevelops. These private green areas include the land and recreational amenities owned by Columbia Association—such as shared-use trails, recreational courts, and over 30 acres of green space distributed across multiple properties—along with privately-owned stormwater management ponds and the wetlands and densely vegetated areas tied to natural ecosystems such as Dorsey Run, Ridgely Run, and the Pickett's Branch, which runs through a parcel on the south side of the CSX rail tracks. This master plan envisions the integration of these natural resources as essential for the creation of an interconnected network of green spaces.



Map 14: Existing Open Spaces Map



Map 15: Existing Environmental Features Map

1 *Open Space Framework*

2 The Master Plan establishes a conceptual open space framework to indicate a
3 general location, scale, function and type of outdoor spaces that will build the
4 foundation for an interconnected network of open spaces in Gateway (See Map 16:
5 Conceptual Open Space Framework Map). This conceptual framework does not
6 specify the final location, size or program of each typology, providing flexibility for
7 these parameters to be defined as redevelopment progresses in each subarea. The
8 placement of open space is often refined during site planning, when geographical,
9 geological, and topographical details are fleshed out.

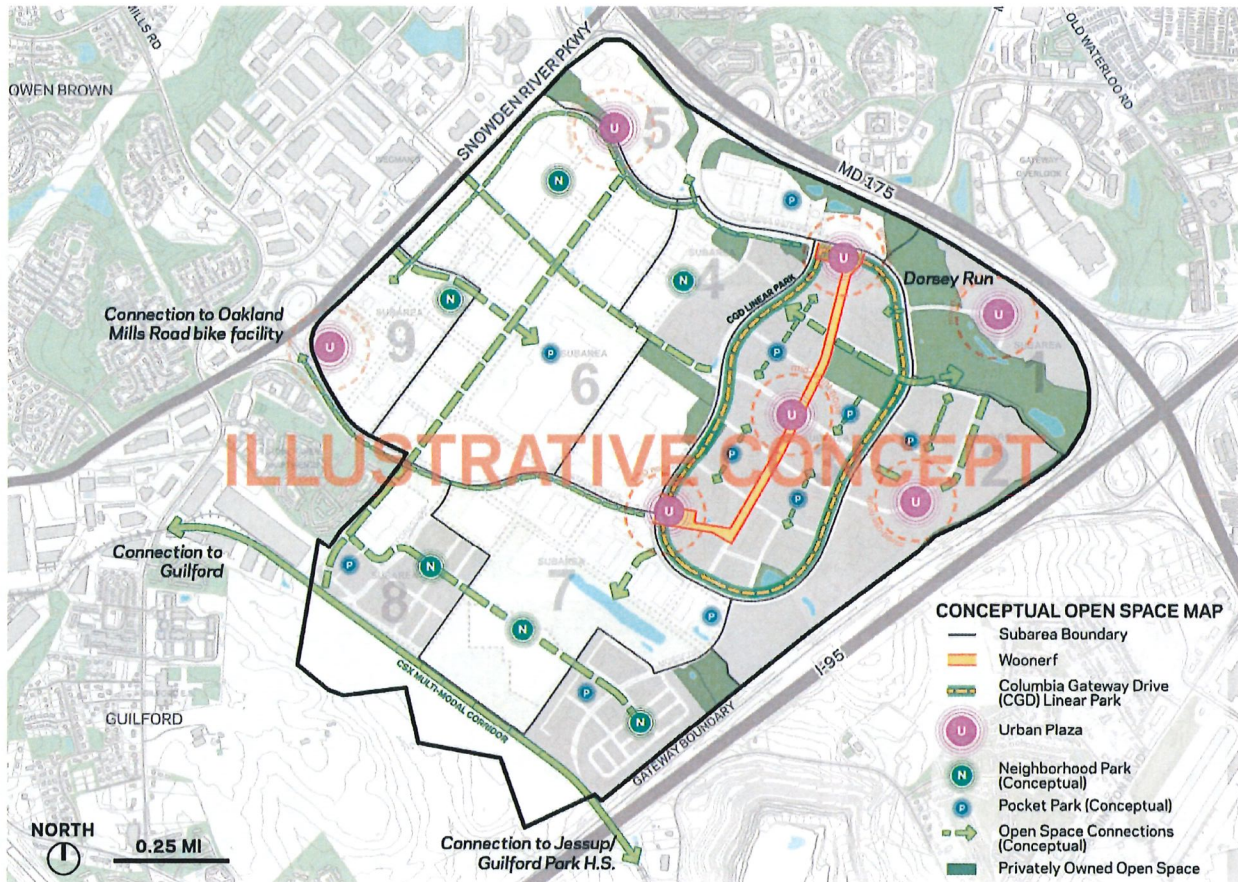
10 Gateway's open spaces may be publicly owned and managed, or privately owned
11 and publicly accessible spaces. The master plan encourages exploring public-private
12 partnership models and funding mechanisms for the dedication of land, design,
13 construction, maintenance, and management of future green areas. Density
14 bonuses or other development incentives should be considered for developments
15 that allocate land for publicly accessible open spaces. Alternatively, acquisitions may
16 be pursued, requirements established in future zoning regulations—or a
17 combination of incentives, acquisitions, and requirements—may be used for the
18 creation of publicly accessible open space.



Recreational outdoor areas for residents and employees (top left); Outdoor collaboration spaces (middle left, top right); Front yards along dense missing middle buildings (bottom left); and pedestrian connections (bottom right)

Recreational outdoor areas for residents and employees (top left); Outdoor collaboration spaces (middle left, top right); Front yards along dense missing middle buildings (bottom left); and pedestrian connections (bottom right)

The conceptual framework includes open space typologies such as the Woonerf, Columbia Gateway Drive (CGD) linear park, urban plazas, neighborhood parks, pocket parks, and the CSX multi-modal corridor, which are detailed further in this section.



Map 16: Conceptual Open Space Framework Map

***All locations are conceptual*

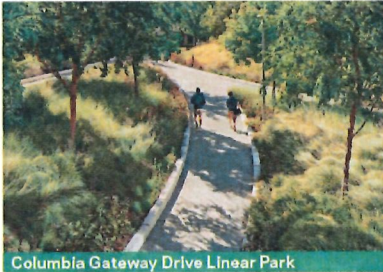
1 *Open Space Typologies*

2 A series of parks and open space typologies are outlined by the master plan. Each
 3 typology offers variation in function and setting, while aligning with the goal of
 4 creating diverse and multigenerational open spaces. The plan provides
 5 recommendations to guide the design and programming of typologies as follows:

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Woonerf



Columbia Gateway Drive Linear Park



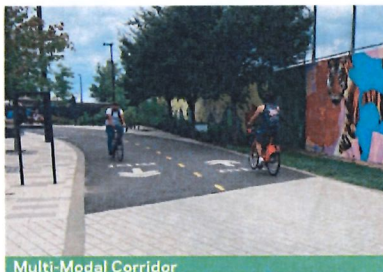
Urban Plaza



Neighborhood Park



Pocket Park



Multi-Modal Corridor

Park and Open Space Service Areas

1 Community/District Level

Including typologies such as the Woonerf, CSX Multi-modal Corridor, and the CGD Linear Park

2 Nodes Level

Including urban plazas envisioned for each node

3 Neighborhood Level

Including neighborhood parks, and pocket parks serving as focal points within subareas

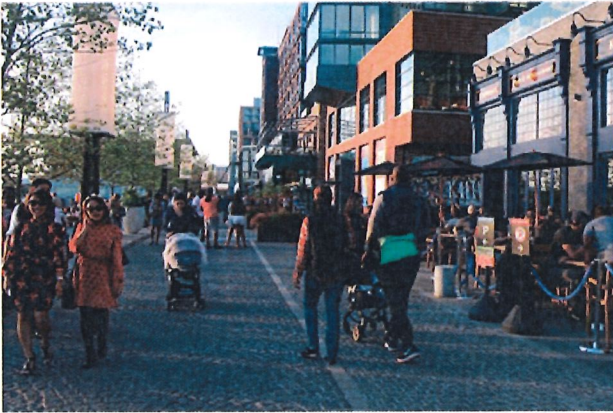
4 Block Level

Including private recreational spaces and publicly accessible private open spaces

Woonerf

This signature shared open space is envisioned to become the primary focal point and the heart of all activity, fostering social and cultural interactions in Gateway: a living, shared street that prioritizes pedestrians and bicycles, and integrates high-quality social spaces to bring people together. The Woonerf should also accommodate slow-moving cars and short-term on-street parking to help activate ground-floor spaces. On-street parking and green infrastructure (such as bioretention, bioswales, street trees, rain gardens, and permeable pavements) should alternatively be present next to the travel lanes for the length of the street. This type of shared street usually features a curb-less configuration, blending the space dedicated for cars, bicycles and pedestrians. Due to its linear nature, a wide range of residents and workers should have easy access to this pedestrian-first, walkable environment.

The Woonerf's design should allow for variation and flexibility as it is constructed and enhanced. There should also be flexibility for the form of buildings, streetscapes, and setbacks along the Woonerf, particularly to recognize the privacy needs of some uses (like ground-floor residential uses and some ground-floor employment uses that require security measures to support operations). For example, minimum and maximum setbacks could be identified. A menu of design options that illustrates how redevelopments containing such uses can still contribute to a vibrant pedestrian environment should be developed. Options may include features like plazas, seating, or other amenities that are used in combination with landscaping, private front yards, or grade separation to maintain privacy. To provide design continuity, the menu can be developed along with a design palette for landscaping and streetscape elements such as trees, pavers, streetlights, and street furniture. All of this should be incorporated in any design guidelines developed as part of the alternative zoning program.



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Shared street with curb-less configuration along active ground floor uses (top); bike/ped welcoming environment (middle); social/gathering spaces (bottom)

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The master plan recommends exploring public-private partnerships, incentives, acquisitions, and zoning requirements to support the Woonerf's implementation and adopting a multi-phased and incremental approach, as redevelopment opportunities in Subarea 3 emerge.

RECOMMENDED DESIGN AND LANDSCAPE FEATURES

Service Area:	Community/District
Design Features:	• Seating areas • Outdoor patios • Increased tree canopy • Curb-less configuration • Bio-retention areas • Pollinator gardens • Public art • 2-way vehicular travel lanes • On-street parking in certain areas (interspersed with planted areas, rain gardens)
Landscape Features:	• Minimize impervious areas and maximize groundcover and tree canopy cover • Street trees along the Woonerf should be arranged in clusters to create native habitat nodes • Use bollards, planters and other barriers for car-free days • Use pavement design to define areas where slow-moving cars are allowed

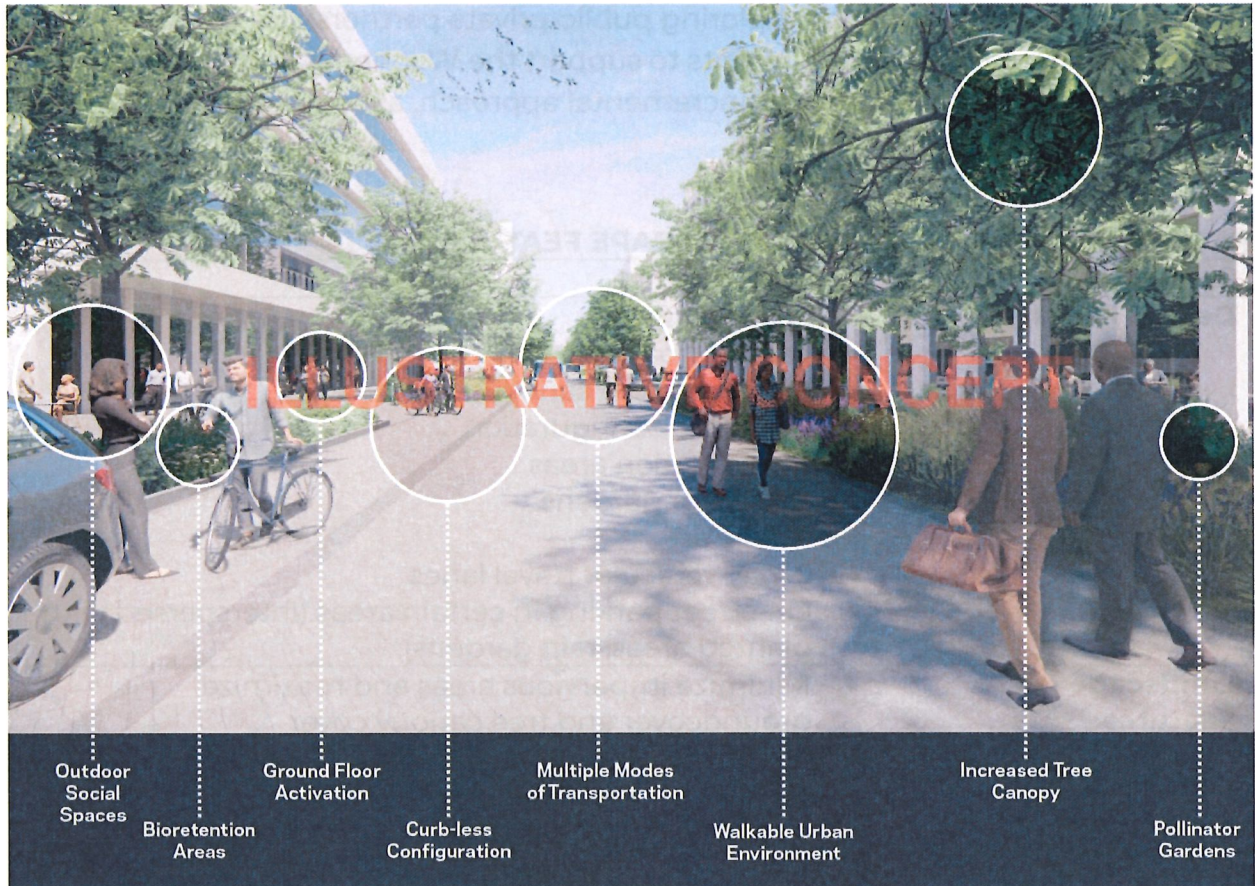


Figure 25: Conceptual rendering of the Woonerf

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Columbia Gateway Linear Park

The master plan envisions transforming the existing shared-use trail, that runs along the inner side of the Columbia Gateway Drive loop, into a linear park with a wider bike/jog path, and added greenery, seating areas, lighting, and recreational features. This shared-use path should be set back from the curb and landscaped on both sides, offering users a park-like experience. As an already frequently used amenity, the goal is to enhance the recreational opportunities for the current workforce, as well as future workers, residents, and visitors to Gateway.

RECOMMENDED DESIGN AND LANDSCAPE FEATURES

Service Area:	Community/District
Potential Program/ Design Features:	• A two-way shared use path • Seating • Fitness equipment • Rain gardens • Lighting • Drinking fountains • Bike repair stations
Landscape Features:	• Minimize impervious areas and maximize groundcover and tree cover • Native and/or adapted species to the region are strongly encouraged

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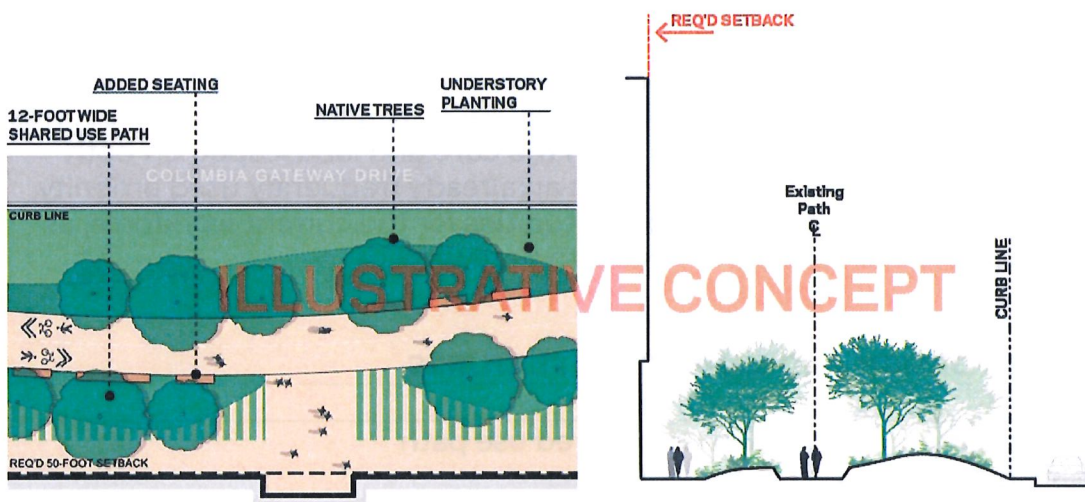


Figure 26: Illustrative Diagram – Columbia Gateway Drive Linear Park

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1 **Urban Plazas**

2 Urban plazas should be located at each node, serving as a focal point for retail,
 3 community, and other active uses. This typology is intended to function as a scaled-
 4 down version of a town square, a place for people to gather and socialize. Urban
 5 plazas are generally paved, with trees and landscaping defining the perimeter or
 6 infused throughout to provide shade. Flexibility will be essential in designing an
 7 urban plaza to ensure the space can host a variety of programmed activities
 8 throughout the day and year.

9 These plazas should be integrated into the streetscape and framed by the buildings
 10 while maximizing sunlight and public access. Activity from the ground floors may
 11 spill out to the public, blending the indoor-outdoor line. Other possible uses include
 12 outdoor dining and restaurant areas, food trucks, seasonal events, such as art
 13 installations, innovation fairs or music events.

14 **RECOMMENDED DESIGN AND LANDSCAPE FEATURES**

Service Area:	Nodes
Potential Program/ Design Features:	• Hardscape/flexible area • Outdoor dining • Seating • Shade structure • Tree canopy coverage • Playground (when adjacent to residential areas) • Water feature • Public art • Movable stage • Civic and cultural event spaces
Landscape Features:	• Design spaces to welcome users of all ages and abilities • Minimize impervious areas by balancing paved and planted areas • Integrate appropriate lighting into the plaza design • Native and/or adapted species to the region are strongly encouraged • Include movable and fixed seating options



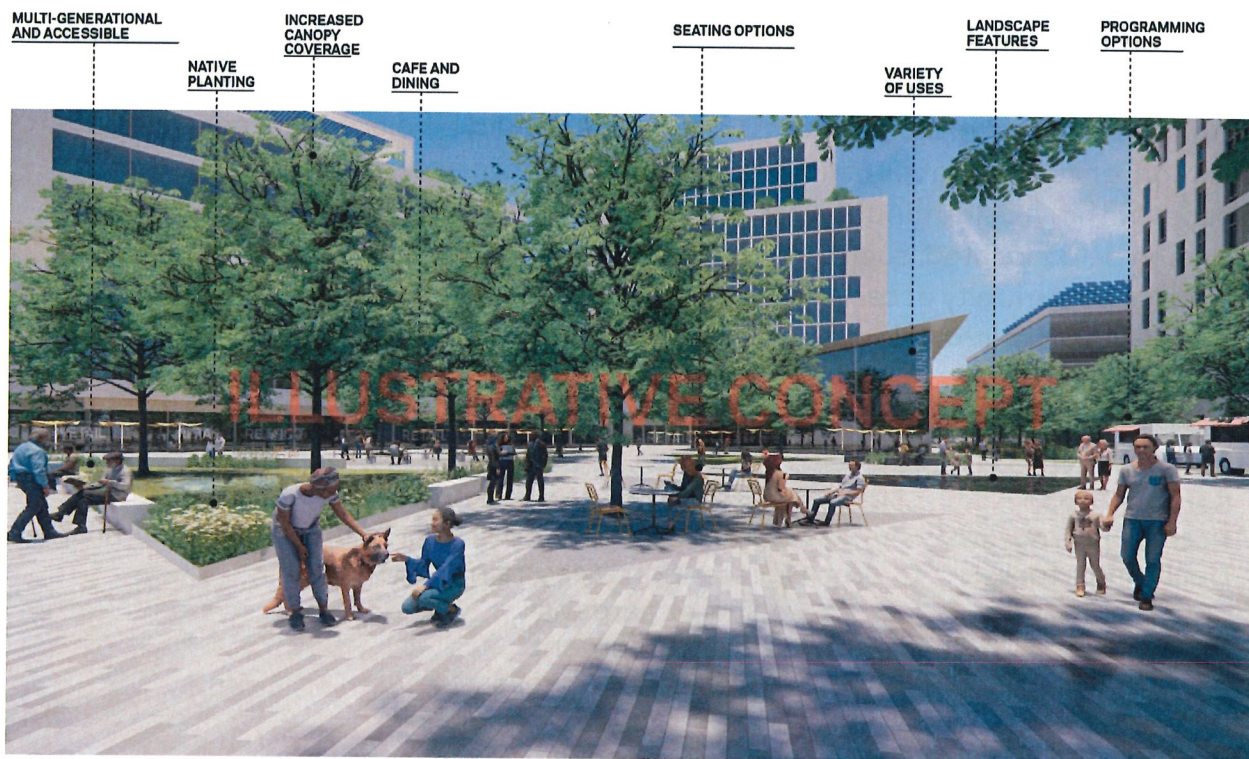
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Active ground-floor uses encouraged to be located facing urban plazas at nodes

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3 Figure 27: Conceptual rendering of the Urban Plaza

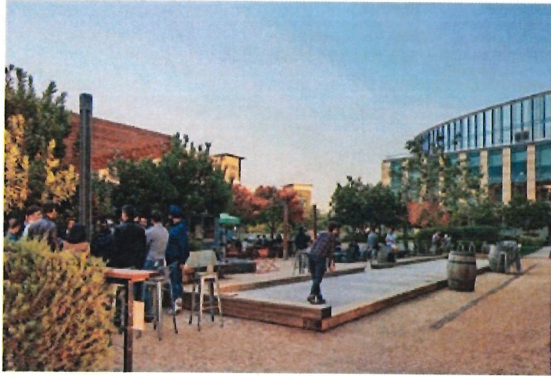
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Neighborhood Parks

Neighborhood parks are primarily envisioned for mixed-use areas with a residential focus, as well as certain employment-focused areas. Their shape and size may be determined as redevelopment progresses but are envisioned to accommodate multigenerational program areas. These parks should be placed at a centralized location, ensuring that all residents and workers have access to high-quality open spaces within a 5–10-minute walk. Also, there is an opportunity for neighborhood parks to be co-located, such as with schools and daycares, to share functions and enhance community access. These parks can also serve as a buffer between industrial uses and residential uses.

RECOMMENDED DESIGN AND LANDSCAPE FEATURES

Service Area:	Neighborhood (¼to ½ mile from residential buildings)
Potential Program/ Design Features:	• Sport courts (pickleball, tennis, basketball or similar) • Bioretention areas, rain gardens • Pollinator gardens • Fitness equipment • Shaded seating areas • Shade structure/pavilion • Tree canopy coverage • Playground (when adjacent to residential areas) • Water feature • Public art • Dog run • Stage/event space • Restrooms • Community garden
Landscape Features:	• Design spaces to welcome users of all ages and abilities • Minimize impervious areas by balancing paved and planted areas • Native and/or adapted species to the region are strongly encouraged • Nature-based solutions should be prioritized for stormwater management



Neighborhood Park in an Employment Focus Area (top); Bio-retention areas and landscape features (middle); and flexible open space (bottom)

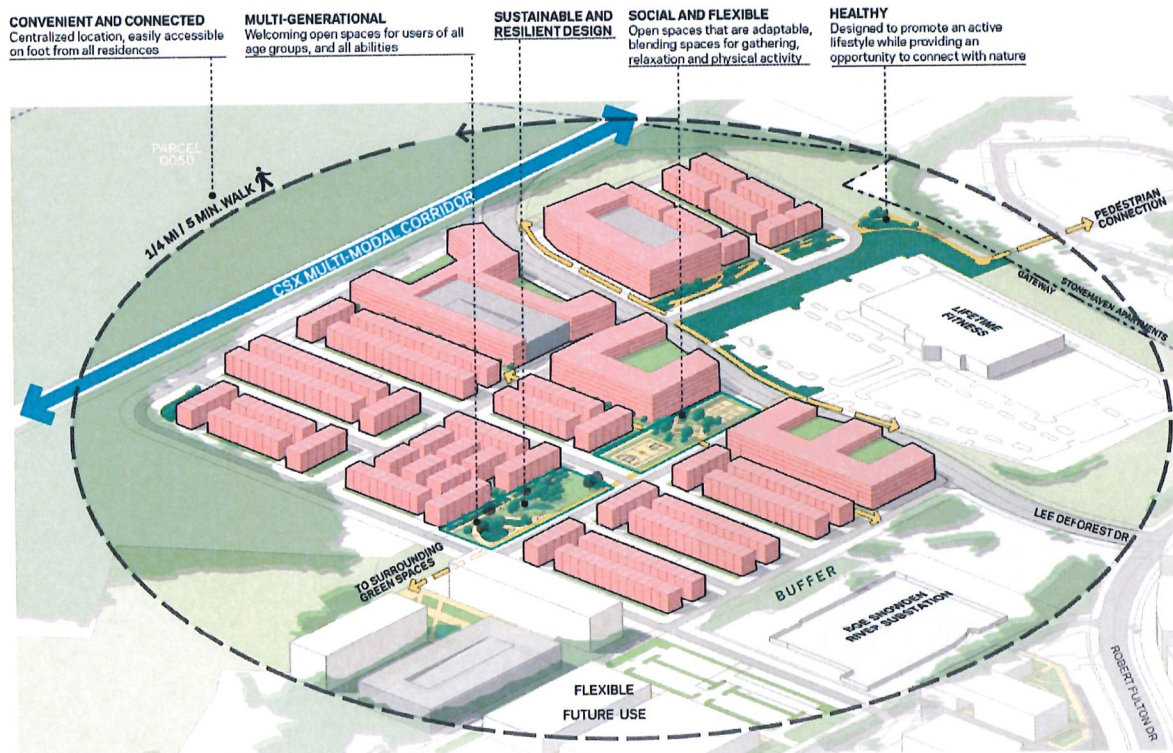


Figure 28: Illustrative Diagram of a Neighborhood Park (Artist Rendering)

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Pocket Parks

Pocket parks are compact versions of urban parks or plazas, typically located in and near areas with high volumes of pedestrian traffic. These parks can be integrated into both residential and employment focus areas. Pocket parks should be framed by surrounding buildings and feature a balanced mix of paved and planted areas, unified through thoughtful design. Pocket parks should be well-integrated with adjacent streetscapes—with a seamless transition in hardscape and planting materials.

RECOMMENDED DESIGN AND LANDSCAPE FEATURES

Service Area:	Block/Neighborhood
Potential Program/ Design Features:	• Bioretention areas, rain gardens • Pollinator gardens • Fitness equipment • Shaded seating areas • Tree canopy coverage • Playground (when adjacent to residential areas) • Water feature • Dog run
Landscape Features:	• Design spaces to welcome users of all ages and abilities • Optimize sun and shade conditions • Minimize impervious areas by balancing paved and planted areas • Native and/or adapted species to the region are strongly encouraged



Figure 29: Conceptual rendering of a Pocket Park

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CSX Multi-modal Corridor

The CSX multi-modal corridor will be an essential component of the open space network, supporting the goal of connecting Gateway to immediate surrounding communities and other parts of the County while expanding recreational opportunities. The primary goal is to repurpose the former CSX rail tracks, with a short-term focus on creating a corridor that allows pedestrians, bicycles, and micro-mobility devices such as scooters to circulate safely. In the mid-term, there is a potential to integrate a rubber wheel transit system or trolley into the multi-modal corridor. As of spring 2025, Howard County's Economic Development Authority has been and continues to investigate the feasibility of the CSX multi-modal corridor to meet the needs of the Master Plan's vision and the County's transportation goals.

RECOMMENDED DESIGN AND LANDSCAPE FEATURES

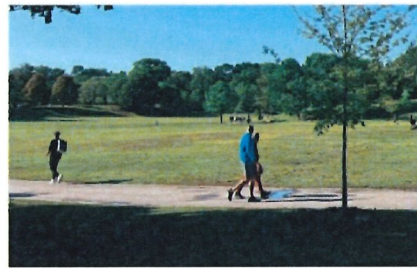
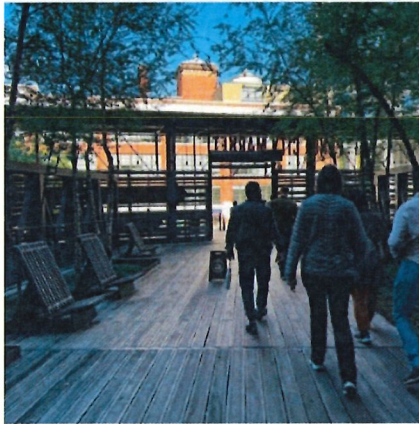
Service Area:	District/Community
Potential Program/ Design Features:	• Bike and pedestrian facilities • Transit/trolley • Showcase existing rail car/industrial heritage • Bioretention areas, rain gardens • Pollinator gardens • Mural/public art opportunities • Accessible routes/footbridges over the tracks • Tree canopy coverage • Reimagined underutilized underpasses • Play areas
Landscape Features:	• Design spaces to welcome users of all ages and abilities • Native and/or adapted species to the region are strongly encouraged



*Bio-retention demonstration areas (top);
Park amenities (middle); and shared use
trails (bottom)*

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Atlanta Beltline

Multi-use trails with shade trees (top left); micro-mobility docking station (top right); passive recreation areas (bottom right); and gathering/social spaces (bottom left)

3
4
5

Key Recommendations:

- + Establish an interconnected network of open spaces that is convenient to employees and residents, accessible to all ages and abilities, flexible to accommodate a variety of activities, and sustainable with increased tree canopy and native species
- + Create focal points for Gateway through its open spaces, including the Woonerf as the primary focal point
- + Explore public-private partnership models and funding mechanisms for the dedication of land, design, construction, maintenance, and management of future green areas
- + Consider a combination of incentives, acquisitions, and requirements for the creation of publicly accessible open space

1

3.5 Affordable Housing

New mixed-use residential developments in Gateway are envisioned to provide a variety of housing options accessible to all income levels and household types. Gateway will build on the guidance provided by the recently adopted general plan, HoCo By Design, for how activity centers should offer diverse, accessible, and affordable housing options when they redevelop.

HoCo By Design also describes targets for affordability and accessibility identified in the Housing Opportunities Master Plan (HOMP):

- Affordability Target: The greater of at least 20% of all net new housing units should be available to households making less than 60% of AMI each year
- Accessibility Target: At least 10% of new housing units affordable to households making less than 60% of AMI should be physically accessible for persons with disabilities. This target should be supplemented with concerted efforts to facilitate accessibility improvements to the existing ownership and rental stock to better enable integrated aging in place.

These targets may be achieved through a variety of programs, grants, incentives, and partnerships. The general plan contemplates the creation of a new zoning district that would encourage diverse housing types that are affordable to a mix of incomes and offer homeownership opportunities. Further, the general plan includes recommendations for evaluating public-private partnerships or other incentives to achieve more affordable for-sale and rental opportunities. The plan also emphasizes the importance of creating multigenerational neighborhoods and recommends considering incentives for low-income and disability-income housing units and evaluating incentives to achieve Universal Design Guideline utilization in at least 10% of all affordable units built throughout the County.

Furthermore, HoCo By Design recommends establishing a targeted incentive program to increase the supply of affordable housing units above and beyond what is required under the County's Moderate Income Housing Unit (MIHU) program to assist the County with reaching the affordability and accessibility targets recommended in the HOMP. The County's MIHU program is an inclusionary zoning program that requires developers of new housing in specific zoning districts to sell or allocate a portion of new dwelling units to households earning 40-80% of the Howard County Median Income.

Housing Goals for Gateway

For Gateway, the vision is to include affordable and multigenerational housing, consistent with the general plan's direction. The market demand for multi-family residential is anticipated to reach up to 6,600 units over the next 30 years, and up to 1,800 dense missing middle units are expected to be in demand within the same timeframe. The Master Plan anticipates that a combination of housing programs and future zoning regulations should include requirements and incentives to achieve affordable and multigenerational housing options. Example strategies include, but are not limited to:

- ~~Implementing the County's Moderate Income Housing Unit (MIHU) Program within Gateway, requiring developers to sell or rent up to 15% of the new dwelling units to households with a moderate income. Requiring 15% 20% of the new dwelling units to be Moderate Income Housing Units (MIHU) within Gateway. MIHU requirements should generally be met onsite.~~
- ~~Creating incentives, or exploring public-private or nonprofit partnerships, to achieve additional affordable units above the 15% 20% MIHU requirement for low- and moderate-income disability-income households. The County's goal is to ensure that 20% of all new units in Gateway are affordable to low- and moderate-income households.~~
- ~~Of these new affordable units, at least 10% should be physically accessible to persons with disabilities, as recommended by HoCo By Design~~
- Establishing incentives for developers to provide Low Income Housing Units (LIHU), with reduced rents available for low-income households, including incentives for mixed-use developments combining public, commercial, retail, and/or transportation facilities with mixed-income affordable rental housing
- Promoting incentives for developers to reserve a portion of the new housing units for households receiving a disability income (Disability Income Housing Units – DIHU) and age-restricted households
- Allowing for denser missing middle housing types (such as multiplex, stacked "flats," stacked 2-over-2 townhomes, stacked 3-over-1 townhomes, stacked 2-over-1 townhomes, and live-work units)
- ~~Requiring sites of a certain size in residential focus subareas to redevelop with more than one housing type (i.e. multifamily and single-family attached or other missing middle types, such as multiplex, stacked "flats," stacked 2-over-2 townhomes, stacked 3-over-1 townhomes, stacked 2-over-1 townhomes, and live-work units)~~
- Providing incentives to create homeownership opportunities, such as a density bonus for projects that create affordable for-sale housing
- Exploring a "live near your work" program, as described in the Transportation Demand Management section (3.7 Transportation and Mobility)

Key Recommendations:

- + Pursue requirements and incentives, through a combination of housing programs and future zoning regulations, to achieve affordable and multigenerational housing options that are available for rental and/or homeownership opportunities.

1



Examples of medium to high density residential buildings

2

3.6 Sustainable Design

A comprehensive sustainable design strategy has been developed in alignment with County goals for climate change mitigation and resiliency. The strategies and recommendations support four primary focus areas: decarbonization, resiliency, health and wellbeing, and urban ecology. Many of the strategies provide an array of benefits supporting multiple focus areas to provide a holistic approach to sustainable design. However, these strategies and recommendations are not meant to be all-inclusive; there may be other sustainable design practices that may emerge over the 30-year timeframe of the plan.



Graphic showing the four focus areas for holistic approach to sustainable design for Gateway

1 *Decarbonization*

2 Decarbonization focuses on reducing or eliminating greenhouse gas (GHG)
 3 emissions which contribute to climate change. At the scale of the Gateway
 4 Innovation District, major GHG emissions result from building construction and
 5 operation. The decarbonization strategies presented promote a multi-modal
 6 transportation network, efficient high-performance buildings, on-site renewable
 7 energy production, and construction with responsibly sourced low-GHG producing
 8 materials. Additionally, nature-based climate solutions, such as focusing on deep-
 9 rooted native plants, will improve soil health and increase carbon sequestration.

10 ***Multi-Modal Transportation Network***

11 The proposed multi-modal transportation network provides a variety of viable and
 12 desirable modes of transportation. Similar to the recommendations presented in
 13 section 3.7, the following strategies aim to encourage walking, biking, and transit use
 14 to reduce dependence on GHG-emitting vehicles.

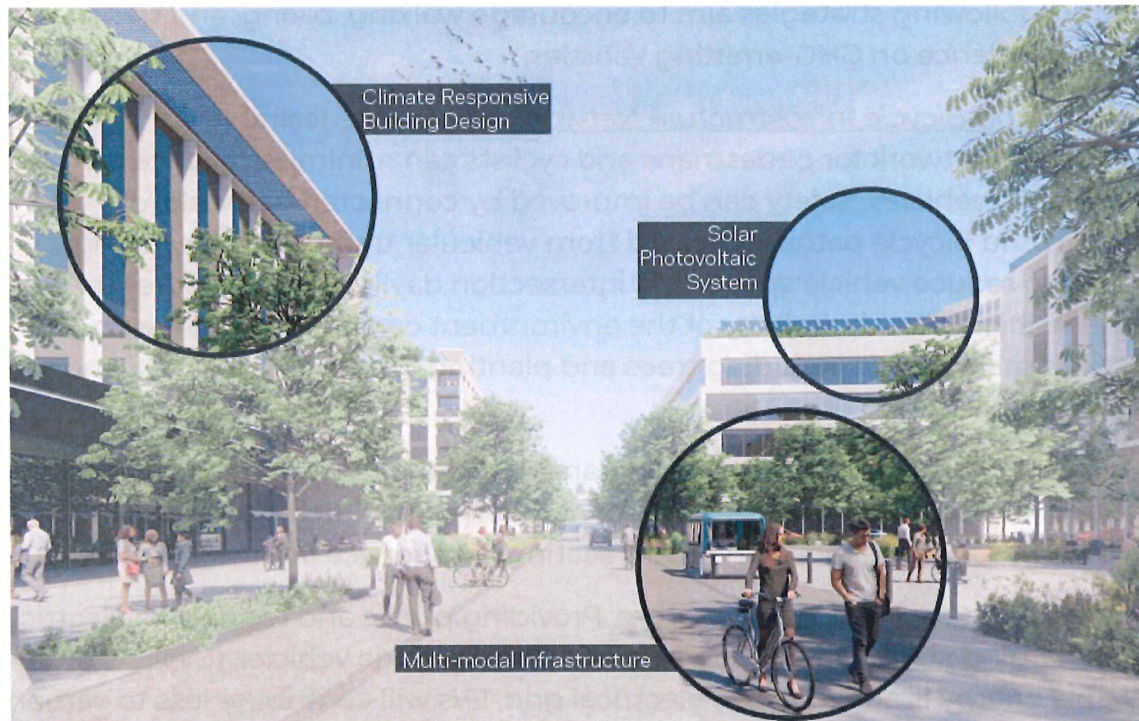
15 *Pedestrian and Bicycle Infrastructure Network:* A safe and desirable
 16 infrastructure network for pedestrians and cyclists can minimize reliance on
 17 GHG-emitting vehicles. Safety can be improved by connected networks of
 18 pedestrian and bicycle paths separated from vehicular traffic, traffic-calming
 19 measures to reduce vehicle speed, and intersection daylighting measures to
 20 increase visibility. The desirability of the environment can be enhanced with
 21 pedestrian-scale design including trees and plantings, seating, public art, and
 22 street-level storefronts.

23 *Public Transit Network:* A robust public transit network can minimize reliance on
 24 personal GHG-emitting vehicles. A robust network should include frequent,
 25 reliable service and shelters with shade, seating, and service information.

26 *Electric Vehicle Charging Infrastructure:* Providing public and residential electric
 27 vehicle charging stations can support adoption of electric vehicles (EVs). As more
 28 renewable energy is added to the electrical grid, EVs will contribute less to carbon
 29 emissions over time.



Public Transit System (left); Electric vehicle charging stations (top right); and pedestrian and bike facilities



Conceptual rendering highlighting key decarbonization strategies recommended for Gateway

High-Performance Buildings

The operation of new and existing buildings contributes significantly to GHG emissions. The following strategies aim to reduce the energy demand for new and renovated buildings. Note, building design and sustainability elements are ultimately governed by the County's adopted green building code.

Climate-Responsive Design: Designing buildings in response to environmental conditions such as solar, wind, and temperature patterns can reduce energy needs. Passive strategies of form, orientation, materials, and facade design can be utilized to reduce HVAC and lighting demands while creating a comfortable environment for occupants.

High-Efficiency MEP Systems: Efficient HVAC systems (e.g., heat-pumps: air, water, geothermal/ground-source; heat recovery; other future technologies; etc.), efficient lighting such as LED and future technologies, , efficient plumbing fixtures, automated building controls, and building monitoring systems further reduce energy use. As technologies are constantly advancing, efficient systems should not be limited to these recommendations but remain open to new advancements.

Low-GWP Refrigerants: Refrigerants with low global warming potential reduce leakage of greenhouse gases into the environment throughout a building system's lifespan.¹⁸

Electrification: Electrified buildings without any gas equipment or appliances (except as required for emergency back-up equipment) reduce GHG emissions. The Howard County *Building Code Considerations for Comprehensive Building Decarbonization* provides guidelines for building electrification. The document also describes exemptions and partial exemptions, such as those for the cooking areas of restaurants and commercial kitchens.

¹⁸ Howard County Climate Action Plan, Mitigation Strategies, Energy

Grid-Interactive Buildings: Designing intelligently connected buildings which respond to utility grid demand and shift loads accordingly to help reduce energy needs in times of peak demand. When demand for the grid is higher, older and more inefficient power plants may need to be switched on to accommodate the increased demand. Load shifting in buildings often utilizes energy storage (batteries, thermal storage, and other future technologies), which is discussed under Resiliency.

Renewable Energy

Onsite renewable energy systems can further reduce the GHG emissions of building operation in Gateway. The following strategies aim to promote renewable energy integration into new and existing buildings.

Solar Photovoltaic Systems: Solar photovoltaic (PV) systems can offset grid electricity usage. PV arrays can be placed on building roofs and parking garages, as canopies above surface parking, incorporated into building enclosures, shade canopies in public spaces, and open fields.

Solar Hot Water Systems: Solar hot water systems can be beneficial for buildings with high-volume hot water usage, such as residences.

Future Technologies: For reasons of cost, scale, and solar availability, solar PV systems are currently the most commercially viable renewable energy technology for most building sites. However, technological advancements in the coming decades may provide new options for onsite renewable energy production and storage. Some technologies that may be explored include:

- Geothermal: Renewable geothermal energy is a utility-scale power solution which derives energy from the Earth's core. It should not be confused with "geothermal" (ground-source) heat pumps which can be constructed at the building-scale to reduce heating and cooling energy by exchanging heat with the ground. Ground-source heat pumps are discussed in the High-Performance Building section because they reduce energy demand but do not generate power.

- Small Scale Wind: Small scale wind turbines are designed for installation on residential or commercial buildings. Currently the cost of energy produced is high compared to solar PV. In addition, small scale wind patterns are harder to predict in developed areas causing turbines to underperform.
- Small Modular Reactors (SMRs): Nuclear is not technically a renewable energy source as it consumes fuel, but it does not emit CO2 as a byproduct of energy generation. Because of this, SMRs are generating a lot of interest in powering the rapidly increasing energy demand for data centers. There are currently no commercially operational SMRs in the U.S. at time of writing, however first commercial deployment is expected in the early 2030s.

Embodied Carbon Reduction

In addition to operational emissions, embodied carbon emissions from raw material extraction and manufacturing comprise a significant proportion of a building’s total lifecycle GHG contribution. Unlike operational emissions, embodied carbon emissions are all released upfront during construction with no way to reduce the impact over time. Choosing materials and construction methods with reduced global warming potential can support overall GHG reduction goals.



1

Howard County Circuit Courthouse: A LEED Gold-certified building with roof solar PVs (middle) and a solar field (bottom) designed to supply the facility with over 50 percent of its energy needs.

2

1 *Resiliency*

2 Climate resiliency focuses on measures to adapt to changing climate conditions and
3 respond to hazardous climate events. As described in Howard County Climate
4 Forward, the county's main vulnerabilities to climate change are increasing heat and
5 precipitation. Precipitation is expected to occur in more frequent extreme storms,
6 increasing severe flooding risks. The resiliency strategies presented support
7 mitigation measures to reduce the adverse effects of heat and flooding and recovery
8 measures to respond to emergencies when they occur.

9 ***Stormwater Management***

10 Effective stormwater management can help remove pollutants from runoff, reduce
11 water temperature, moderate the flow of runoff into nearby water bodies, and
12 reduce flooding. The following strategies aim to protect against flooding and reduce
13 runoff using natural hydrologic processes to retain and infiltrate water. New
14 developments may employ these strategies to meet the County's stormwater
15 management requirements.

16 *Low-Impact Development Strategies:* Designing sites and landscapes using low-
17 impact development (LID) strategies can mitigate flooding by absorbing rainfall,
18 reducing water ponding, and street flooding. LID strategies aim to mimic the
19 natural hydrology of a site to reduce runoff into municipal storm systems and
20 recharge groundwater through infiltration. Some examples of LID strategies
21 include bioretention, bioswales, rain gardens, and permeable pavements. LID
22 strategies may also be planned as part of the design for and incorporated into
23 green open space and amenity areas.

24 *Green Roofs:* Green roofs can provide additional rainwater holding capacity at the
25 roof level which may also reduce the area required for stormwater management
26 at ground level. Green roofs can be paired with rooftop PV for maximum
27 utilization of the roof area.

Water Treatment and Reuse

Onsite water treatment and reuse systems can provide resiliency in two major ways: reducing demand on municipal water supply during drought and maintaining a non-potable water supply in case of municipal water disruption. The following strategies aim to capture available water and reuse for non-potable water needs.

Rainwater Harvesting: Rainwater harvesting systems can capture rain from building roofs and store in tanks which can be placed on the site or constructed below-grade—water collection tanks are commonly constructed integrally with below-grade parking structures. Harvested rainwater can support site irrigation systems (if needed) and eliminate the need for potable water use in outdoor applications. Rainwater can also be used for non-potable water uses within the building such as flushing and cooling tower make-up.

Onsite Water Reuse: Building systems can be designed to treat, store, and reuse water. Water can be treated onsite by various methods, stored in tanks, and then distributed for non-potable water uses like flushing, irrigation, and cooling tower make-up throughout a building or development. Capturing and reusing water onsite can also reduce stormwater runoff and wastewater discharge from the development.

In addition to rainwater, all potable and non-potable water used onsite may be recycled back into an onsite treatment and storage system (though such reuse would require changes to the building code). Some systems reuse only lightly contaminated greywater (from sinks, showers, and washing machines), but more robust systems may also include heavily contaminated blackwater (from toilets, urinals, and other heavy chemical uses).

A water balance study was conducted for the 30-year plan which estimated that 100% of flush water could be supplied by recycled water with additional available for some portion of irrigation or cooling tower make-up.

Onsite Potable Water Storage: Onsite storage of potable water can provide resilience in case of municipal water supply disruptions, though capacity and water age are some key factors to be considered.

Reclaimed Water Use: Utilizing reclaimed water from the Little Patuxent Water Reclamation Plant is another potential option to consider. This approach would allow for the expanded use of reclaimed water for non-potable purposes – such as irrigation, landscaping, and cooling towers – thereby supporting long-term water sustainability goals and reducing reliance on potable water supplies. However, the feasibility of extending the ‘purple pipe’ infrastructure – particularly in terms of infrastructure requirements, and distance – would need to be carefully evaluated as part of this option.

Water Reuse Cycle

In addition to rainwater, all potable and non-potable water used onsite may be recycled back into an onsite treatment and storage system.

Some systems reuse only lightly contaminated greywater (from sinks, showers, washing machines, etc.), but more robust systems may also include heavily contaminated blackwater (from toilets, urinals, and other heavy chemical uses).

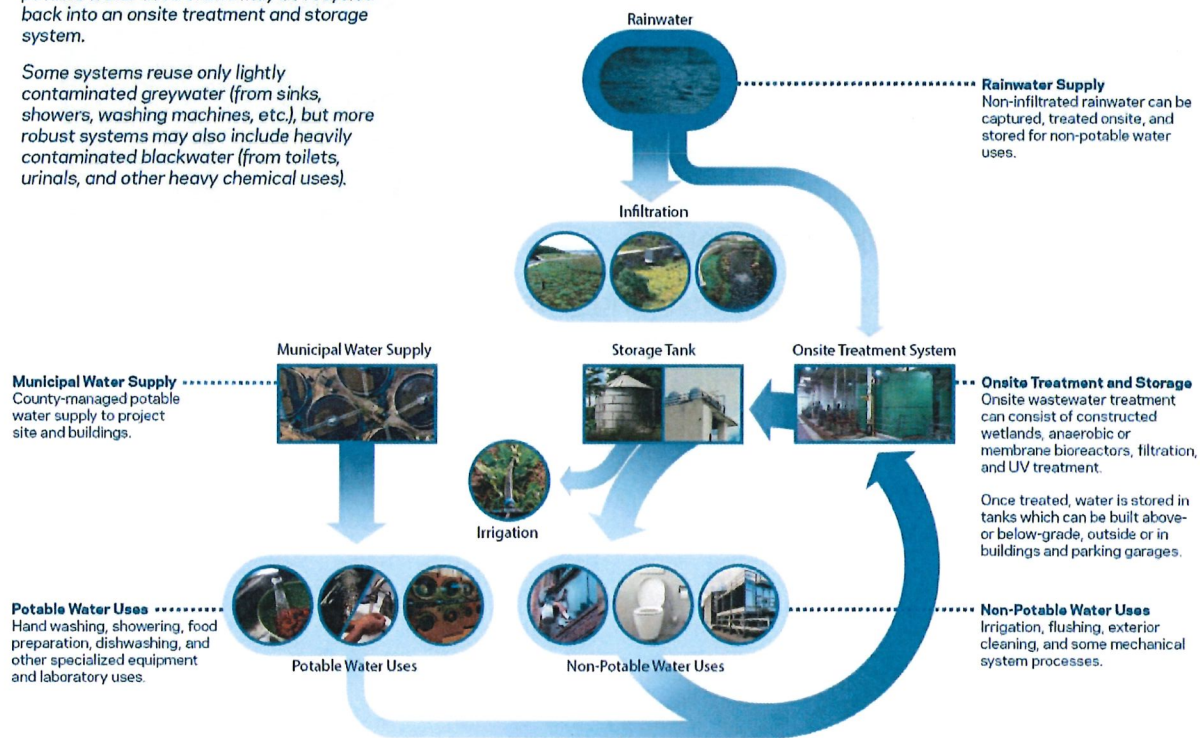


Figure 30: Water Reuse Cycle Illustration (Source: HOK)

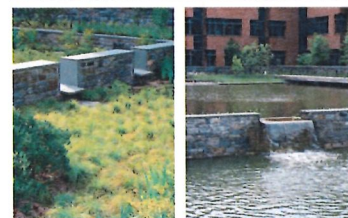
Heat Island Mitigation

The heat island effect is when developed areas experience higher temperatures due to heat absorption and radiation of hardscape and building materials. The additional heat can exacerbate the danger to human health on already hot days. The following strategies aim to reduce the heat island effect in redevelopment.

Tree Canopy Coverage: Tree canopies can help reduce the heat island effect and provide shade to pedestrians. By reducing surface temperatures, trees can provide energy savings for electricity and air conditioning in summer. In addition, tree canopies contribute to biodiversity and provide habitat for local wildlife.

Light Colored Paving and Building Materials: Choosing paving and building materials with a high solar reflectance (SR) can reduce the heat island effect. Dark paving and building materials absorb heat and increase nearby temperatures.

Vegetation: Planted vegetation, including green roofs, also contribute to cooler surface temperatures. Native vegetation will require less water supply and be more adaptable to surviving in this climate.



Energy Back-up and Recovery

Energy systems can provide resiliency by reducing demand on the electric grid and maintaining power in case of utility outages. The following strategies aim to promote onsite energy generation back-up.

Solar Photovoltaic Systems: Solar photovoltaic (PV) systems can be capable of operating critical building systems during power outages, which can provide resilience in instances of grid power disruptions especially when paired with energy storage.

Energy Storage: Incorporating energy storage systems in buildings can support recovery after damaging weather events when grid power may be disrupted. Energy storage also allows for targeted reduction of utility energy use during peak demand periods contributing to the broader resilience of the grid. Common energy storage methods currently are battery and thermal storage, but the increasing demand for storage is likely to drive new technologies in coming decades.

Microgrid: Buildings and developments can be designed to operate independent of the utility grid to provide resilience in case of grid disruptions.

1 *Health & Wellbeing*

2 Health and wellbeing strategies focus on the physical, mental, and social health of
3 the community both on an individual level and as a collective. The strategies
4 presented promote physical activity, interaction with nature, and community
5 connection.



Walkable Bikeable Community

The following strategies aim to support walking and biking as viable and desirable modes of transportation within the development.

Pedestrian and Bicycle Infrastructure Network: Walking or biking to accomplish daily activities promotes an active lifestyle, interaction with nature, and social connection. These transportation modes can be supported by providing connected pedestrian paths, separated and protected bicycle paths, and traffic-calming measures to create safe and desirable environments for walking and biking.

Bicycle Parking and Repair: In addition to bicycle paths, secure short- and long-term bicycle parking and repair stations to support bicycle use for daily activities.

Mixed-Use Development: Complete live, work, and play communities can be designed with convenient access to daily necessities like groceries, pharmacy, and childcare, and desirable amenities, such as restaurants, entertainment, and natural spaces within walking distance of offices and residences.

Human-Nature Interaction

The following strategies aim to encourage people to spend more time outdoors by creating lively and pleasant public spaces.

Public Use Outdoor Spaces: Provide outdoor spaces that are programmed for community events and recreation to encourage people to spend time outdoors. The programming should include recreational space for all ages and abilities, including parks, playgrounds, gardens, nature trails, and public plazas.

Street Trees: Street trees create habitats for local wildlife, providing opportunities for people to interact with nature in the public realm on a daily basis and experience seasonal changes. Shade from trees also provides a more comfortable environment on hot days, extending the time that people of all ages can comfortably enjoy the outdoors and accomplish daily errands on foot.

Nature Education: Signage can be incorporated into public spaces to educate the community on local ecosystems, conservation, and sustainable development strategies.



1

2

Outdoor Thermal Comfort

The following strategies aim to encourage people to spend more time outdoors by reducing thermal stress.

Tree Canopy Coverage: The shade from trees along walkways and gathering spaces can reduce heat island effect and create a cooler microclimate for human comfort. People will be able to spend more time outside when heat stress is reduced. Deciduous trees which lose their leaves in winter are advantageous because they provide shade on hot summer days but also allow sunlight to stream through the branches on cold winter days.

Architectural Shading Interventions: Architectural shading can be used to provide shade and cooler temperatures in public spaces and can be deployed or retracted seasonally as needed. Shading strategies might include awnings and overhangs at building exteriors; canopies, sails, and umbrellas at seating areas and walkways; and PV canopies above parking.

Water Features: Water features such as fountains, ponds, misters, and splash pads can provide cooling effects and sensory interest to public spaces.

Equitable Development

The following strategies aim to provide equitable access to public spaces and amenities to support a multigenerational community.

Public Use Outdoor Spaces: Outdoor areas with recreational space can encourage the community to spend time outdoors where they can experience the natural environment. The programming should include recreational spaces for all ages and abilities.

Access to Daily Amenities: Communities with convenient access to daily necessities, such as groceries, pharmacy, and childcare, can support a multi-generational community.

1 *Urban Ecology*

2 Urban ecology focuses on supporting the local ecosystem for the benefit of all. HoCo
3 By Design, the County's general plan, recommends incorporating natural resources
4 into site planning to create connections between natural resources both on- and off-
5 site (existing regulations already require new development to protect steep slopes,
6 floodplains, streams, and wetlands, and meet forest conservation requirements). The
7 strategies presented aim to incorporate natural systems into development, mitigate
8 harm to wildlife, and provide holistic benefits to the community.

9 *Biodiversity:* Incorporating native plants and pollinator species into building sites
10 can support local wildlife and the overall ecosystem health. Because native plants
11 are adapted to local climate conditions, they also require less (or no) irrigation,
12 conserving water. Removal of invasive species should be encouraged to promote
13 biodiversity.

14 *Habitat Support:* A healthy ecosystem can also be supported by incorporating
15 native habitats into building sites. Connections between habitat areas from one
16 site to another, traffic calming measures, and signage can provide safe passage
17 for wildlife.

18 *Bird-Friendly Design:* Design building facades using bird-friendly strategies to
19 avoid bird collisions and deaths. Large areas of reflective glazing are particularly
20 deadly for birds and solutions such as reducing glazed area, reducing reflectivity,
21 and adding patterning can mitigate collisions. The American Bird Conservancy
22 provides additional guidance for bird-friendly design.

23 *Light Pollution:* Design exterior lighting to minimize uplighting, glare, and light
24 trespass and include controls to allow for after-hours shutoff of lights not needed
25 for safety.



Native habitats integrated into building sites (top left); native plants and pollinator species (right); and use of frit patterns on glass facades for bird protection (bottom left)

Key Recommendations:

- + The master plan recommends incentives for projects that incorporate sustainable design practices and also exceed the County's regulatory requirements.

3.7 Transportation and Mobility

The overall goal for transportation and mobility in Gateway is to create an interconnected transportation network of Complete Streets that serves all modes and connects people walking, bicycling, and driving to and around the Columbia Gateway area. The components of this network will include external access improvements and new internal streets to serve all transportation modes, along with dedicated and expanded transit facilities and service. Further, policies and strategies will be developed to manage transportation demand and parking.

Complete Streets Policy & Design Manual Updates

The planning, design, construction, and maintenance of the streets, roads, and related transportation infrastructure in Howard County is guided and directed by the Howard County Complete Streets Policy. The policy outlines two clear goals, which are to: require “a seamless, connected street network, regardless of mode, including safe and convenient pedestrian crossing and access to transit” and to “develop plans, facilities, and accommodations that further the County’s Complete Streets policy. These policies, along with the Howard County Design Manual, are guiding how and where the transportation network will change and respond to the revitalization in Gateway. The policy also notes that every street does not necessarily need to provide separate accommodation for every mode, but a network should be in place so that trips can be made by walking, biking, taking public transit, and driving.

Transportation System Needs

In addition to following Complete Streets guidance to reimagine the Gateway transportation network, it is necessary to determine how vehicle traffic volumes and travel patterns may change in the future as a result of development that may occur. Assessing the future transportation system needs to involve three steps:

1. Developing an understanding of existing traffic patterns in and around Gateway
2. Inventorying existing programmed capital projects and projected background development that impact Gateway
3. Determining the amount and location of future residential and nonresidential growth within Gateway

1 These steps will enable Howard County to be prepared for the increased travel
2 demand potentially generated by future development.

3 At the start of the master planning process, an inventory of previous transportation
4 studies that impact access to Gateway was conducted. The review identified three
5 impactful capital project ideas:

- 6 • Improve existing access and add a new access point to Gateway along Route
7 175 bounding the northern edge of the site
- 8 • Provide regional transit service to Gateway via the CSX right-of-way bounding
9 the southern edge of the site
- 10 • Provide a shared use path along Robert Fulton Drive between Snowden River
11 Parkway at Oakland Mills Road to Robert Fulton Drive at Columbia Gateway
12 Drive

13 Further study was necessary to evaluate transportation system needs relating to
14 improved access to the Gateway site and mobility improvements within Gateway.
15 Planned projects were included in that evaluation.

16 **Methodology**

17 As part of the master planning process, a custom travel demand model was
18 developed to estimate the future transportation needs within and surrounding
19 Gateway. The evaluation included major roads like Columbia Gateway Drive,
20 Snowden River Parkway, Robert Fulton Drive, and Route 175, as well as local streets
21 within the site. The goal of the travel demand model was to determine roadway
22 improvements which will be necessary to accommodate the amount and type of
23 development expected within Gateway.

Results

One early goal of the master plan team was to improve access and visibility to the Gateway site from Interstate 95, given challenges with limited existing access. Further, HoCo By Design calls for the consideration of additional connections between Gateway and the regional transportation system. The travel demand model was used to analyze the feasibility of providing a new access point to Gateway along Route 175 between Route 108 and Interstate 95. The results indicate that feasible strategies for this additional site access can be provided. Specifics of the access point must include a detailed transportation study with input from the Maryland State Highway Administration, property owners, regulatory agencies, and public input to develop and evaluate a full range of alternatives and identify the preferred configuration to address multi-modal transportation needs, while addressing stakeholder and environmental concerns (such as Maryland Department of Environment review for impacts to wetlands/streams).

The scenarios evaluated to determine feasibility indicated that the preferred alternative would need to provide a street configuration that distributes traffic entering the site between the existing and new access points along Route 175, and avoid concentrating substantial new traffic movements at existing near-capacity intersections. This will be important to provide acceptable traffic operations both in the internal Gateway roadway network, and along Route 175. See the Route 175/Gateway Access Improvements section below for additional information.

Access Improvements to Gateway

HoCo By Design, the County's recently adopted general plan, calls for future transportation connections, including bicycle, pedestrian, and transit, among and between activity centers and other commercial centers. The general plan also describes a new northern access point for Gateway – a partially grade-separated interchange at Route 175 and Route 108. The plan for Gateway proposes new ways for vehicles, bicycles, and pedestrians to externally access the site; these improvements are depicted on Map 17: Site Access Map.

Route 175/Gateway Access Improvements

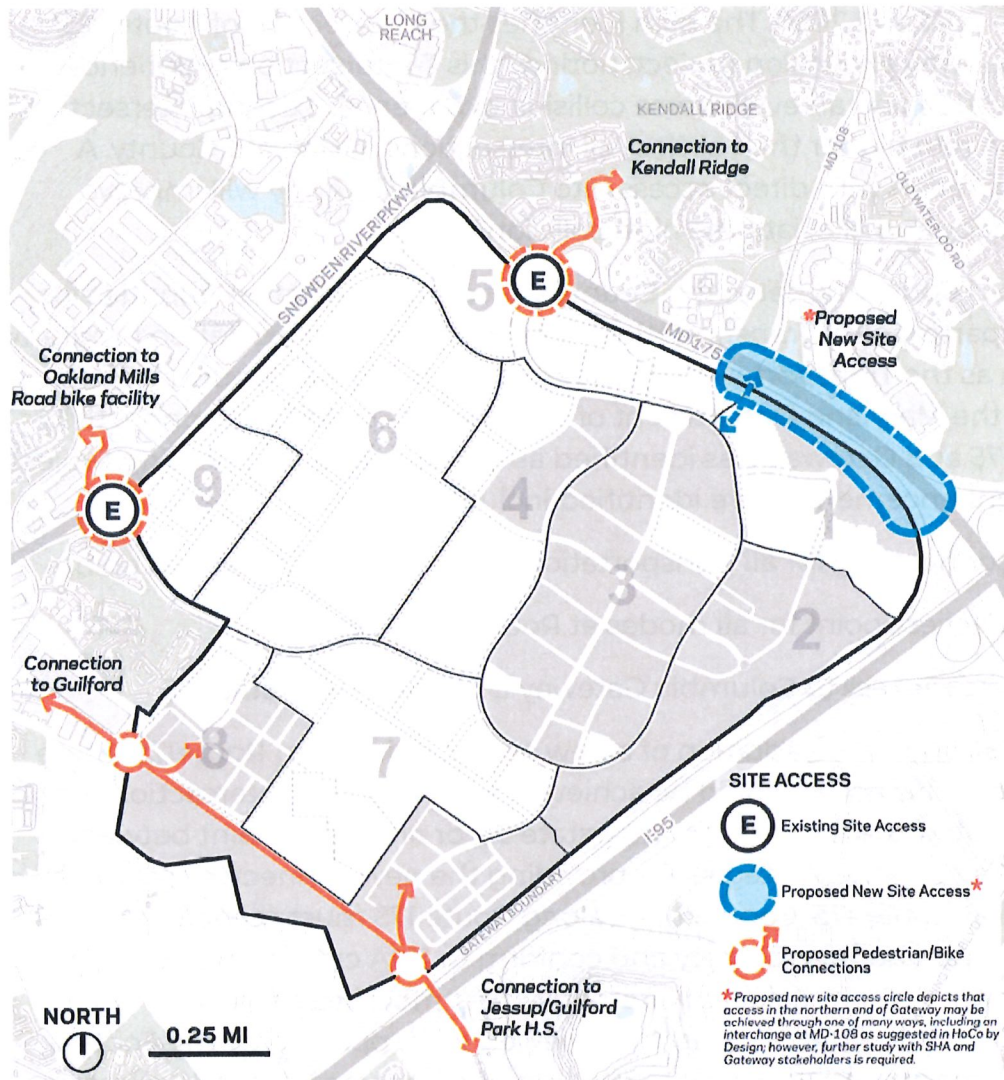
The State Highway Administration (SHA) performed a preliminary analysis of motor vehicle operations and potential alternatives at Route 175 and Route 108. Resilience 2050, the 2023 Baltimore Metropolitan Council's Long Range Transportation Plan documents \$70 billion worth of transportation investments that may receive federal funding between 2028 and 2050. The plan identifies the intersection of Route 175/Route 108 as a roadway expansion project, noting "this T-intersection experiences significant congestion and an even worse collision experience. Existing intersection exhibits a collision rate higher than almost all intersections in Howard County. A partial grade-separation with direct access into Columbia Gateway will improve intersection capacity and alleviate the high collision rate."

Every year, Howard County updates the County's list of transportation priorities for the Maryland Department of Transportation's Consolidated Transportation Program. This list is known as the Transportation Priorities Letter. In Howard County's 2024 Priority Letter to the Maryland Department of Transportation (MDOT), connectivity between Route 175 and Gateway was identified as a Design and Engineering Project. Multiple access enhancements were identified including:

- Enhance connectivity for all transportation modes at existing access points
- Add a new access point for all modes at Route 108/Route 175
- Provide direct access to Columbia Gateway Drive from Interstate 95

This master plan supports the addition of a new access point from Route 175. There are a variety of ways this access could be achieved, such as a new intersection with or interchange at Route 108, a flyover from Interstate 95, or an access point between Route 108 and Interstate 95. Strategies for providing the new connection may involve grade separation at Route 175. Connections along Route 175 must meet SHA requirements for operations and safety and conform to SHA criteria. In addition to SHA review and approval, any selected alternative that modifies or adds an interchange ramp to Interstate 95 must be reviewed and approved by the Federal Highway Administration (FHWA) through the Interstate Access Permit Application (IAPA) process.

- 1 Further evaluation and coordination with State Highway Administration will be
- 2 needed to identify the preferred access point. Regardless of its specific location,
- 3 master plan goals for the access point include distributing traffic entering the site
- 4 among all future access points to mitigate congestion, creating a welcoming new
- 5 entrance to Gateway, and connecting to surrounding communities.



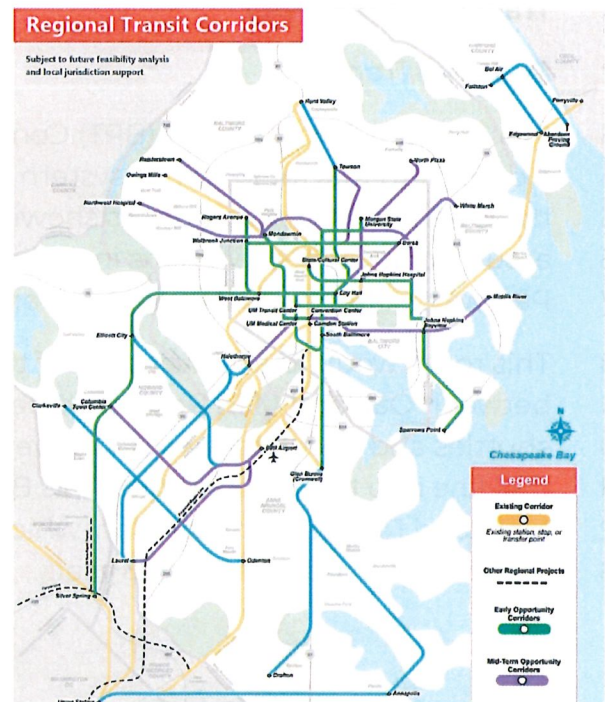
Map 17: Site Access Map

6

Bike and Pedestrian Connectivity

The proposed transportation network prioritizes walking and cycling, seamlessly connecting to existing paths and trails beyond Gateway, which will provide employees and residents with new ways to travel. This includes utilizing the CSX rail line – a 3.1-mile abandoned railroad spur – as a unique connection for people walking and biking to and from the innovation district. A full list of the plan’s external connections for people walking and bicycling to and from the site includes:

- A shared use path under Snowden River Parkway along the Robert Fulton Drive right of way to connect to an Oakland Mills Road shared use path, providing connectivity to the Oakland Mills Road cycle track; the proposed Dobbin Road shared use path; and the Elkhorn Branch Trail.
- A shared use path under Route 175 along Columbia Gateway Drive right of way that connects to the Kendall Ridge path network and to Snowden River Parkway and Dobbin Road shared use paths
- A grade separated shared-use path connection across Route 175 to connect to Route 108, the Gateway Overlook Shopping Center, and Old Waterloo Road. The exact location for this path is subject to further evaluation as part of future planning for a Route 175 vehicular access point.
- A multi-modal corridor that includes a shared use path and transitway along the CSX rail line connecting Guilford to the west and Jessup and Guilford Park High School to the east



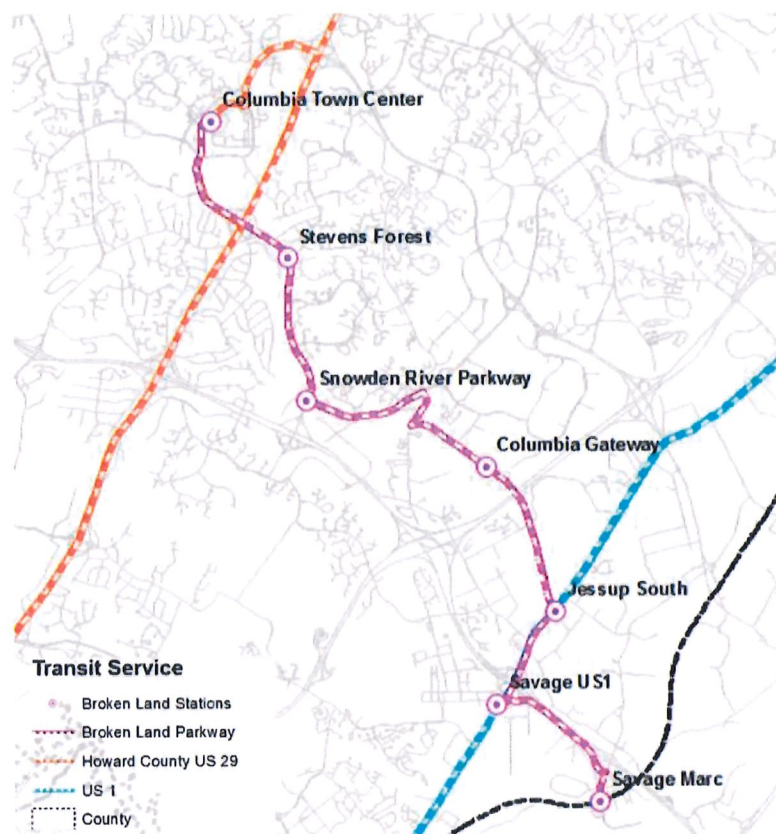
Map 18: Maryland Regional Transit Corridors Map (Source: <https://rtpcorridors.com/>)

Transit Connectivity

Regional Transit

In a 2012 Bus Rapid Transit (BRT) Concept Plan, the CSX line was envisioned as part of a dedicated bus rapid transit system that would connect Downtown Columbia and the Odenton MARC station. As shown on Map 19: Transit Service Map, stations were assumed at various locations including the Columbia park and ride, Snowden River Parkway, Columbia Gateway Drive, and Fort Meade.

This route would take advantage of the CSX right-of-way for approximately 4.9 miles between Oakland Mills Road and the Savage MARC Station. The study assumed local shuttles and circulators would convey passengers from a station located along the CSX line into the Gateway Site. This BRT concept was included in the 2020 Central Maryland Regional Transit Plan, which outlines how to improve public transportation in the region over the next 25 years.



Map 19: Transit Service. Proposed future transit service shown in Columbia Gateway Vicinity. (Source: Howard County Bus Rapid Transit Phase II Study Technical Report)

Dedicated Transitway and Station

Rather than locate a transit station along the CSX line, this master plan recommends that the Gateway transit stop be more centrally located near the southern limit of the Woonerf. The transitway would travel along Robert Fulton Drive, Lee Deforest Drive, Columbia Gateway Drive and Samuel Morse Drive, and the CSX multi-modal corridor. The proposed configuration is shown in Map 20: Multimodal Facilities Map.

Local Transit

The Transit Development Plan (TDP) serves as a guide for public transportation improvements within Howard County and surrounding communities over a five-year planning horizon. The TDP was most recently updated in 2023. It focuses on improving the efficiency and effectiveness of transit services and is intended to be responsive to changing land uses, demographics, and travel patterns. As of 2025, Gateway is served by RTA Route 406, which has the highest operating cost per trip among all routes and limited activity along much of its alignment. As Gateway evolves, the TDP will adapt to meet changing transit demands through the update process.

Additional Transportation Policies and Programs

Transportation Demand Management (TDM)

As described in HoCo By Design, Howard County's general plan, transportation demand management (TDM) is a group of strategies used to manage demand for travel on the transportation network. The focus is on moving people, not vehicles, creating a more efficient use of our roadways. The transportation needs and opportunities within Gateway will evolve as the master plan is implemented and developers begin to build out the site. As Gateway becomes more dense, additional TDM Strategies may make sense.

TDM products and services include encouragement to use alternatives to single-occupant vehicles (SOV) such as taking transit, ridesharing, riding bikes, and walking, thereby reducing the number of vehicles using the road network. Alternatives to commuting such as compressed work weeks, flextime, and telecommuting, as well as parking management tactics such as preferential parking for carpools and parking pricing are also effective strategies. Some communities have used “live near your work” incentives to reduce commute times and encourage mode shift, or electing to take transit, bike, or walk instead of drive. Per the Howard County *Transportation Demand Management* page, “the result of a successful TDM strategy is less traffic congestion, better air quality, and even happier, healthier communities.”¹⁹

The general plan describes how TDM strategies can involve providing information on the range of transportation options in a community, promoting travel options to community members and businesses, and developing incentives to support using non-automotive travel options, along with disincentives. Strategies also include parking management and reducing zoning requirements for provision of automobile parking to influence which transportation options people choose when they travel and reduce search times for parking. Even for people who elect to arrive at Gateway using a motorized vehicle, the complete street network and internal multimodal links provide an opportunity to park once to visit multiple destinations, thereby eliminating short motor vehicle trips within the site. Parking policies must be structured to allow visits to multiple destinations regardless of property ownership of the parking lot chosen.

This master plan recommends that Howard County develop a Transportation Demand Management Plan for Gateway to support non-automotive travel options and reduce demand on the motor vehicle transportation network.

¹⁹ *Transportation Demand Management*. Howard County Office of Transportation. (accessed 2025, March 2). <https://www.howardcountymd.gov/transportation/transportation-demand-management>.

Case Studies

Howard County required both Downtown Columbia and Maple Lawn in Fulton to adopt TDM strategies by completing a Transportation Demand Management Plan (TDMP).

Downtown Columbia (DTC) Transportation Demand Management Plan (TDMP)

The Downtown Columbia Master Plan called for the development of a Transportation Demand Management Plan (TDMP) for DTC to ensure it will be multi-modal as it grows. To do so, the role of travel options other than driving alone, such as taking the bus, biking, walking, telework and modified work schedules, needs to be increased.

The TDMP is a critical tool in enhancing the role of travel options. The initial 2018 plan was updated to be more aligned with the current development and transportation realities in DTC, as well as address COVID's impact on transportation choices. It includes steps to be taken by the Downtown Columbia Partnership and the Howard County Office of Transportation in both the short- and long-term to successfully implement TDM measures in Downtown Columbia.^{xi} This document was used to generate the recommendations for Gateway listed below.

Maple Lawn Transportation Demand Management Plan (TDMP)

On December 29, 2000, the Zoning Board's Decision and Order in Case No. 995M incorporated Exhibit 55, a Transportation Demand Management Plan, as part of the proposal to develop Maple Lawn in Fulton, thus becoming a requirement for development of the property. The TDMP states that the developer intended to spearhead the effort to create a coordinated TDM programming and included a funding mechanism of \$0.10 per square foot of leasable space in commercial buildings and \$30 per year for homeowners. Currently, implementation of the Maple Lawn TDMP is the responsibility of two parties: the residential homeowners' association and the developers, Greenebaum, and St. John's Properties.

Recommendations

Develop a TDMP for Gateway

Develop a TDMP for Gateway to support non-automotive travel options and reduce demand on the motor vehicle transportation network. The following recommendations were developed based on national best practices and strategies for Downtown Columbia. They are suggested for consideration and could be expanded upon during the development of the Gateway TDMP.

Work with Employers to Develop TDM Strategies for New Employees

The Howard County Office of Transportation (OOT) should work with incoming and existing employers to develop TDM Statements. OOT is currently working with partners in Downtown Columbia to develop a TDM creation guide and provide developers with model TDM statements.

Plan for Scalable Micromobility and Microtransit Options

Work with partners to expand transportation choice for travel within Gateway. Consider micromobility strategies like bikeshare or electric scooter-share programs. Explore expanding the Route 1 Corridor microtransit pilot project. Ensure the design of the streetscape throughout Gateway can accommodate micromobility and microtransit operations in the future.

Advocate for Increased Transit

To support the development of a transitway and dedicated transit station described in the Transit Connectivity section of the document, Howard County will need to continue to advocate for expanded transit options in the Gateway area by engaging with area elected officials and transit agencies.

Adopt Curb Management Strategies

Motor vehicles making deliveries or pickups to area businesses and residences can cause congestion and create a potential safety hazard when temporarily parked in the travel lane. Ensure curb management strategies are discussed during the site plan development process to ensure appropriate accommodations are made to minimize impacts. Some potential strategies include establishing time or use limits and flexible-use curb zones.

1 Implement Comprehensive Parking Management

2 Available, affordable, and convenient parking will incentivize driving to Gateway.
3 Parking supply, price, and accessibility should be carefully considered as it relates to
4 the proposed development during the site buildout process. Conversely, not
5 providing sufficient parking can result in increased congestion while drivers search
6 for a parking spot.

7 While some surface parking lots may remain or be needed for smaller development
8 sites, they should be avoided where high-intensity development is proposed. Surface
9 parking lots take up a lot of space, increases the distance between destinations, and
10 detract from the sense of place the master plan envisions. Structured parking
11 provides more parking in a smaller footprint and can be “hidden” above, below, or
12 wrapped within commercial or mixed-uses.

13 In partnership with landowners, developers, and stakeholders, Howard County
14 should work to minimize demand for on-site parking by exploring and developing
15 policies and programs, such as parking cashout programs, unbundling parking
16 benefits for new residential development, and creating a parking improvement
17 district to deliver parking capacity district wide. The outcomes of these policies and
18 programs will be to allow parking ‘once’ for a trip to Gateway, avoiding broad
19 segments of reserved parking dedicated to individual properties that is prevalent in
20 suburban parking areas. While some permitted or reserved parking may be
21 desirable, ample general parking dedicated to Gateway visitors must be provided to
22 avoid short, motorized vehicle trips within Gateway.

23 Explore the Development of a Live Near Your Work Program: Live Near Your Work
24 (LNYW) programs provide homebuying incentives for individuals who work within a
25 certain geographic area. Usually, LNYW programs are a partnership between the
26 local government entity and participating employers. A set dollar amount is provided
27 to prospective residents to incentivize the purchase or rental of a home or apartment
28 near their place of employment. The funds are usually allocated to down payment,
29 closing costs, or rental subsidies and are calculated based on local market
30 conditions. Often, a commitment to remain in the home for a set amount of time is
31 required. Howard County should explore the development of a LNYW program for
32 Gateway that reflects the housing goals included in Section 3.5.

1

Key Recommendations:

- +** Create an interconnected network that serves all modes and connects people walking, bicycling, and driving to Gateway
- +** Pursue a new access point from Route 175 through further evaluation and coordination with State Highway Administration and key stakeholders
- +** Provide employees and residents new walking, bicycling, and transit options to Gateway
- +** Develop a transportation demand management plan for Gateway to support non-automotive travel options and reduce demand on the motor vehicle transportation network

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3.8 Public Infrastructure

Gateway's redevelopment vision includes many public infrastructure investments to be made over the plan's long-term, 30-year implementation schedule. Given the breadth and complexity of infrastructure needed, a plan for public infrastructure and financing should be developed to guide future investment.

Potential Infrastructure Needs

The plan organizes potential infrastructure needs into categories, which include:

- Public facilities – such as public schools, police protection, fire/emergency medical services (EMS), public libraries, community centers, public restrooms, and parking garages
- External access improvements – vehicular access from Route 175 and multiple bike and pedestrian improvements (including the CSX multi-modal corridor)
- Internal road network and site circulation improvements – new streets, reconfigurations of existing streets (as complete streets)
- Water/sewer improvements – water supply and sewer system improvements
- Open spaces – including multiple types of open spaces shown on the open space framework, including the Woonerf, linear park, urban plazas, and neighborhood parks
- Innovation facilities – an innovation hub

Several of these infrastructure categories – transportation and mobility improvements, open spaces, and innovation facilities – are described in more detail in earlier sections of the plan. Public schools are described in later pages of this section.

1 With regards to fire/EMS, an evaluation should be conducted to determine the need
2 for a fire station to be located inside the Gateway area. Further, as Gateway
3 redevelops, it will be important to ensure that access requirements are met
4 (including, but not limited to secondary access, road width, turning radius, weight
5 capacity, etc.). The Office of the Fire Marshal can provide specific guidance as
6 redevelopment takes place and as the internal road network and external site access
7 points are further studied.

8 In addition, Howard County Police Department's Strategic Planning Section should
9 be involved in the evaluation of the road network and external site access and other
10 facility needs.

11 A comprehensive evaluation of police protection infrastructure, specifically the
12 potential for a full-service police station, is necessary. The type, amount, locations,
13 and phases of development in the Gateway redevelopment area will significantly
14 impact the police department's capacity to respond to calls and meet community
15 needs without further investments.

16 Previous studies have highlighted the advantages of adding a third police station
17 within the County – a recommendation included in the County's General Plan, HoCo
18 By Design. This station would serve not only the growing Gateway area but also the
19 surrounding regions and the County.

20 The evaluation should consider factors such as the number and location of existing
21 police stations, the number of authorized sworn officers, emergency call volume,
22 population density and growth trends, co-locating public safety facilities, and the
23 potential for incorporating integration technologies (like "Smart Cities") that
24 enhance service delivery to the community.

25 The Howard County Library System (HCLS) should evaluate the need for additional
26 library capacity to serve planned growth in Gateway. If there is a need for a new
27 library in Gateway, HCLS should consider integrating the library with other
28 complimentary public or private facilities as recommended in the County's general
29 plan, HoCo By Design.

30

Similarly, the County should evaluate the need for a new community center, serving all ages, or separate ones, as a resource for individuals, families, and the senior population.

As with the North Laurel Community Center, a facility could be designed to allow for future growth, based on the actual population it will be catering to (its site shall be sized accordingly).

Space for this facility should be centrally located, and easily reachable, either on foot or by different means of transportation, in addition to private cars.

Preliminary evaluation of water and sewer needs indicates that the water supply, with already planned improvements and some necessary operating changes, can meet anticipated demand (as based on the market estimates presented earlier in the document). The sewer system will need not only investment in already planned improvements, but also other considerable improvements (which could include new or expanded pumping stations and sewer pipes). However, such improvements are not anticipated to be needed in the near term, allowing time to plan and fund these improvements. The extent and timing of improvements will depend on the amount, type, and timing of new development.

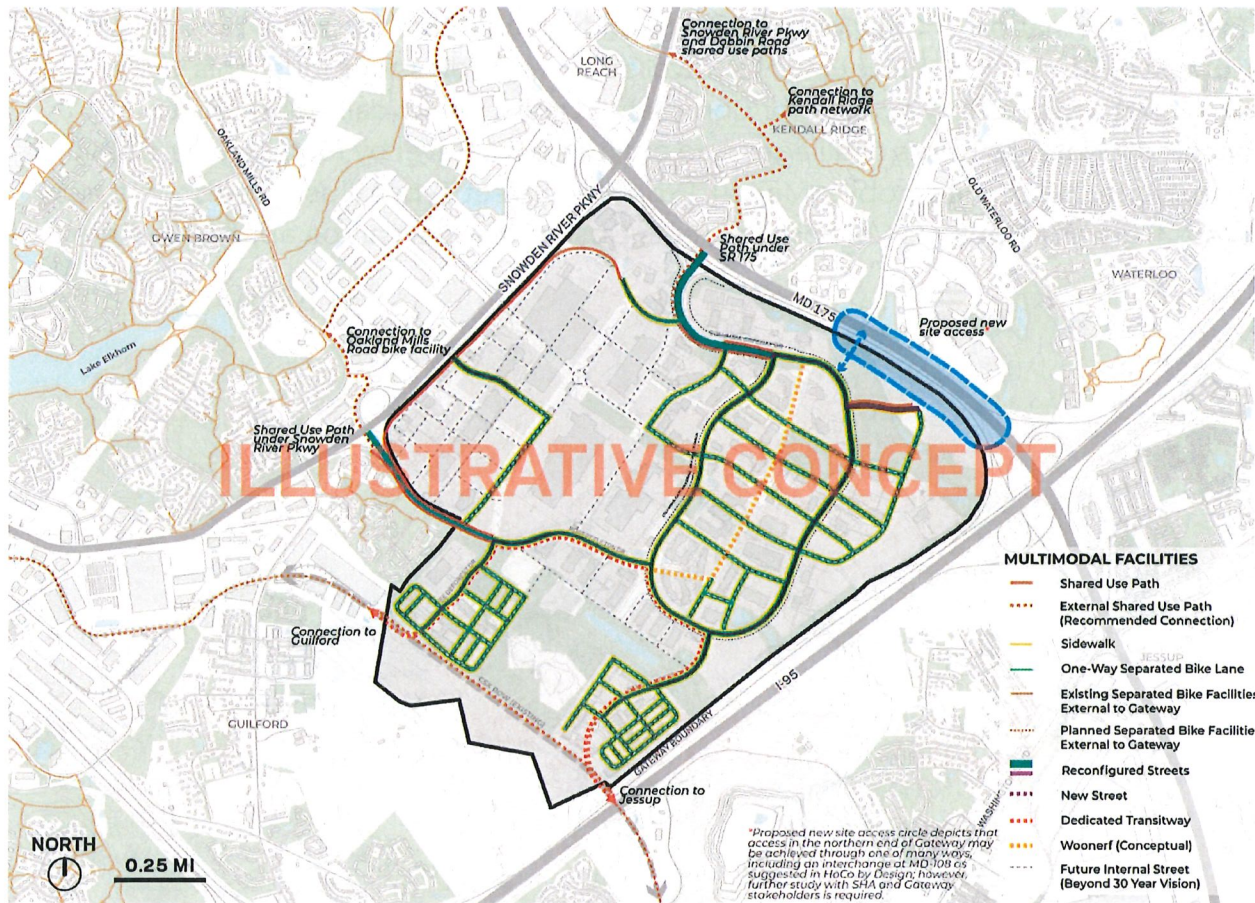
Further, sustainable strategies, like greywater reuse and onsite blackwater treatment, could offset the need for sewer capital improvement to serve future demand. As an innovation district, Gateway may include data centers, which are heavy-impact water users, primarily for cooling. Therefore, onsite reuse has the potential to drastically reduce freshwater demand and wastewater discharge. More importantly, onsite water reuse will make Gateway less vulnerable to water shortages, droughts, and public infrastructure failures. This in turn enhances resiliency and operational continuity at Gateway. With regards to onsite blackwater treatment, there are a few factors that need to be considered and evaluated. For example, factors such as high upfront cost of investment, skilled personnel for ongoing operations and maintenance, strict regulatory compliance, and concerns regarding safety and odor would need to be thoroughly evaluated.

Mobility Improvements within Gateway

In addition to improving external access, the plan proposes a new internal road network and site circulation improvements, illustrated in Map 20: Multimodal Facilities. The alignment of new streets is based on three main principles:

- Create an interconnected network of streets that builds off the existing street network with new streets that follow existing property lines
- Design all proposed and reconfigured streets as Complete Streets using the typical street types in Howard County Design Manual Volume III, Complete Streets and Bridges
- Design new streets as extensions of existing streets where possible (e.g. Eli Whitney Drive and Benjamin Franklin Drive)

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3 Map 20: Multimodal Facilities Map

4 Map depicting multimodal facilities proposed within Gateway and existing and proposed shared use

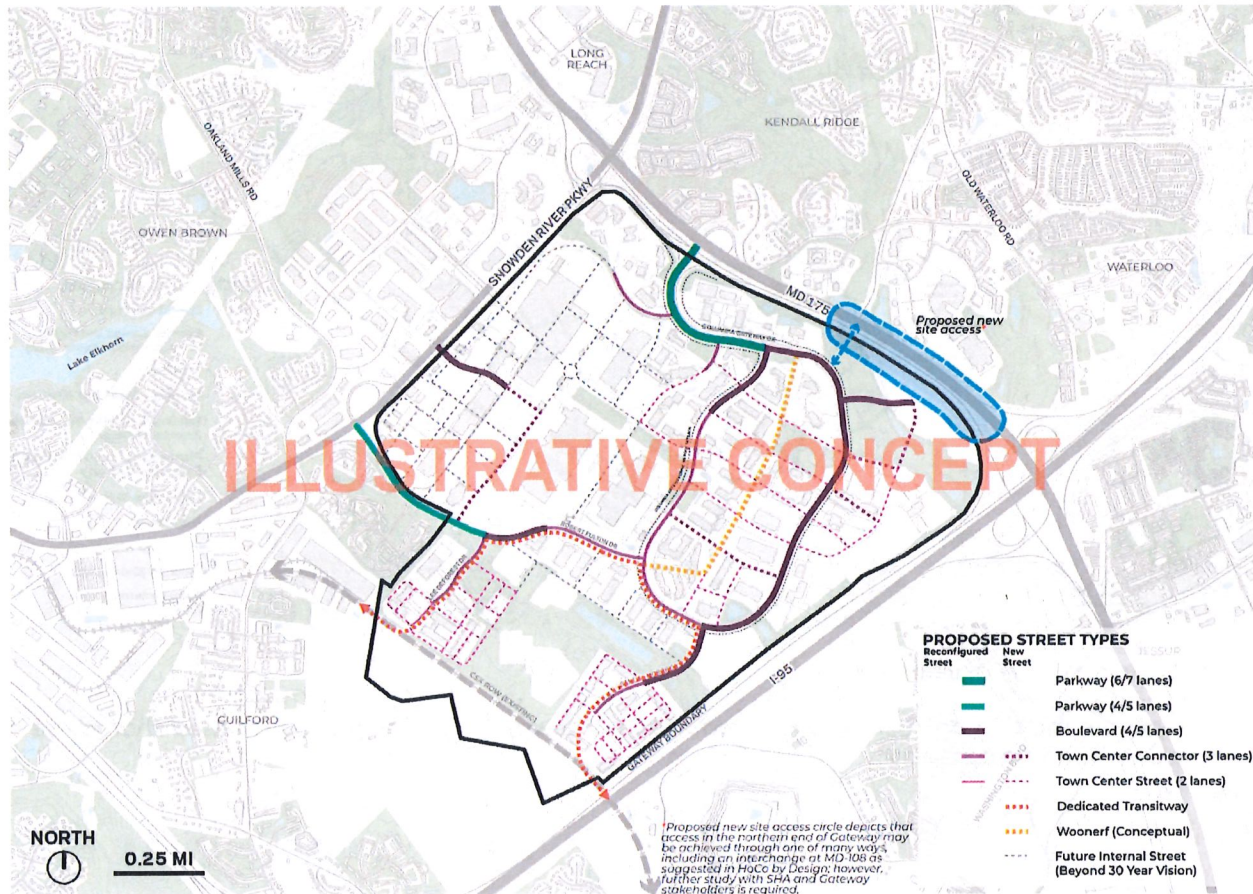
5 facilities surrounding gateway.

6

7

Proposed Complete Street Network

The transformation of Gateway's existing roads to an interconnected network of Complete Streets will allow users to travel safely regardless of mode. This vision aligns with the County's policy for Complete Streets, which calls for roads to accommodate residents of all ages and abilities who travel by foot, bicycle, public transportation or automobile. Map 21: Proposed Street Types illustrates how street types from the County's Complete Streets Design Manual can be applied to Gateway.



Map 21: Proposed Street Types Map

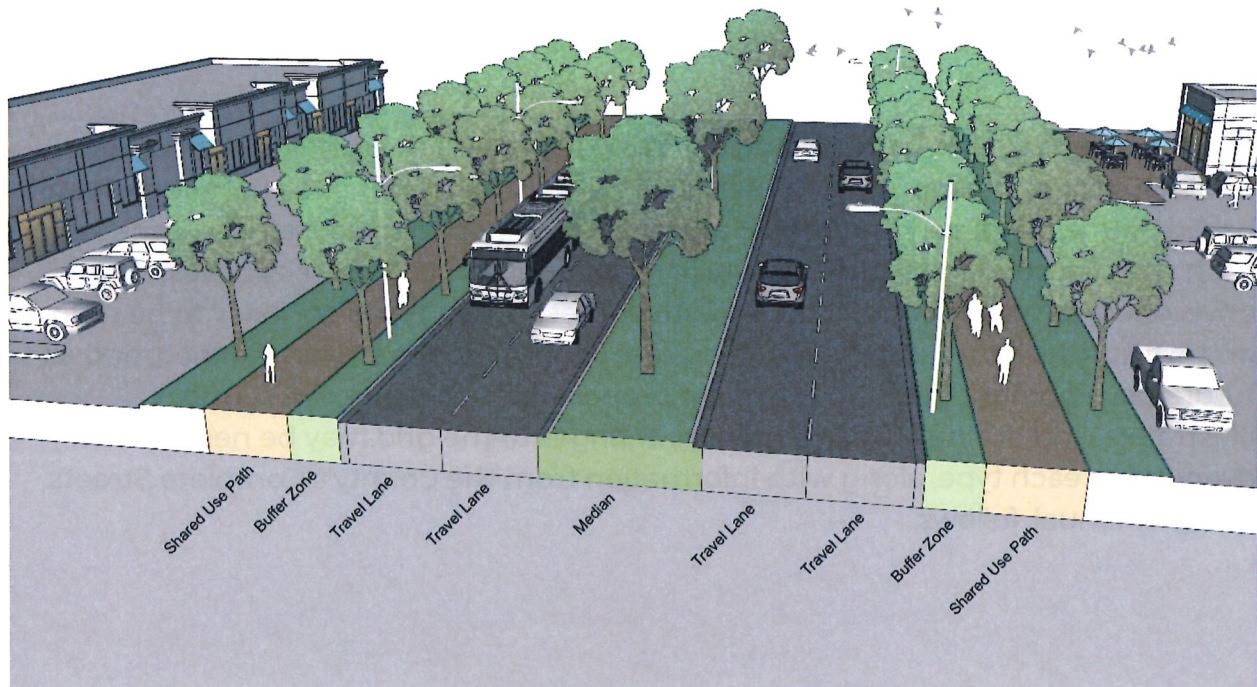
Map depicting the Street Types for existing and new streets within Gateway

1 **Street Types**

2 The Street Types included in the Design Manual were developed by linking land use
3 contexts common to Howard County with accommodation for all modes of travel.
4 Boulevards, Town Center Connectors, and Town Center Streets were developed to
5 provide safe multimodal facilities in higher density mixed-use areas, similar to what
6 is proposed in Gateway. The Parkway and Neighborhood streets were intended for
7 lower density suburban environments, which could accommodate Gateway's
8 industrial uses.

9 The proposed street types depicted in Map 21 include Parkways, Boulevards, Town
10 Center Connectors, and Town Center Streets. The street types shown were evaluated
11 based on the travel demand model and the resultant projected traffic volume for
12 each street according to the intensity of residential and commercial development
13 envisioned, as well as continuing industrial. These street types are likely to be refined
14 in the future as internal and external access configurations are determined, and as
15 future development types and uses are proposed. Further, the street grid is
16 illustrative, and during implementation, changes to the grid may be needed. An
17 overview of each type, along with information from the County's Complete Streets
18 Design Manual, follows.

- 1 **Parkways** are 4/5 or 6/7 lane divided streets with grass or landscaped medians. They
- 2 are intended to serve as streets which can accommodate a large motor vehicle
- 3 demand. Treed buffer zones separate travel lanes from shared use paths for people
- 4 walking and bicycling.



Street Type	Right of Way Width	Center Turn Lane/Median	Inside Travel Lane*	Outside Travel Lane	Shoulder/Offset from Curb	Parallel Parking	On-Street Bike Lane	Buffer Zone***	Separate Bike Lane	Sidewalk	Shared Use Path	Target Speed	Carrying Capacity
Parkway (6-lane)	122'	11' **/ 16' min	12' **	11'	1'	N/A	N/A	6'	N/A	N/A	10' (2 sides)	varies	50-60k
Parkway (4-lane)	112'	11' **/ 28'	12' **	11'	1'	N/A	N/A	6'	N/A	N/A	10' (2 sides)	varies	50-60k

*Against center line/median; ** Includes 1' gutter pan; ***Dimension measured from back of curb to sidewalk/separated bike lane/shared use path

Figure 31: Street Type - Parkway Section and Dimensions

Boulevards are 4/5 lane divided streets with grass or landscaped medians that also provide a median crossing island. They are intended as principle motorized vehicular routes in higher density mixed-use areas. Separated walking and bicycling facilities – like sidewalks and bike lanes – are provided, rather than shared use paths, given anticipated high volumes of pedestrians and bicyclists. The graphic in **Figure 33** depicts on-street parking, however, on-street parking is not envisioned on all Boulevards in Gateway in order to minimize right of way needs.

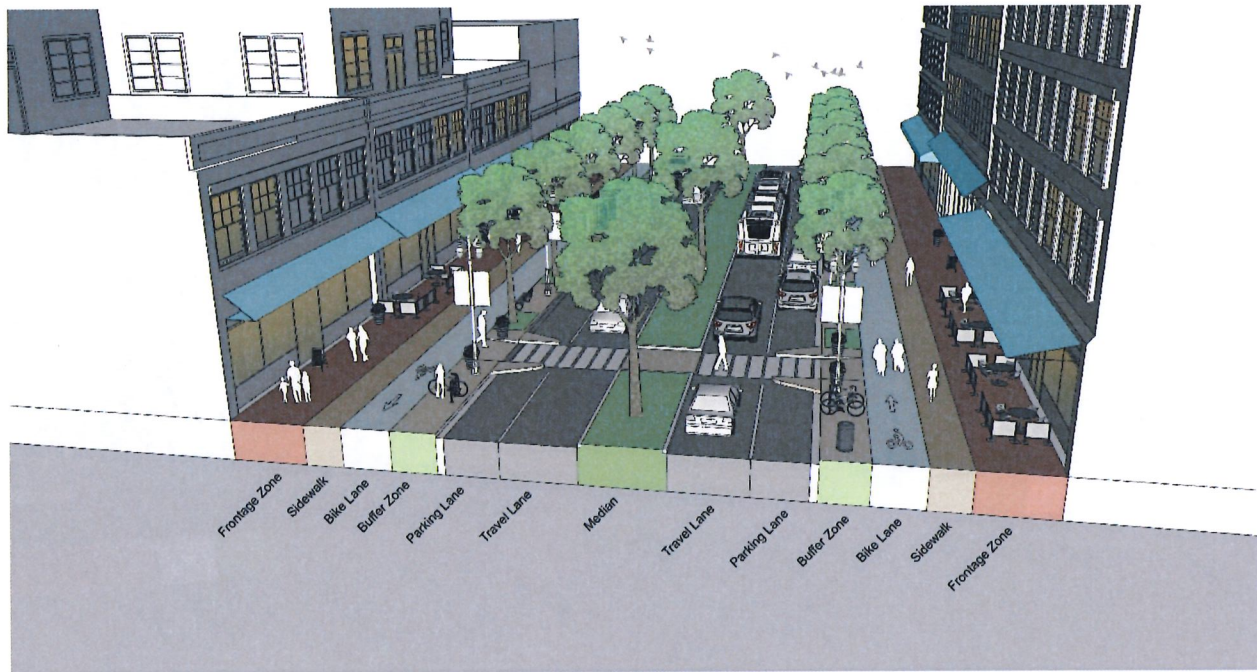


Street Type	Right of Way Width	Center Turn Lane/Median	Inside Travel Lane*	Outside Travel Lane	Shoulder/Offset from Curb	Parallel Parking	On-Street Bike Lane	Buffer Zone ***	Separate Bike Lane	Sidewalk	Shared Use Path	Target Speed	Carrying Capacity
Boulevard	116'	11' **/ 16'	11' **	11'	N/A	8' **	N/A	6'	6.5'	5' min (2 sides)	N/A	25 mph	35-40k
Boulevard No Parking	100'	11' **/ 16'	11' **	11' **	N/A	N/A	N/A	6'	6.5'	5' min (2 sides)	N/A	25 mph	35-40k

*Against center line/median; ** Includes 1' gutter pan; ***Dimension measured from back of curb to sidewalk/separated bike lane/shared use path

Figure 32: Street Type - Boulevard Section and Dimensions

Town Center Connectors are 3 lane streets with center turn lanes. They are intended for streets with a moderate motorized vehicle demand. Like Boulevards, volumes of pedestrians and bicyclists are anticipated to be high; therefore, separated walking and bicycling facilities are provided rather than shared use paths. Curb extensions and median refuges should be provided in mid-block crossing locations. On-street parking is not envisioned on all Town Center Connectors in Gateway in order to minimize right of way needs.

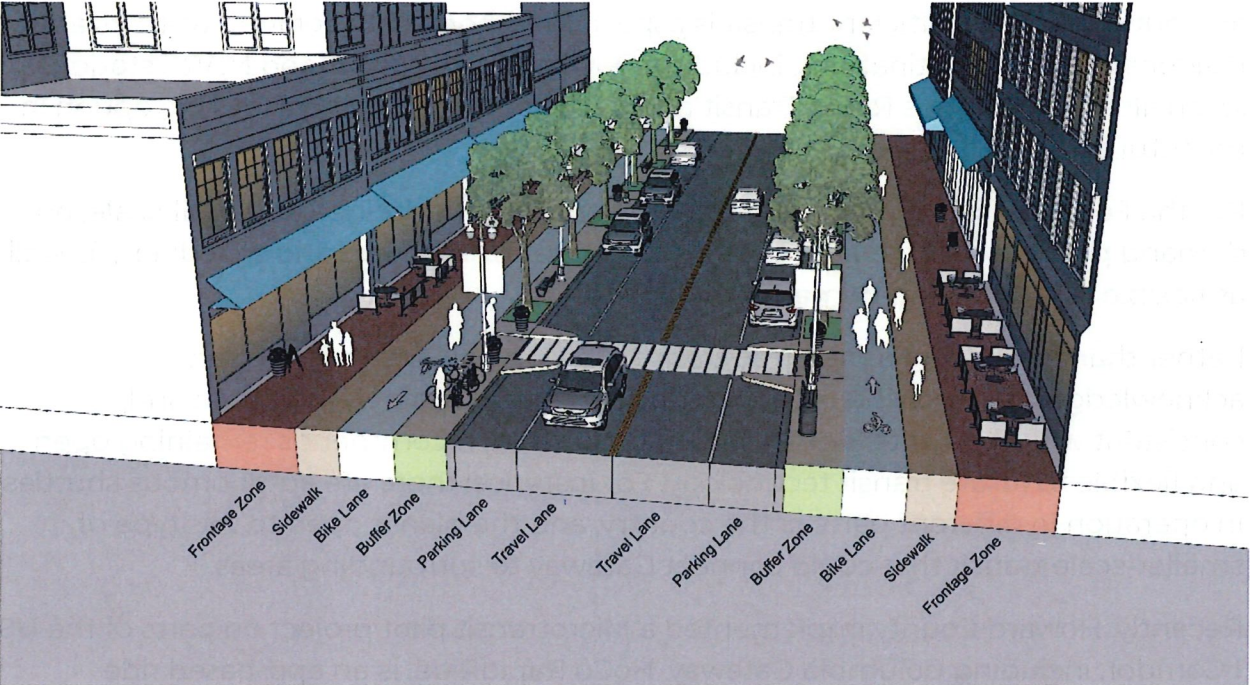


Street Type	Right of Way Width	Center Turn Lane/Median	Inside Travel Lane*	Outside Travel Lane	Shoulder/Offset from Curb	Parallel Parking	On-Street Bike Lane	Buffer Zone***	Separate Bike Lane	Sidewalk	Shared Use Path	Target Speed	Carrying Capacity
Town Center Connector	88'	11'	N/A	11'	N/A	8' **	N/A	6'	6.5'	5' min (2 sides)	N/A	25 mph	<20k
Town Center Connector No Parking	72'	11'	N/A	11' **	N/A	N/A	N/A	6'	6.5'	5' min (2 sides)	N/A	25 mph	<20k

*Against center line/median, ** Includes 1' gutter pan, ***Dimension measured from back of curb to sidewalk/separated bike lane/shared use path

Figure 33: Street Type - Town Center Connector Section and Dimensions

1 **Town Center Streets** are 2 lane streets which are anticipated to have limited
2 motorized vehicle demand. Like Town Center Connectors, separate walking and
3 bicycling facilities are provided rather than shared use paths in anticipation of high
4 volumes of pedestrians and bicyclists.



Street Type	Right of Way Width	Center Turn Lane/Median	Inside Travel Lane*	Outside Travel Lane	Shoulder/Offset from Curb	Parallel Parking	On-Street Bike Lane	Buffer Zone***	Separate Bike Lane	Sidewalk	Shared Use Path	Target Speed	Carrying Capacity
Town Center Street	76'	N/A	N/A	10.5'	N/A	8' **	N/A	6'	6.5'	5' min (2 sides)	N/A	25 mph	<12k
Town Center Street No Parking	64'	N/A	N/A	12' **	N/A	N/A	N/A	6'	6.5'	5' min (2 sides)	N/A	25 mph	<12k

*Against center line/median; ** Includes 1' gutter pan; ***Dimension measured from back of curb to sidewalk/separated bike lane/shared use path

Figure 34: Street Type - Town Center Street Section and Dimensions

1 **Microtransit**

2 As the entire master planning area is nearly 1,100 acres, and higher-intensity
 3 development is envisioned in strategic nodes and along the Woonerf, future workers
 4 and residents may need to travel via methods other than foot or bike within and in
 5 and out of Gateway. Efficient transit is especially important to connect workers and
 6 residents to other destinations, including Downtown Columbia and MARC stations.
 7 As an alternative to Bus Rapid Transit (BRT), microtransit may be a feasible option in
 8 the future.

9 Per the Federal Highway Administration, microtransit is defined as “small-scale, on
 10 demand public transit services that that can offer fixed routes and schedules, as well
 11 as flexible routes and on-demand scheduling.”²⁰

12 Rather than identifying a preferred transit type within Gateway, the plan
 13 acknowledges the evolving technologies associated with transportation and,
 14 consistent with the context of an innovation district, recommends remaining open
 15 and flexible to future transit technology. For instance, there are autonomous shuttles
 16 in operation in different parts of the country, and the plan is open to this type of
 17 smaller-scale transit that could connect Gateway to surrounding areas.

18 Recently, Howard County implemented a Microtransit pilot project on parts of the US
 19 1 Corridor, including Columbia Gateway. HoCo RapidRide, is an app-based ride
 20 hailing service with a ½ hour pickup window.

²⁰ Microtransit. American Public Transportation Association. (2025). <https://www.apta.com/research-technical-resources/mobility-innovation-hub/microtransit/>

1 *Phasing Infrastructure Investment*

2 Gateway's redevelopment will not occur all at once, and neither will investment in its
 3 infrastructure. As previously mentioned, a plan for public infrastructure and
 4 financing should be developed. This plan should further evaluate and establish a
 5 recommended sequence of investments and consider how some nodes may be the
 6 earliest locations for new development; however, the master plan provides an
 7 illustrative concept of how some key infrastructure pieces could be phased
 8 (illustrated in Map 22: Conceptual Infrastructure Phasing). Infrastructure
 9 investments—along with expanded programming to support employment growth
 10 and new zoning—can catalyze redevelopment. Some infrastructure investments
 11 may require an incremental approach. For example, the Woonerf and new streets
 12 may develop gradually, as redevelopment occurs.

13 The design of the Woonerf will depend on the scope of the design of the associated
 14 redevelopment. For example, a phase one scenario could involve the development of
 15 the Innovation Hub and an associated plaza that is designed to become a part of the
 16 Woonerf. Meanwhile, a redevelopment in another block could build a segment of the
 17 Woonerf and a side road; to avoid a 'hidden' front door, the redevelopment's front
 18 door could be located at the corner of the new side road and Woonerf. To connect
 19 the Innovation Hub Plaza to this Woonerf segment, a temporary multi-use path
 20 could be built. That temporary path would then be transformed into the Woonerf as
 21 additional redevelopments occur.

22 It is important to note that certain types of infrastructure – like police and fire access
 23 needs and stormwater – are reviewed and addressed at the site plan level, when
 24 redevelopment projects are proposed. Redevelopment projects are subject to
 25 Adequate Public Facilities Ordinance (APFO) requirements. On the water-sewer side,
 26 the County updates its Master Plan for Water and Sewerage every three years;
 27 therefore, Gateway will be incorporated into triennial updates. The Howard County
 28 Public School System updates its Educational Facilities Master Plan annually, and it
 29 will address Gateway in the future. Community facilities, such as police, fire, and
 30 recreational, are addressed through capital planning. Overall, the county has various
 31 reviews and planning processes to provide adequacy checks along the way for
 32 redevelopment projects.

Conceptual Infrastructure Phasing

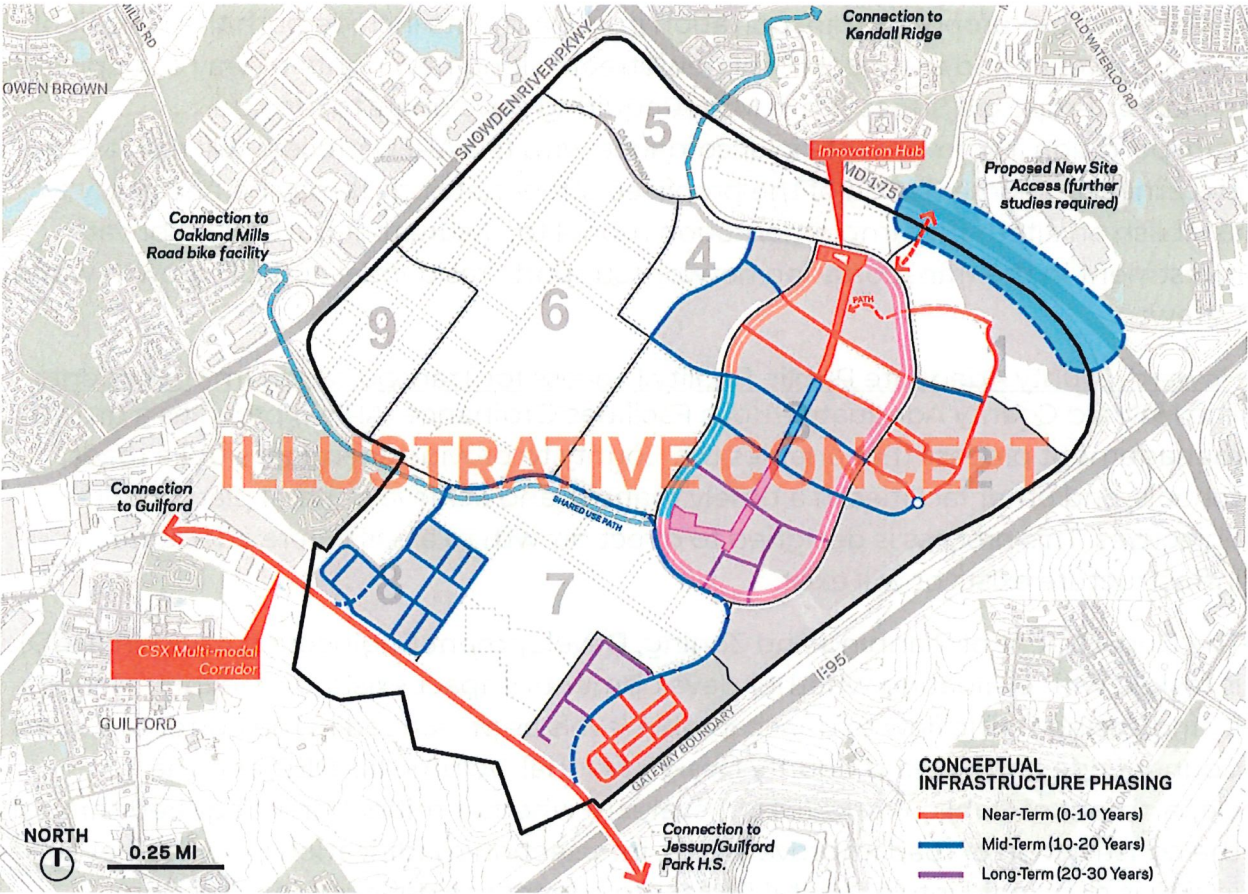
In the near-term (0 to 10 years) – infrastructure investment could begin in the northern part of the site with investment in an innovation hub (envisioned to be a catalyst use) and evaluation of a new access point along Route 175. Private development opportunities in nodes may be pursued, and investment in a first segment of the Woonerf and internal roads could be built. At the same time, investment in the CSX multi-modal corridor can occur in the southern part of the site to connect Gateway to neighboring communities. And, the County can seek opportunities to acquire sites for public infrastructure needs, such as schools, libraries, fire stations, etc.

In the mid-term (11 to 20 years) – the second, additional investment in the Woonerf could be built along with additional internal roads. The mid-term may also include investment in Route 175 access in the north, and construction of the dedicated transitway in the south.

In the long-term (21 to 30 years) – completion of the Woonerf could occur, along with additional internal roads.



1



Map 22: Conceptual Infrastructure Phasing Map

Transportation Phasing Considerations

In Gateway, the proposed transportation improvements include both the retrofit of existing streets, and the creation of new streets along new rights-of-way as depicted in Map 21: Proposed Street Types Map. Requiring developers to provide transportation improvements in accordance with the APFO process will result in a piecemeal implementation of the proposed street network. It may be necessary to establish an alternative implementation model to ensure that public and private investment in the transportation network supports residential and job growth within Gateway.

Howard County Adequate Public Facility Process for Transportation Improvements

The Howard County Adequate Public Facilities Ordinance (APFO) provides a growth management process that enables the County to provide adequate public roads, schools, and other facilities in a timely manner and achieve general plan growth objectives. This process is designed to direct growth to areas where adequate infrastructure exists or will exist.

The Department of Planning and Zoning, Development Engineering Division (DED) is tasked with evaluating whether developments impact existing road intersections by increasing traffic flow to unacceptable levels as prescribed in the current Howard County Code and Howard County Design Manual, Volume III. DED and the Department of Public Works (DPW) evaluate whether mitigation is required through the construction of road improvements, intersection modifications, or whether a fee-in-lieu is to be paid into a Capital Project to correct the deficient intersection.

The APFO process often results in the construction of frontage improvements along the edge of a development that fronts on an existing road, new roads internal to the proposed development, and off-site intersection improvements.

This process works well when applied to individual residential or commercial developments, or when to the development of a larger greenfield, or undeveloped area. It is less well suited to the redevelopment of a larger area with multiple property owners for two primary reasons:

- Retrofitting an existing street to a new street type cannot occur one frontage improvement at a time. For safety and accessibility reasons, it is necessary to ensure consistency of motor vehicle lane configuration, bicycle facilities, and pedestrian facilities along a corridor, and the continuity and connectivity of routes as they are implemented across the site.
- Intersections should not be continually modified and expanded as each additional parcel is redeveloped. Instead, intersections should be designed to accommodate all future forecast growth within the master planned area. Evaluating the same intersection with each new development would result in the same intersection being studied and potentially modified with each new development.

CASE STUDIES

An overview of three infrastructure implementation case studies is included below for consideration during the development of the plan for public infrastructure and financing reviewed in this section.

Case Study 1: Downtown Columbia, Howard County, MD

The Downtown Columbia Master Plan was adopted in 2010 as an amendment to Howard County's General Plan. The master plan outlines a 30-year revitalization and redevelopment effort focused on fostering a mixed-use walkable urban center with higher density residential, office, retail, and entertainment amenities. HoCo By Design, the County's new General Plan, carries forward the Downtown Columbia Plan.

Regarding infrastructure, the Downtown Columbia Master Plan:

“...recommends that private developers, not current residents be responsible for the cost to design, permit, and construct, in addition to their own buildings and facilities, all necessary County roads, intersections, and sidewalks, including upgrades to existing roads in accordance with the Adequate Public Facilities Act and new non-program sized sewer and water lines within Downtown Columbia. Water and sewer system improvements should continue to be funded by user revenues paid to the Water and Sewer Enterprise Fund.”

Since transportation improvements were completed following the Adequate Public Facilities process, implementation of infrastructure in Downtown Columbia has been piecemeal. Traffic studies are submitted by the developer for each phase, and the resulting transportation network reflects what is needed for each phase of project development rather than the site as a whole.

Implementing transportation improvements based on existing APFO requirements, on a piecemeal basis, does not retrofit the existing suburban infrastructure quickly which can reduce progression to a more urbanized community. Urban environments strive for roadways that accommodate multiple modes of transportation, including connectivity for bicyclists and pedestrians.

In addition to the challenges of incrementally creating transportation improvements, this same challenge is a barrier to creating efficient parking options. An authority, public/private partnership, or cooperative structure that allows multiple stakeholders to collaborate to deliver projects may allow for greater flexibility in ensuring that transportation and parking is provided in locations supporting multimodal connectivity.

Case Study 2: White Flint, Montgomery County, MD

White Flint, situated in Montgomery County just outside the Capital Beltway, lies between Rockville and Bethesda. It benefits from excellent transit access, as it is positioned along the Route 355/Interstate 270 Corridor—a historic route connecting Montgomery County to Frederick County.

In 2010 Montgomery County Council approved the White Flint Sector Plan^{xiii}. The Plan espouses goals like Howard County's Goals for Gateway. Per Montgomery County's website, the Plan aims to:

- Create a thriving, diverse mixed-use center with highest intensity closest to Metro and along Rockville Pike
- Create new parks and open spaces
- Transform Rockville Pike into a boulevard with street trees and improved crosswalks
- Develop a transportation network that includes a grid of new public streets
- Improve the pedestrian and bicycling environment
- Promote sustainable development

The White Flint Special Taxing district was established by Montgomery County Council Bill Number 50-10 to fund projects to improve area amenities including public spaces, streetscape improvements, and bikeways. The legislation stipulates that the funds collected shall not exceed an amount sufficient to cover the costs of transportation infrastructure approved by the Council. Tax rates are determined based on the estimated cost, including contingency, for each listed transportation infrastructure improvement.

The Montgomery County Planning Board approved Implementation Guidelines for the monitoring, coordinating, and staging for the implementation of recommendations in the Sector Plan. An Implementation Advisory Committee meets regularly to identify new projects for the amenity fund and monitor the County Capital Improvement Program and Growth Policy.

Case Study 3: Delaware Transportation Improvement Districts

The State of Delaware utilizes Transportation Improvement Districts (TIDs) to “provide the transportation improvements needed to support land development in locations identified as appropriate for development in local Comprehensive Plans. Coordinating land use and transportation can lower infrastructure costs and foster planning for market ready development / redevelopment opportunities.” DeIDOT administers 7 TIDs that are in operation and 7 TIDs in development across the state. Private developments or redevelopments within the geographic limits of a TID are assessed as a transportation-based impact fee, which allows for the cost of transportation improvements to be equitably distributed among the private sector partners that will benefit from the new facilities. Transportation improvements are triggered by development related growth.

According to *Transportation Improvement Districts: A Guide for Delaware Local Governments*, TIDs have the following benefits:

- Foster market-ready (re) development
- Support complete communities
- Focus transportation investments to high-priority growth areas
- Complement master plans
- Provide for “fair-share” contributions to transportation improvements
- Improve cost-effectiveness and efficiency of transportation improvements
- Promote intergovernmental coordination

Key Recommendations:

- + Consider an alternative implementation model to ensure that public and private investment in the transportation network supports residential and job growth within Gateway
- + Explore alternative models for creating efficient parking options in locations that support multi-modal connectivity

1 *School Capacity Considerations*

2 As Gateway adds new multi-family housing and denser missing middle housing
3 types, there will be school children living in the community. Since Gateway's housing
4 types will be more urban than most of Howard County's suburban-style homes, pupil
5 yields in Gateway are anticipated to be lower than countywide average pupil yields.

6 As directed by HoCo By Design, the County's Department of Planning and Zoning
7 conducted a pupil yield analysis to better understand student generation rates by
8 housing types and neighborhoods. The analysis evaluated historical pupil enrollment
9 data from the Howard County Public School System (HCPSS) from 2013 through
10 2023. It determined that pupil yields vary by housing types and neighborhood, with
11 smaller housing types yielding fewer students per unit.

12 Newer multi-family developments, such as those in Downtown Columbia, have
13 significantly lower student yields compared to single-family housing types and also
14 lower yields compared to garden-style apartment units. If new multi-family housing
15 in Gateway follows market trends in the region, it may redevelop with many studios,
16 one-bedroom units, and two-bedroom units, and a lesser number of three-bedroom
17 units, which are more typical of garden-style apartments. The pupil yield study
18 shows that apartment buildings with a lower average number of bedrooms per unit
19 generate lower pupil yield rates than the countywide average.

- 20 • It is possible that Gateway's multi-family units could yield similar numbers of
21 students to Downtown Columbia's newer multi-family buildings. Pupil yield
22 rates could be approximately 0.04 students per unit if rates are similar to those
23 generated in 2023 by the Metropolitan, TEN.M & m.flats, and Juniper. This yield
24 level is significantly lower than the countywide average apartment student
25 yield rate of 0.31 pupils per unit, about 8 times less.
- 26 • In another scenario, Gateway's multi-family units could yield students at rates
27 like newer multi-family buildings countywide (i.e., those built since 2010, which
28 in 2023, generated 0.19 students per unit), still much less than the 0.31
29 countywide average student yield rate.
- 30 • Meanwhile, denser missing middle housing types could yield similar numbers
31 of students as townhomes (0.51 pupils per unit as noted above).

- Regardless of whichever development scenario plays out, further evaluation and coordination with HCPSS will be needed to estimate future pupil yields and plan for needed public school capacities.
- Further, the County should work with HCPSS to reassess pupil yields as redevelopment progresses over the 30-year period.

According to the HCPSS 2024 School Feasibility Study, Gateway is currently assigned to Cradlerock Elementary School, Lake Elkhorn Middle School, and Oakland Mills High School. The Adequate Public Facilities Ordinance (APFO) 2027-2028 School Capacity chart indicates that the Cradlerock Elementary School district is closed, meaning that if any residential development were proposed for the site today, it would be placed in a waiting bin for up to five years.

The APFO school capacity chart is updated annually and informed by HCPSS enrollment projections and capacity utilization calculations prepared by HCPSS.

Like the APFO School Capacity chart, the HCPSS Feasibility Study is updated annually. Moving forward, the information in the annual Feasibility Study will be presented in the Educational Facilities Master Plan (EFMP). Enrollment projections are based on various factors (such as birth rates, housing resales, and apartment turnover). Near-term housing growth projections factor into the enrollment projections as well and are based on plans recently approved by the County's Department of Planning and Zoning and future redevelopment potential based on zoning capacity.

Since Gateway's existing zoning does not allow for residential development, Gateway has not yet been included in the HCPSS annual enrollment projections. Once Gateway's zoning is changed to allow residential development, its potential housing growth can be factored into the HCPSS projections. Additionally, pupil yields and school capacity needs should be reassessed as Gateway adds residential units.

While further evaluation and coordination will be needed to more fully plan for public schools, the master plan outlines some preliminary recommendations for the County and HCPSS to consider.

Near-term preliminary recommendations:

- Incentivize private property owners to proffer land or dedicate suitable site(s) for future school use. As part of the development of an alternative zoning program, incentives to support land dedication for public schools should be considered.
- Seek opportunities to acquire sites suitable for public infrastructure needs in Gateway (for schools, fire and police stations, and libraries). While the County may not have immediate needs for these facilities, available sites could be acquired in the near-term with leaseback options for tenants to hold land for future school or other community facility needs. Such a leaseback strategy is described in HoCo By Design.
- Consider pursuing a public-private partnership model, as contemplated in HoCo By Design, to address near-term school site acquisition. In addition to offering incentives, the County, HCPSS and property owners may want to seek opportunities to pursue a cooperative agreement or public-private partnership in the near-term to reserve a site for potential school use.
- Assess school capacity needs at the time of rezoning and monitor pupil yields generated from new housing in Gateway.

Near/mid-term preliminary recommendations:

- Seek opportunities to reassign Gateway to school districts with the capacity to help catalyze redevelopment in the near-term. While school capacity needs are being evaluated, the County, with HCPSS, determines if a site inside Gateway is needed for a school. As Gateway currently does not have any residential units, reassigning would have no impact on existing students or families in Gateway. Gateway could be reassigned to one or more schools with capacity to facilitate redevelopment.

Alternative School Site Models

The County's General Plan, HoCo By Design, includes some guidance for future school sites, especially for activity centers (places where housing and businesses are mixed together in a walkable environment), of which Gateway is the largest. The general plan calls for exploration of opportunities to co-locate schools with other public amenities – like libraries, parks, affordable housing, and athletic fields, to make use of limited greenfield space and leverage additional funding opportunities.

HoCo By Design also suggests that alternative school design models be examined to maximize available land resources. Such alternative designs may include higher capacity buildings, smaller footprints, shared site amenities, vertical construction, and adaptive reuse of underutilized properties. There are examples of alternative designs from different parts of the country. These designs typically share some common features:

- Smaller footprints compared to schools typically found in suburban settings
- Shared recreational facilities or rooftop play areas
- Shared parking
- Bus drop off zone on a secondary street
- Compact or vertical form which can allow for innovative design and greater energy efficiency

1



**H-B Woodlawn Secondary Program (HBW),
Arlington, VA (+/- 2.5 Acre Site)**

Small footprint, with access to transit and bike infrastructure, kids play areas on roof terraces, newly constructed field on top of a single-level parking, and curb-side bus drop-off zone on secondary street (bottom right)

2

H-B Woodlawn Secondary Program (HBW), Arlington, VA (+/- 2.5 Acre Site): Small footprint, with access to transit and bike infrastructure, kids play areas on roof terraces, newly constructed field on top of a single-level parking, and curb-side bus drop-off zone on secondary street (bottom right)

3



Urban School of San Francisco, California (+/- 0.7 Acre, divided into two sites)

A K-12 school with athletics and academic facilities in separate buildings (within less than 5 minutes walking), easy access to transit, walk or bike are the main way of commute (top)

The Nueva School, San Mateo, California (+/- 2.8 Acre Site)

Capacity for over 450 students, high-density mixed use area, close to a transit station, and parking below grade.



Tenderloin Community E.S., San Francisco, California (+/- 1.5 Acre Site)

Small building footprint in a dense urban area, capacity for over 300 students (Pre K to K-5), walking distance to Metro and Bus Rapid Transit (BRT), kids play areas at grade and on rooftops (bottom)



Urban School of San Francisco, California (+/- 0.7 Acre, divided into two sites): A K-12 school with athletics and academic facilities in separate buildings (within less than 5 minutes walking), easy access to transit, walk or bike are the main way of commute (top)

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Tenderloin Community E.S., San Francisco, California (+/- 1.5 Acre Site): Small building footprint in a dense urban area, capacity for over 300 students (Pre K to K-5), walking distance to Metro and Bus Rapid Transit (BRT), kids play areas at grade and on rooftops (bottom)

These design features are aligned with the vision for a more compact, urban form in Gateway. The site is anticipated to redevelop with a greater variety of building heights than in other parts of Howard County. Complete streets are planned throughout the site, along with numerous bicycle and pedestrian connections to and from the site – resulting in potential for walking and biking to school.

Gateway is also being planned with various types of open spaces, including neighborhood parks, linear pathways, and pocket parks. These could potentially be utilized as shared recreational facilities with a school. Shared parking strategies can be considered to help reduce the footprint required for a new school site. Further, there may be opportunities to connect future students in Gateway with the innovation district’s burgeoning industries.

Preliminary recommendations for the County and HCPSS to consider in the near-term include:

- Examine alternative school design models that establish a variety of ways to maximize available land resources
- Explore the opportunity to establish a 21st century urban school model that embodies innovation in Gateway
- Consider the suitability of existing buildings for adaptive reuse as an alternative school design that utilizes a smaller footprint

Further evaluation and coordination will be needed with HCPSS to more fully evaluate the potential for an alternative school design in Gateway.

Key Recommendations:

- ✚ Develop a plan for public infrastructure and financing to guide future investment in public facilities, transportation and mobility improvements, water/sewer improvements, open spaces, and innovation facilities
- ✚ Further evaluate and coordinate with HCPSS to more fully plan for public schools, considering the master plan's preliminary recommendations

CHAPTER 4 – IMPLEMENTATION

4.1 Pacing Growth

HoCo By Design describes how Gateway – in addition to Downtown Columbia – represents one of the last large potential growth centers in the County. The general plan goes on to describe how Gateway is poised to be the County's next big mixed-use center and will help accommodate future jobs and housing demand.



Figure 35: Summary of Market Demand

Non-residential market potential

Market evaluation conducted for the master plan suggests that over 30 years, Gateway could add approximately 4,700-8,100 new jobs, equating to a net additional demand for roughly 1-1.8 million new square feet of nonresidential space. The tables below show potential growth of the workforce, based on market analysis, and associated demand for non-residential space. This space does not account for retail demand described in Section 2.4, which would only serve to increase the demand for non-residential space.

Property Type	Current Gateway Employment	Forecasted Workforce Demand			
	Year 0 2023	Year 10 2033	Year 20 2043	Year 30 2053	New 2023-53
Low-Growth Scenario					
Commercial office	10,187	12,410	13,295	14,142	3,955
Innovation /flex office	652	1,219	1,317	1,408	756
High-Growth Scenario					
Commercial office	10,187	14,666	15,712	16,713	6,526
Innovation /flex office	652	1,950	2,107	2,253	1,600

Table 3: Gateway Forecasted Workforce Demand Chart, as estimated in 2024 (Source: Stiletto Analysis)

Property Type	Current Gateway Inventory	Forecasted New Office Demand (Square Feet)			
	Year 0 2023	Year 10 2033	Year 20 2043	Year 30 2053	New 2023-53
Low-Growth Scenario					
Commercial office	3,953,865	444,605	621,573	790,951	790,951
Innovation /flex office	1,653,305	169,957	199,469	226,724	226,724
High-Growth Scenario					
Commercial office	3,953,865	895,881	1,105,025	1,305,199	1,305,199
Innovation /flex office	1,653,305	389,318	436,538	480,146	480,146
Total Combined Commercial and Innovation/Flex Space Demand					
Low-growth	5,607,170	614,562	821,043	1,017,676	1,017,676
High-growth	5,607,170	1,285,200	1,541,564	1,785,346	1,785,346

Table 4: Gateway Forecasted Space Demand Chart, as estimated in 2024 (Source: Stiletto Analysis)

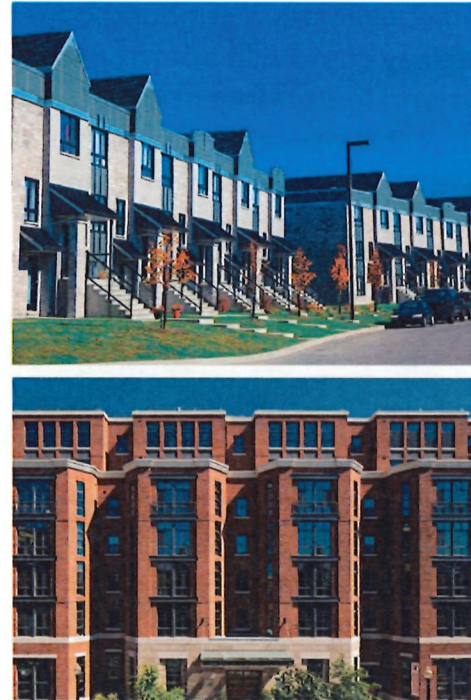
Residential market potential

On the housing side, there is market potential to support the addition of 4,500-6,600 multi-family units and 1,200-1,800 denser missing middle units over 30 years.

Development of these units is anticipated to start slowly over the first 10 years as new investments are made in public spaces and infrastructure and Downtown Columbia continues to develop dense multi-family housing. Demand could then accelerate as the mixed-use walkable environment is established, and compelling locations are created.

The residential demand chart illustrates how new residential units could be built in the near-term (years 1-10), mid-term (years 11-20), and long-term (years 21 to 30), depending on the strength of market demand.

As Gateway is a large area with numerous property owners and individual parcels, redevelopment is not expected to happen quickly. Many factors influence and drive growth. Local government is one aspect that drives growth, primarily through zoning and land development regulations, and through various types of incentives. However, other factors need to align for redevelopment to occur. Property owners and developers must choose to invest in redevelopment. There needs to be market demand for new space. The lending community must support the investment. As a result, large-scale redevelopment is often a long-term endeavor.



Examples of missing middle (top) and multi-family residential buildings (bottom)

Gateway Residential Demand Chart - Low and High Market Demand (Cumulative)

	Near-Term		Mid-Term Cumulative		Long-Term Cumulative	
	Low Market	High Market	Low Market	High Market	Low Market	High Market
Multi-family	1,000	1,500	2,700	4,000	4,500	6,600
Denser Missing Middle	400	600	800	1,200	1,200	1,800
Subtotal	1,400	2,100	3,500	5,200	5,700	8,400

Table 5: Gateway Residential Demand Chart, as estimated in 2024

Housing Allocations

As described in HoCo By Design, the County's Adequate Public Facilities Ordinance (APFO) sets the pace of new residential development through an annual housing allocation chart, which caps the number of new units that can be built each year by geographic regions. Once the annual cap is reached, subdivision plans are placed "on hold" until the next year when more allocations are made available.

HoCo By Design further describes how once a master plan for Gateway is completed, and the number and pacing of residential units for Gateway are determined, the allocation chart can be amended to include annual allocations for Gateway, or a separate chart for Gateway can be adopted. The general plan further notes that Gateway's units are not likely to be built in the near-term, as zoning changes will follow the master plan, and units will take several years after zoning to be constructed. Once zoning is changed, the allocation chart should be amended. Such allocations may consider the market demand estimates in this master plan or other factors relevant at the time.²¹

Key Recommendations:

- + Amend the housing allocation chart to include annual allocations for Gateway once Gateway's zoning is changed
- + Re-evaluate market demand, potential, and master plan goals throughout the master plan timeframe

²¹ Market demand will change throughout the master plan timeframe and should be revisited as Gateway redevelops. Other factors should be evaluated, like the pacing of new housing added in Downtown Columbia and other areas of Howard County, and countywide market demand estimates (such as demand identified in HoCo By Design). These factors could support a faster pace of housing growth than that indicated by the Gateway Residential Demand Chart.

4.2 Potential Infrastructure Financing Tools

Designing, funding, and constructing Gateway's many types of infrastructure projects will be a complex, phased undertaking. The master plan recognizes that a combination of financing tools will be necessary, and multiple tools should be considered. These tools can be tailored to meet the specific needs of a project and ensure its successful implementation. Key tools in the public financing toolbox include:

- Tax Increment Financing (TIF): a method that uses future real property tax revenues generated by the project to finance certain improvements
- Special Taxing Districts: can be used alone to create additional revenues and/or as a back-up credit enhancement together with TIF to fund certain improvements
- Other Revenues: includes local county (income, admissions, hotel/motel) and state (real property, sales) sources of revenue
- Public Private Partnerships (PPP): collaborative agreements between government entities and private sector companies to share resources, risks, and rewards with true "three-P's" consisting of availability/lease payments, operations and maintenance payments, and other agreed upon fees/payments
- Grants and Subsidies: direct financial assistance provided by government agencies to support specific project components
- Tax Credits and Incentives: provided to reduce tax liabilities and encourage investment. For example, Gateway is part of the Eastern Howard County Enterprise Zone, which offers tax credits to encourage businesses to make capital investments and create new jobs.

An infrastructure phasing and financing plan will be an important early step in the plan's implementation. This plan should identify when and how various public financing tools should be deployed and the priorities of infrastructure projects. The plan should also consider the needs of legacy businesses, particularly those in the identified Priority Industries for the Innovation District, and adjacent residents, and explore ways to retain these important contributors to the community.

Key Recommendations:

- + Determine how various public financing tools should be used as part of the development of an infrastructure phasing and financing plan

4.3 Implementation Approach

The Gateway Innovation District will take a phased approach to its redevelopment, allowing flexibility and adaptability to market demand and conditions over a 30+ time horizon. With strategic and phased infrastructure improvements, Gateway's character can transform into a vibrant, walkable, and connected community with an array of amenities.

However, as infrastructure investments and redevelopment take time, there are various strategic actions that can be taken in the near-term to support the innovation district's employment growth, which along with this master plan's vision, will catalyze redevelopment. These strategic actions are in alignment with the six common characteristics (found in Section 2.2 and listed below) that help fuel innovation and create the environment for industry, government, non-profits and academia to collide and thrive.

1) Multi-level government and university/institutional support

2) A champion

3) Defined market demand

4) Unique value proposition

5) Strategic sector focus

6) Management dedication to supporting tenant growth

Recommended Strategic Actions

The County, property owners, and other stakeholders may pursue various strategic actions in the near-term to help lay the foundation for the innovation district. The actions listed below focus on business attraction, funding mechanisms, zoning, and other planning activities.

- ~~Focus **business attraction and retention** efforts on identified priority Industries.~~
- ~~Establish anchor institution(s)~~
- ~~Create opportunities to **establish early pathways to education** and careers in innovation~~
- ~~Support Howard County Economic Development Authority (EDA) in its efforts to **scale up the Maryland Innovation Center (MIC)**~~
- ~~Pursue the development of an **Innovation Hub** as an opportunity to expand the programming at the MIC and create a thriving innovation core at the heart of Gateway~~
- ~~Establish a Gateway Innovation District **Board of Directors**~~
- ~~**Catalyze/facilitate redevelopment** by planning appropriately for public infrastructure (such as roads, community amenities, school facilities, etc.).~~
- ~~**Strategically acquire sites for public amenities and infrastructure** based on infrastructure planning.~~
- ~~**Establish/codify financing mechanisms** for infrastructure improvements as needed.~~
- ~~**Develop/amend zoning** that encourages building development/improvement in line with the master plan and provides incentives to catalyze mixed-use redevelopment that offers an array of publicly-accessible open spaces, amenities and facilities; achieves sustainable design goals; and creates opportunities for affordable, multi-generational housing.~~
- ~~Establish a **communications plan** to guide the strategic communication efforts and promotions of Gateway Innovation District, including to bring awareness, funding opportunities, and support for Gateway from different levels of government, and to create ambassadors and champions within government.~~

<u>Recommended Strategic Action</u>	<u>Lead Agency</u>	<u>Timeframe</u>
<u>Focus business attraction and retention efforts on identified priority industries and aligned with the common characteristics and employment goals of the Innovation District vision</u>	<u>Howard County Economic Development Authority</u>	<u>Years 0-5</u>
<u>Establish anchor institution(s) and champion(s)</u>	<u>Howard County Economic Development Authority</u>	<u>Years 0-5</u>
<u>Create opportunities to establish early pathways to education and careers in innovation</u>	<u>Howard County Economic Development Authority</u>	<u>Years 0-5</u>
<u>Support Howard County Economic Development Authority (EDA) in its efforts to scale up the Maryland Innovation Center (MIC)</u>	<u>Howard County Economic Development Authority</u>	<u>Years 0-5</u>
<u>Pursue the development of an Innovation Hub as an opportunity to expand the programming at the MIC and create a thriving innovation core at the heart of Gateway</u>	<u>Howard County Economic Development Authority</u>	<u>Years 0-5</u>
<u>Establish a Gateway Innovation District Board of Directors</u>	<u>Howard County Economic Development Authority</u>	<u>Years 0-5</u>

<u>Catalyze/facilitate redevelopment by planning appropriately for public infrastructure (such as roads, community amenities, school facilities, etc.).</u>	<u>Howard County Department of Public Works; Howard County Office of Transportation; Howard County Public School System, etc.</u>	<u>Years 0-5</u>
<u>Strategically acquire sites for public amenities and infrastructure based on infrastructure planning.</u>	<u>Howard County Department of General Services</u>	<u>Years 0-5</u>
<u>Establish/codify financing mechanisms for infrastructure improvements as needed.</u>	<u>Howard County Finance Department</u>	<u>Years 0-5</u>
<u>Develop/amend zoning that encourages building development/improvement in line with the master plan and provides incentives to catalyze mixed-use redevelopment that offers an array of publicly accessible open spaces, amenities and facilities; achieves sustainable design goals; and creates opportunities for affordable, multi-generational housing.</u>	<u>Howard County Department of Planning and Zoning</u>	<u>Years 0-5</u>
<u>Establish a communications plan to guide the strategic communication efforts and promotions of Gateway Innovation District, including to bring awareness, funding opportunities, and support for Gateway from different levels of government, and to create ambassadors and champions within government.</u>	<u>Howard County Economic Development Authority</u>	<u>Years 0-5</u>

Partnerships/Champion

Section 2.2 explains that “a Champion” is an influential representative(s) who can build awareness and help attract new support/participation, and can help advocate for the development, raising awareness and building buy-in for the district.

Gateway is fortunate to have a strong industry cluster, committed property owners, and various entities already playing a supportive or catalytic role in Gateway. These entities will also play a critical role in realizing the master plan vision. Together, these entities may be able to identify or establish an organization that could play the “champion” role to help realize the master plan’s vision, fill-in programming gaps and coordinate partnerships.

Some of those key entities are:

- **Columbia Gateway Association** – A non-profit organization consisting of approximately 25 property owners in the Gateway area primarily established to organize events that promote the Gateway Business District.
- **Howard County Economic Development Authority (HCEDA)** - The HCEDA is a quasi-governmental organization whose mission is to be a catalyst for economic growth and stability in Howard County. It performs an essential public function in promoting and enhancing the economic welfare of the County through its programs to encourage job creation, retain existing businesses, and attract new businesses. HCEDA is also the home to the Maryland Innovation Center and is located within the Gateway Innovation District.
- **Columbia Association** – A non-profit community services corporation that manages and provides a multitude of services, amenities, and public spaces to the nearly 100,000 residents living in Columbia, MD.
- **Howard County Government**
- **Gateway property owners/business owners/developers**

In the near-term future, Gateway can benefit from the development of diverse champions that extend beyond these current groups. These connections can form the basis of new relationships and opportunities (such as higher education partners and new tenants). There can be both champions internal and external to County Government.

CONCLUSION

Gateway is uniquely positioned to be the region's nerve center for cutting-edge research, pioneering ideas, and entrepreneurial ventures for a global market.

The Master Plan provides a roadmap to transform Gateway into a forward-thinking innovation district – an innovative ecosystem designed to fuel sustainable job creation, foster long-term economic growth, and attract the brightest minds in research, entrepreneurship, and technology. The Gateway of tomorrow prioritizes a phased mixed-use redevelopment strategy, with a focus on increasing density, enhancing connectivity, and creating spaces that inspire collaboration.

At the heart of Gateway is a bold ambition to build an environment where visionary entrepreneurs, researchers, and companies can thrive. By leveraging its unique location, diverse industries, and cutting-edge design, Gateway is poised to become the new center of innovation in the region – the place that people come together, share ideas, and drive the future forward.

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