

RICHMOND HIGHWAY CORRIDOR AREA

LOCATION AND CHARACTER

The Richmond Highway Corridor¹ stretches for nearly eight miles from the boundary of the City of Alexandria on the north to Fort Belvoir and Jeff Todd Way/Mount Vernon Memorial Highway on the south, as shown in Figure 1. A portion of the Huntington Transit Station Area (TSA) abuts the Richmond Highway Corridor.

Richmond Highway, generally a north-south oriented transportation route, serves a dual purpose. It functions as a through-commuter roadway connecting the southern part of Fairfax County and counties to the south to the City of Alexandria, Arlington County and Washington, D.C. to the north. It also functions as a “Main Street” that serves the many commercial uses and residential communities located on or near the corridor.

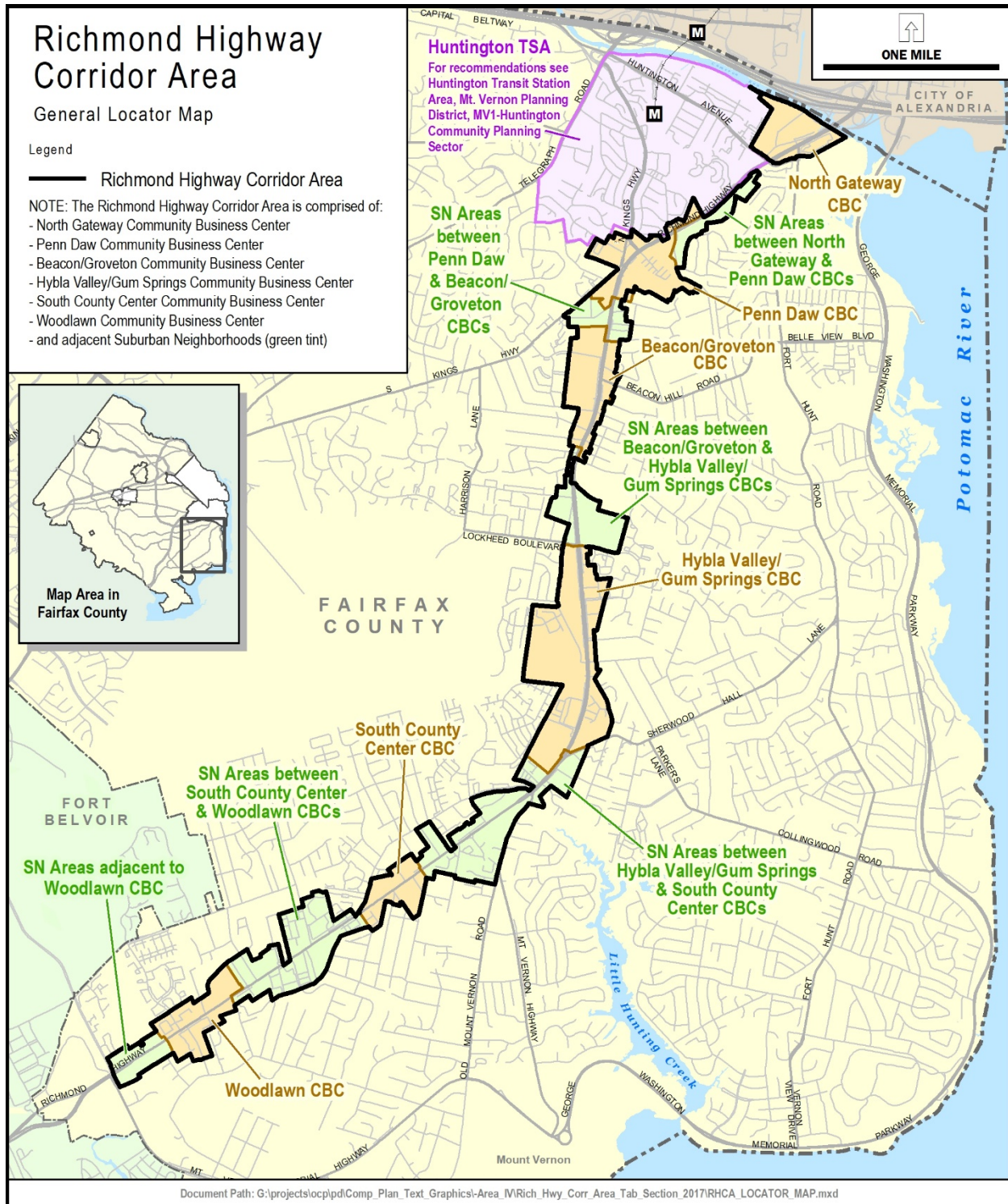
There are six Community Business Centers (CBC) in the Richmond Highway Corridor. From the north to south, they are: North Gateway, Penn Daw, Beacon/Groveton, Hybla Valley/Gum Springs, South County Center, and Woodlawn. In 2017, many of the CBCs were characterized by community shopping centers.

The areas between the CBCs, referred to as Suburban Neighborhood Areas (SNAs), contain a number of smaller scale retail and commercial businesses of various types and sizes, such as gas stations, restaurants, motels, banks, plant nurseries and auto-related businesses. Residential communities along and adjacent to the corridor consist of a variety of housing types, including single-family detached homes, townhomes, garden-style apartments, mid-rise units, and mobile homes.

There are four stream crossings of Richmond Highway. Cameron Run crosses adjacent to the Capital Beltway and the City of Alexandria through both the Richmond Highway Corridor and the Huntington TSA; Little Hunting Creek crosses just south of the Gum Springs community; the North Fork of Dogue Creek crosses just east of Woodlawn Court; and, the main stem of Dogue Creek crosses Richmond Highway between Sacramento Drive and Jeff Todd Way/Mount Vernon Memorial Highway. The stream crossings provide natural breaks in the otherwise almost entirely developed corridor.

Significant heritage and natural resources are located within or near the corridor, including George Washington’s Mount Vernon and Grist Mill, the Gum Springs Community, the Pride of Fairfax, Woodlawn Historic Overlay District (HOD) and the Pope-Leighey House, Huntley Meadows Park, and Huntley HOD. These resources are important to Fairfax County and represent unique assets and opportunities in the corridor.

¹The term *Richmond Highway* and *Richmond Highway Corridor* is used in the Richmond Highway Corridor Area section of the Comprehensive Plan to describe the roadway from the Capital Beltway and the City of Alexandria/Fairfax County boundary to Jeff Todd Way/Mount Vernon Memorial Highway. Richmond Highway Corridor continues to be used to reference a County designated revitalization district and to define the service area of the Southeast Fairfax Development Corporation (SFDC). The *Richmond Highway Corridor Area* includes the Community Business Centers and Suburban Neighborhoods located along Richmond Highway.



RICHMOND HIGHWAY CORRIDOR AREA **FIGURE 1**

HISTORY

Highway Corridor Overlay

In 1978, the Richmond Highway Corridor between the Capital Beltway/Interstate-495 and the City of Alexandria/Fairfax County boundary to Jeff Todd Way/Mount Vernon Memorial Highway was established as a Highway Corridor (HC) zoning overlay district. The highway corridor overlay district imposes additional regulations on certain automobile-oriented, fast-service and quick turn-over uses, including drive-through uses, quick-service food stores and services stations, in an effort to prevent or reduce traffic-related problems such as congestion and accidents within a thousand feet of either side of the centerline of Richmond Highway.

Revitalization Considerations

In 1986, the Board of Supervisors designated the Richmond Highway Corridor as a Commercial Revitalization Area to encourage and facilitate revitalization in the form of quality development and redevelopment projects, particularly those with parcel consolidation.

In 1998, the Board of Supervisors adopted the Commercial Revitalization District (CRD) Zoning Overlay District to further the county's commitment to revitalization. The Zoning Overlay District applies to commercial properties mostly within the CBCs, and provides greater flexibility in the development or redevelopment of those properties. The Board of Supervisors also created a policy supporting the expedited and concurrent processing of development proposals and Comprehensive Plan amendments to generate investment activity in CRDs. The Richmond Highway Corridor is one of the five designated CRDs in Fairfax County.

The Southeast Fairfax Development Corporation (SFDC), a nonprofit economic development organization founded in 1981, is supported by Fairfax County. Its mission is to promote, facilitate and monitor development, redevelopment and revitalization along the Richmond Highway Corridor, and as such, is an active participant in public and private revitalization efforts.

Corridor-wide Comprehensive Planning

A number of corridor-wide planning studies have been undertaken for the Richmond Highway Corridor over the past 20 years. In 1991, the Board of Supervisors adopted the Route 1 Corridor Area study recommendations within the Mount Vernon Planning District portion of the Area IV Plan. In 1999, the Board of Supervisors adopted the Richmond Highway Corridor text as a replacement for the Route 1 Corridor Area text. A number of site-specific amendments have modified recommendations for individual sites along the corridor.

In January 2015, the Virginia Department of Rail and Public Transportation published a study called the *Route 1 Multimodal Alternatives Analysis*. The purpose of the study was to evaluate and recommend multimodal improvements to address the needs of both local and through-travelers. The study area extended from the Huntington Metrorail Station to the Woodbridge Virginia Railway Express Station in Prince William County.

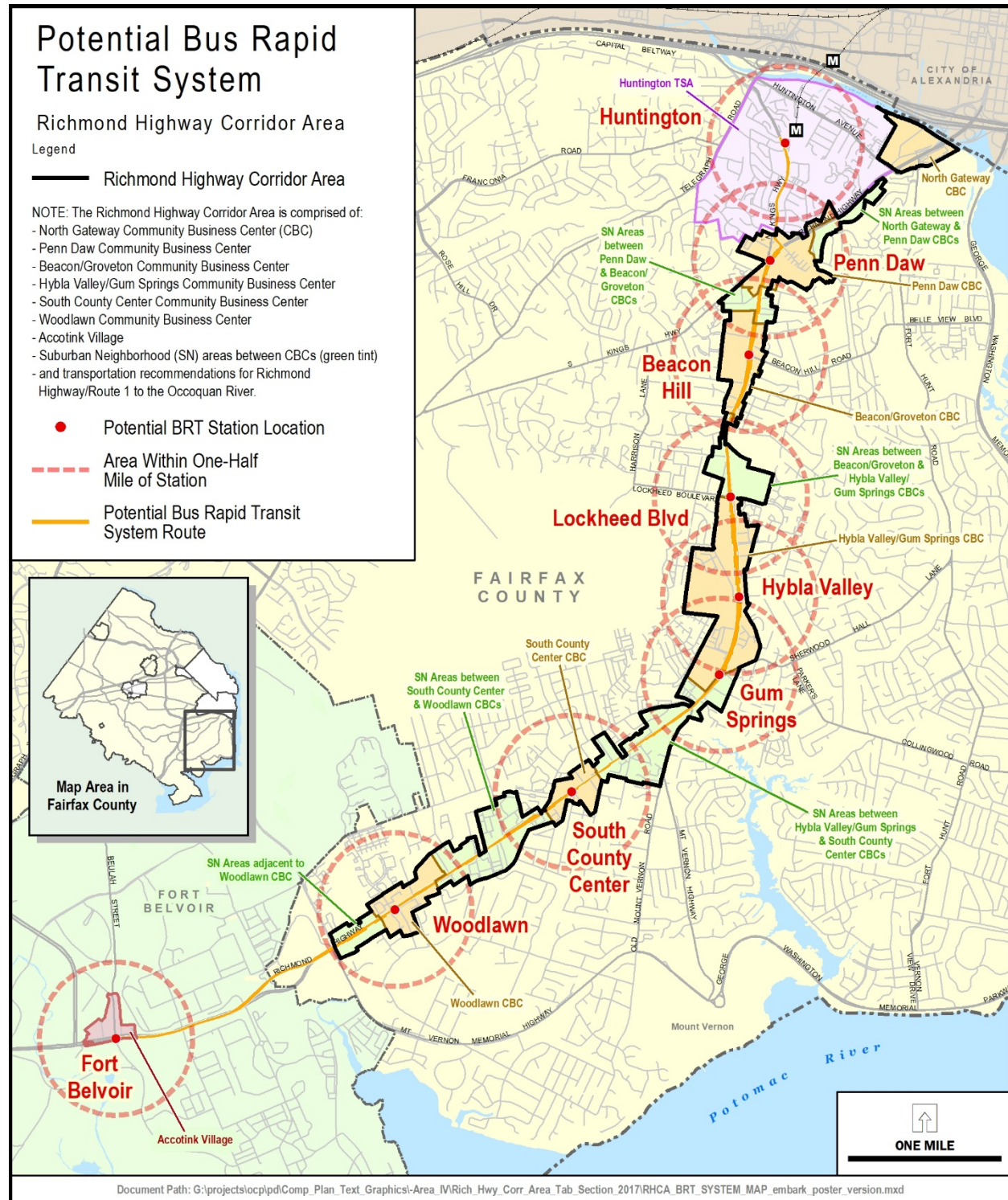
The study's preferred alternative was a four-phased implementation of transportation improvements beginning at the Huntington Metrorail Station. The first two phases recommend a median-running bus rapid transit (BRT) system comprised of nine stations between Huntington and the Accotink/Fort Belvoir area. Richmond Highway is recommended to be a consistent six-lane cross section with continuous bicycle and pedestrian facilities and additional parallel street connections are recommended off of the corridor, where feasible. The Phase I and Phase II termini of the BRT system are recommended to be generally located in Hybla Valley and the Accotink/Fort Belvoir area, respectively. Phase III extends BRT to the Woodbridge Virginia Railway Express

Station in Prince William County and would be comprised of additional stations in Fairfax County south of Accotink/Fort Belvoir and in Prince William County. A longer term Phase IV is an extension of the Metrorail Yellow Line from Huntington to Hybla Valley. The study recommended transit-oriented development (TOD) within walking distance of the potential stations in the form of compact, higher-density mixed-use development patterns

In May 2015, the Board of Supervisors authorized a Comprehensive Plan amendment known as Embark Richmond Highway to assess and refine recommendations for Phases I and II and to include policy guidance related to the Phase IV extension of Metrorail. The geographic limits of the Plan amendment extended from Huntington Metrorail Station along North Kings Highway, connecting to Richmond Highway via Shields Avenue, to the Accotink/Fort Belvoir area, as shown in Figure 2. The study also evaluated TOD opportunities within the Penn Daw, Beacon/Groveton, Hybla Valley/Gum Springs and Woodlawn CBCs.

A community Advisory Group was appointed, with members representing the Mount Vernon and Lee Districts, SFDC, and one at-large member provided local area expertise. The group offered guidance on staff's technical work and findings, contributed to development of recommendations, and engaged other stakeholders to encourage awareness and participation in the Plan amendment process. The greater community participated through public meetings, workshops, and online media.

The planning effort considered revisions to the Comprehensive Plan to foster redevelopment in the CBCs that would be mutually supportive of multimodal transportation improvements, including policy objectives for the Metrorail extension to the Beacon/Groveton and Hybla Valley/Gum Springs CBCs as well as major revisions to the transportation, urban design, environment, and parks and recreation guidance.



POTENTIAL BUS RAPID TRANSIT SYSTEM **FIGURE 2**

CONCEPT FOR FUTURE DEVELOPMENT

There are six CBCs in the Richmond Highway Corridor. Each CBC is intended to contain a mix of residential and non-residential uses in a compact, pedestrian-friendly urban form and serve as a focal point along the corridor. The SNAs are planned for predominantly residential use, but may also include limited neighborhood-serving retail and other non-residential uses.

A BRT system with nine potential stations is planned to connect the Huntington Metrorail Station to Accotink/Fort Belvoir, with at least one station in each of the following areas: Huntington Transit Station Area (TSA), Penn Daw CBC, Beacon/Groveton CBC, Hybla Valley/Gum Springs CBC, South County Center CBC, Woodlawn CBC, and the Accotink/Fort Belvoir area as shown in Figure 2. The BRT system, including the final number and location of stations, will be determined with the design of the system. The North Gateway CBC would continue to be served by local bus service, with connections to and from the Huntington Metrorail Station and the planned Richmond Highway BRT stations. An extension of Metrorail from the Huntington TSA to Beacon/Groveton and Hybla Valley/Gum Springs CBCs is envisioned to occur after the implementation of the BRT system.

Redevelopment recommendations for land units in the CBCs are provided to advance revitalization and the creation of distinctive urban environments that are economically vibrant and offer attractive opportunities to live, work, recreate and shop. Recommendations for the SNAs maintain the existing predominately residential character and encourage redevelopment where appropriate.

GUIDING PLANNING PRINCIPLES

The following eight planning principles are intended to establish the vision and guide land use decisions for the Richmond Highway Corridor:

- 1.) Promote revitalization along the Richmond Highway Corridor by:
 - a. Encouraging redevelopment of older commercial uses in favor of mixed-use developments in the designated CBCs to support live-work-shop urban environments and that concentrate the highest intensities at the transit stations.
 - b. Supporting safe and attractive pedestrian spaces and increased pedestrian activity.
 - c. Encouraging parcel consolidations of a logical and sufficient size to support planned redevelopment. The configuration of the consolidations should not preclude adjacent and/or nearby properties from developing as recommended by the Comprehensive Plan. When consolidation cannot be achieved, development proposals should demonstrate how future development can occur on any unconsolidated parcels in conformance with the Comprehensive Plan.
- 2.) Ensure that the health and leisure needs of residents, visitors, and employees are well-provided for in future development plans by:
 - a. Incorporating urban parks and recreational opportunities consistent with the Urban Parks Framework that, in conjunction with development, contribute to

placemaking and enhancing quality of life.

- b. Offsetting impacts to parks from new residential development through in-kind or monetary contributions.
- c. Enhancing pedestrian and bicycle access to parkland, where appropriate, for recreation and the enjoyment of nature.
- d. Creating places that encourage walking and biking as part of everyday activities, including shopping, accessing schools, libraries and other public facilities; and, traveling to work.

3.) Provide a variety of safe, reliable, effective, and interconnected transportation modes by:

- a. Supporting a bus rapid transit system primarily in an exclusive travelway within the Richmond Highway median from the Huntington Metrorail Station to Accotink Village, and a Metrorail extension from the Huntington Metrorail Station to Hybla Valley, as expeditiously as possible.
- b. Encouraging multimodal transportation usage by providing a well-designed and publicly accessible network of complete streets that integrate transit, pedestrian, bicycle and vehicular connections within the CBCs and to adjacent neighborhoods.
- c. Facilitating transportation modes and strategies other than the use of automobiles, such as walking, biking, public transit and Transportation Demand Management (TDM) techniques to reduce traffic congestion along Richmond Highway.
- d. Improving traffic circulation and safety by enhancing intersections, consolidating entrances, reducing curb cuts, providing better signage and improving access to uses.
- e. Encouraging dedication of right-of-way and repurposing existing service drives to accommodate the proposed multimodal cross-section that supports transit riders, pedestrians, bicyclists and motorists of all ages and abilities.

4.) Encourage high-quality urban design by:

- a. Supporting the public realm through excellence in building and site design.
- b. Using common urban design elements along the entire corridor to provide a sense of continuity and cohesion.
- c. Applying a range of street types to promote a walkable, multimodal transportation network.
- d. Achieving mixed-use developments within the CBCs that create a distinct sense of place and take advantage of the unique characteristics of each area.

- e. Providing a sense of orientation and identity through distinctive architecture, landmarks, public art, open spaces and wayfinding to help people understand places within the corridor and navigate the physical environment.
- f. Placing utilities underground for land use development projects.

5.) Support the economic success of the corridor by:

- a. Improving access to employment, job training, and continuing educational opportunities.
- b. Retaining and enhancing a diversity of job types.
- c. Positioning the corridor to attract the next generation workforce, industries, and companies, as well as the retail and service companies needed for a thriving community.
- d. Encouraging the provision of a variety of housing types that are affordable and accessible to residents with a range of income levels, ages, and abilities, who are needed for a diversified work force and vibrant community.
- e. Balancing the timing of development with supportive transportation improvements and public facilities.
- f. Encouraging business development that supports Fort Belvoir as a significant contributor to the economic success of the corridor.
- g. Transforming the corridor into a place of invention and innovation using smart technologies and sustainable design.
- h. Embracing a growing diverse population as an asset to the corridor's economic vitality and promoting fairness and equity in decision-making on public policy and publicly delivered services for the corridor.

6.) Maintain the primarily residential nature of stable communities surrounding the CBCs by:

- a. Planning for primarily residential, institutional and open space uses in areas outside and between the CBCs.
- b. Providing a variety of residential housing types within the CBCs to preserve the stability of lower density neighborhoods.
- c. Supporting consolidation of land along Richmond Highway with parcels in the surrounding residential neighborhoods only when this type of consolidation is necessary to provide for site layouts that function in a well-designed, efficient manner to support reasonable and appropriate redevelopment along the corridor and protect unconsolidated parcels.
- d. Establishing effective transitions to stable neighborhoods through compatible land uses, building intensity, and scale. Landscaping, public spaces and urban design techniques should be used to assist in reducing impacts. Adequate buffering and screening with year-round vegetation should be provided as

appropriate to minimize the visual impact of redevelopment on existing single-family neighborhoods.

7.) Preserve, enhance, and restore the environment by:

- a. Minimizing the impact of development on the natural environment, including water quality and the ecological conditions of streams.
- b. Encouraging development approaches that serve to reduce impervious surfaces and achieve improved control over stormwater runoff. Promote the application of context sensitive low impact development (LID)/green stormwater infrastructure practices) in stormwater management (e.g., rain gardens, green roofs, vegetated swales) and the integration of LID practices within landscaping strategies.
- c. Restoring streams and riparian areas where possible and practical.
- d. Incorporating the preservation of existing trees within site design, along with the planting of native trees and other native vegetation.
- e. Encouraging sustainable landscape design (e.g., appropriate placement of native and non-invasive plants, biodegradable mulch, reduced lawn areas, improved soil quality) to create diverse landscapes that enhance air and water quality, improve habitat values and support resource conservation through reduced need for maintenance.

8.) Recognize and accept responsibility for the stewardship of heritage resources by:

- a. Identifying heritage and cultural resources through survey and research.
- b. Protecting heritage and cultural resources by avoiding adverse impacts, or destruction of significant resources.
- c. Undertaking appropriate actions to retain and enhance significant resources through appropriate preservation actions.
- d. Encouraging the use of open space/conservation easements.
- e. Providing incentives and assistance to encourage heritage resource protection and preservation.

Promoting awareness of heritage and cultural resources.

CORRIDOR-WIDE GUIDELINES

The following should be used to guide development in the Richmond Highway Corridor. Site-specific recommendations in the CBCs and SNAs are contained in the sections that follow these Corridor-wide Guidelines. For each of these areas, consistency with all the applicable sections of the Policy Plan, Guiding Planning Principles, and Corridor-wide Guidelines should be achieved with development and redevelopment. In some instances, site-specific conditions may differ from and replace the guidelines listed below.

LAND USE

Overall Concept

The CBCs are considered the priority redevelopment areas, as the BRT stations will be located in these places along the corridor. The redevelopment options in the CBCs recommend an amount and type of development appropriate to achieve a high intensity mix of uses within approximately one-quarter to one-half mile of the BRT stations. The SNAs are envisioned to contain primarily residential, institutional and open space uses. Infill development in both the SNAs and CBCs should be of a compatible use, type and intensity in accordance with the guidance provided by the Land Use Element of the Policy Plan, Objectives 8, 9 and 14². Establishing effective transitions from higher to lower intensity development is an important consideration, and may be realized through compatible land uses, tapering of building intensity and scale towards lower density development, appropriate buffering and screening with year-round vegetation, and other means.

Development Potential

Figure 3 contains the corridor-wide development potential inclusive of the redevelopment options. Additional details about the baseline level of development and redevelopment options are contained in the CBC and SNA sections. A transportation analysis should be completed, as deemed appropriate, during the development review process in order for the redevelopment options to be considered prior to the operation of the BRT system. The transportation analysis should meet Fairfax County and state standards, where applicable, determine deficiencies, and identify commitments to mitigate any transportation-related impacts.

The quantification shown in Figure 3 does not include additional development potential that is recommended for the Beacon/Groveton and Hybla Valley/Gum Springs CBCs under a scenario where Metrorail is extended to these areas in the future. This additional development potential under a Metrorail scenario will be implemented when a corridor-wide transportation analysis, coordinated with the Virginia Department of Transportation, is completed and a Full Funding Grant Agreement or a comparable funding agreement to design and build the Metrorail extension is executed.

² Objective 8 addresses protection of established residential neighborhoods. Objective 9 relates to non-residential development. Objective 14 refers to minimizing undesirable impacts through compatible land uses and other means.

Figure 3

Existing Land Use (2015) and Estimate of Planned Development Potential

Land Use	2015 Existing Land Use	Comprehensive Plan development potential inclusive of redevelopment options ¹
Residential ²	5,000 dwelling units	18,600 dwelling units
Non-residential ³	5.4 million gsf (12,760 jobs)	8.5 million gsf (23,200 jobs)
Office	800,000 gsf (2,700 jobs)	3.9 million gsf (13,000 jobs)
Retail	3.3 million gsf (8,250 jobs)	3.5 million gsf (8,750 jobs)
Industrial	270,000 gsf (600 jobs)	100,000 gsf (220 jobs)
Institutional	325,000 (650 jobs)	320,000 gsf (640 jobs)
Hotel	730,000 gsf (560 jobs)	712,000 gsf (550 jobs)
Total	5,000 dwelling units and 5.4 million gsf (12,760 jobs)	18,600 dwelling units and 8.5 million gsf (23,200 jobs)

Note 1: Development potential, employment estimates, and dwelling units are approximate.

Note 2: The residential development potential does not include potential housing bonuses allowed under the Affordable Dwelling Unit (ADU) Ordinance and the Board of Supervisors’s Workforce Housing Policy (WDU).

Note 3: The Plan recommends flexibility among the types of non-residential land uses as described in the section that follows.

Flexibility Among Non-Residential Uses

The distribution of land uses by square footage was developed for the purposes of testing the transportation analysis. Irrespective of the distribution of non-residential uses shown in Figure 3, the Plan permits flexibility among the various types of non-residential uses, so long as the total non-residential square footage recommended for the entire corridor and to each CBC is not exceeded. This flexibility among types of non-residential uses is supported to the extent that applicants are able to adequately address multimodal transportation needs and urban design recommendations.

The Plan also encourages future opportunities for institutional, cultural, recreational, and governmental uses which enrich community life, improve the provision of public services, and enhance the area’s business competitiveness. Generally, community-serving institutional uses, such as a community center, may be considered in any land unit if the use is of a similar scale and character as other planned uses.

Freestanding uses with drive-through facilities and uses that create high traffic volumes which also contribute to the strip-commercial character of Richmond Highway may be acceptable only when they are consistent with the desired form and character and are coordinated with adjacent or desired building and site design. The location of such uses should not impede the flow of pedestrian or vehicular traffic, compromise safety, disrupt the existing and planned interior circulation system of the center and/or building site, or thwart the achievement of the long-term vision of the

Comprehensive Plan. Establishments that are not consistent with quality revitalization or conducive to foot traffic are strongly discouraged.

Metrorail Level of Development

The Comprehensive Plan includes recommendations for additional development potential of approximately 2.71 million square feet for the Beacon/Groveton and Hybla Valley/Gum Springs CBCs under a scenario where Metrorail is extended to these areas in the future. This additional development under a Metrorail scenario will be implemented in coordination with the execution of a Full Funding Grant Agreement or comparable funding agreement to design and build the Metrorail extension. Additionally, before such an increase in development potential is allowed in these areas, an assessment of the transportation and other impacts will be completed and any necessary mitigation identified, in coordination with the Virginia Department of Transportation.

PUBLIC FACILITIES

The existing public facilities that serve the corridor and those anticipated to accommodate the future growth in the corridor under the redevelopment options are described in the following section. Since growth rates will vary over time, the thresholds referenced below may be reached in different years. Actual growth levels should be monitored so that infrastructure capacity is phased with new development. Regardless of the rate of growth, commitments of the land for needed facilities and/or identification of additional resources to support the provision of public facilities should be realized in advance of the estimated need to the extent possible. Tables listing existing public facilities are provided in the Overview section of the Mount Vernon Planning District in the Area IV Plan.

Schools

The Richmond Highway Corridor is served by 19 public schools: 13 elementary schools, three middle schools, and three high schools using attendance areas for School Year 2017-18. In 2015, the existing 5,000 dwelling units in the corridor yielded approximately 2,100 students. Under the envisioned Comprehensive Plan buildout, approximately 18,000 dwelling units are recommended, resulting in an increase of approximately 13,000 new dwelling units. Using the 2016 student generation ratio, this could generate approximately 2,200 additional students (1,200 elementary, 400 middle, and 600 high school).

This increase in students results in a need for new facilities to support the increased enrollment. A new elementary school is planned near the South County Government Center. At least one additional new school site should be accommodated, which may be an elementary, secondary, or other type of school depending on the identified need. The preferred school site is in the Hybla Valley/Gum Springs CBC; however, if it cannot be accommodated at that location, the school should be located in one of the CBCs served by the BRT system. This would allow students to take advantage of pedestrian and transit access to the school, allow the school facility to provide optimum service to the community, and would be consistent with the vision of a more urban pattern of development.

Traditionally, public school capacity needs have been addressed through various means including dedication of land, new school construction, additions to existing facilities, interior architectural modifications, use of modular buildings, changes to programs, and/or changes to attendance areas. Additional school capacity could also be addressed through innovative, urban solutions including the co-location of school facilities, such as vocational training, academy programs and/or adult learning centers, within mixed-use, office or other commercial buildings provided that all access, safety, security and space requirements are met; with parks and other

public facilities; or through other creative approaches. Fairfax County Public Schools also may evaluate other possible “in-kind” school impact mitigation strategies. During the development review process, any impact on schools, necessitated by any increased intensity, should be mitigated with provisions by the developer(s) and the county. Traditional and/or innovative measures to mitigate the impacts of new development on school capacity should be considered, provided that the objectives and policies for public schools within the Public Facilities Element of the Policy Plan are followed.

The Fairfax County Public Schools’ Capital Improvement Program (FCPS CIP) contains more detailed information on student membership and facilities data. The FCPS CIP is updated annually with data and contains strategies for addressing schools where capacity is needed through capital projects and other proposed solutions to alleviate a capacity need.

Libraries

The Richmond Highway Corridor is served by John Marshall and Martha Washington Community Libraries and the Sherwood Regional Library. John Marshall Library underwent renovations in 2017-2018 to increase the footprint and add community space. The planned growth in the corridor is not anticipated to generate the need for an additional library.

Fire and Rescue

Emergency services are provided by Penn Daw Fire and Rescue Station 11, Mount Vernon Fire and Rescue Station 9, and Woodlawn Fire and Rescue Station 24. Funding to expand or replace the Penn Daw and Woodlawn Fire and Rescue Stations was approved in 2015. Funding to expand or replace Mount Vernon Fire and Rescue Station is anticipated in 2018. Other than those improvements, there are no identified needs for an additional fire and rescue station.

Police

Funding for a new South County Police Station/Animal Shelter has been approved. The station, along with the existing Mount Vernon Police Station, is anticipated to provide sufficient coverage for the Richmond Highway Corridor.

Wastewater Management

Wastewater is treated at the AlexRenew and Noman M. Cole, Jr., Pollution Control Plant (NMCPCP). The treatment capacity at both facilities is capable of handling the projected sewage flow capacity through 2045. Future road improvements should assess the impact on the sanitary sewer collection system as wastewater flows must be maintained at all times.

Water

Major facilities along the corridor include transmission mains ranging in size from 16 to 30-inches in diameter, the Beacon Hill Water Storage Tank, the Gum Springs Storage and Pumping Facilities, and the Groveton Storage Tank. Fairfax Water identified future necessary system improvements as part of a 2011 update to its System Master Plan. Within the Richmond Highway Corridor, these improvements include:

- Construction of an additional water storage tank at Fairfax Water’s Beacon Hill site.
- Construction of a transmission water main along South Kings Highway corridor from Telegraph Road to the Beacon Hill Water Storage Tank (in design in 2015).

- Improvements to Fairfax Water’s Gum Springs Pump Station, including installation of at least two new pumps.
- Extension of an existing transmission water main from Richmond Highway at Quander Road to Huntington Avenue; and west on Huntington Avenue to Telegraph Road.
- Replacement and oversizing of existing water main along Richmond Highway from Woodlawn to the City of Alexandria limits, concurrent with redevelopment.

Additional transmission requirements to better serve the corridor in the future may be identified as redevelopment occurs.

Telecommunications

New buildings should be designed to accommodate telecommunications facilities and associated equipment on rooftops. Such design should be compatible with the building’s architecture and should conceal antennas and equipment from surrounding properties and roadways by flush mounting, screening antennas, and/or concealing related equipment behind screen walls or building features. Antennas should be a similar color as the building surface to which it is attached. If structures are proposed to include telecommunications facilities and associated equipment on rooftops, a visual impact assessment should be conducted to evaluate any potential impacts that may require mitigation.

Natural Gas

Washington Gas has sufficient infrastructure to serve the envisioned growth in the corridor. All projects requesting natural gas are reviewed on a case-by-case basis to determine if additional construction or relocation of lines is needed.

HOUSING

A key to the success of the Richmond Highway Corridor is ensuring that people with a range of income levels, ages, and abilities can live in the corridor. Affordable housing should be located close to employment opportunities. Furthermore, as an area envisioned to be served by interconnected multimodal transportation options, the Richmond Highway Corridor is well situated to provide a variety of housing opportunities to further the goal of creating vibrant places for a diverse community. Existing assisted housing in the Mount Vernon Planning District is contained in the Mount Vernon District Overview section, District-Wide Recommendations, Housing, Area IV Volume of the Comprehensive Plan.

In addition to providing affordable housing in mixed-use areas, the Policy Plan addresses the need to promote affordable housing opportunities in all parts of the county, particularly in areas where the existing supply is low. All projects with a residential component should provide affordable housing in accordance with the Affordable Dwelling Unit Ordinance and the Guidelines for the Provision of Workforce Housing set forth in the Policy Plan. The Affordable Dwelling Units (ADUs) or Workforce Dwelling Units (WDUs) are preferred to be provided on-site. The units should accommodate a variety of households for people of all ages and abilities. Flexibility in the total number of affordable units provided may be considered for projects that meet additional housing needs that have been identified by the county. Examples include providing a higher proportion of units in the lowest income tiers or providing units with more bedrooms than would otherwise be expected. Such proposals should be evaluated on a case-by-case basis.

Efforts should be made to preserve market rate housing units that are affordable to households earning below 100 percent of Area Median Income (AMI). Land owners may meet

their affordable housing objective by purchasing existing units and preserving their affordability as set forth in the Board of Supervisors' WDU Administrative Policy Guidelines.

ENVIRONMENT

Redevelopment along the Richmond Highway Corridor provides opportunities for significant environmental improvement, especially through the improvement of stormwater management.

Stormwater Management

Goals

Stormwater management plays an important role in protecting water quality and the health of the county's streams. Both development and redevelopment offer opportunities to protect and support the restoration of water resources by correcting deficient situations (e.g., sites that have developed with little or no stormwater controls; outdated stormwater management approaches that need to be updated) in an effort to protect and restore local streams and to reduce the pollutant loads entering the Potomac River and Chesapeake Bay to the extent practicable. This may be accomplished by reducing the total runoff volume and/or significantly delaying its entry into the stream system and by removing pollutants from rainfall runoff. Stormwater quantity and quality controls should be optimized for all development projects consistent with the scale of the projects, with a goal of replicating natural hydrologic conditions and reducing runoff volumes in furtherance of stream protection and/or restoration.

Low Impact Development

Low impact development (LID) practices of stormwater management (also referred to as green stormwater infrastructure) can reduce runoff volumes entering local streams by evapotranspiring water, filtering water through vegetation and/or soil, returning water into the ground, or reusing water. Such techniques can be incorporated within urban areas more easily than detention and retention ponds. LID practices can include, but are not limited to, bioretention or biofiltration facilities (commonly referred to as rain gardens), vegetated swales, porous pavement, vegetated roofs, tree box filters, the preservation or creation of forested/open space areas, and the collection and reuse of stormwater runoff through the use of cisterns, both above ground and below ground.

Ecological Spines

Ecological Spines are an innovative stormwater management approach designed for select locations on the Richmond Highway corridor where piped streams may be daylighted and/or LID/green stormwater infrastructure may be integrated. These Ecological Spines provide aesthetic benefits and create visual focal points; provide passive recreational opportunities through the establishment of accessible green corridors; provide opportunities to better connect people with nature; augment downstream Environmental Quality Corridors and Resource Protection Areas; and, provide ecological benefits through the establishment or enhancement of riparian buffer areas and the integration of native vegetative restoration efforts, particularly within areas adjacent to streams. Opportunities to integrate LID/green stormwater infrastructure stormwater management concepts (see below) within Ecological Spines should be explored. When integrating daylighted streams into development designs, natural stream buffer areas should be restored to the extent feasible as suggested by the Environmental Quality Corridor policy (see the Environment section of the Policy Plan, Objective 9, Policy a). Buildings proposed near restored stream corridors should not be constructed within areas that would be subject to flooding by 100 year storm events and roads in these areas should be designed to have minimal impact. The Ecological Spine cross-sections shown in the Urban Street Network Design Section should be referenced when designing these environmental features.

Stormwater Design

All proposals should incorporate stormwater management measures that further the above stormwater management goals. Environmentally-friendly stormwater design, with an emphasis on the use of LID practices, should be integral to each project, recognizing that stormwater management measures may be phased as development occurs. Stormwater and site designs should minimize the amount of impervious cover and incorporate runoff reduction strategies such as infiltration, stormwater reuse and retention to improve downstream waters. The use of appropriate native plant materials is encouraged to improve biodiversity and provide habitat benefits while reducing the use of pesticides, herbicides and fertilizers, improving the soil, and minimizing maintenance. The use of non-native invasive plant materials is discouraged to avoid detrimental impacts to riparian plant communities, water quality, and environmental quality. Use of non-native, non-invasive species should be limited to stormwater facilities located in built or formal landscapes and when there are no suitable native plant alternatives.

The incorporation of stormwater management strategies in parks and other open space areas can support this approach while providing recreational amenities, habitat benefits and educational opportunities (e.g., interpretive exhibits highlighting ways that the strategies benefit water and ecological resources). Stormwater management and selected LID practices should also be incorporated into new and redesigned streets where allowed and practicable; this approach can support recommendations for ecologically-sensitive urban street network designs as identified in the Urban Street Network section and guidance for individual CBCs in the corridor, including the potential for incorporating the daylighting of streams. As approaches to treating stormwater continue to evolve, and as new innovative practices are identified, these evolving measures should be employed in support of stream protection and restoration.

In order to achieve stormwater management goals, stormwater controls should typically treat runoff close to its source. This may be accomplished through onsite controls or through coordination of stormwater management measures among neighboring development sites. Contributions to, or construction of, one or more projects identified in a Board of Supervisors-adopted watershed management plan or projects that would otherwise further county stormwater goals may also be considered.

Any development proposal that result in an intensity of 1.0 FAR (or equivalent residential density) or greater and/or result in a 20 percent or more increase in impervious cover on the site, should be reviewed on a case-by-case basis for the appropriate optimization of stormwater management and water quality controls, allowing for flexibility in specific approaches to achieve the following guidelines (any one of A, B, or C below):

A. Specific Performance Targets

- Reduction in runoff volume leaving the site equivalent to one inch from impervious surfaces on the site. If this level of runoff volume reduction cannot be attained, a combination of runoff volume reduction and peak flow and velocity reduction should be provided to the extent necessary to protect downstream water resources, even where runoff would be discharged directly into a pipe or constructed channel.
- For redevelopment projects, phosphorus reduction for new impervious areas should meet the most current regulatory requirements, while the phosphorus load from existing impervious area should be reduced by at least 30 percent below predevelopment loads.
- As proposed intensities increase above 1.0 FAR, and/or as proposals incorporate additional increases in impervious cover, commensurate increases in the performance targets described above should be pursued.

B. Linkage to Green Building Rating Systems

- As an alternative to the targets set forth in A, stormwater management measures may be provided that are sufficient to attain the Rainwater Management credit of the most current version of Leadership in Energy and Environmental Design-New Construction (LEED-NC) or Core & Shell (LEED-CS) rating system (or equivalent of this/these credit(s) based on an alternate rating system). Stormwater management practices that are applied toward this outcome should provide runoff reduction/rainfall volume retention, rather than just stormwater treatment, to the maximum extent practicable.

C. Alternative Approaches

- As an alternative to A or B, stormwater management measures and/or downstream improvements may be pursued to optimize site-specific stormwater management and/or stream protection/restoration efforts, consistent with the adopted watershed management plan(s) that is/are applicable to the site. Such efforts should be designed to protect downstream receiving waters by reducing stormwater runoff volumes and peak flows from existing and proposed impervious surfaces to the maximum extent practicable, consistent with watershed plan goals. Consideration may be given to other stormwater runoff-related factors such as downstream flooding, drainage complaints, character and condition of downstream channels, and identified stream impairments.

Residential and Other Noise-Sensitive Uses

Where residential or other noise sensitive uses are proposed near Richmond Highway, such proposals should only be considered with the provision of a noise study during the review of the development, commitments to noise mitigation measures, and, potentially, commitments to the provision of disclosure statements and a post-development noise study. The noise study during development review should clearly define the noise levels impacting the proposed uses as a measure of DNL dBA; should include noise contours and/or noise impacts at each façade of each affected building with current noise levels and projected noise levels based on a minimum 20-year traffic volume projection for the roadway and for bus rapid transit and/or Metrorail, as may be applicable; and, should identify differing noise levels that may affect building facades at different elevations.

In areas where projected noise impacts at affected building facades will exceed DNL 75 dBA, design strategies should be pursued where feasible, consistent with other design goals, such that exposures of facades for noise-sensitive areas of residences will be minimized. Where such exposures cannot be avoided, and for dwelling units for which outdoor spaces including balconies are projected to be exposed to noise levels that exceed DNL 65 dBA, disclosure statements should be provided to potentially affected residents and users within the impacted uses or units. The disclosure statements should clearly identify the mitigated and unmitigated noise levels for interior space and the noise levels for any affected balconies, in addition to noise mitigation for interior space and outdoor recreational areas. When feasible, post-development noise studies should be conducted to support evaluations of the effectiveness of noise mitigation measures.

Green Building Practices

Objective 13 in the Environment Element of the Policy Plan provides guidance for green building practices and standards. Development and redevelopment should meet applicable green building standards and achieve best practices in accordance with the Policy Plan.

HERITAGE RESOURCES

In 2016, a reconnaissance survey was completed along the Richmond Highway Corridor from Huntington Avenue to Mount Vernon Memorial Highway to identify properties or buildings that may qualify for listing in the Fairfax County Inventory of Historic Sites. The survey identified several properties for more thorough documentation. Heritage resource staff in the Department of Planning and Zoning should be contacted regarding resource identification and ongoing survey efforts as directed by the 1988 Heritage Resource Management Plan and the Comprehensive Plan Policy on Heritage Resources. There is a potential for additional heritage resources to be identified.

Potential resources identified include many single family homes built between 1900 and 1940 that remain unaltered and embody the distinctive characteristics of a type, period, or method of construction. Evaluation of potential resources should provide adequate information to determine if a property qualifies as an identified heritage resource. Resources or areas identified for further research are noted in the appropriate section of the Plan. The Overview section of the Mount Vernon Planning District, in the Area IV Plan, includes a figure and map of the resources included in the Fairfax County Inventory of Historic Sites, as well as policies related to Heritage Resources.

Viewshed from Historic Sites

A Guiding Planning Principle for development within the Richmond Highway Corridor is the recognition and acceptance of responsibility for the stewardship of heritage resources. One specific application of this principal is consideration for potential impacts to the viewsheds of two notable resources in proximity to the corridor – Woodlawn and Huntley. These homes, constructed circa 1800 and 1818 respectively, offer unique opportunities to understand and appreciate Fairfax County’s heritage. Both of these homes were constructed at higher elevations that offered the original owners expansive views of their landholdings and beyond to the Potomac River. Although the views from each of these homes is quite different from when they were constructed, they remain quite impressive with limited visual intrusion from 20th century development.

Woodlawn and Huntley are included among thirteen areas considered to be major contributors to the quality of life in Fairfax County. These sites have been set within Historic Overlay Districts that establish regulations for surrounding development, above the standard zoning protection, intended to better preserve the unique architectural, historic, or archaeological value of these sites. Although redevelopment envisioned for the Richmond Highway Corridor will not occur within the limits of the Historic Overlay Districts, and, therefore, not be subject to the additional development restrictions, new development in the southern portion of the Hybla Valley/Gum Springs CBC and in Woodlawn CBC may be visible from Huntley, closely in line with the tops of the existing tree canopy, and thereby impact the ability to interpret our county’s heritage. Maintenance of the existing tree canopy on the Woodlawn site, as an expressed Standard for the Woodlawn Historic Overlay District, likely prevents any visibility of future development along the corridor from Woodlawn.

The ability to mitigate potential impacts to the viewsheds from Huntley and Woodlawn is largely addressed by the maximum building heights envisioned for those areas of potential impact. Future redevelopment within these targeted areas will be expected to provide additional analysis as part of the entitlement process to demonstrate the extent to which a requested development proposal would be visible. Development that indicates any potential for visibility may be expected to exclude building materials that would exacerbate impacts to views (e.g. highly reflective materials, building lighting). Such expectations are noted within the recommendations for the Hybla Valley/Gum Springs CBC and Woodlawn CBC.

PARKS, RECREATION, AND OPEN SPACE

Parks, recreational facilities, and open space are essential elements to ensure the livability of the communities along the Richmond Highway Corridor. A diverse and accessible park network contributes to the physical, social, and economic health of the community, benefiting residents, workers and visitors alike. Parkland and open space also provide ecological benefits, such as improved air quality, habitat diversity, and enhanced stormwater management.

Current Conditions

In 2017, there were approximately 15 acres of public parkland within the Richmond Highway Corridor, including approximately 3 acres in Vernon Heights Park, which contains a playground and trails, and 12 acres in North Hill Park. A portion of the property on the site of the Original Mount Vernon High School within the South County Center CBC is owned by the Board of Supervisors and leased to the Park Authority. Several other parks are located in close proximity to the corridor and provide open space and recreation options to the residents and workforce. These include recreation centers, a neighborhood dog park, and natural areas. Huntley Meadows Park, located just outside of the corridor, offers more than 1,500 acres of land devoted to natural and cultural resource protection with public access provided on trails within a small portion of the park.

Due to the primarily commercial nature of the CBCs and early development patterns along the corridor, there is a lack of public parkland and recreational opportunities within these areas and the Mount Vernon Planning District as a whole. As a result, the Richmond Highway Corridor and surrounding communities are underserved for parks and recreation facilities and connectivity to and between parks is poor.

Future Parks, Recreation, and Open Space Needs

As the corridor redevelops and attracts more residents and employees, the need for parks and recreation facilities to serve the growing communities will continue to increase. All residential development projects should offset impacts to parkland and park facilities for which there are adopted service level standards, either through monetary or “in-kind” contributions to serve the corridor.

Development within the CBCs should also address the guidance of the Urban Parks Framework as outlined in Appendix 2 of the Parks and Recreation Element of the Policy Plan to provide publicly accessible park space and recreation opportunities within mixed-use developments. Developments should provide high quality, publicly accessible park space on site in balance with the proposed density to assure a livable community. Diversity among the types of park spaces in the CBCs is encouraged to support a variety of leisure opportunities, including places that foster social interaction and those that provide facilities for sports and recreation activities. Safe and inviting public access supports the usability, visibility, and placemaking value of these spaces. Publicly accessible park space should be integral to development and can be publicly owned, privately owned, or provided through public-private partnerships.

The need for athletic fields to serve new development will be determined based on adopted service level standards as identified in Appendix 3 of the Parks and Recreation Section of the Policy Plan. Creative approaches are encouraged to integrate large footprint recreation needs, such as athletic fields. These approaches may include placement of such facilities on rooftops, over stormwater detention facilities, in utility corridors, indoors, and in other alternative locations. The use of field lighting and synthetic turf allows for extended scheduling, increasing capacity through more efficient usage of a facility. Field designs that accommodate multiple sports can reduce the amount of land needed and maximize recreational opportunities. When feasible, field design should seek to further environmental goals, for example, by the provision of enhanced stormwater

management and establishment of native vegetation for biodiversity and shade. It is preferable that athletic field needs be addressed within development sites; however, construction of new facilities in the vicinity of the corridor may be considered as well. Enhancements to existing facilities at nearby school and park sites that expand capacity provides another means to address increased demand.

Facilities for which adopted standards are not available, such as running tracks, game tables, bocce courts, outdoor fitness equipment, putting greens, and other desirable outdoor recreational opportunities are also encouraged. Publicly accessible indoor facilities, such as multipurpose program areas, indoor gyms, and courts may be provided to meet a portion of the need. Over time, the types of facilities needed and desired may change. Flexibility, adaptability, and imagination is encouraged to allow for innovative recreational facilities and activities.

Full realization of the redevelopment option would be anticipated to generate a need for 38 acres of publicly accessible parkland within the Community Business Centers along the length of the corridor. This estimate does not include the need generated by additional development that could be realized with Metrorail. For development that is intended to be constructed in phases, public parks and/or recreation facilities are expected to be phased to when the need arises.

The Urban Parks Framework, as outlined in Appendix 2 of the Parks and Recreation Section of the Policy Plan, seeks to ensure that the higher densities envisioned within the county's urbanizing areas, such as Community Business Centers, provide spaces that contribute to a vibrant, livable community. The Urban Parks Framework addresses five distinct types of urban parks to provide a variety of park experiences to serve an urban lifestyle: pocket parks, common greens, civic plazas, Recreation-focused urban parks, and linear parks. The urban park types span a continuum of purposes, uses, sizes and features that can flexibly accommodate a broad spectrum of recreational and leisure pursuits. These urban parks are distinct from urban design elements such as streetscape areas, sidewalk cafes, commercial entertainment venues, and retail browsing areas. As the corridor redevelops, the full spectrum of urban parks should be integrated with development to provide for the diverse needs of a community. Special focus should be on including elements that foster physical activity.

URBAN DESIGN

Urban design is used to align the desired scale and character of development with the social, economic and aesthetic values of a community. It guides the physical features that define the arrangement and appearance of building form, open spaces, streets, blocks, and communities. The Richmond Highway area has a rich history with a number of notable historic sites, and the corridor has been evolving since early in the nation's history. Over time, the corridor has developed into an auto-oriented pattern that is challenging for pedestrian circulation with low-density, single-use buildings, large amounts of surface parking, and few public spaces. Redevelopment presents an opportunity to improve upon the current development pattern by establishing an urban form that draws upon the prominence of the corridor's historical legacy; builds strong multimodal connections; creates diverse public spaces that meet the needs of residents and visitors; and integrates the built environment with the area's natural resources.

The following recommendations address site design, building massing and height, articulation and façades, other public realm elements, and parking design.

Site Design

Site design should prioritize the pedestrian realm to create a vibrant urban environment. Typically, buildings should be located close to the sidewalk to allow for active storefronts and other uses that engage pedestrians. The location of buildings or other site features should not interrupt the pedestrian circulation system. Uses such as loading docks, mechanical rooms, utility vaults, and exposed parking decks detract from the public realm and should be located on shared lanes or alleys, or placed internally to the building envelope to minimize their negative impacts.

Proposed developments in the CBCs should adhere to an established build-to line for each street type as discussed in the Urban Street Network Design section. The build-to line is a theoretical line on the ground indicating where the façades of buildings should be located. It ensures that the ground floors of all buildings on a block are generally in line with one another at the edge of the streetscape. The build-to line generally applies to the podium (or base) of the building structure and excludes upper levels, which may be set back further to allow light and air to reach the street. Exceptions to the build-to line may occur where plazas, parks, or spaces for public art are located.

Existing buildings will not necessarily conform to the build-to line established by new development. Thus, new development and redevelopment, especially those that are phased, should incorporate visual and physical linkages to existing buildings to create a high-quality pedestrian realm. New buildings may use landscaping or other architectural features to visually align with existing buildings from the build-to line. Proposed development in the SNAs is encouraged to adhere to the established build-to line to the greatest extent possible.

Building Massing and Height

Sites should be designed to achieve the desired intensity goals while remaining sensitive to the impact on the surrounding context. Buildings should be designed to protect views and to allow for privacy. Building massing should allow for light at the street level and to minimize long periods of shadow on the street, on adjacent buildings, or in open space.

Building heights in this Plan are not measured in feet but rather in stories to provide some flexibility. The ground floor of a mixed-use or commercial building should be at least 16-feet in height, with the remaining stories generally not exceeding 12 feet except where greater height is required for multi-story retail uses. Building heights under the redevelopment options in the CBCs are illustrated in Figures 24, 32, 41, 51, and 66. The following are general recommendations regarding building height throughout the corridor:

- Building heights should be tallest along Richmond Highway and transition to a lower-scale as they get closer to established residential neighborhoods.
- Buildings may be oriented to maximize their view potential, but their location and orientation should take into consideration uses in the immediate vicinity.
- Buildings should be designed with height variations to provide light and views, privacy, and effective transitions to adjacent uses.

Building Articulation and Facades

Building articulation, or changes in the façade, are achieved through recesses, protrusions, window systems, entries, balconies, cornices, and different roof forms, and should be used to visually reduce the scale of a building and avoid monotonous building elevations. Changes in materials, colors, and/or textures which express the ground floor, building podium, and higher

elements should be incorporated to create variety and interest. Further, articulation may provide shade, demarcate entries, or act as gateway features to contribute to a vibrant public realm. Building height modulation and variations in the heights of buildings within a block should be incorporated to distinguish uses, to provide variety, and to provide transitions between higher density buildings along Richmond Highway and lower density buildings within the surrounding residential neighborhoods.

The pedestrian experience is influenced significantly by the scale of buildings that are located adjacent to the sidewalk. Buildings should be sited and designed to create a sense of enclosure for streets and the spaces between buildings. Step-backs can be used to create an appropriate proportion of street width to building height, particularly for tall buildings. When portions of the building above the lower levels are set back from the build-to line, pedestrians only perceive the first few floors of the building podium, and not the full height of the building. Step-backs to reduce the impacts of shadows may be necessary to ensure that sunlight is present in important locations, particularly those related to public open spaces, including pocket parks and plazas. Shadow studies (also called sunlight or solar shading analyses) should be utilized to ensure that adjacent buildings and spaces will have adequate light. Step-backs add depth and complexity to the bulk of buildings; they can create interesting exterior spaces on upper floors and opportunities for outdoor patios or terraces.

The scale and level of detail of building façades and frontages should be appropriate to pedestrians. Ground-floor commercial uses should be accessed directly from the adjacent public sidewalk or building zone. The façades of first-floor commercial uses, residential lobbies and common areas should be primarily transparent to activate the sidewalk by providing visibility into the building. Long expanses of blank walls without windows or entrances detract from the pedestrian experience. Such conditions should not occur on any public street-facing façades. If blank façades cannot be avoided, strategies should be employed to mitigate their impact on the public realm. This may include the provision of applied architectural elements, material changes, public art installations, special lighting, or landscaping. Windows should provide building detail and visual interest and not contain opaque, mirrored, or translucent glass.

In residential buildings, the degree of transparency in the ground floor may be reduced for private uses, such as living areas. Residential lobbies and other common spaces should exhibit higher transparency and should provide a visual connection to the outside. Ground-floor residences with individual entrances should be grade-separated from the public sidewalk to provide some privacy. The sill of ground floor windows should generally be placed above the eye level of passers-by on adjacent sidewalks. This creates the opportunity for stoops, bays, porches or entries that establish a distinct transition between private residential use and the public realm. When grade separation cannot be achieved, a landscaped building zone should be provided between the residence and the public sidewalk. Stairs or porches should not encroach on the sidewalk; they should be located wholly on private property in the building zone so as to not impact pedestrian movement.

Signage and Wayfinding

Generally, signage should be integrated with building architecture to avoid visual clutter. Building-mounted signs or monument-style ground-mounted signs incorporated within the building zone are encouraged. Pedestrian-scaled signage should be incorporated into all new uses. Pole-mounted signs are discouraged.

Wayfinding is a method of orienting people within their surroundings and enhances their understanding of places. Wayfinding tools such as signs, maps, symbols, or other graphic methods should be incorporated into a project to help people navigate the physical environment and to

contribute to the overall identity of an area through use of consistent themes. A coordinated program of public art, signage, and/or other way-finding elements enhances connectivity and orients people who walk, bicycle, and use transit in the area.

Public Art

The identity of the Richmond Highway Corridor should be established in part through the inclusion of public art. Redevelopment projects and public spaces are encouraged to include art in their design as per Policy Plan guidance. Public art can help build authenticity, recall historically significant events in the area, and increase a sense of pride and place. Artwork should create an inviting and attractive environment for residents, employees, and visitors. Art installations should be located in prominent public spaces and be integrated with other urban design features.

Parking Design Recommendations

The proper location of parking is essential to creating an environment that promotes walking. Adequate and convenient parking is also essential for the economic vitality of retail uses. On-street, structured and underground parking should be encouraged for most of the uses. Parking should generally be located internal to developments. Access to parking areas should be designed to minimize conflicts between vehicles and pedestrians by reducing the number of access points and minimizing the width of curb cuts where they intersect with the sidewalk. Vehicular access to parking lots and garages should be limited to local streets, shared lanes, or alleys when feasible.

On-Street Parking

On-street parking provides convenient and accessible parking for residential and retail uses while enhancing the pedestrian experience by increasing the safety and comfort of the people using the sidewalk. Where on-street parking is provided, curb cuts for vehicular access should be minimized in order to reduce vehicular conflicts with pedestrians and maximize the number of on-street parking spaces. On-street parking should be parallel to the street. Angled and perpendicular on-street parking is discouraged. Landscaped bulbouts within on-street parking areas at intersections should be used to reduce crosswalk distances for pedestrians.

Structured Parking

Underground parking is the least intrusive form of parking and is the preferred method for providing parking in the Richmond Highway Corridor. However, the provision of underground parking may not always be feasible. Therefore, an above-grade structured parking garage, or podium parking, may be appropriate.

Freestanding parking structures are discouraged as they should be integrated into the building. Where the facades of parking structures are exposed, architectural detailing, lighting, and landscaping should be employed to mitigate negative visual impacts. Exposed parking structures are strongly discouraged along the Livability Spine or adjacent to parks and plazas. Access to parking structures should be attractive and coordinated with the architecture of the building through the use of architectural treatments on doors or similar treatments. Consideration should be given to reducing glare and other potential negative visual impacts from light sources.

Surface Parking Lots

Surface parking lots should be avoided, particularly in front of buildings and along Richmond Highway. Any surface parking lots should be located to the side or rear of the primary use and should contain clearly delineated pedestrian connections to the associated building. Such lots should be intensively landscaped and well-lit. They also should be designed to contribute to on-site stormwater management by using elements such as planter areas and permeable paving in the parking stall area. The redesign and consolidation of existing, private, surface parking lots is encouraged.

TRANSPORTATION

Richmond Highway is a regional commuter corridor, serves as a main street for nearby residents and businesses, and is the major element that ties together a culturally vibrant and historic community. The Richmond Highway Corridor is envisioned to evolve into a multimodal corridor served by a fast, high-quality BRT system; a consistent six lane roadway and local bus service; continuous pedestrian and bicycle facilities; and ultimately, Metrorail from Huntington to Hybla Valley. These improvements are important to enhancing access and mobility, while supporting desired new development.

In addition to the Richmond Highway improvements, street grid networks are proposed within the CBCs, around many of the potential BRT station areas to support transit-oriented development (TOD). These grids will provide improved connectivity, alternatives to travel on Richmond Highway, shorter blocks, and more urban, pedestrian-oriented streetscapes. These improvements will make active transportation options appealing and convenient for residents, workers, and visitors, and contribute to the economic health throughout the corridor by facilitating redevelopment and attracting new jobs and housing.

The Guiding Planning Principles section of this Plan provides the general transportation goals for the corridor. The following section contains specific transportation recommendations and policies that elaborate on the corridor-wide goals in greater detail and provides suggested recommendations for achieving them. The section should be used to guide general transportation decisions. In some instances, site-specific transportation recommendations are included in the land use recommendations section for individual land units.

Each Community Planning Sector within the Mount Vernon and Lower Potomac Districts also contains specific transportation recommendations for Richmond Highway and adjacent roadways, which are shown on the maps included in each sector plan. The location and boundaries of the Community Planning Sectors in the vicinity of the Richmond Highway Corridor are shown in Figure 4. The sector figures show access orientation, circulation plans, interchange impact areas, and generalized locations of proposed roadway and transit improvements.

Public Transportation

Bus Rapid Transit

The BRT system is planned to serve the Richmond Highway Corridor from the Huntington Metrorail Station to Accotink/Fort Belvoir, with stations in the Huntington Transit Station Area (TSA), Penn Daw CBC, Beacon/Groveton CBC, Hybla Valley/Gum Springs CBC, South County Center CBC, Woodlawn CBC and Accotink/Fort Belvoir as shown in Figure 2.

The implementation of a phased BRT system between the Huntington Metrorail Station and Accotink/Fort Belvoir is needed to provide residents increased mobility, reduce vehicle dependency, and accommodate additional transit ridership from redevelopment in the Richmond Highway Corridor. The provision of a BRT system also will encourage denser, mixed-use, walkable development in the CBCs of Penn Daw, Beacon/Groveton, Hybla Valley/Gum Springs, and Woodlawn. BRT service is envisioned to be frequent and reliable, and is expected to include enhancements such as dedicated lanes, busways, traffic signal priority, off-board fare collection, level-boarding platforms, and other station features.

Additional guidance about the sections of the BRT system north of the Penn Daw CBC and south of the Woodlawn Area to Accotink/Fort Belvoir can be found in the MV1 – Huntington Community Planning Sector guidance in the Mount Vernon Planning District and LP4 – Fort

Belvoir Community Planning Sector guidance in the Lower Potomac Planning District, respectively.

The following recommendations apply:

- Provide transportation capacity improvements that encourage transit travel to support the envisioned future growth;
- Establish phased BRT service between the Huntington Metrorail Station and Accotink/Fort Belvoir to serve the needs of residents and businesses near Richmond Highway; and,
- Design BRT stations for the comfort and convenience of the transit rider. Paved and covered waiting areas, including amenities such as seating areas and lighting, within the public right-of-way at the stations should be provided.

Local Bus Service

Existing bus service on the Richmond Highway Corridor serves both local riders and people commuting through the area. Modifications to these routes are anticipated with the implementation of the BRT system to provide connections to the system and supplement local routes within the proposed grids of streets where necessary. North Gateway, while not served directly by the BRT, should be served by local bus service that connects directly to transit facilities, such as the BRT station in Penn Daw and the Huntington Metrorail station.

The following recommendation applies:

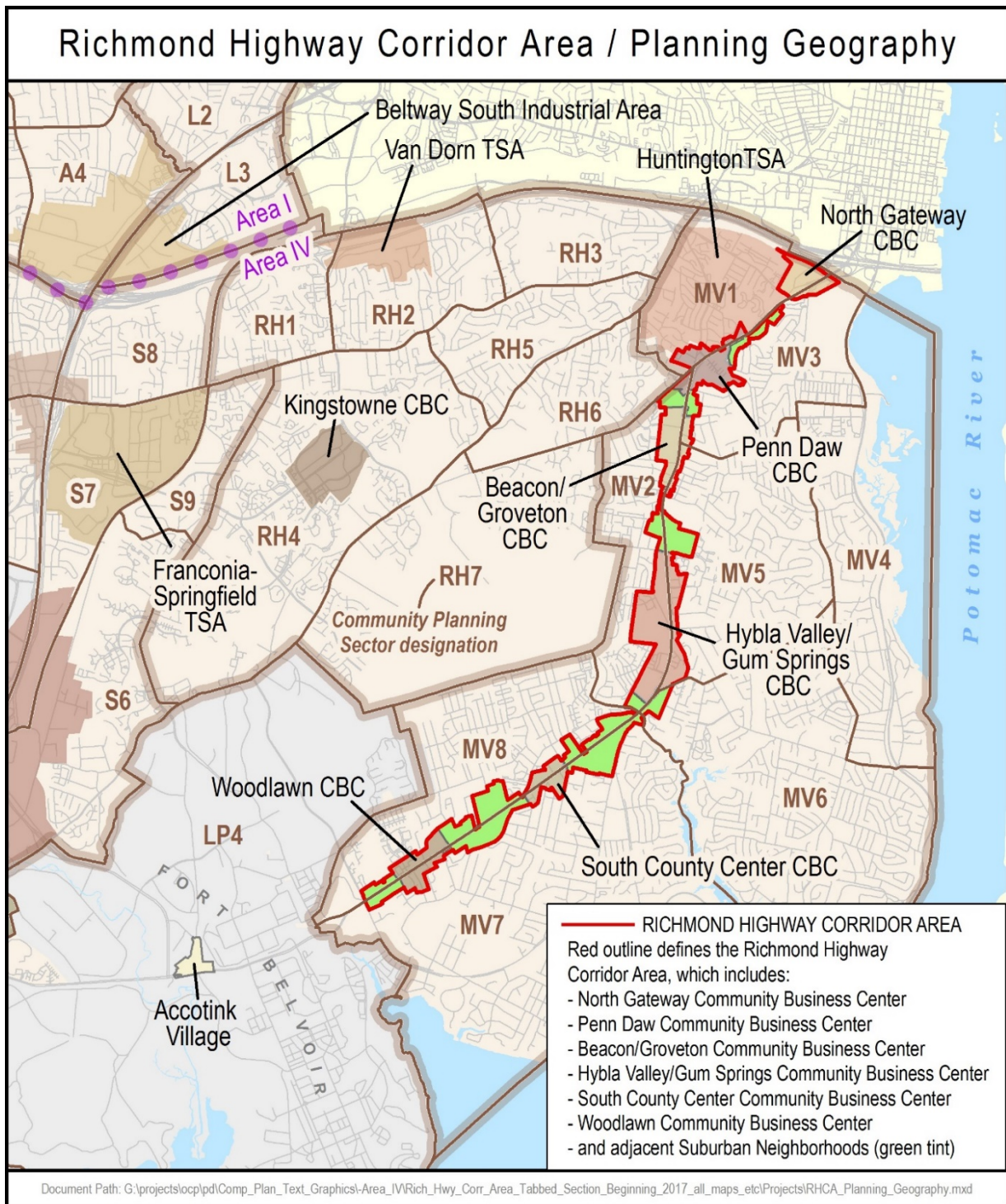
- Utilize local bus service to assist in connecting riders to the planned BRT system or to supplement it where necessary.

Metrorail

An extension of the Metrorail Yellow Line from the Huntington Metrorail Station to the Beacon/Groveton and Hybla Valley/Gum Springs CBCs is envisioned as a continuation of the multimodal character of the Richmond Highway Corridor. This extension may occur after the BRT system is in place.

The following recommendation applies:

- Assess the transportation and other impacts of extending the Metrorail Yellow Line from the Huntington Metrorail Station to the Beacon/Groveton and Hybla Valley/Gum Springs CBCs and identify necessary mitigation measures.



COMMUNITY PLANNING SECTORS

FIGURE 4

Roadway Level of Service

Richmond Highway is designated as a National Highway System (NHS) facility by the Federal Highway Administration (FHWA). The Commonwealth of Virginia requires that intersections along NHS facilities, such as Richmond Highway, achieve an overall LOS of 'D', unless a lesser standard is agreed upon.

Fairfax County is attempting to create places where people live, work, and play while meeting the needs of all modes of transportation by creating a series of interconnected, mixed-use nodes with multimodal access and connections to surrounding communities. While it is important to allow vehicles to circulate through, within, and around the corridor in a safe and efficient manner, strategies that reduce vehicular demand should be implemented where possible. Fairfax County, therefore, prefers to allow a lesser LOS standard of 'E' where appropriate along Richmond Highway to help achieve a well-designed and balanced multimodal environment.

The following recommendations apply:

- Generally, maintain an overall Level of Service (LOS) of 'D' for intersections on Richmond Highway, unless a lesser standard of LOS 'E' is agreed upon by Fairfax County and the Virginia Department of Transportation (VDOT).
- Generally, maintain an overall intersection LOS of 'E' for other intersections in proximity of Richmond Highway, but located off the corridor.

Grid of Streets

There are many transportation-related benefits of a grid of streets. Some of the benefits include improved circulation and distribution of traffic, additional walking and cycling routes, enhanced connectivity to places, and more direct access for emergency responders. Maps and details related to the street grids are in the Urban Street Network Design (USND) section and relevant CBC sections of the Plan.

The following recommendation applies:

- Implement a grid pattern of streets in the North Gateway, Penn Daw, Beacon/Groveton, Hybla Valley/Gum Springs, and Woodlawn CBCs to support TOD, as shown on Figures 26, 34, 43, 54, and 69 in the CBC Recommendations section of the Plan.

Richmond Highway Widening

Richmond Highway is one of the primary roads in the Mount Vernon Planning District and serves as the main corridor for residents, businesses and visitors to this community. The right-of-way and road both need to be widened, in many places, to accommodate the planned multimodal facilities.

The following recommendations apply:

- Widen Richmond Highway to accommodate a median-running BRT system guideway with BRT stations from Penn Daw to Accotink/Fort Belvoir.
- Design the roadway as a complete street with six travel lanes, and continuous bicycle and pedestrian facilities on both sides, along the entire length of the Richmond Highway Corridor.

Access Management

Richmond Highway currently has many curb cuts and other driveway access points. Reducing the number of these access points could improve safety, improve traffic flow, and lessen conflicts between motorists, pedestrians and cyclists. Improved inter-parcel access will provide connectivity between blocks and reduce the number of trips that need to access Richmond Highway.

The following recommendations apply:

- Reduce the number of curb cuts and other driveway access points on Richmond Highway. Encourage facilities to coordinate access points.
- Discourage, as much as possible, full movement access locations along Richmond Highway except at signalized intersections.
- Realign intersecting streets to eliminate offset and angled intersections with Richmond Highway, where necessary.
- Encourage development proposals to utilize the grid of streets for access, provide adequate multimodal and inter-parcel access, and provide other measures needed to mitigate the traffic impacts.

Pedestrian and Bicycle Facilities

The pedestrian and bicycle networks on Richmond Highway will provide multimodal alternatives to automobile travel and provide important connections to destinations within the corridor and beyond. These networks should be designed, built, maintained, and operated to a high standard in order to attract users, to achieve the transportation goals for the corridor, and to provide residents and visitors with appealing travel options to work, shopping, recreation, or other daily destinations.

Planned bicycle facilities for Richmond Highway are shown in Figures 7 and 8, Transit Boulevard – Richmond Highway, North and South of Napper Road Cross-section(s). These figures show designs for the planned separated bike lane (cycle track) in the Richmond Highway right-of-way from North Gateway to Accotink/Fort Belvoir. Bicycle facilities are also planned to connect adjacent neighborhoods to Richmond Highway. See the Bicycle Master Plan and CBC Multimodal Network Maps for more details on these facilities. For additional details on appropriate pedestrian and bicycle facility treatments, designs, and locations for new CBC grid streets, see descriptions in the Urban Street Network Design and the Multimodal Network Maps in the CBC Recommendations sections.

The following recommendations apply:

- Provide continuous pedestrian and bicycle facilities, within the public right-of-way, on both sides of Richmond Highway from North Gateway to Accotink/Fort Belvoir. Facility design should protect users and provide low-stress conditions appropriate to the planned traffic volume and speed of the roadway.
- Provide adequately marked and signalized crosswalks on Richmond Highway at the future BRT stations and at signalized intersections to encourage pedestrian and bicyclist movement. Outfit controlled crosswalks with pedestrian-controlled signals that meet ADA design standards. Non-signalized pedestrian crossings of Richmond Highway are discouraged.

- Provide safe, secure, and convenient bicycle parking to encourage cycling in the Richmond Highway Corridor. See the Fairfax County Bicycle Parking Guidelines for the quantity and design of bicycle parking facilities.
- Implement and incorporate enhancements to bicycle and pedestrian facilities within the Richmond Highway Corridor as part of roadway and transit improvements to create a continuous network of high-quality multimodal facilities and circulation between modes and to destinations along the corridor.
- Maintain a high level of service for pedestrians and cyclists, which includes, but would not be limited to, meeting Americans with Disabilities Act (ADA) standards, enhanced safety and security measures, the provision of direct pathways to and from BRT stations, and minimized delays at intersections, especially within a quarter mile of the BRT stations.

Transportation Demand Management

Transportation Demand Management (TDM) refers to a variety of strategies aimed at reducing the traffic demand, particularly for single occupant vehicle trips during peak periods, and at expanding the modal choices. Traffic volumes need to be minimized to decrease congestion within the Richmond Highway Corridor, to create livable and walkable spaces, and to minimize the effects of traffic on neighboring communities. The result is a more efficient use of the transportation systems. TDM is therefore an important component of this Plan and the promotion of the programs to the various stakeholders within a CBC is critical to its success.

A systematic, and integrated program of TDM strategies throughout the Richmond Highway corridor can reduce peak period single occupancy vehicle trips, as well as increase the percentage of travelers using transit and non-vehicular modes of transportation. TDM programs should embrace the latest information technology techniques to encourage teleworking, and provide sufficient information to enable trip makers' to make educated decisions about how, when, and whether to travel.

The objective of a successful TDM program for the Richmond Highway corridor is to reduce the number of single occupant vehicle trips. These reductions are based on Institute of Transportation Engineers' (ITE) peak hour trip generation rates.

The following recommendations apply:

- Reduce peak period single occupancy vehicle trips by 35 percent for office development and 25 percent for residential development. Final TDM goals will be determined based on site specific characteristics at the time of rezoning, or other application, where a TDM commitment is applicable, as deemed acceptable by Fairfax County.
- Ensure that development proposals include the following elements associated with a TDM program in support of the TDM goals for Fairfax County:
 - Measures to achieve the minimum trip reduction goals. Examples of TDM measures to be considered can be found in the Transportation element of the Policy Plan volume of the Comprehensive Plan.
 - An implementation plan with ongoing monitoring actions.

- Commitments to ensure TDM efforts are successful.
- A plan to promote TDM programs to the various stakeholders.

Parking Management

To facilitate the achievement of TDM goals and encourage transit use, shared parking for uses which have different peak demand periods, instituting paid parking, or other parking reduction strategies are encouraged. Additionally, shared parking should be explored for similar uses with both existing and new buildings, especially when the existing use is over parked. These parking strategies can increase the cost-effectiveness of providing vehicle parking while reducing vehicle trips.

Appropriately allocated and strategically located parking is critical to the multimodal vision for Richmond Highway. See Parking Design Recommendations in the Urban Design Section of the Corridor-wide Guidelines for more information.

As the Richmond Highway Corridor is developed, and the land use and transportation infrastructure matures, parking requirements should be examined to determine if they are adequate for the changing conditions. Rather than supplying parking for each individual use, parking should be treated as a common resource for multiple uses. Implementing this practice will reap many advantages in creating a more walkable and less auto-dominated environment.

The following recommendations apply:

- Encourage parking reductions and other incentives to lower parking, if supported by the parking plan.
- Explore opportunities for shared parking with adjacent properties.
- Consider reduced parking rates for subsequent phases of development, where appropriate.
- Manage parking within the CBCs to avoid spillover parking into adjacent residential areas.

Balancing Land Use and Transportation

A balance between land use and transportation must be achieved for revitalization to be successful. To ensure an adequate transportation system as the plan for the Richmond Highway Corridor is implemented, development should include a transportation analysis during the development review process and commitments to mitigate any impacts, as warranted. At a minimum, development should meet appropriate site specific and/or transportation policy conditions as contained in the Comprehensive Plan. These may include frontage and access improvements and the provision of pedestrian and bicycle facilities.

The following recommendation applies:

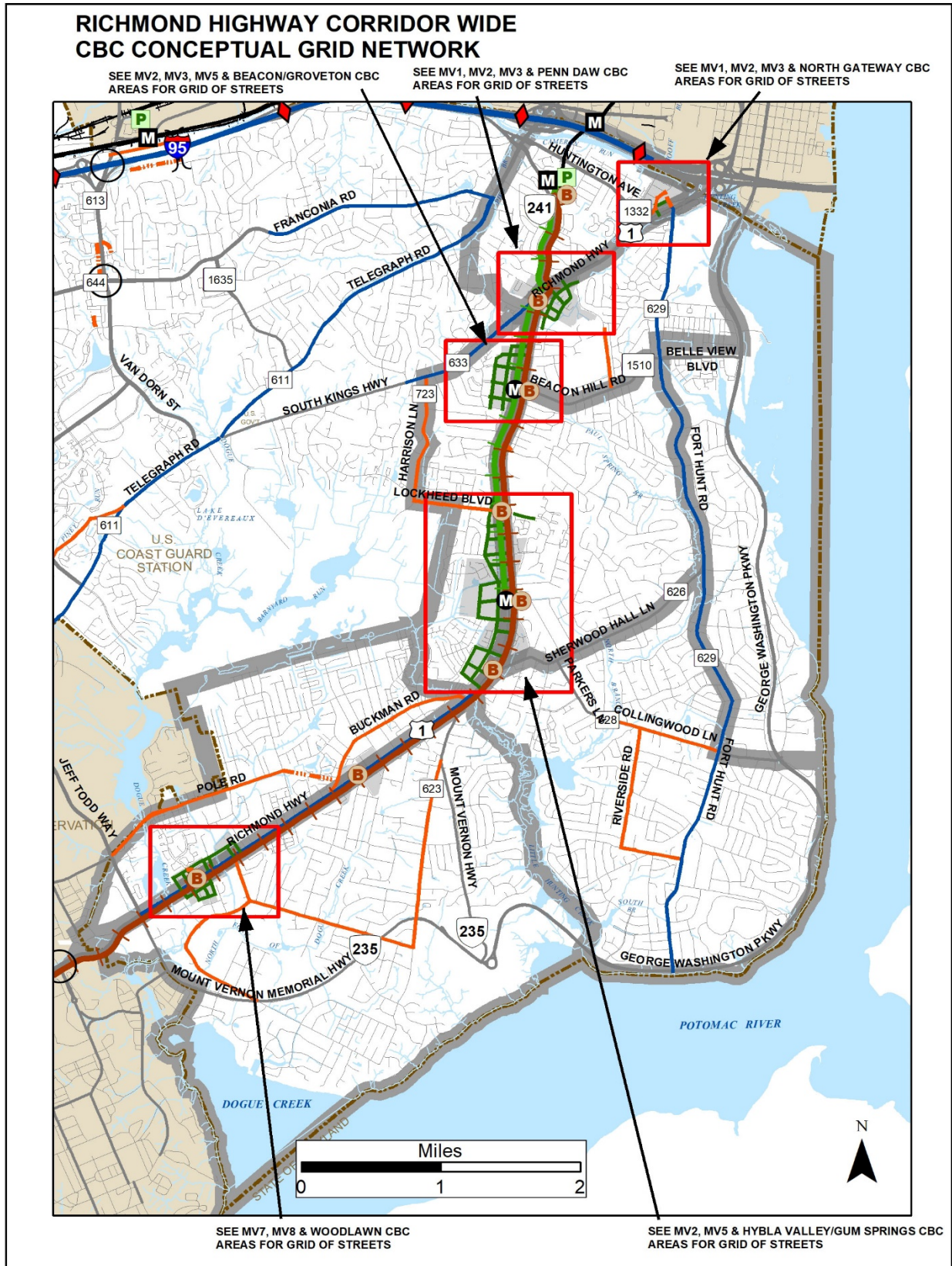
- Provide transportation improvements, right-of-way, and commitments to mitigation strategies, as needed

URBAN STREET NETWORK DESIGN

Street Network

The implementation of a comprehensive multimodal network of streets within the CBCs and SNAs is critical to achieving the vision for Richmond Highway as a roadway that serves both through traffic and local needs. Within the Penn Daw, Beacon/Groveton, Hybla Valley/Gum Springs, and Woodlawn CBCs, a new network of urban street grids is intended to facilitate high-quality development and redevelopment. These street grids are roadway patterns that create walkable, compact blocks that are scaled for the pedestrian and facilitate local travel without trips having to access Richmond Highway directly. In some cases, the new streets will function as parallel roads to Richmond Highway, offering greatly enhanced multimodal connectivity within the corridor. The block sizes formed by the grids will be conducive to development, as well as increase access to new development. The locations of the street grid networks are shown in Figure 5 (Conceptual Grid Network). Multimodal connections will be prioritized along the corridor and across Richmond Highway at signalized intersections to improve internal connectivity within the CBCs and between the surrounding neighborhoods and the CBCs.

It is anticipated that the grids of streets will be implemented as redevelopment occurs. Development proposals within these CBCs should include and implement the planned transportation improvements as shown in Figures 26 (North Gateway CBC), 34 (Penn Daw CBC), 43 (Beacon Groveton CBC), 54 (Hybla Valley/Gum Springs CBC), and 69 (Woodlawn CBC). Additional street segments necessary to maintain acceptable traffic circulation for an individual development should be provided by that development. Alternative grid segments may be considered by the county if the alternative achieves the Plan goals.



CONCEPTUAL GRID NETWORK

FIGURE 5

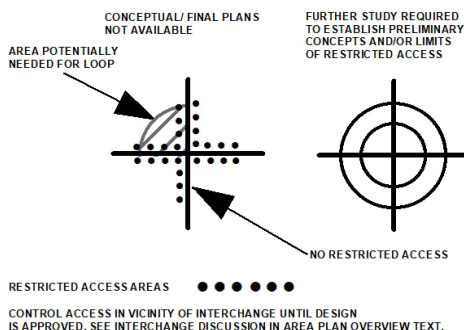
TRANSPORTATION RECOMMENDATIONS LEGEND

ARTERIAL	COLLECTOR LOCAL	
		WIDEN OR IMPROVE EXISTING ROADWAY
		CONSTRUCT ROADWAY ON NEW LOCATION
	2 4 6 8 10 12	TOTAL NUMBER OF LANES, INCLUDING HOV LANES (COLLECTOR/ LOCAL CROSS SECTIONS TO BE FINALIZED DURING PROCESS OF REVIEWING PLANS FOR PROPOSED DEVELOPMENT)
EXISTING	PROPOSED	
		METRORAIL STATION
		COMMUTER PARKING LOT
		TRANSIT TRANSFER CENTER (NO PARKING)
		COMMUTER RAIL STATION
		RAIL STATION
		POTENTIAL BUS RAPID TRANSIT (BRT) STATION
		HIGH OCCUPANCY VEHICLE LANES
		HIGH OCCUPANCY TOLL LANES
		FULL INTERCHANGE IMPROVEMENT (STUDY REQUIRED)
		PARTIAL INTERCHANGE IMPROVEMENT
		PROPOSED HIGHWAY OVERPASS
		PROPOSED HIGHWAY UNDERPASS
		CONSTRUCT OR IMPROVE LOCAL OR COLLECTOR STREET (NUMBER INDICATES PROPOSED NUMBER OF LANES) (CROSS SECTIONS TO BE FINALIZED DURING PROCESS OF REVIEWING PLANS FOR PROPOSED DEVELOPMENT)
		PROPOSED CUL-DE-SAC
		RAIL TRANSIT
		BUS RAPID TRANSIT (BRT)
		PLANNING SECTOR OR DISTRICT OR DEVELOPMENT CENTER

NOTE: IMPROVEMENTS TO ARTERIAL FACILITIES SUBJECT TO COMPLETION OF CORRIDOR STUDIES. SEE DISCUSSION IN AREA PLAN OVERVIEW TEXT. FINAL ALIGNMENTS SUBJECT TO COMPLETION OF APPROPRIATE ENGINEERING STUDIES.

HOV LANES TO BE CONSIDERED IN PROJECT DEVELOPMENT. HOV LANES TO BE PROVIDED IF WARRANTED BASED ON DEMAND FORECASTS AND CORRIDOR STUDY.

KEY TO INTERCHANGE ENLARGEMENTS



Functional Classification of Streets

The Commonwealth of Virginia has embraced the goal of providing a multimodal and intermodal transportation system. To assist in implementing this goal, the Virginia Department of Rail and Public Transportation (DRPT), in collaboration with the Virginia Department of Transportation (VDOT), FCDOT, and other entities, developed Multimodal System Design Guidelines in 2013. The guidelines support the principles of walkability, context sensitive street design, Transit Oriented Development, and Traditional Neighborhood Design.

The urban design-oriented functional classification system, detailed in the Multimodal System Design Guidelines, is being used for street and highway classification in the Richmond Highway Corridor area. Figure 6 provides a cross-reference between the traditional and urban design-oriented classification schemes.

Figure 6
Cross-Reference between Traditional Highway Functional Classification and
Urban Design Oriented Functional Classification Table

Fairfax County Functional Classification (Design Speed)					
Multimodal Types (Design Speed)	Interstate, Freeway, or Expressway (50-70 mph)	Principal Arterial (30-60 mph)	Minor Arterial Type A or B (30-60 mph)	Collector (30-50 mph)	Local Street (20-30 mph)
		Multimodal Through Corridor (35-55 mph)			
		Transit Boulevard (30-35 mph)			
		Boulevard (30-35 mph)			
			Major Avenue (30-35 mph)		
			Avenue (25-30 mph)		
					Local Street (25 mph)

Note: The cross-references shown in the table above are general in nature. Some variations may occur. There are no Multimodal Through Corridors proposed in the Richmond Highway Corridor Area.

Source: Virginia Department of Rail and Public Transportation, Multimodal System Design Guidelines, Chapter 5 Multimodal Corridors, October 2013.

The functional classifications of the street networks specific to each CBC are shown in their respective section in Figures 35 (Penn Daw CBC), 44 (Beacon/Groveton CBC), 55 and 56 (Hybla Valley/Gum Springs CBC), and 70 (Woodlawn CBC). The functional classification of streets in the Richmond Highway Corridor, inclusive of the CBCs and SNAs, should be updated as warranted by future studies.

The design of streets based on their functional classification includes the roadway and the adjacent streetscape areas so that all transportation modes are accommodated as appropriate. “Complete Streets” provide safe access and movement for pedestrians, bicyclists, motorists and transit riders of all ages and abilities and should be considered in the design of the roadway network and streetscape areas.

General Streetscape Recommendations

Attractive streetscapes create a well-designed edge to a roadway that contribute to an area’s identity and provide a safe, high-quality pedestrian experience. Street cross-sections and traffic mitigation measures planned in the corridor should apply to all streets, public or private. The

streetscape design for roadways within the CBCs will vary by street type and the adjacent land uses, but should incorporate unifying elements. Streetscapes should visually and physically link the entire length of the corridor, and should be attractive environments for browsing, commerce, and casual interaction, particularly within the CBCs.

Streetscapes are typically composed of multiple elements, including: utilities, crosswalks, bicycle lanes, on-street parking, streetlights, trees and landscaping, sidewalks, and furnishings. These elements collectively create a quality and functional multimodal environment. The location of these elements is generally defined within specific streetscape zones and vary by street type. The design of these streetscapes should also consider the environmental opportunities which exist adjacent to the roadways, and within the Ecological Spines. Evaluation of opportunities to daylight streams, enhance riparian buffers, provide additional native landscape materials, using these features as an integral part of the project design.

There are nine street typologies in the Richmond Highway Corridor Area. The nine types fall within the broader categories of Transit Boulevards, Major Avenues, Avenues, and Local Streets. General streetscape guidance on the component parts of each streetscape is provided, followed by information about the typologies and cross-sections for each roadway type.

Definition of Streetscape Zones

Streetscapes are composed typically of a landscape panel, sidewalk and building zone. The *landscape panel*, located along the curb is the designated location for trees, landscaping, traffic signs, lighting, and other amenities such as bus stops, bicycle racks, seating, trash receptacles, and refuge strips. Outdoor dining associated with a business should not be located in the landscape panel. The *sidewalk* is reserved for pedestrian movement and should not contain any street furniture, outdoor dining, or other amenities. The landscape panel and sidewalk are typically located within the public right-of-way and typically should be privately maintained. The *building zone* is located between the sidewalk and the face of the building and is intended for activities such as window browsing, outdoor seating, and other building-related activities, and some landscaping may be incorporated into these areas. The character of the building zone is largely determined by its adjacent land use.

Streetscape Dimensions

In general, areas with higher pedestrian activity, such as major retail streets and along Transit Boulevards, should have the widest sidewalks, building zones, and landscape panels to accommodate increased pedestrian activity. Above all, consistent dimensions within the streetscape of each block should be provided to avoid shifting pedestrian features or building frontages.

Underground Utilities

Utilities, utility boxes, and utility vaults should be placed underground, wherever practical, (with the exception of storm drainage in areas where natural channels are possible) to foster a visually appealing and pedestrian-friendly environment. Such infrastructure should be located within building structures, under sidewalks, or in the building zone. These facilities should not be located within the landscape panel where conflict with street trees is possible. If underground utility lines are located under sidewalks, above grade structures and utility cabinets should not be located in the sidewalk where they may impede pedestrian movements. To achieve this goal of undergrounding utilities, detailed site analysis should take place early in the development process to avoid conflicts between utilities and proposed street tree locations. If underground utilities are not practical at the time of redevelopment, redevelopment should provide underground utility conduits and commitments to facilitate future improvements as adjacent development builds-out and utilities are relocated.

Pedestrian Crossings

Pedestrian crossings on Richmond Highway should be highly visible using pavement markings and other devices to clearly identify pedestrian crossing locations at signalized intersections. Intersections within the CBC grid of streets may be delineated with pavement markings and/or different paving materials as permitted by VDOT.

On-Street Parking

Streetscapes with on-street parallel parking are encouraged to incorporate a small paved area adjacent to the curb known as a refuge strip. The refuge strip will allow passengers to exit parked cars without having to step into planted areas. Trees and fixtures in this zone should be spaced appropriately to allow car doors to swing open without obstruction.

Street Lighting

Street lighting should maintain the overall character and quality of the area, provide adequate lighting levels that ensure public safety without creating glare or light spillage, and conform to LEED light pollution requirements and county ordinances. Lighting should be designed to illuminate the street as well as pedestrian areas. Street lights should be located in a manner that does not conflict with street trees at their projected maturity.

Planting in the Streetscape

Street trees should be planted in an environment that promotes healthy root growth and should be evenly spaced at 25 to 35 feet on-center, whenever possible. Only those varieties of plant materials that require little maintenance, are resistant to disease, and are adapted to extreme urban conditions should be used. In addition to trees, vegetation within planting strips should include supplemental plantings, such as ornamental shrubs, ground cover, flowering plants, and grasses. Design should focus on providing plant species native to Virginia arranged to mimic natural vegetative communities wherever practicable. Where appropriate, special pavement treatments or hardscape elements may be considered to achieve both a root-friendly design and pedestrian walkability across the streetscape. Trees should be planted so that at maturity they do not conflict with buildings or pedestrians and should have acceptable vehicular clearance over roadways at their mature size.

Sidewalk and Streetscape Materials

A variety of sidewalk materials should be considered that complement adjacent building architectural styles and contribute to placemaking in the CBCs, as well as assist in the delineation of streetscape zones. Pavers, concrete scoring techniques, stone, and tiles should be used as a complement to concrete sidewalks.

Street Furniture and Other Elements

Street furniture selections for items such as benches, wayfinding signs, trash receptacles, water fountains, and bike racks, should be generally consistent within each CBC. This may include style, size, finish, and color. Fixed elements, such as light poles, should be aligned within the landscape panel to minimize the disruption of pedestrian flow.

Design Alternatives

While the goal of consistent streetscape design is prioritized, pre-existing site constraints or development phasing may limit the ability of a development to satisfy all streetscape recommendations temporarily or permanently. Some limited variation may be permitted if the proposed alternative meets or exceeds the standards established by this plan. Where flexibility is granted, the streetscape should include, at a minimum, acceptable sidewalk widths and an acceptable amount of street trees between the roadway and the sidewalk. Additional consideration should be given to opportunities to convey runoff overland in natural channels, including

restoring/daylighting existing channels which are currently piped, and how best to incorporate those designs into the streetscape.

Street Types and Design

This section identifies the street types in the Richmond Highway Corridor, including an overview of each type's functionality, cross-section, and character. The dimensions of elements within the cross-section for each street type are flexible to respond to particular needs in different locations. Within the Richmond Highway Corridor, cross-sections should be context-sensitive and fit into an urban environment, while addressing operations and capacity needs. Although typical street cross-sections are recommended, final street designs may include some variations in the curb-to-curb width, sidewalk width, or building setback to reflect the changing context of the streets along Richmond Highway and within the CBCs. The general right-of-way widths depicted do not include any necessary turn lanes that may be needed to support development.

Transit Boulevard

Richmond Highway is the only Transit Boulevard in the corridor and will provide the connecting element between the CBCs. It is the most transit supportive multimodal street type in the corridor, has facilities designed to support transit, and also will accommodate the corridor's vehicular, bicycle and pedestrian traffic.

The concept for the Richmond Highway Transit Boulevard features dedicated transit lanes with adjacent refuge space for pedestrians at stations, a bike facility separated from vehicular traffic, landscape panels with evenly spaced street trees, and sidewalks on both sides of the boulevard. Signalized intersections and all transit station locations should include pedestrian crossing devices and markings to clearly delineate the crossing area. Large building and planting zones are planned to provide space for pedestrians or additional trees and landscaping between the sidewalk and the building. Lighting along the street should be distinctive and designed for all users. Within the Suburban Neighborhood Areas and the redevelopment Plan options in the CBCs, reductions in the building and planting zone widths may be considered for small parcels that are challenged to develop due to site size constraints, environmental constraints, or the presence of heritage resources. Prioritization should be given to maintaining a planting zone wide enough for a row of trees.

Figures 7 and 8 depict the recommended configuration for Transit Boulevard cross-sections. Note, there are two cross-sections for the Transit Boulevard; one for the portion of the roadway north of Napper Road to the Capital Beltway, and the other for the portion of the roadway south of Napper Road and terminating at Jeff Todd Way/Mount Vernon Memorial Highway.

Richmond Highway, north of Napper Road Cross-section dimensions:

Within the 178-foot right-of-way:

- Bus Rapid Transit Lane (not shown in figure) – A 58-foot wide space to accommodate a dedicated median-running transitway. Prior to the operation of BRT, the median should be planted with grass or other vegetation.
- Drive Lanes (not shown in figure) – 3 travel lanes per direction (11-foot typical for each lane; however, lane widths may vary based on site characteristics and anticipated traffic volumes and types of vehicles).
- Landscape Panel – An 8-foot minimum landscape panel on both sides of the street. Street trees should be evenly spaced and under-story vegetation should include shrubs and ground cover.

- Cycle Track – A 6.5-foot buffered cycle track per direction. The cycle track may be constructed at the grade of the roadway or raised to the level of the sidewalk.
- Utility Strip – A 2-foot utility strip on both sides of the street.
- Sidewalk – A 6-foot sidewalk on both sides of the street. An additional 1-foot VDOT maintenance buffer behind the sidewalk should be included in the right-of-way.

Outside of the right-of-way (See previous paragraphs for guidance on reduced widths in this area):

- Planting Zone – An 8-foot wide planting zone on both sides of the street to accommodate a row of street trees and understory landscaping. Frequent pedestrian connections should be provided between the sidewalk and building zone.
- Building Zone – An 8 to 17-foot wide multi-use zone to accommodate commercial and residential entrances, space for seating and window browsing, or additional landscaping.

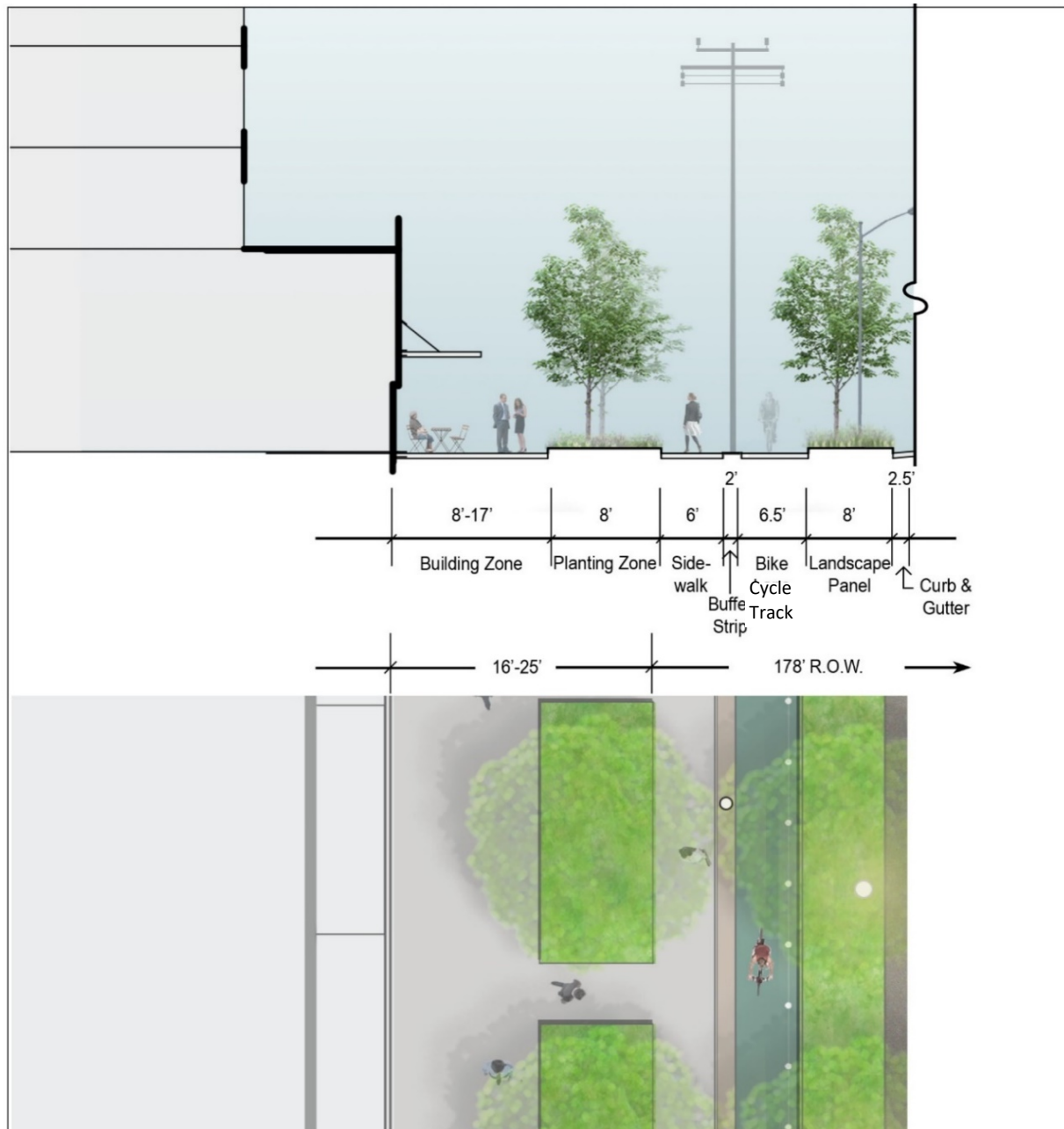
Richmond Highway, south of Napper Road Cross-section dimensions:

Within the 178-foot right-of-way:

- Bus Rapid Transit Lane (not shown in figure) – A 58-foot wide space to accommodate a dedicated median-running transitway, where applicable.
- Drive Lanes (not shown in figure) – 3 travel lanes per direction (11-foot typical for each lane; however, lane widths may vary based on site characteristics and anticipated traffic volumes).
- Landscape Panel, Inner – A 5.5-foot wide panel located between the curb and the bicycle facility. Structural cells may be required for sufficient root space to support the long term health of street trees.
- Cycle Track – A 6.5-foot buffered cycle track in each direction. The cycle track may be constructed at the grade of the roadway or raised to the level of the sidewalk.
- Landscape Panel, Outer – A 4.5-foot wide panel located between the bicycle facility and the sidewalk on both sides of the street.
- Sidewalk – A 6-foot sidewalk on both sides of the street. An additional 1-foot VDOT maintenance buffer behind the sidewalk should be included in the right-of-way.

Outside of the 178-foot right-of-way (See previous paragraphs for guidance on reduced widths in this area):

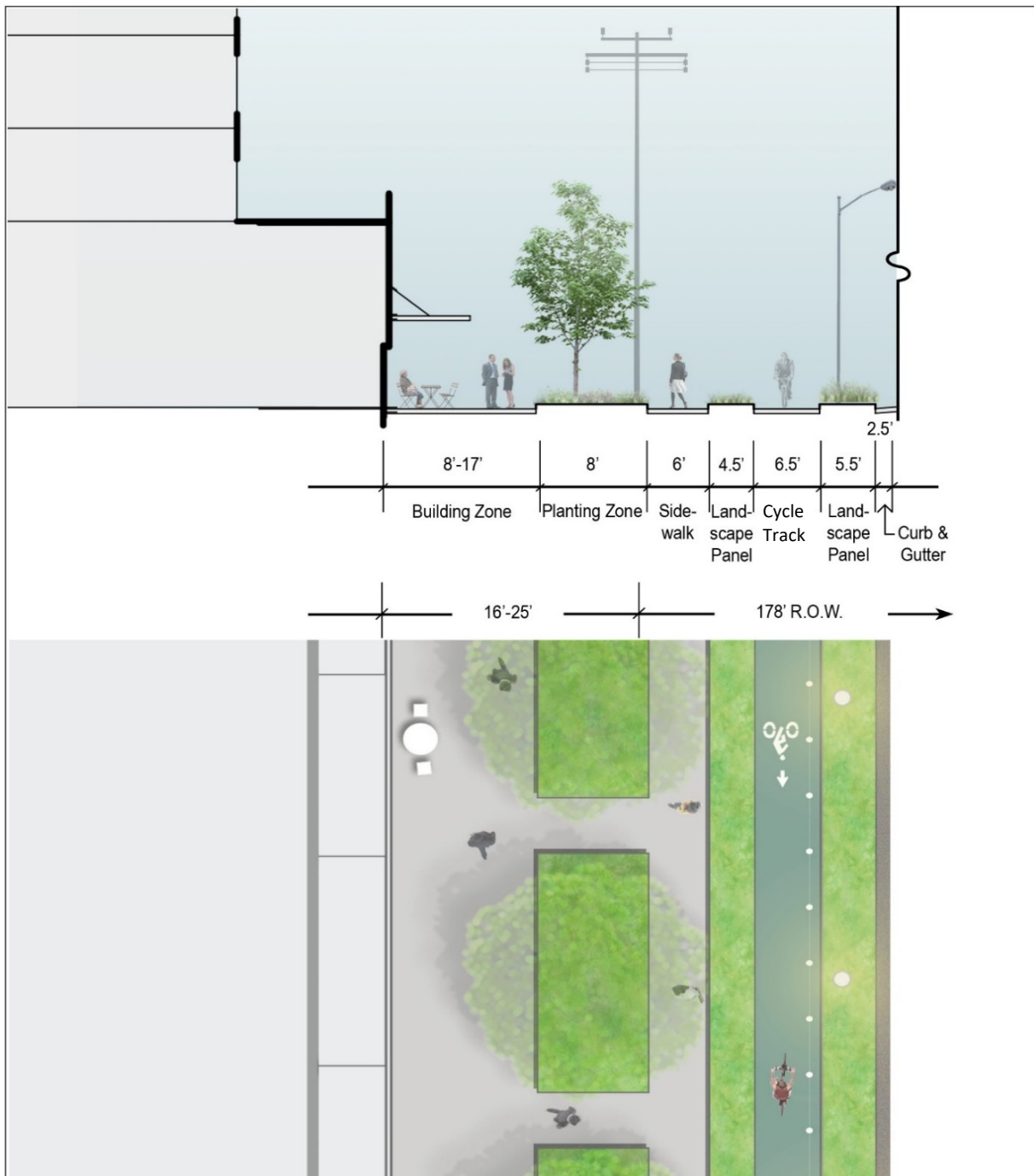
- Planting Zone – An 8-foot wide planting zone on both sides of the street to accommodate a row of street trees and understory landscaping. Frequent pedestrian connections should be provided between the sidewalk and building zone.
- Building Zone – An 8 to 17-foot wide multi-use zone to accommodate commercial and residential entrances, space for seating and window browsing, or additional landscaping.



Note 1: Typical street cross sections are depicted. Although dimensions are noted, final street design will require accommodation of all applicable road design infrastructure. Additionally, final street designs may vary as necessary to address other design and engineering goals and requirements.

Note 2: VDOT requires a 1-foot maintenance buffer at the back of the sidewalk or shared use path on the edge of the right-of-way.

TRANSIT BOULEVARD CROSS-SECTION AND PLAN
RICHMOND HIGHWAY, NORTH OF NAPPER ROAD **FIGURE 7**



Note 1: Typical street cross sections are depicted. Although dimensions are noted, final street design will require accommodation of all applicable road design infrastructure. Additionally, final street designs may vary as necessary to address other design and engineering goals and requirements.

Note 2: VDOT requires a 1-foot maintenance buffer at the back of the sidewalk or shared use path on the edge of the right-of-way.

**TRANSIT BOULEVARD CROSS-SECTION AND PLAN
 RICHMOND HIGHWAY, SOUTH OF NAPPER ROAD**

FIGURE 8

Major Avenue

A Major Avenue (Figure 9) is planned in the Hybla Valley/Gum Springs CBC and will largely function as a parallel facility to Richmond Highway. Major Avenues typically have one to two travel lanes in each direction, a slower design speed than the Transit Boulevard, and may include elements such as pedestrian bulb-outs at intersections, frequent pedestrian crossings, contiguous bike lanes, and sidewalks. Medians are not preferred but may be necessary to provide a pedestrian refuge or turn lane(s). The character of the streetscape should generally be determined by the pedestrian activities generated by the adjacent land uses rather than the street classification.

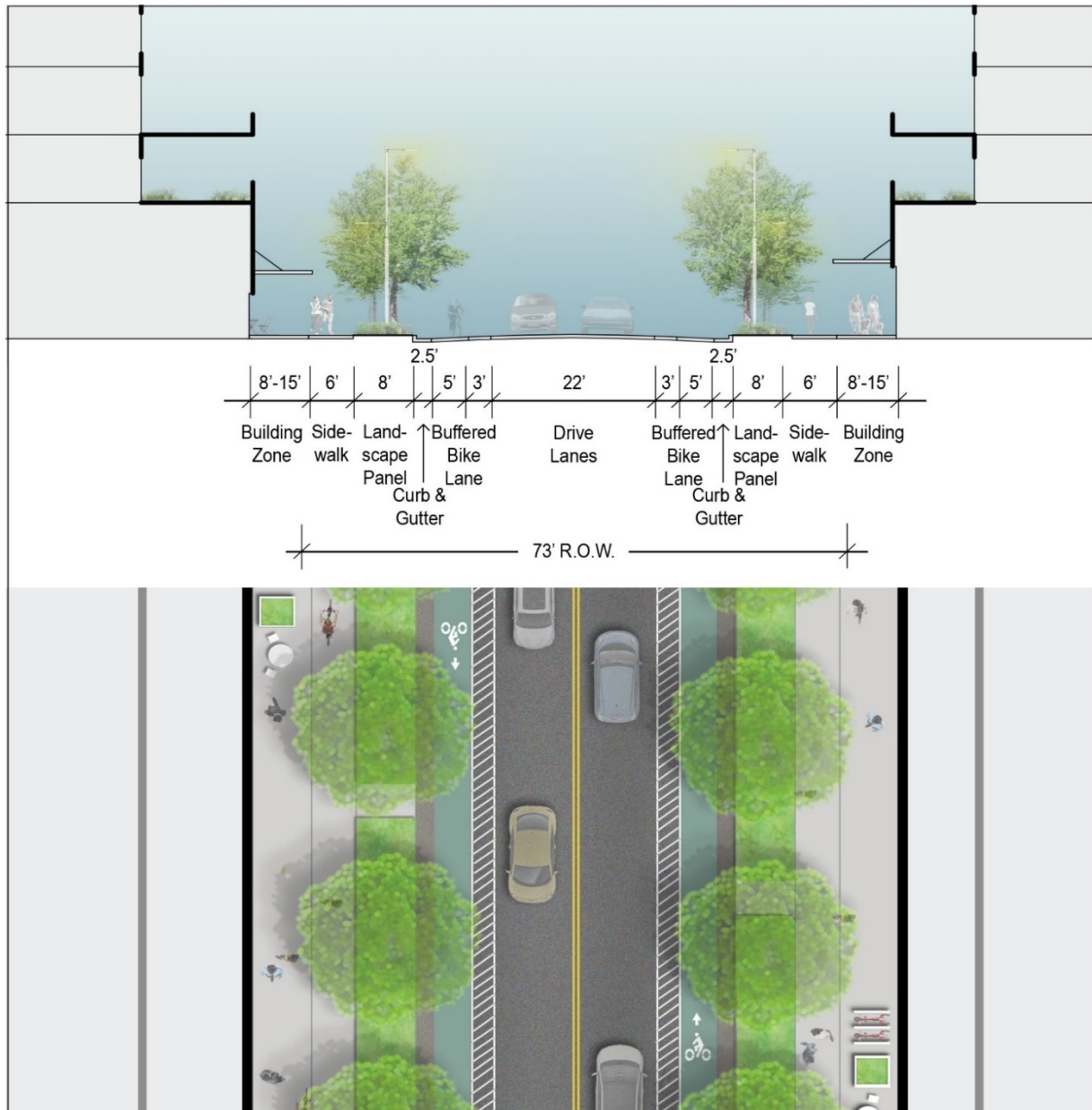
Major Avenue Cross-section dimensions:

Within the right-of-way (73-foot minimum):

- Drive Lanes – 1 to 2 travel lanes per direction (11-foot typical for each lane; however, lane widths may vary based on site characteristics and anticipated traffic volumes).
- On-Street Parking – 8.5-foot wide parallel, on-street parking is optional for the Major Avenue. If on-street parking is provided, it should be located between the travel lanes and the bicycle lane. The width of the parking lane includes a 2.5-foot wide curb and gutter.
- Bicycle Lane – A 5-foot on-road dedicated bike lane with a 3-foot buffer.
- Landscape Panel – A minimum of 8-foot wide panel for landscaping and amenity areas on both sides of the street. Street trees should be evenly spaced and understory vegetation should include hardy shrubs and ground cover. Street lights should be sited between trees to minimize conflicts with branches. Amenities such as bicycle racks, bus shelters, seating areas, and other furnishings may be located in paved areas between street trees.
- Sidewalk – A 6-foot sidewalk on both sides of the street. An additional 1-foot VDOT maintenance buffer behind the sidewalk should be included in the right-of-way.

Outside of the right-of-way:

- Building Zone – An 8 to 15-foot wide building zone. When ground-level retail use is provided in a building, the building zone may be used for retail browsing or outdoor dining. Residential uses may have stoops, porches and/or stairs within this zone. Supplemental plantings (to include shade and flowering trees, shrubs, flowering plants, ground cover, and grasses) may also be located in the building zone.



Note 1: Typical street cross sections are depicted. Although dimensions are noted, final street design will require accommodation of all applicable road design infrastructure. Additionally, final street designs may vary as necessary to address other design and engineering goals and requirements.

Note 2: VDOT requires a 1-foot maintenance buffer at the back of the sidewalk or shared use path on the edge of the right-of-way.

MAJOR AVENUE CROSS-SECTION AND PLAN

FIGURE 9

Kings Highway and Mount Vernon Memorial Highway

Kings Highway and Mount Vernon Memorial Highway are Major Avenues (Figure 10) that link collector and local roads to major roadways. They are generally between two and four lanes wide and may carry high volumes of traffic. Kings Highway extends from Telegraph Road north of the Huntington Metro area to another intersection with Telegraph Road near Huntley Meadows Park to the south. Mount Vernon Memorial Highway links Richmond Highway to George Washington's Mount Vernon estate. They are located in the mature areas of the county and include sections based on older design standards that may limit certain streetscape amenities from being fully realized.

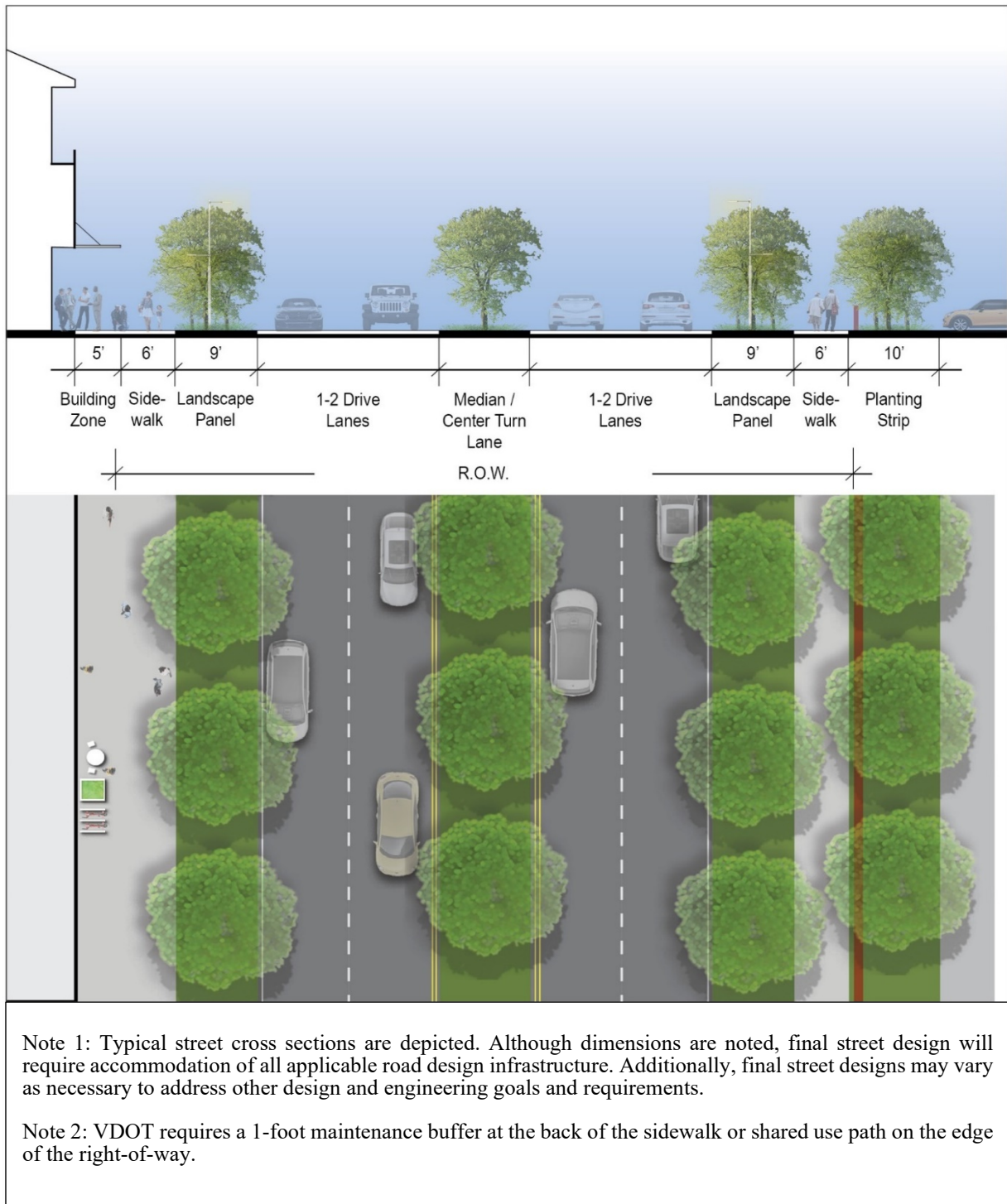
Kings Highway and Mount Vernon Memorial Highway Cross-section dimensions (not including the portion of North Kings Highway between the Huntington Metrorail Station and Jamaica Drive):

Within the right-of-way (65-foot minimum):

- Drive Lanes – 1 to 2 travel lanes per direction (11-foot typical for each lane; however, lane widths may vary based on site characteristics and anticipated traffic volumes). A 2.5-foot wide curb and gutter should be located between the travel lanes and the landscape panel.
- Landscape Panel – A 9-foot wide panel for landscaping and amenity areas. Street trees should be evenly spaced and understory vegetation should include hardy shrubs and ground cover. Street lights should be sited between trees to minimize conflicts with branches. Amenities such as bicycle racks, bus shelters, seating areas, and other furnishings may be located in paved areas between street trees.
- Sidewalk – A 6-foot sidewalk on both sides of the street. An additional 1-foot VDOT maintenance buffer should be included in the right-of-way.

Outside of the right-of-way:

- Building Zone – A 5-foot wide zone when a building is adjacent to the street. When ground-level retail use is provided in a building, the building zone may be used for retail browsing or outdoor dining. Residential uses may have stoops, porches and/or stairs within this zone. Supplemental plantings (to include shade and flowering trees, shrubs, flowering plants, ground cover, and grasses) may also be located in the building zone.
- Planting Strip – A 10-foot wide strip for landscaping when surface parking is adjacent to the street. Street trees should be evenly spaced and understory vegetation should include hardy shrubs and ground cover. A low masonry wall is encouraged to be placed adjacent to the sidewalk to help buffer pedestrians from parked vehicles.



**KINGS HIGHWAY AND MOUNT VERNON MEMORIAL HIGHWAY
 CROSS-SECTION AND PLAN**

FIGURE 10

North Kings Highway (Huntington Metrorail Station to Jamaica Drive)

North Kings Highway, between the Huntington Metrorail Station and Jamaica Drive, is a four-lane roadway with left turn lanes and narrow sidewalks. Land uses along this portion of Kings Highway are mostly single- or multi-family residential uses, with some neighborhood-serving commercial, and Mount Eagle Elementary School. Building setbacks are minimal and there is limited available right-of-way outside of the curb. There is high pedestrian activity due to the proximity of the Huntington Metrorail station and the elementary school. Steep hills north of the station, near the Huntington Club condominiums, make cycling and walking challenging along this section of roadway. The planned BRT system is anticipated to run on North Kings Highway from the Huntington Metrorail station to Richmond Highway. Despite the limited right-of-way on North Kings Highway, some pedestrian improvements are possible that could enhance pedestrian safety and comfort, reduce the speed of vehicles, and encourage drivers and pedestrians to be more alert. Pedestrian improvements may include, but not be limited to elements such as:

- Street lights: Pedestrian-scaled streets lights could be installed between the sidewalk and the roadway curb on both sides of the highway.
- Sidewalks: Existing sidewalks could be widened to incorporate the grass strip between the curb and the existing sidewalk to provide more room for people to walk side-by-side and to pass each other. New sidewalks will enhance the appearance of the corridor by replacing old concrete with a new, consistent surface.
- Landscaping and other VDOT approved barriers: Landscaping, decorative bollards, or other barriers that are acceptable to VDOT could be installed between the sidewalk and the curb to provide a level of security for pedestrians by placing elements between them and moving vehicles. Such measures encourage drivers to be more alert by better defining the edges of the roadway. This treatment may be particularly beneficial along roadway curves and at intersections.
- Medians: Concrete or planted medians could be used to reduce the speed of moving vehicles and provide visual cues to drivers to slow down. Medians may also reduce the distance pedestrians must cross at one time by providing a refuge space. While it may not be possible to have a continuous center medians the entire portion of North Kings Highway, there may be locations that are appropriate for small medians and/or pedestrian refuges.
- Enhanced crosswalks and pedestrian signals: High-visibility crosswalks could be installed at certain intersection crossings where there is significant pedestrian activity. High-Intensity Activated Crosswalk (HAWK) Beacon traffic control devices or other mid-block crossing facilities may be appropriate in certain instances.
- Wayfinding signage: Pedestrian wayfinding signage could be installed to provide directional information regarding important destinations such as the Metrorail Station, BRT, major streets, parks, schools, heritage resources, neighborhoods, and retail establishments.

Avenues

Avenues (Figure 11) will connect slower speed local streets to higher speed facilities like the Transit Boulevard. Avenue streets typically have one to two travel lanes in each direction. They have slower design speeds than Boulevards and may include elements such as pedestrian bulb-outs at intersections, frequent pedestrian crossings, parallel on-street parking, contiguous bike lanes and sidewalks to maximize walkability. Medians are not preferred but may be necessary to provide a pedestrian refuge or turn lane(s). The character of the streetscape should generally be

determined by the pedestrian activities generated by the adjacent land uses rather than the street classification.

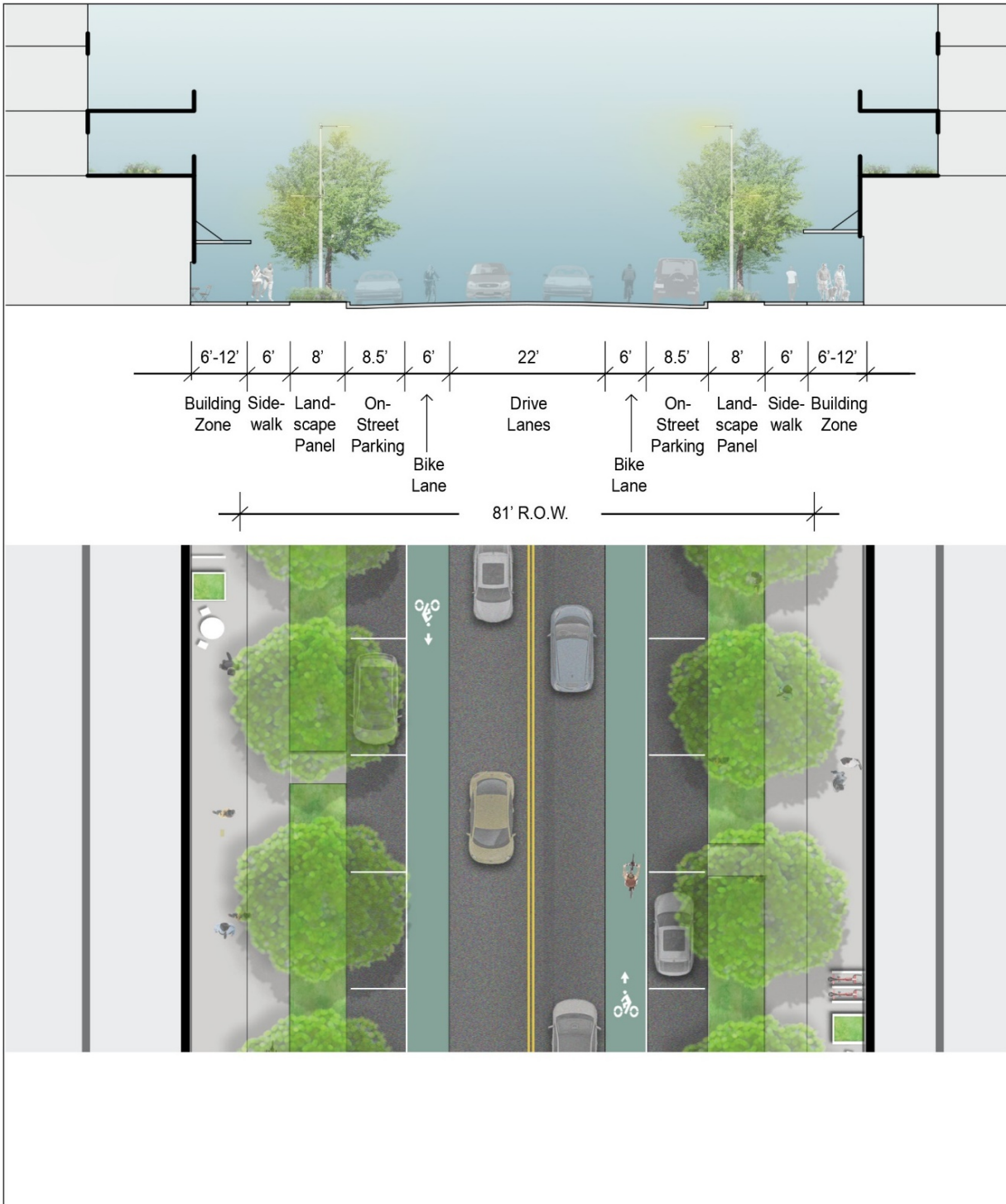
Avenue Cross-section dimensions:

Within the right-of-way (81-foot minimum):

- Drive Lanes – 1 to 2 travel lanes per direction or 1 travel lane per direction with a center turn lane (11 foot typical for each lane; however, lane widths may vary based on site characteristics and anticipated traffic volumes).
- Bicycle Lane – A 6-foot on-road dedicated bike lane in each direction.
- On-Street Parking – 8.5-foot wide parallel, on-street parking lane in each direction. The width of the parking lane includes a 2.5-foot wide curb and gutter.
- Landscape Panel – A minimum 8-foot wide panel for landscaping and amenity areas on both sides of the street. Street trees should be evenly spaced and understory vegetation should include hardy shrubs and ground cover. Street lights should be sited between trees to minimize conflicts with branches. No Amenities such as bicycle racks, bus shelters, seating areas, and other furnishings may be located in paved areas between street trees.
- Sidewalk – A 6-foot sidewalk on both sides of the street. An additional 1-foot VDOT maintenance buffer should be included in the right-of-way.

Outside of the right-of-way:

- Building Zone – A 6-12 foot-wide building zone. When ground-level retail use is provided in a building, the building zone may be used for retail browsing or outdoor dining. Residential uses may have stoops, porches and/or stairs within this zone. Supplemental plantings (to include shade and flowering trees, shrubs, flowering plants, ground cover, and grasses) may also be located in the building zone.



AVENUE CROSS-SECTION AND PLAN

FIGURE 11

Livability Spine (Avenue)

Livability Spines (Figure 12) are planned for the Penn Daw, Beacon/Groveton, and Woodlawn CBCs. A Livability Spine is a specialized type of Avenue that will function as a pedestrian corridor and as a place for people to enjoy outdoor activities. The Livability Spine includes a Pedestrian Zone on each side of the roadway that is comprised of a building zone, a Linear Park space, a pedestrian facility, and a landscape panel. The Pedestrian Zone on the side of the Livability Spine in closest proximity to the BRT station should include a walkway that is wide enough to accommodate both pedestrians and cyclists for recreational purposes. Walkway surfaces should be constructed from high-quality, bike and pedestrian-friendly materials, and have well-defined edges. The Pedestrian Zone on the side of the Livability Spine that is furthest from the BRT station should include a sidewalk intended for pedestrian traffic only. Elements within the Pedestrian Zone may have variable dimensions (within the specified ranges) to allow for flexibility in the design in response to adjacent building uses and the desired features and activities within the Linear Park. When facility dimensions change between blocks or developments, appropriate transitions should be incorporated. The minimum widths of the Pedestrian Zone elements are provided in the cross-section description. Roundabouts may be considered to serve as a focal point and help slow the flow of traffic.

Livability Spine Cross-section dimensions:

- Pedestrian Zone with Walkway (as shown from left to right)– Located on the side of the Livability Spine closest to the BRT station, a 45 to 68-foot wide zone that includes a landscape panel, walkway, Linear Park, and building zone.

Outside the right-of-way:

- Building Zone – A 12 to 20-foot building zone including space for building access and amenities as well as a through lane for pedestrians that is a minimum of 6-feet wide. When ground-level retail use is provided in a building, the building zone may be used for retail browsing or outdoor dining. Residential uses may have stoops, porches and/or stairs within this zone. Supplemental plantings (to include shade and flowering trees, shrubs, flowering plants, ground cover, and grasses) may also be located in the building zone. In all cases, a 6-foot wide pedestrian route must be maintained between the building zone and the Linear Park.
- Linear Park – A 15 to 30-foot wide Linear Park. This area is designated for programmed activity areas such as playgrounds, plazas, kiosks, and social gathering spaces.

Within the right-of-way (73-foot minimum):

- Walkway – A minimum of a 10-foot wide facility designed to serve for both pedestrian and bicycle access. Walkway surfaces should be constructed from high-quality, bike and pedestrian-friendly materials, and have well-defined edges. An additional 1-foot VDOT maintenance buffer should be included in the right-of-way.
- Landscape Panel – A minimum of 8-foot wide panel for landscaping. Street trees should be evenly spaced and understory vegetation should include hardy shrubs and ground cover. Street lights should be sited between trees to minimize conflicts with branches. Amenities such as bicycle racks, bus shelters, seating areas, and other furnishings may be located in paved areas between street trees.

- Pedestrian Zone with Sidewalk (as shown from left to right) – 36 to 54-foot wide zone that includes a Landscape Panel, sidewalk, Linear Park, and building zone.

Within the right-of-way (73-foot minimum):

- Landscape Panel – A minimum of 8-foot wide panel for landscaping. Street trees should be evenly spaced and understory vegetation should include hardy shrubs and ground cover. Street lights should be sited between trees to minimize conflicts with branches. Amenities such as bicycle racks, bus shelters, seating areas, and other furnishings may be located in paved areas between street trees.
- Sidewalk – A 6-foot sidewalk adjacent to the landscape panel. Walkway surfaces should be constructed from high-quality, pedestrian-friendly materials, and have well-defined edges. An additional 1-foot VDOT maintenance buffer should be included in the right-of-way.

Outside of the right-of-way:

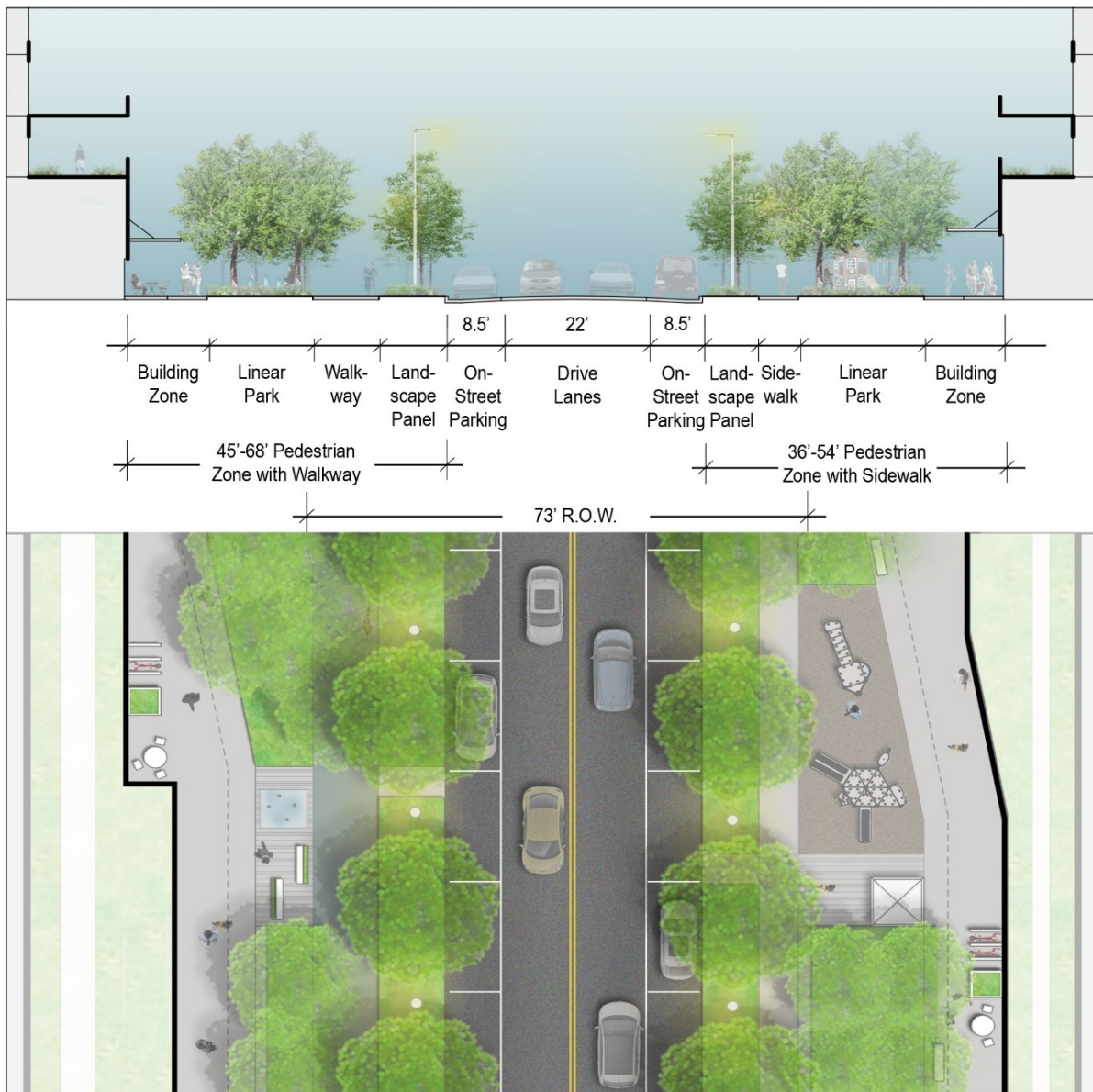
- Linear Park – A 10 to 20-foot wide Linear Park. This area is designated for programmed activity areas such as playgrounds, plazas, kiosks, and social gathering spaces.
 - Building Zone – A 12 to 20-foot building zone including space for building access and amenities as well as a through lane for pedestrians that is a minimum of 6-foot wide on both sides of the street. When ground-level retail use is provided in a building, the building zone may be used for retail browsing or outdoor dining. Residential uses may have stoops, porches and/or stairs within this zone. Supplemental plantings (to include shade and flowering trees, shrubs, flowering plants, ground cover, and grasses) may also be located in the building zone. In all cases, a 6-foot wide pedestrian route must be maintained between the building zone and the Linear Park.
- Central portion of the Livability Spine – this area includes on-street parking and drive lanes, and is located between the Pedestrian Zone with Walkway and the Pedestrian Zone with Sidewalk.

Within the right-of-way (73-foot minimum):

- On-Street Parking – 8.5-foot wide parallel, on-street parking lane in each direction. The width of the parking lane includes a 2.5-foot wide curb and gutter.
- Drive Lanes – 1 to 2 travel lanes per direction or 1 travel lane per direction with a center turn lane (11 foot typical for each lane; however, lane widths may vary based on site characteristics and anticipated traffic volumes).

The cross-section for the Livability Spine depicts the landscape panels and adjacent pedestrian facilities within the public right-of-way. Alternately, the landscape panels and adjacent pedestrian facilities may be creatively incorporated into the Linear Park space, outside of the right-of-way, as a means to foster innovative design of the Linear Park. Flexibility in the width and location of the landscape panels, sidewalk, pedestrian/bicycle walkway, and overall right-of-way may be considered in such circumstances. Under this scenario where the sidewalk/walkway and the landscape panel in the Pedestrian Zone are creatively integrated into the Linear Park and are not included in public right-of-way, these features may be considered to provide publicly

accessible urban park space. Perpetual maintenance of all facilities within the Pedestrian Zone should be provided by the property owner.



Note 1: Typical street cross sections are depicted. Although dimensions are noted, final street design will require accommodation of all applicable road design infrastructure. Additionally, final street designs may vary as necessary to address other design and engineering goals and requirements.

Note 2: VDOT requires a 1-foot maintenance buffer at the back of the sidewalk or shared use path on the edge of the right-of-way.

Note 3: Flexibility in the width and location of the landscape panels, sidewalks and walkways may be considered in circumstances where it is desired for these facilities to be creatively incorporated into the Linear Park space. If this option is pursued, these facilities should not be located within the right-of-way and should be privately maintained. See Plan text for additional information.

LIVABILITY SPINE CROSS-SECTION AND PLAN **FIGURE 12**

Local Streets

Local Streets (Figure 13) will generally have the lowest traffic volumes and slowest moving traffic. Local Street cross-sections are narrow, with one lane in either direction, and are flanked by parallel, on-street parking on both sides of the road, wherever feasible. Due to low vehicle speeds, bicycles may be accommodated in the travel lane rather than in a dedicated bicycle lane. Measures to slow traffic such as raised mid-block pedestrian crossings, small traffic rotaries, and sidewalk bulb-outs at intersections may be appropriate.

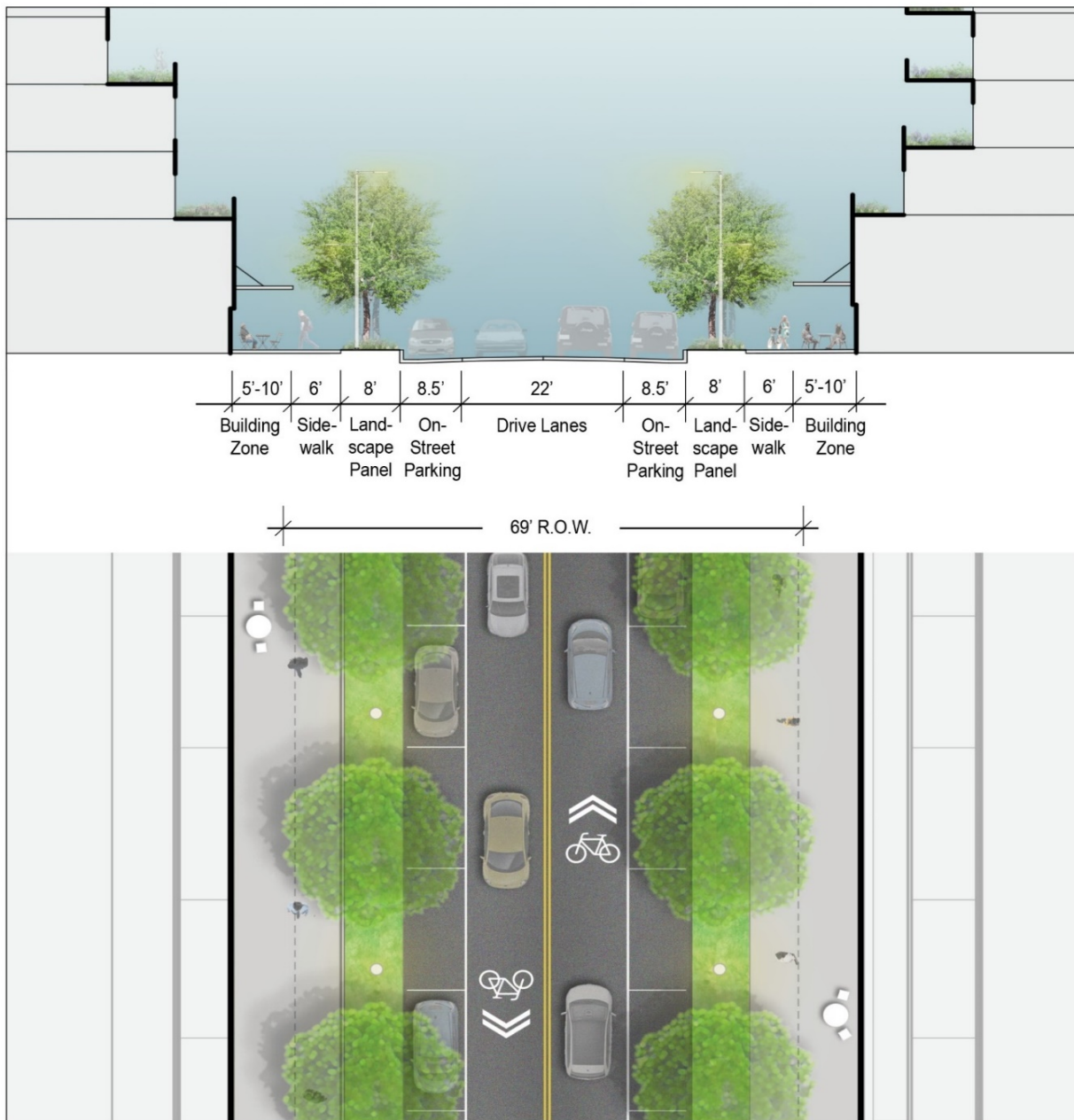
Local Street Cross-section dimensions:

Within the right-of-way (69-foot minimum):

- Drive Lane – one travel lane per direction (11-foot typical for each lane; however, lane widths may vary based on site characteristics and anticipated traffic volumes).
- On-Street Parking – 8.5-foot wide parallel, on-street parking lane in each direction. The width of the parking lane includes a 2.5-foot wide curb and gutter.
- Landscape Panel – A minimum 8-foot wide panel for landscaping and amenity areas on both sides of the street. Street trees should be evenly spaced and understory vegetation should include hardy shrubs and ground cover. Street lights should be sited between trees to minimize conflicts with branches. Amenities such as bicycle racks, bus shelters, seating areas, and other furnishings may be located in paved areas between street trees.
- Sidewalk – 6-foot sidewalk on both sides of the street. An additional 1-foot VDOT maintenance buffer should be included in the right-of-way.

Outside of the right-of-way:

- Building Zone – A 5 to 10-foot building zone. When ground-level retail use is provided in a building, the building zone may be used for retail browsing or outdoor dining. Residential uses may have stoops, porches and/or stairs within this zone. Supplemental plantings (to include shade and flowering trees, shrubs, flowering plants, ground cover, and grasses) may also be located in the building zone.



Note 1: Typical street cross sections are depicted. Although dimensions are noted, final street design will require accommodation of all applicable road design infrastructure. Additionally, final street designs may vary as necessary to address other design and engineering goals and requirements.

Note 2: VDOT requires a 1-foot maintenance buffer at the back of the sidewalk or shared use path on the edge of the right-of-way.

LOCAL STREET CROSS-SECTION AND PLAN

FIGURE 13

Ecological Spines Type 1 and Type 2 (Local)

The Ecological Spines have four distinct cross sections. Types 1 and 2 are part of the street network while Types 3 and 4 include only pedestrian facilities and green spaces. Information about Ecological Spines Types 3 and 4 is contained in the CBC recommendations section.

The Ecological Spine street type is a distinct local street unique to the Hybla Valley/Gum Springs CBC. These streets are envisioned to celebrate and reinvigorate the natural features within the CBC; they are anticipated to incorporate existing stream corridors into their designs, especially in areas where streams are proposed to be restored and/or day-lighted as part of redevelopment. Ecological Spines are generally residential in character with predominately passive recreational opportunities. They should be designed to mimic natural systems by providing off-line stormwater treatment that compliments the day-lighted/naturalized stream corridor. If day-lighting is not possible, off-line stormwater features should be utilized that feed the piped system but mimic natural landscape features such as wetland cells, wet meadows, and infiltration facilities where soils and topography allow.

Type 1 (Figure 14) is characterized by buildings located on both sides of the street. Type 2 (Figure 15) is anticipated to have low-density residential buildings on the side of the street that faces existing communities. Type 2 Ecological Spines provide the opportunity for pedestrian connections to existing residential neighborhoods along the edges of proposed redevelopment areas. Both street types are planned to incorporate a wide bioswale/water channel designed to be lightly programmed with passive recreation opportunities such as boardwalks, gathering areas, trails, and similar uses along the edges of the waterway. Periodic pedestrian bridges may span these waterways to provide pedestrian access to both sides of the waterway. The vehicular travel portion of the Ecological Spine is narrow, with one lane in either direction and no on-street parking. A shared use path with connections into the existing neighborhoods is envisioned, where feasible. The following recommendations are provided to achieve the streetscape character of Ecological Spines, Types 1 and 2:

Ecological Spine Type 1 Cross-section dimensions (as shown from left to right):

Outside of the right-of-way:

- **Building Zone** – A 6 to 10-foot wide building zone on both sides of the street. When ground-level retail use is provided in a building, the building zone may be used for retail browsing or outdoor dining. Residential uses may have stoops, porches and/or stairs within this zone. Supplemental plantings (to include shade and flowering trees, shrubs, flowering plants, ground cover, and grasses) may also be located in the building zone.
- **Sidewalk** – A 6-foot sidewalk adjacent to the building zone.
- **Bioswale/Water Channel** – A 44 to 64-foot wide linear green including a waterway where possible. The bioswale/water channel and green space is envisioned to be lightly programmed with passive recreation opportunities such as boardwalks, gathering areas, trails, and similar uses on the edges of the waterway, which would not be adversely impacted by periodic flooding, in the flood-prone areas. The planting palette should consist of plant species native to Virginia and arranged to mimic natural communities. Non-native invasive species should not be planted.

Within the right-of-way (61-foot minimum):

- Shared Use Path – A 10-foot shared use path is proposed for one side of the facility. An additional 1-foot VDOT maintenance buffer should be included in the right-of-way.
- Landscape Panel – A minimum of 8-foot wide panel for landscaping and amenity areas. Street trees should be evenly spaced and understory vegetation should include hardy shrubs and ground cover. Street lights should be sited between trees to minimize conflicts with branches. Amenities such as bicycle racks, bus shelters, seating areas, and other furnishings may be located in paved areas between street trees.
- Curb and gutter – A 2.5-foot curb and gutter.
- Drive Lane – one travel lane per direction (11-foot typical for each lane; however, lane widths may vary based on site characteristics and anticipated traffic volumes).
- Curb and gutter – A 2.5-foot curb and gutter.
- Landscape Panel – A minimum of 8-foot wide panel for landscaping and amenity areas. Street trees should be evenly spaced and understory vegetation should include hardy shrubs and ground cover. Street lights should be sited between trees to minimize conflicts with branches. Amenities such as bicycle racks, bus shelters, seating areas, and other furnishings may be located in paved areas between street trees.
- Sidewalk – A 6-foot sidewalk adjacent to the building zone. An additional 1-foot VDOT maintenance buffer should be included in the right-of-way.

Ecological Spine Type 2 Cross-section dimensions (as shown from left to right):

Outside of the right-of-way:

- Building Zone – A 6 to 10-foot wide building zone. When ground-level retail use is provided in a building, the building zone may be used for retail browsing or outdoor dining. Residential uses may have stoops, porches and/or stairs within this zone. Supplemental plantings (to include shade and flowering trees, shrubs, flowering plants, ground cover, and grasses) may also be located in the building zone.

Within the right-of-way (54-foot minimum):

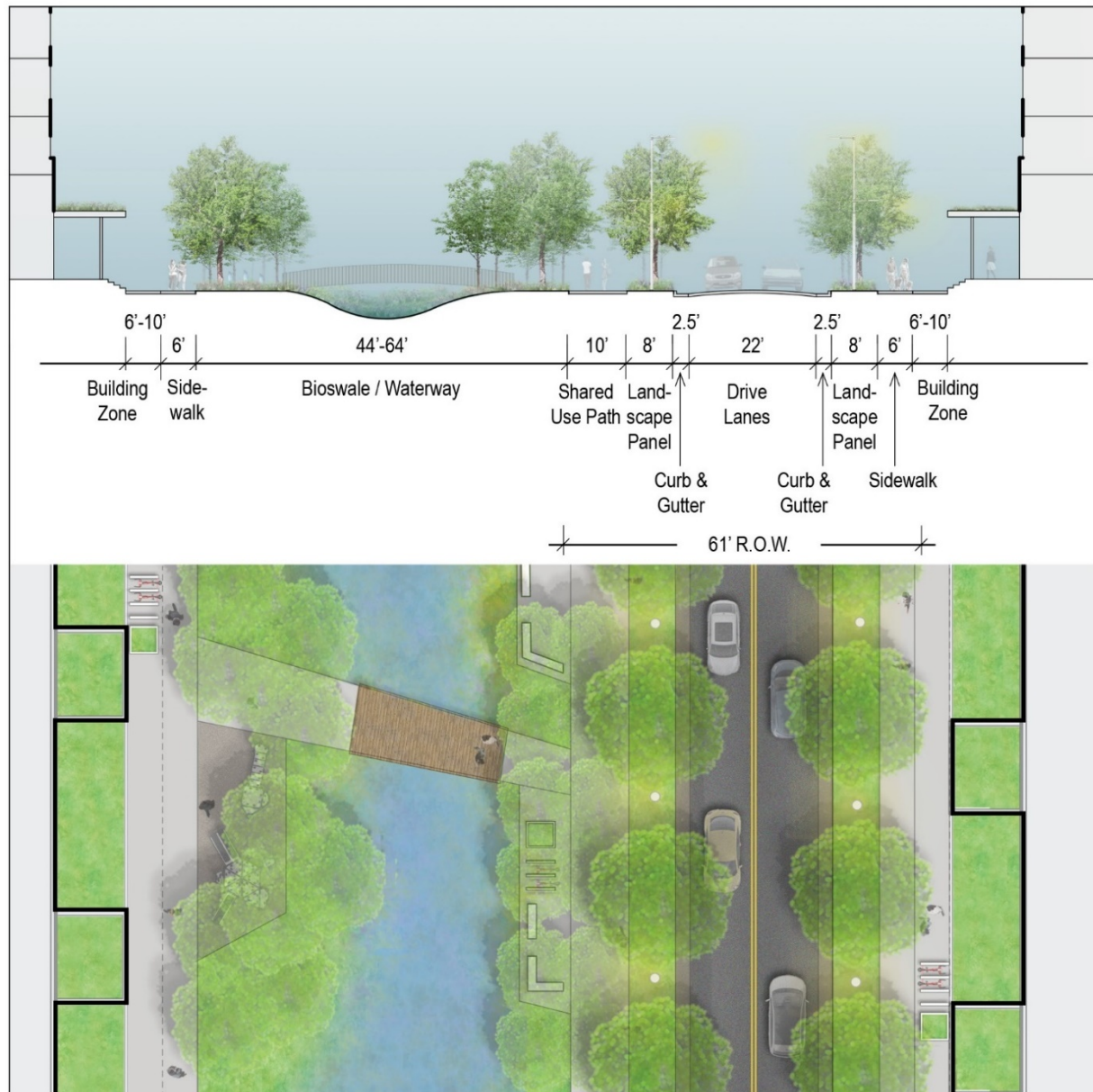
- Sidewalk – A 6-foot sidewalk adjacent to the building zone. An additional 1-foot VDOT maintenance buffer should be included in the right-of-way.
- Landscape Panel – A minimum of 8-foot wide panel for landscaping and amenity areas. Street trees should be evenly spaced and understory vegetation should include hardy shrubs and ground cover. Street lights should be sited between trees to minimize conflicts with branches. Amenities such as bicycle racks, bus shelters, seating areas, and other furnishings may be located in paved areas between street trees.
- Drive Lane – one travel lane per direction (12-foot minimum for each lane where there is no curb and gutter; however, lane widths may vary based on the need for curb and gutter, site characteristics and anticipated traffic volumes).
- Landscape Panel – A minimum of 8-foot wide panel for landscaping and amenity areas. Street trees should be evenly spaced and understory vegetation should include hardy shrubs and ground cover. Street lights should be sited between trees to minimize

conflicts with branches. Amenities such as bicycle racks, bus shelters, seating areas, and other furnishings may be located in paved areas between street trees.

- Sidewalk – A 6-foot sidewalk adjacent to the landscape panel. An additional 1-foot VDOT maintenance buffer should be included in the right-of-way.

Outside of the 54-foot right-of-way:

- Bioswale/Water Channel – A 50 to 70-foot wide linear green including a waterway where possible. The bioswale/water channel and green space is envisioned to be lightly programmed with passive recreation opportunities such as boardwalks, gathering areas, trails, and similar uses on the edges of the waterway, which would not be adversely impacted by periodic flooding, in the flood-prone areas. The planting palette should consist of plant species native to Virginia and arranged to mimic natural communities. Non-native invasive species should not be planted.
- Shared Use Path – A 10-foot shared use path is proposed for one side of the bioswale/water channel.

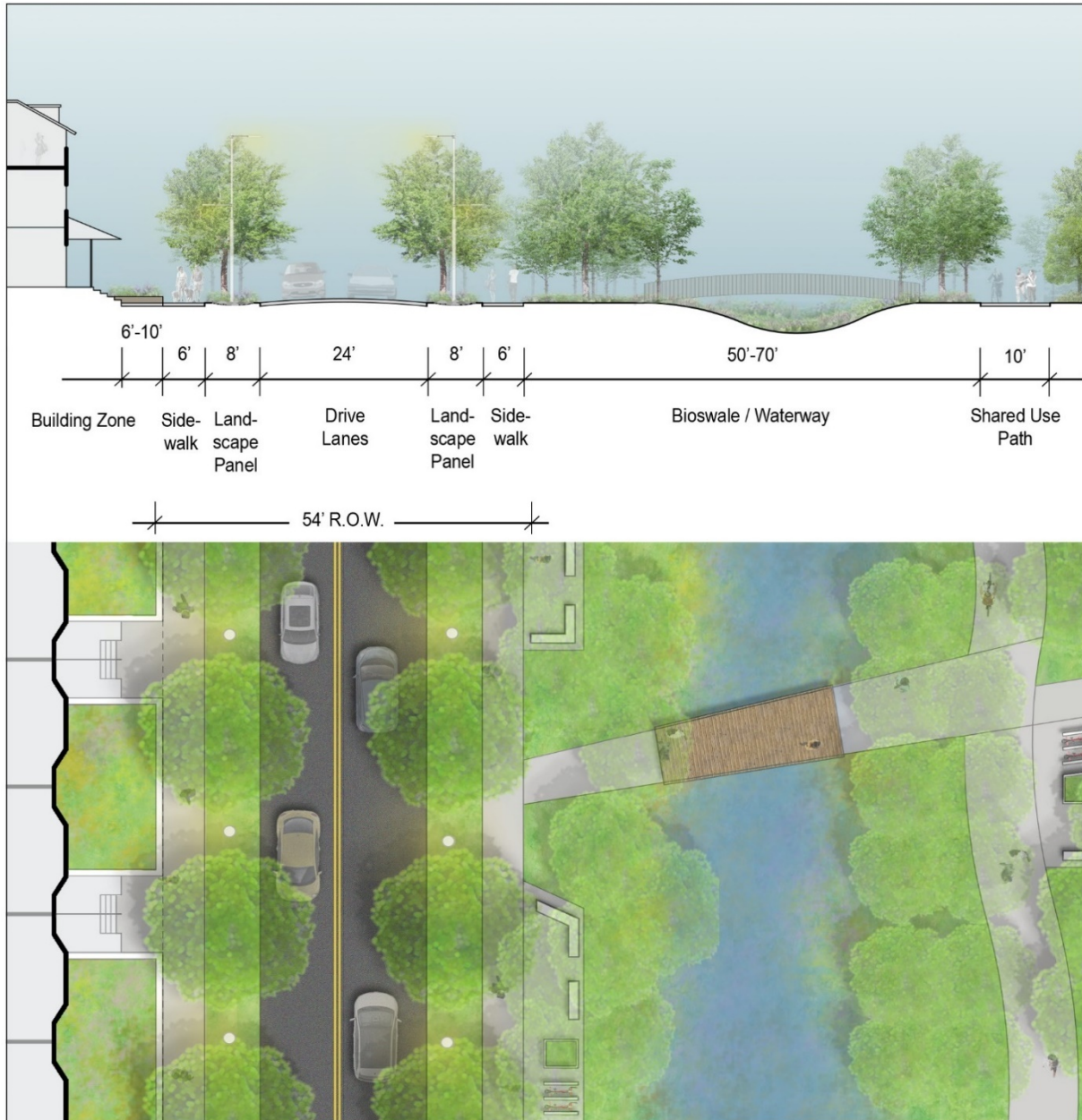


Note 1: Typical street cross sections are depicted. Although dimensions are noted, final street design will require accommodation of all applicable road design infrastructure. Additionally, final street designs may vary as necessary to address other design and engineering goals and requirements.

Note 2: VDOT requires a 1-foot maintenance buffer at the back of the sidewalk or shared use path on the edge of the right-of-way.

ECOLOGICAL SPINE TYPE 1 CROSS-SECTION AND PLAN

FIGURE 14



Note 1: Typical street cross sections are depicted. Although dimensions are noted, final street design will require accommodation of all applicable road design infrastructure. Additionally, final street designs may vary as necessary to address other design and engineering goals and requirements.

Note 2: VDOT requires a 1-foot maintenance buffer at the back of the sidewalk or shared use path on the edge of the right-of-way.

ECOLOGICAL SPINE TYPE 2 CROSS-SECTION AND PLAN

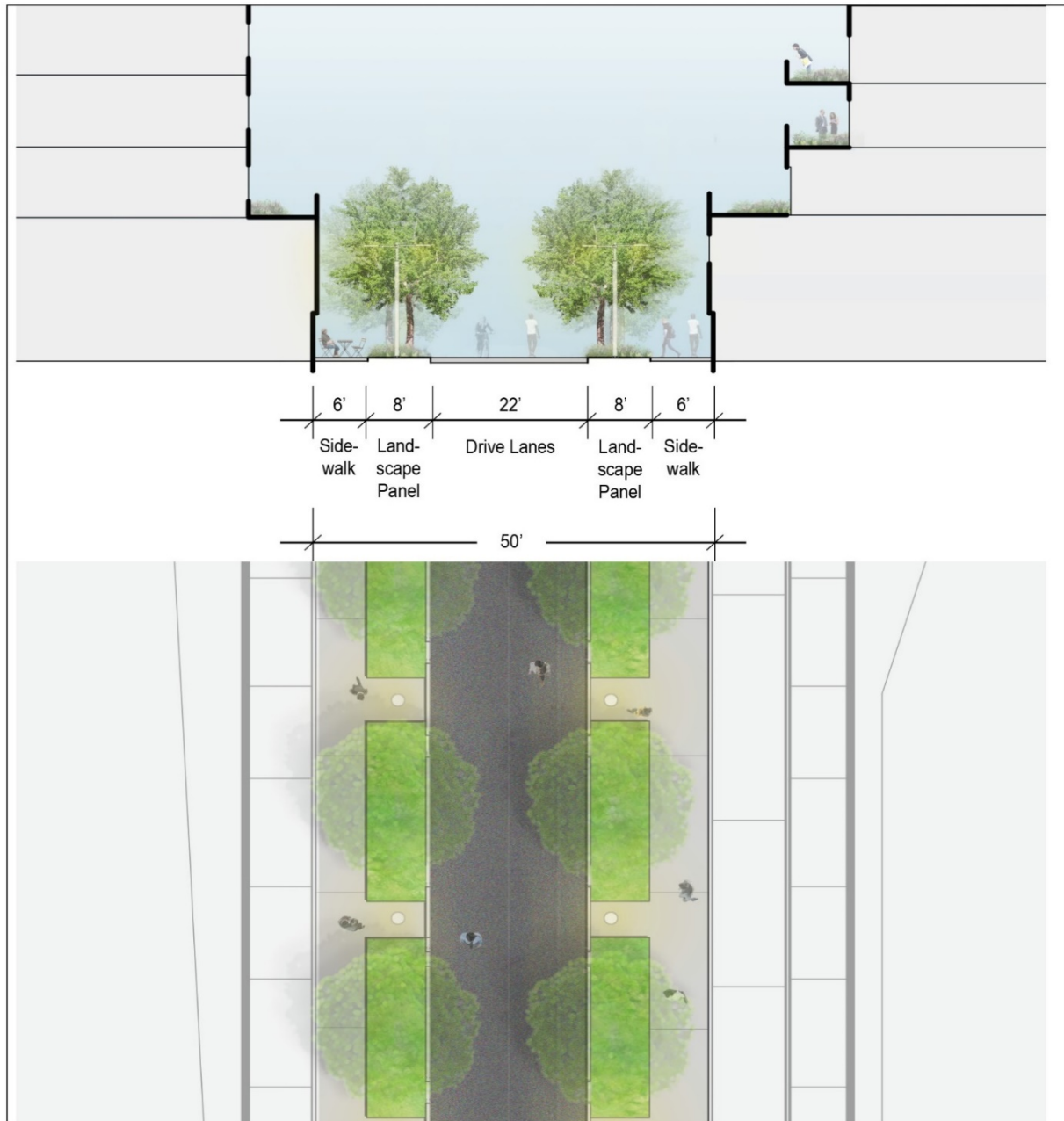
FIGURE 15

Shared Lane/Alley (Private)

The Shared Lane/Alley (Figure 16) is a private street to be located within proposed developments where needed for pedestrian access and utilitarian purposes. It may be used to provide access into parking garages and loading areas as well as for emergency vehicles. Shared Lanes may be incorporated as part of the pedestrian and bicycle network. They should include certain features of public streets such as landscape panels and sidewalks. The following recommendations are provided to achieve the streetscape character of Shared Lane/Alleys:

Shared Lane/Alley Cross-section dimensions:

- Drive Lane – 22 feet which may be used to accommodate vehicles, pedestrians, cyclists, and/or emergency vehicles, as needed.
- Landscape Panel – A minimum of 8-foot wide panel for landscaping. Street trees should be evenly spaced and understory vegetation should include hardy shrubs and ground cover. Street lights should be sited between trees to minimize conflicts with branches.
- Sidewalk – A 6-foot sidewalk adjacent to the building.



Note 1: Typical street cross sections are depicted. Although dimensions are noted, final street design will require accommodation of all applicable road design infrastructure. Additionally, final street designs may vary as necessary to address other design and engineering goals and requirements.

SHARED LANE/ALLEY CROSS-SECTION AND PLAN

FIGURE 16

IMPLEMENTATION

Achieving the vision for the Richmond Highway Corridor will necessitate an implementation approach that is innovative, flexible, and comprehensive. Policies, regulatory tools and processes need to be identified and adapted as appropriate to facilitate the desired results. Partnerships and cooperation among stakeholders will be essential to realizing the vision. Successful implementation will require a commitment to the overall vision, including the guiding planning principles, the corridor-wide and CBC policies, and the specific vision for the individual CBCs, including the grid of streets, the open space network, and the urban design guidance.

The following elements, among potentially others, will be part of a successful implementation plan: policy and Plan guidance, regulatory tools, design standards and the ability to allow for flexibility within those standards, funding mechanisms, the ability to evolve processes with time and new information, and the identification of funding mechanisms. Such elements will be used to guide decisions on land use, transportation, urban design, urban parks and other infrastructure improvements. Implementation of the Comprehensive Plan will occur primarily through the rezoning process, in which a determination will be made as to whether a development proposal is in conformance with the Plan's recommendations and whether its impacts are being adequately addressed through such things as commitments to high quality design and other Plan objectives, and through in-kind and monetary contributions such as those made toward transportation and/or public facility improvements needed to support new development.

Additional county and state policies and regulations may also guide decisions related to development along the corridor. These regulations need to be reviewed and updated as necessary for the vision to be implemented. For example, a full partnership with VDOT and DRPT will be required to implement the multimodal environment that the Plan envisions in lieu of traditional design standards.

Flexibility

The CBC concept plans are an illustrative guide to how each of the CBCs may develop and are not meant to prescribe the exact form or appearance of future development proposals. There is flexibility in the implementation of these concept plans, provided there is general adherence to the function of the conceptual grid of streets, the open space network, building heights, total development intensity, and the activation of streets with retail and other ground-floor uses. A form-based approach has been used in the redevelopment options for certain land units in the CBCs that provides flexibility in the form, placement, and use of buildings. Under this approach, the total planned redevelopment potential and proportion of residential/non-residential land uses are further refined through the application of the urban design, open space, and streetscape recommendations.

The Plan also provides flexibility to exchange square footage among planned non-residential uses provided that a vibrant mixed-use community is achieved, the multimodal transportation needs are addressed, and certain non-residential uses are sited per the guidance in the Plan. There is also flexibility in the Plan to substitute planned non-residential uses for community serving institutional uses under certain conditions. See the Flexibility Among Non-Residential Uses section in the Corridor-wide Guidelines for additional guidance.

Finally, the Plan provides flexibility in the implementation of some of the innovative concepts, such as the Livability Spines and the Ecological Spines. For example, the various components of the Livability Spine have flexible dimensions and, depending on the design, some components of the streetscape may be counted towards the urban parks requirement. How these issues are addressed will be evaluated during the review of specific development proposals.

Phasing

Development along the corridor will likely occur incrementally over a number of years. This incremental development is anticipated for the corridor as a whole, as well as for larger individual development projects. Incremental redevelopment must be balanced with the need for infrastructure and public facilities to support the development. This includes the transportation infrastructure, parks and recreational facilities, schools, and other public facilities needed to successfully support an increased population and employment base. Development applications must be reviewed in a manner that ensures appropriate phasing to the provision of these public improvements. Each phase of redevelopment will need to advance the goals and the vision in the Plan, and the construction of and/or commitment to the public facilities appropriate for each phase of development.

The first development project within a CBC that seeks to implement the redevelopment option should establish a sound framework for redevelopment of the whole CBC. Priorities that should be addressed in the earliest phases of site development planning include appropriate segments of roadway network (the grid of streets, Livability Spine and Ecological Spine), as well as appropriate pieces of the parks and open space network; adherence to the street types and corresponding cross-section(s); and pedestrian and bicycle access to the BRT stations.

The overall multimodal transportation network also will be implemented incrementally. This includes the phased implementation of BRT and Metrorail, as well as other improvements that increase the capacity of the transportation system, help enhance the efficiency of the existing transportation system, or assist in reducing the demand on the transportation system. Such phased improvements may include the implementation of the grid of streets, inclusion of Intelligent Transportation Systems (ITS) technologies along the transportation network, implementation of Transportation Demand Management (TDM) measures, implementation of the widening of Richmond Highway, and the provision of pedestrian and bicycle improvements.

Interim Development Conditions

There are three scenarios that may be considered as interim development. Interim development can refer to a project that is constructed in phases and the temporary conditions that are created because the development plan is not fully realized. It also can refer to developments, generally those smaller in scale and potentially for a limited duration, that do not strictly conform to the vision in the Plan. Finally, it can refer to temporary placemaking efforts that can contribute to the vitality of the area on a short term basis. Interim conditions that enhance the urban character and contribute to placemaking in the CBCs are encouraged for the portions of a project that will not be built until the later phases. Examples include pop-up parks, green space, interim recreational facilities, or low intensity temporary uses. It may also be acceptable to maintain existing uses as long as they do not preclude the achievement of other priorities, such as the street grid. Interim development conditions within the CBCs will need to carefully consider the pedestrian experience in an evolving urban environment and ensure that any adverse impacts associated with an interim state of redevelopment are mitigated as appropriate. Phased developments should demonstrate through plans and supporting graphics how interim conditions will meet Plan objectives. Any interim development should give particular consideration to the following, as applicable to the situation:

- Providing a pedestrian plan to determine which pedestrian-oriented facilities (parks, retail streets, and transit) will require interim connections and streetscape improvements;
- Providing streetscape improvements that conform to Plan guidelines and that result in continuity of the streetscape design;

- Designing buildings for the ultimate grid of streets by siting them to conform with the configuration of the street network, providing façade articulation to each building face and treatments to ensure compatible transitions, and incorporating appropriately scaled entrances;
- Demonstrating how interim parking facilities will adhere to parking design and phasing goals;
- Showing how interim stormwater facilities can be creatively incorporated and can address impacts of interim development conditions;
- Providing temporary landscaping improvements to enhance the aesthetics and functionality of spaces that are in transition;
- Demonstrating how the proposed development will not preclude future redevelopment of the site or adjacent sites in conformance with the Plan;
- Demonstrating how the proposed uses support the multimodal environment, particularly if the site is located at or near a planned BRT station; and,
- Ensuring that construction sites provide a contiguous, safe pedestrian path during construction, particularly along Richmond Highway and to BRT/transit facilities. Coordination with adjacent properties, including those under construction, should occur to ensure seamless pedestrian paths are provided. Construction sites should be appropriately lighted and visually screened.

Additional guidance on interim conditions can be found in the *Guidelines for Interim Improvement of Commercial Establishments*, Appendix 6 of the Land Use element of the Policy Plan for interim development that does not strictly conform to long-term recommendations.

Refined Grid of Streets

The Richmond Highway Corridor currently consists of a mix of small parcels fronting the roadway and larger retail superblocks with a relatively small number of connecting streets. A grid of streets with smaller block sizes will make for a connected and more walkable Richmond Highway Corridor. A conceptual grid network for the corridor is shown in Figure 5. These street grids will be refined as part of a future analysis of the street grids by FCDOT. It will be further refined by future development, more detailed analyses, and input from affected properties and other stakeholders. Implementation of the grid of streets should take the following into consideration:

- Continuity, within the grid of streets, should be maximized;
- Intersections that are skewed, off-set intersections, awkward dog legs, and intersections with more than four legs, should be avoided;
- Safe and convenient pedestrian access to transit stations should be provided;
- Any block longer than 600 feet within the CBC grids should contain a mid-block pedestrian connection; and,
- Where possible, even spacing between intersections should be maintained.

There is flexibility in implementing the conceptual grid of streets in terms of exact street location, layout, and design details, but, in general, the grid should conform to the street types and overall conceptual grid vision contained in the Plan. The first development to advance within an area should provide for its proportionate share of the grid of streets as it affects their property and will generally set the specific location and features of that portion of the grid of streets. The implementation of the initial segment(s) of the conceptual grid of streets in an area should demonstrate that this grid will not preclude the successful achievement of the overall vision for the street grid through later phases of development.

Transportation Infrastructure

A longstanding planning concept in the Comprehensive Plan is linking development to the provision of the infrastructure needed to support it. Development should be supported by transportation improvements that better connect Richmond Highway locally and to the rest of the region. A dynamic plan that connects private redevelopment with the associated public improvements is critical to ensuring the transformation of the Richmond Highway Corridor.

Realizing the vision for the corridor is expected to take years. In addition, major transportation improvements can take many years to design, fund, and build. Planning and sequencing of transportation infrastructure will need to consider actual and projected growth of different land uses, based on entitlements, the pace of development, and short- and long-range market forecasts. While some transportation improvements will be implemented through government-led efforts, others are dependent on private development and will only be implemented as development occurs.

Transportation improvements should be appropriately phased with development. Exclusive of BRT, new development should contribute its appropriate share of funding and/or in-kind construction so that transportation projects keep pace with development. Some improvements, to the extent possible, may be implemented in stages by the private sector as development occurs.

The implementation of public infrastructure improvements will require creative and innovative funding and management tools to adequately address the needs of the area. Federal, state, regional, and county funding sources should all be pursued for these transportation improvements; however, a combination of public and private sector funding will be needed to fund these improvements. A detailed examination of funding options is needed before a preferred funding approach and strategy is selected. The feasibility of various financial tools should be assessed, and the mechanisms for financing specific portions of the funding plan must be identified.

A dynamic funding plan for transportation improvements is essential to identify strategies for implementing transportation infrastructure improvements. Such a funding plan should address existing transportation needs, support redevelopment, and address transportation-related impacts from development along the corridor.

Public Facilities

In the Richmond Highway Corridor, where most of the land is privately owned and already developed, locating new public facilities cannot rely on the public's ability to purchase land and construct such facilities. It will, therefore, be critical that land for free-standing uses or spaces within buildings for co-located uses be provided within private development. Rezoning proposals should commit to provide the necessary land and/or building space to ensure locations are available for the facilities to be constructed in concert with the pace of growth. In addition to facilitating public facility objectives through zoning actions, it may be necessary for landowners throughout

the Richmond Highway Corridor to work collaboratively and creatively through partnerships to meet public facility objectives.

Public facility and infrastructure analyses should be performed in conjunction with any development applications. Commitments should be provided for needed improvements and for the mitigation of impacts identified in the public facility and infrastructure analyses, as well as for improvements and mitigation measures identified in the Areawide recommendations. Public facilities will be funded from a combination of public and private sources.

Parks and Recreational Facilities

The integration of urban park spaces within the Community Business Centers, as guided by the Urban Parks Framework in the Policy Plan, will address a large portion of the day-to-day desires of future residents and employees for outdoor leisure and recreation opportunities. Recreational facility needs generated by new developments will be calculated based on the benchmark facilities of playgrounds and basketball courts. Other types of sport courts, such as bocce ball, handball, pickleball, volleyball, tennis, and half courts may be provided to meet the projected court need. In addition, facilities for which adopted standards are not available, such as running facilities, game tables, and outdoor fitness equipment, may also be provided as they will provide outdoor recreational opportunities that are desirable in an urban area. Publicly accessible indoor facilities, such as multipurpose program areas, indoor gyms, and courts may also be provided to meet a portion of the need.

Achieving the number of athletic fields needed to serve the anticipated population along the Richmond Highway Corridor will be challenged by the limited availability of undeveloped land. New development is expected to offset impacts to parkland and recreational facility needs. Redevelopment applications should proactively seek creative opportunities to address the additional demand for athletic fields generated by new development. Contribution of land that can accommodate athletic fields and/or the physical construction of such facilities is encouraged. It is preferred that new athletic fields be constructed within the Community Business Centers as a component of new development. This will establish the facility where it will directly benefit the users that the field is intended to serve and where many can walk or bike to the field. Collaboration among land owners is encouraged to jointly provide space or land that can accommodate large facility needs. In addition to traditional dedication of land to the Park Authority for field development, provision of publicly accessible and scheduled athletic fields on privately-owned land, including rooftop or indoor facilities, should be considered. Collocation of athletic facilities within easement corridors or above stormwater management facilities may also be considered.

Opportunities may also be considered to construct new or improve existing facilities on Park Authority-owned land or public school sites in the vicinity of the corridor. Provision of land outside of the CBCs that can be developed to meet the athletic field need may also be considered as a means of offsetting a development's impacts to parks. Forging new park-provider partnerships must be seriously considered.

Once land is identified that can address the athletic field need, opportunities that maximize the service capacity of the athletic field should be explored. Use of synthetic turf and field lighting can significantly increase the amount of play time possible compared to natural turf fields. Designing athletic fields to accommodate multiple sports will maximize the flexibility to address changing demand for different field sports. When possible, opportunities for shared parking to serve athletic fields should be considered, minimizing the development footprint necessary to accommodate athletic field development.

Green Development

The Plan contains an extensive array of environmental objectives, the achievement of which may, in a number of instances, necessitate overcoming various economic and technical challenges. The county should actively explore potential mechanisms and strategies that may facilitate and incentivize the attainment of these objectives.

Partnerships

Dedicated leadership and involvement from community participants, state and federal agencies, and the private and non-profit sectors working together with the county will be essential to the corridor's transformation. The process and involvement from all stakeholders must be transparent, focused, and thorough.

Public sector partnerships among county, state, and federal agencies will be critical in identifying and investing in the necessary public infrastructure improvements. Public infrastructure investments, such as parks or a BRT system, improve the development climate of an area and make it more attractive for private investment. Fairfax County can and should reinforce and leverage private sector investments that achieve the vision for the Richmond Highway corridor.

Public-private partnerships, which entail using public resources to foster private investment and development activity that may not otherwise occur, are another possible approach for implementing the Plan. These partnerships have proven to be a successful mechanism to help the county advance certain infrastructure projects and development objectives. By using public investments strategically, Fairfax County can reinforce and leverage private sector investments to achieve the vision for the corridor.

Private sector cooperation among landowners along the corridor will be a key component to implementation. An aspect of cooperation among landowners includes parcel consolidation and/or coordinated development plans. The Plan encourages redevelopment to consolidate parcels of a logical and sufficient size to support redevelopment. In certain cases as recommended in the land unit guidance, substantial parcel consolidation should be achieved. The consolidation of parcels for redevelopment will offer the greatest amount of flexibility in terms of site design and layout, and coordinated development plans will offer an alternative when consolidation is not possible. These private partnerships should ensure that new development can support the dedication of land or space for parks, active fields, and open space; rights-of-way to implement the grid of streets; public facilities, such as a school; and to provide for the programming and activation of public spaces.

Coordinated Development

Coordinated development plans may be used in lieu of, or in addition to, substantial consolidation of parcels. Consideration should be given to site design, building locations, urban design, open space amenities and signage, inter-parcel access where appropriate, roadway realignment or improvements, and parking facilities. Coordinated development proposals will need to ensure that projects function in a compatible, well-designed, efficient manner; are consistent with the land use guidance and development potential of the CBC or SNA; are compatible with the development on adjacent properties; reflect coordinated phasing of improvements as needed (for example, frontage improvements); are consistent with the overall intent of the land use concept to achieve the desired form and mix of uses; and do not preclude adjacent parcels from developing in conformance with the Plan.

Maintenance

Maintenance of the public realm is expected to be a shared public and private sector responsibility. Commitments should be made from developers to maintain publically-accessible parks and open spaces, streetscapes and, where applicable, the Ecological and Livability Spines. Commitments for the private maintainance of streetscapes should include the entire streetscape to the curb line including the public right-of-way. An agreement will likely be required for maintenance for the portion of the streetscape located within public right-of-way.

COMMUNITY BUSINESS CENTERS

OVERVIEW

Six Community Business Centers (CBCs) are designated along the Richmond Highway Corridor; from north to south, these are North Gateway, Penn Daw, Beacon/Groveton, Hybla Valley/Gum Springs, South County, and Woodlawn. The following guidance establishes the overall vision for the CBCs. Vision elements are more fully developed within specific concept plans for four of the six CBCs - Penn Daw, Beacon/Groveton, Hybla Valley/Gum Springs, and Woodlawn. North Gateway and South County CBCs are subject to separate planning endeavors.

The concept plans for Penn Daw, Beacon/Groveton, Hybla Valley/Gum Springs, and Woodlawn CBCs recognize this transit-oriented development potential and the influence of the planned transportation improvements. It is anticipated that redevelopment will be the primary mechanism through which the vision will be realized. The concept plans represent one method to achieve that vision. Flexibility in the implementation of the concept plans is appropriate and encouraged, as long as the intent and framework of the vision is achieved.

Overall Vision

The vision for the Richmond Highway Corridor's CBCs honors the historical legacy and resources of the corridor and the area's unique ecological features in a manner that is designed to achieve a series of coordinated, transit-oriented activity nodes. Past transportation infrastructure, such as historic roadway alignments and former airport sites, has shaped development patterns along the corridor, while the area's historic structures, buildings, events, and neighborhoods have contributed to its character. Numerous historical sites are located within or in proximity to the Richmond Highway Corridor. Notable sites include Woodlawn and Pope-Leighey House (which was relocated to Woodlawn), Historic Huntley, the Original Mount Vernon High School, the Gum Springs Community, and the Pride of Fairfax. Abundant streams, tributaries, wetlands, and natural areas are located in the area and cut across Richmond Highway, connecting the corridor to the Potomac River and the Chesapeake Bay. The vision unites the historical resources and ecological attributes of the corridor by establishing a cohesive series of vibrant, well-connected places that embrace the corridor's legacy, celebrate its environmental features, and strengthen the greater Richmond Highway community.

Overall Vision Elements and Strategies

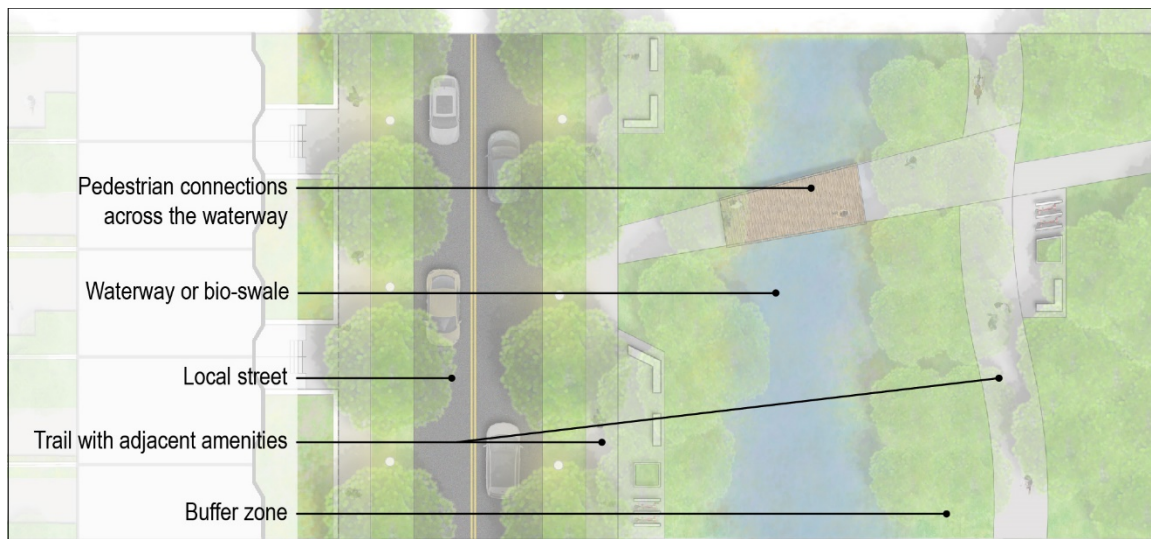
The Vision Elements, as listed and described below, integrate the Guiding Planning Principles for the corridor with more specific guidance for the CBCs. In general, each Vision Element includes strategies for implementation.

1.) Emphasize, protect, and restore existing ecological resources and natural spaces to strengthen the relationship between people and nature.

Some streams, wetlands and waterways within the CBCs have been altered or otherwise disturbed over time. Channelizing and piping these waterways adversely affects environmental health, reduces wildlife habitat and limits opportunities for residents to engage with and benefit from the ecosystems provided by these natural elements. These practices also impact the ability of waterways to manage weather events and natural disasters. Preserving and enhancing the area's ecological systems and connecting people to them by adding amenities will provide opportunities for improved environmental and public health benefits while fostering a sense of place.

A key concept for realizing this element of the vision are connected green corridors that where possible, combine a stream channel and/or other innovative stormwater facilities with a

roadway and/or multi-use path and are referred to as Ecological Spines (Figure 17). Ecological Spines are planned in the Hybla Valley and Woodlawn CBCs where existing streams and rivers are present. Within the Ecological Spine, these streams and rivers (some of which have been piped or channelized) should be daylighted and/or improved into more natural areas and green space amenities with sidewalks and trails for pedestrian mobility and recreation. Ecological Spines are intended to serve as a natural green space amenity that anchors and connects to other parks, green spaces and streetscapes within the CBC and to surrounding neighborhoods. Some portions of the Ecological Spines may provide for low-volume vehicular travel in addition to bicycle and pedestrian travel, as described in the Urban Street Network Design (USND) section. The goal is to improve and protect these stream valleys while incorporating them into the design of the open space for the enjoyment of those who live, work or shop in the CBC.



ECOLOGICAL SPINE CONCEPT

FIGURE 17

2.) Use legacy infrastructure and historic resources to preserve and promote the historic significance of the area.

Historic or legacy features such as old roads and trail alignments, structures, parcel geometries, and airport runways offer opportunities to define each CBC's identity and strengthen its sense of place. Incorporating references to existing or demolished features in projects, and in particular within their public spaces, will offer opportunities to provide a narrative of the area's rich past. Redevelopment should occur in a manner that recognizes the legacy of historic buildings and sites, events, neighborhoods, and infrastructure along the corridor, including the preservation of important viewsheds from Woodlawn and Historic Huntley.

3.) Promote multimodal connectivity within and between the CBCs to improve access and provide transportation choices.

The planned multimodal transportation network will form the framework for a functional, urban environment that increases access and improves mobility within the CBCs, while also linking the CBCs to surrounding communities and to the rest of the county. A fundamental component of the framework is the additional means for pedestrians and cyclists to traverse the corridor. Walking, bicycling, and enhanced access to public transit will increasingly become an option for daily transportation needs, such as commuting to work and school, and for traveling to recreational activities. Pedestrian and bicycle facilities should seamlessly connect within the grid system, including at the intersections of different street types.

Along Richmond Highway, street design elements, including separated bicycle lanes, wide sidewalks, landscaped areas, and crosswalks, should take on a more urban character to unify development on both sides of the roadway and encourage a walkable and bike-friendly environment. Continuous pedestrian and bicycle facilities should be provided that connect the transit stations on Richmond Highway to grids of streets in the CBCs and facilitate movement safely and comfortably along and across the corridor. Refer to the Fairfax County Bicycle Master Plan and the Urban Street Network Design (USND) section of the Plan for bicycle facility guidelines, street cross-sections, and road design characteristics, respectively.

4.) Encourage transit-oriented development (TOD) and a grid of streets that support a mix of land uses.

A higher intensity mix of housing and non-residential uses, within a single building or within a short walking distance of one another and proximate to a transit station, will decrease the number and distance of vehicular trips and will encourage people to walk, bike or take transit. A diverse range of residential, commercial, and institutional uses within the CBCs will reduce reliance on driving as the only means to travel in order to fulfill daily needs by locating goods, services, housing, and jobs in close proximity. The highest intensity and most diverse mix of uses should occur in the blocks immediately adjacent to the BRT stations. Development should decrease in intensity and height when adjacent to existing neighborhoods.

Focusing redevelopment and new infrastructure within the CBCs will protect, preserve and enhance the surrounding established communities by managing growth in targeted areas, while minimizing infrastructure demands. Each development should construct their portion of the grid network. Parcels should be consolidated and development coordinated as necessary to achieve the vision including the grid of streets and open space network.

5.) Transform the visual character of Richmond Highway through excellence in site and building design to build a sense of place.

A visually cohesive corridor will be created through adherence to urban design guidance that informs how sites, including their public spaces and buildings, relate to Richmond Highway. The guidelines provide strategies that should be used to establish a strong identity and character that can be clearly recognized by residents and visitors. Organizing parking, providing high-quality streetscapes with minimal curb-cuts, and establishing a consistent building-to-street relationship will result in sites that relate well to one another in a walkable environment.

Buildings and urban plazas should be located around the transit stations and frame the adjacent blocks with consistent ground-floor building facades to form focal points along the corridor. Buildings should adhere to established build-to lines. Above the first floor,

structures are encouraged to incorporate setbacks that result in modulating rooflines and foster distinctive building architecture. Dramatic changes in topography along the corridor offer opportunities to maximize views from buildings to significant points of interest and natural areas. Viewsheds and topographic changes should be considered as design opportunities during redevelopment.

Building heights should be varied to create an interesting, dynamic environment that will allow a mix of light and shadow to permeate down to the street; the use of building step-backs provides the opportunity for the creation of rooftop terraces. Buildings should have varied rooflines and not all buildings in a block or CBC should be of a similar height. Buildings should step down in height from Richmond Highway to form effective transitions to adjacent uses. Figure 18 shows an example of how building forms should vary in height to create terraces and modulated roof lines, and how building step-backs above the ground-floor can create interesting architectural designs.



BUILDING FORM, MASSING, AND STEP-BACK ILLUSTRATION **FIGURE 18**

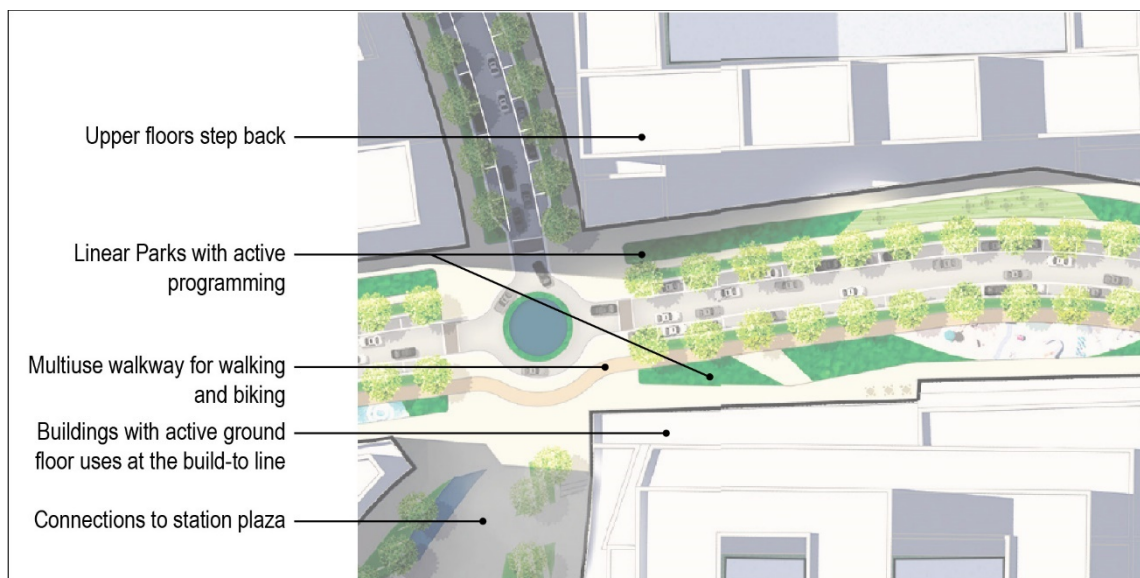
6.) Support strong and healthy communities through well-defined and active public spaces.

A network of open spaces is an integral component of the CBCs and part of a corridor-wide system of coordinated park spaces. The network should consist of a range of open spaces that include parks, plazas, and recreational amenities. This network will create opportunities for community building by connecting people through shared spaces and activities, by linking people to environmental resources, and by recognizing the shared historical legacy of the area. The design of public open spaces should consider the needs of users on the site and how these spaces fit into the corridor-wide needs for urban park space. These spaces should be inherently flexible, connect with surrounding neighborhoods, incorporate active and passive recreational amenities, and provide space for the programming of a variety of activities that encourage social interaction.

The Open Space Plan for each CBC and the Urban Parks Framework should be used to guide decisions about parks during implementation. For planned open spaces that extend across multiple

properties such as the Livability Spine, developments should be coordinated with adjacent properties to form a cohesive space.

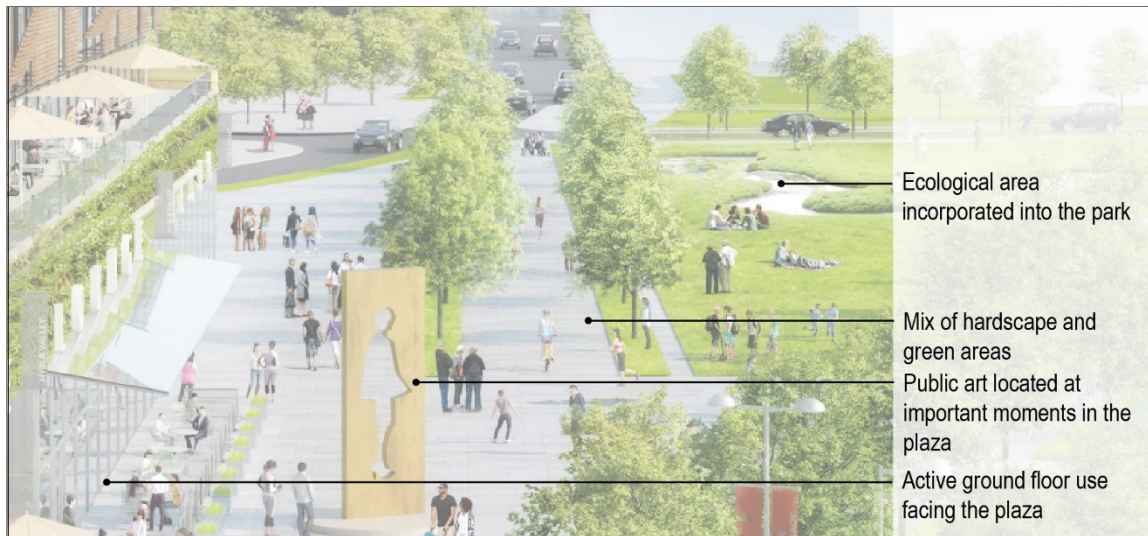
A key concept for realizing this element of the vision are the “Livability Spines” that combine local streets with pedestrian and bike facilities and parks, plazas and open space. The Livability Spine is a primary organizing feature and is the center of activity for the Penn Daw, Beacon/Groveton, and Woodlawn CBCs. The Livability Spine incorporates a Linear Park consisting of a mix of large plaza and green spaces along both sides of the roadway. On one side of the Livability Spine, the Linear Park is envisioned to be incorporated into a Pedestrian Zone that also includes a multi-use walkway. The intent of the Pedestrian Zone is to allow for flexibility in the implementation of the Linear Park and walkways so that the desired design can be achieved. An option exists to creatively integrate the walkway into the design of the Linear Park, rather than as a separate pedestrian element, as discussed under the Street Types and Design section. Retail and other uses that activate the pedestrian realm should be located on the ground-floors of buildings facing the Livability Spine and may include outdoor dining and other amenities within the building zone. Figure 19 illustrates the Livability Spine concept.



LIVABILITY SPINE CONCEPT

FIGURE 19

Ground-floor uses that foster pedestrian activity should complement parks, streetscapes on certain streets including Richmond Highway and the Livability Spine, and civic spaces within the CBCs. Uses that encourage pedestrian activity on the street include retail, restaurants, residential building amenities, and sometimes office uses, depending on how they are presented on the street. These uses should be complemented with building entrances, storefront windows, canopies, signage, landscaping, and streetscape furnishings. Most streets associated with ground-floor retail uses should have on-street parking to benefit businesses, encourage pedestrian activity, and increase the comfort of pedestrians by using parked cars to buffer those on the sidewalk from moving vehicles. Ground-floor uses located on plazas and linear green spaces should help build a sense of community while providing lively places for recreation and civic engagement. Figure 20 illustrates a plaza concept that integrates green spaces, hardscape features, and ground-floor retail uses.



PLAZA CONCEPT

FIGURE 20

- 7.) **Act as stewards of the corridor’s future legacy by incorporating smart and sustainable technologies and by integrating green infrastructure into new developments.**

The Richmond Highway corridor is envisioned to become a place of invention and innovation that features the latest smart technologies, sustainable building practices, and green infrastructure. Using these technologies and practices to support place-making efforts and to integrate green infrastructure both across a project site and within buildings will improve the long-term ecological health of these areas and foster more livable and sustainable communities.

Projects should meet or exceed the county’s policy for green buildings to promote environmental responsibility and build upon the corridor’s ecological theme. Intelligent transportation systems, new parking technologies, low-impact development techniques for stormwater management and green building techniques, such as sustainable power generation and green roofs, are examples of the types of infrastructure that should be incorporated into new CBC developments, wherever feasible. Ecological Spines are another innovative design elements that should be incorporated to achieve the county’s policy.

Emphasizing Form Instead of Floor Area Ratio (FAR): Redevelopment Options for Penn Daw, Beacon/Groveton, Hybla Valley/Gum Springs, and Woodlawn CBCs

The Plan uses a form-based approach to guide the desired redevelopment options in four of the six CBCs: Penn Daw, Beacon/Groveton, Hybla Valley/Gum Springs and Woodlawn. A form-based planning approach is intended to provide flexibility in the design of a project, while ensuring that the project contributes to the vision of the community. The emphasis on form focuses on building form, urban design, and height in order to define the development potential of properties within these CBCs in lieu of the use of more traditional FAR limitations.

The amount of development potential allocated to any given property or assemblage should be guided by recommendations on the new street connections, open space, parking requirements, building height, and other urban design criteria. The total number of dwelling units and amount of

non-residential square footage allowed under the redevelopment option also is provided for each land unit so that the overall development potential of a CBC is not exceeded. In some cases, the baseline level of development is stated in terms of the FAR or dwelling units per acre.

RECOMMENDATIONS

The following sections provide guidance for each CBC. Consistency with the CBC recommendations in conjunction with all the applicable sections of the Policy Plan, the Guiding Planning Principles, Corridor-wide Guidelines, and CBC Vision Elements should be consulted in the review of all development proposals within the CBCs. In some areas, site-specific recommendations may differ from and supersede the Guiding Planning Principles and Corridor-wide Guidelines. As noted in the Land Use Section under Corridor-wide Guidelines, under the redevelopment option, flexibility among non-residential uses is appropriate provided the overall vision of a vibrant mixed-use community is achieved and multimodal transportation needs are addressed.

The guidance for the Penn Daw, Beacon/Groveton, Hybla Valley/Gum Springs, and Woodlawn CBCs states how the design themes and form-based approach should be implemented for these areas, while also presenting site-specific recommendations. Construction of (or a commitment to) the open spaces, parks, a mix of residential and non-residential uses, and the grid of streets is expected to be phased appropriately. Recommendations are organized into five sections:

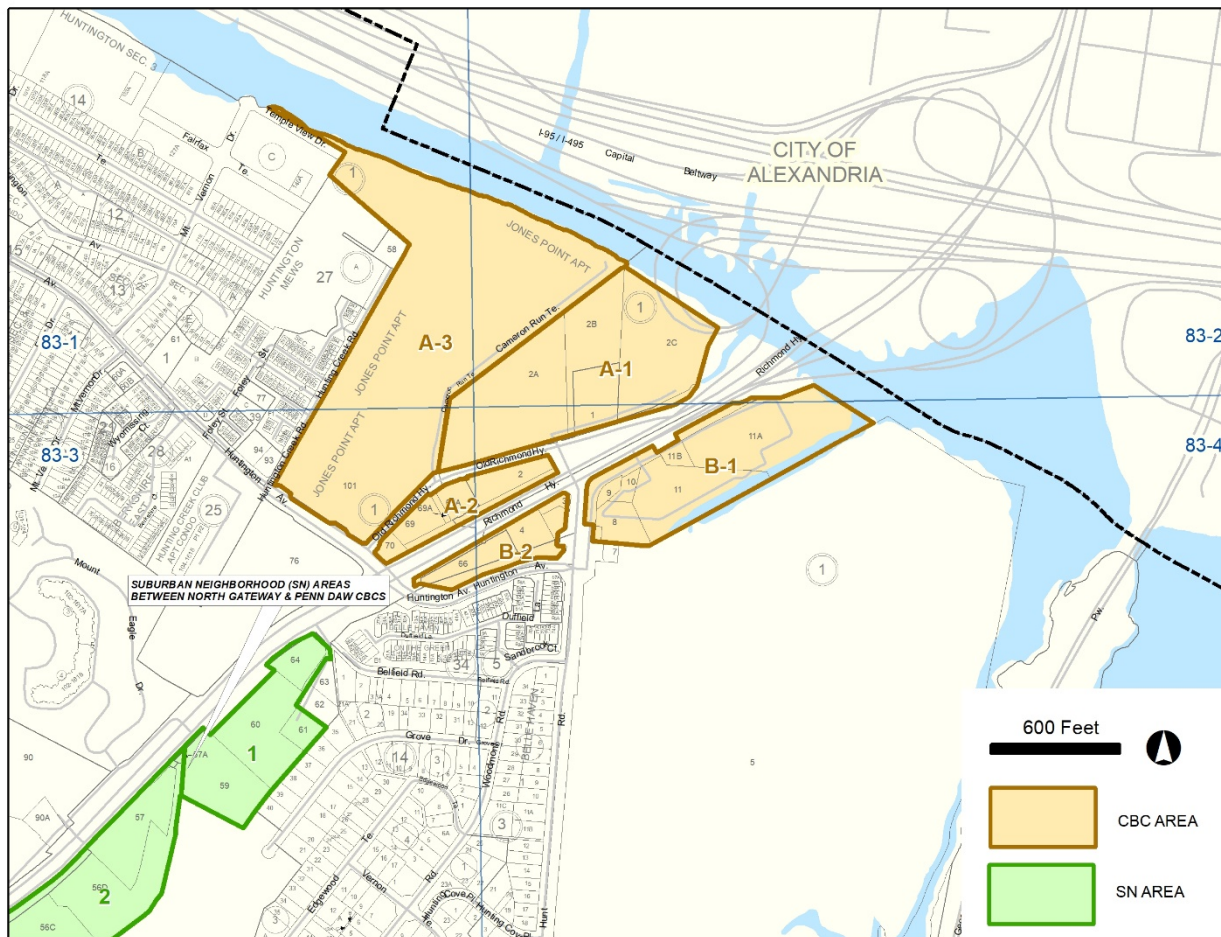
- The conceptual plan;
- The open space network;
- The multimodal network;
- Area road improvements; and
- Individual land unit recommendations.

Where the Comprehensive Plan envisions a substantial change in land use that is expected in conjunction with redevelopment, but proposed uses do not strictly conform to the recommendations of the Comprehensive Plan, the Guidelines for Interim Improvement of Commercial Establishments found in Appendix 6 of the Land Use element of the Policy Plan may be considered.

NORTH GATEWAY COMMUNITY BUSINESS CENTER

The North Gateway CBC serves as an entry point to the historic Richmond Highway Corridor from points north including Washington, D.C., the City of Alexandria, Maryland, and the Capital Beltway (Interstate 495) establishing the initial impression of Fairfax County. The proximity of the CBC to the Capital Beltway, the Huntington Metrorail Station and Fort Hunt Road presents opportunities for well-designed, transit-accessible redevelopment along this portion of the Richmond Highway Corridor. Currently, this CBC is characterized by high-rise residential buildings, auto dealerships, gas stations, hotels/motels, and midrise office buildings. Improving the identity and appearance of the area using urban design principles and revitalization strategies is consistent with adopted Comprehensive Plan goals. Environmentally sensitive areas exist along Cameron Run and in the shallow lots along the east side of Richmond Highway. As development occurs, there are opportunities to celebrate and enhance the CBC’s prominent location and the existing environmental assets.

Figure 21 indicates the geographic location of land units in the North Gateway CBC, shown in yellow, and the Suburban Neighborhood Areas south of the CBC, shown in green.



NORTH GATEWAY CBC BOUNDARY AND LAND UNITS

FIGURE 21

CONCEPTUAL PLAN

The North Gateway CBC is a major entrance to the Richmond Highway Corridor. The CBC marks the entry into Fairfax County and serves as a welcoming point to the significant historic and cultural resources that are found in the Richmond Highway Corridor. Pedestrian and bicycle connections to the Huntington Metrorail Station, and the Cameron Run and Mount Vernon Trails are CBC assets.

This area is planned to redevelop as a mixed-use center with residential, office, hotel and retail uses. These planned uses are compatible with the surrounding character and density of the Huntington Transit Station Area (TSA) to the west and south.

The western land units (Sub-units A-1, A-2, and A-3) are envisioned to redevelop around a multimodal grid of streets that enhance circulation within the CBC and create developable and walkable-sized blocks. Intersections formed by the new grid of streets should be spaced so that blocks are scaled at walkable distances. Mid-block pedestrian connections within the grid of streets are recommended where large blocks may make walking inconvenient.

Buildings should be sited in relationship to the streets to define the CBC as a focal point and gateway. Well-designed streetscapes, building sites, and architecture should be incorporated that complement the network of local streets and blocks and create a sense of place for the CBC. Building materials that are compatible and complementary to surrounding uses are desirable. Urban parks and landscaping should be used to soften the built environment.

A Livability Spine, extending perpendicular to Richmond Highway generally from Fort Hunt Road to Cameron Run Terrace, will form the central organizing feature of the CBC. It will function as North Gateway's "main street" and will serve as the focus of commercial activity. Buildings facing the Livability Spine should have retail or other activity-generating uses on the ground-floor level so as to create a lively pedestrian environment. The Livability Spine will be the primary connection and pedestrian corridor through the western side of the CBC, and its Linear Park component will be a public gathering place for people to enjoy outdoor activities.

The Conceptual Plan, as shown in Figure 22, illustrates how development may be organized within the CBC. Most buildings should be designed to support multiple uses. Due to the proximity of the Capital Beltway interchange, residential uses should be buffered from road noise. Non-residential and other active uses should be located on the ground-floor of buildings within the blocks adjacent to the Livability Spine and Richmond Highway. Taller buildings should be located near the Beltway, with appropriate heights as related to the adjacent neighborhoods to the west. Buildings should have their entrances and any associated outdoor spaces open onto the Livability Spine. No garage entrances or loading areas should front on the Livability Spine.

Figure 22 also identifies several planned open spaces in addition to the Livability Spine, including two multi-use parks at the southern end of the CBC and an Ecological Spine adjacent to Cameron Run that will connect to a multi-use trail and the Huntington Levee along with the planned linear park on Sub-unit A-3. A future extension of the Cameron Run Trail should connect to the Mount Vernon Trail. The park adjacent to Cameron Run on the north side of the CBC is a potential location for an athletic field. An urban plaza that includes a public art feature is appropriate at the southernmost point of the CBC where Huntington Avenue intersects Richmond Highway. All public open spaces should creatively integrate design features such as public art or notable architecture that celebrate the gateway location of the site as well as a sense of arrival or movement. See the North Gateway Open Space Network section for additional information about the suggested design and types of activities planned for the Livability and Ecological Spines.

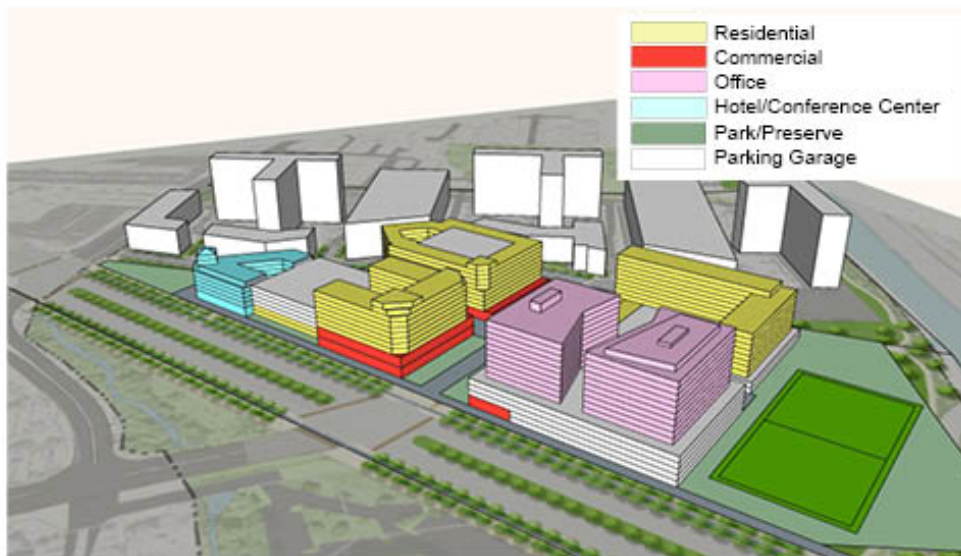
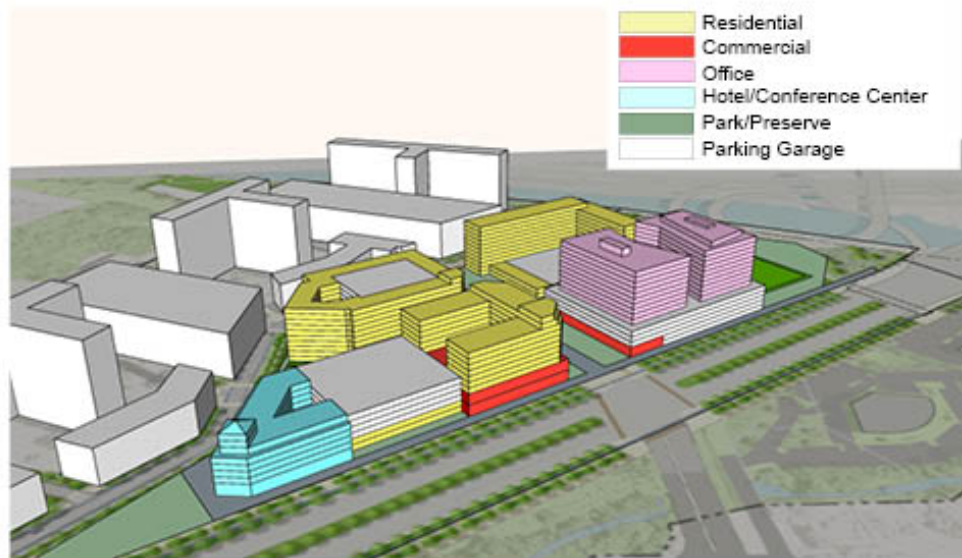
Architectural designs should creatively address building scale through massing, terracing, and the modulation of facades that create an interesting play of light and shadow, while mitigating impacts to adjacent neighborhoods. Signature architecture, entry plazas, and public art are envisioned to demarcate the Livability Spine at its intersection with Richmond Highway. Additional height is recommended for buildings that flank the intersection to encourage distinctive designs and creative corner treatments. In addition to land uses, Figure 23 also shows how building massing is generally envisioned. Buildings should have a consistent ground-floor plane next to the building zone but should step back above the ground-floor to prevent shadows and a canyon-like effect on adjacent streets. Building rooflines should not be uniform in a single building or within a block. Terraces, green roofs, and other roof top amenities should be provided to maximize outdoor recreational opportunities for residents and workers; provide environmental benefits, such as stormwater collection and heat island reduction; and, enhance the views to Cameron Run, the City of Alexandria, the Potomac River, and the rest of the Richmond Highway Corridor from the upper stories of buildings.

The Conceptual Plan should be used as a guide to create and evaluate development proposals. There is flexibility in how the Conceptual Plan can be implemented provided there is general adherence to the grid of streets, in particular the Livability Spine; the open space network, including the Ecological Spine; and ground floor building design.



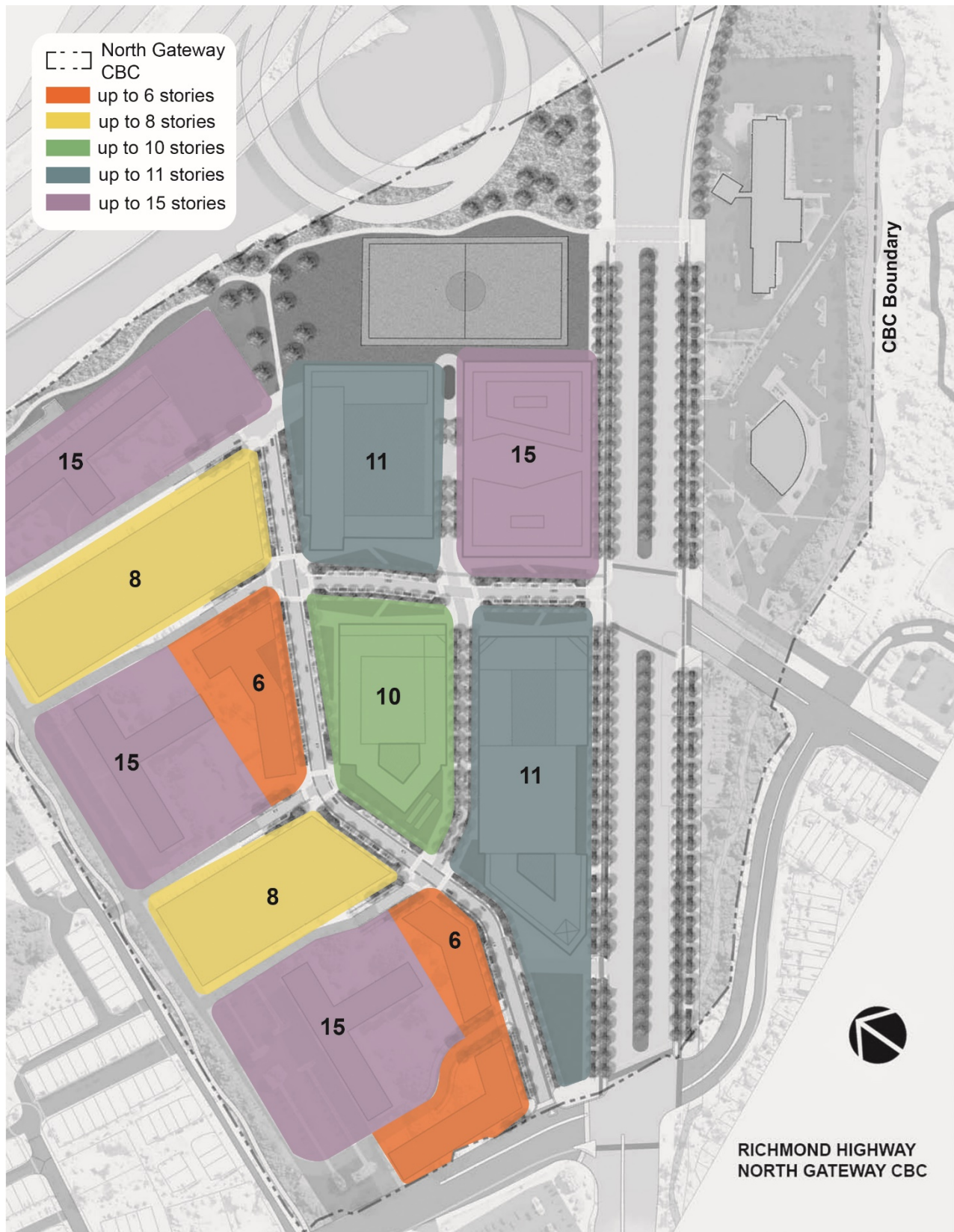
CONCEPTUAL PLAN
NORTH GATEWAY CBC

FIGURE 22



BUILDING FORM, MASSING, AND PLANNED USES
NORTH GATEWAY CBC

FIGURE 23



BUILDING HEIGHTS
NORTH GATEWAY CBC

FIGURE 24

BUILDING HEIGHTS

Building height is one of the key elements that will determine the amount of development potential that is achievable in each land unit. Building heights should not be homogenous within a development, and redevelopment should not adversely impact the historic viewshed from the George Washington Memorial Parkway. Existing, approved, and planned development should offer a variety of building heights within the CBC to create visual interest. The Riverside Apartments in Sub-unit A-3 consist of three 15-story buildings with approved infill development that ranges from 6 to 8 stories. In Sub-units A-1 and A-2, the tallest buildings are recommended along Richmond Highway close to the I-495 interchange up to a maximum of 15 stories in height. Moving west from Richmond Highway and south from the interchange, heights should step down. Buildings along the Livability Spine are envisioned up to 15 stories in height, tapering to 10 stories in height where these buildings abut the planned park. On the east side of the CBC, existing uses include an office building and hotel along Richmond Highway, which are 8 and 7 stories, respectively. Figure 24 illustrates the existing and recommended building heights in the North Gateway CBC. Vision Element 5 and the building height recommendations contained within the Urban Design section of the Corridor-wide Guidelines should be consulted for further information.

OPEN SPACE NETWORK

The North Gateway CBC is planned to be served by a variety of urban park spaces, following the guidance of the Urban Parks Framework in the Policy Plan volume of the Comprehensive Plan. While each development is expected to address the urban park need generated by its development, there are several park spaces designated on the Conceptual Plan that should guide the provision of urban park space within the CBC. Within the context of the overall Richmond Highway corridor, the North Gateway CBC is the northern entrance to the corridor; as such, public spaces should be designed to welcome and orient visitors to the corridor.

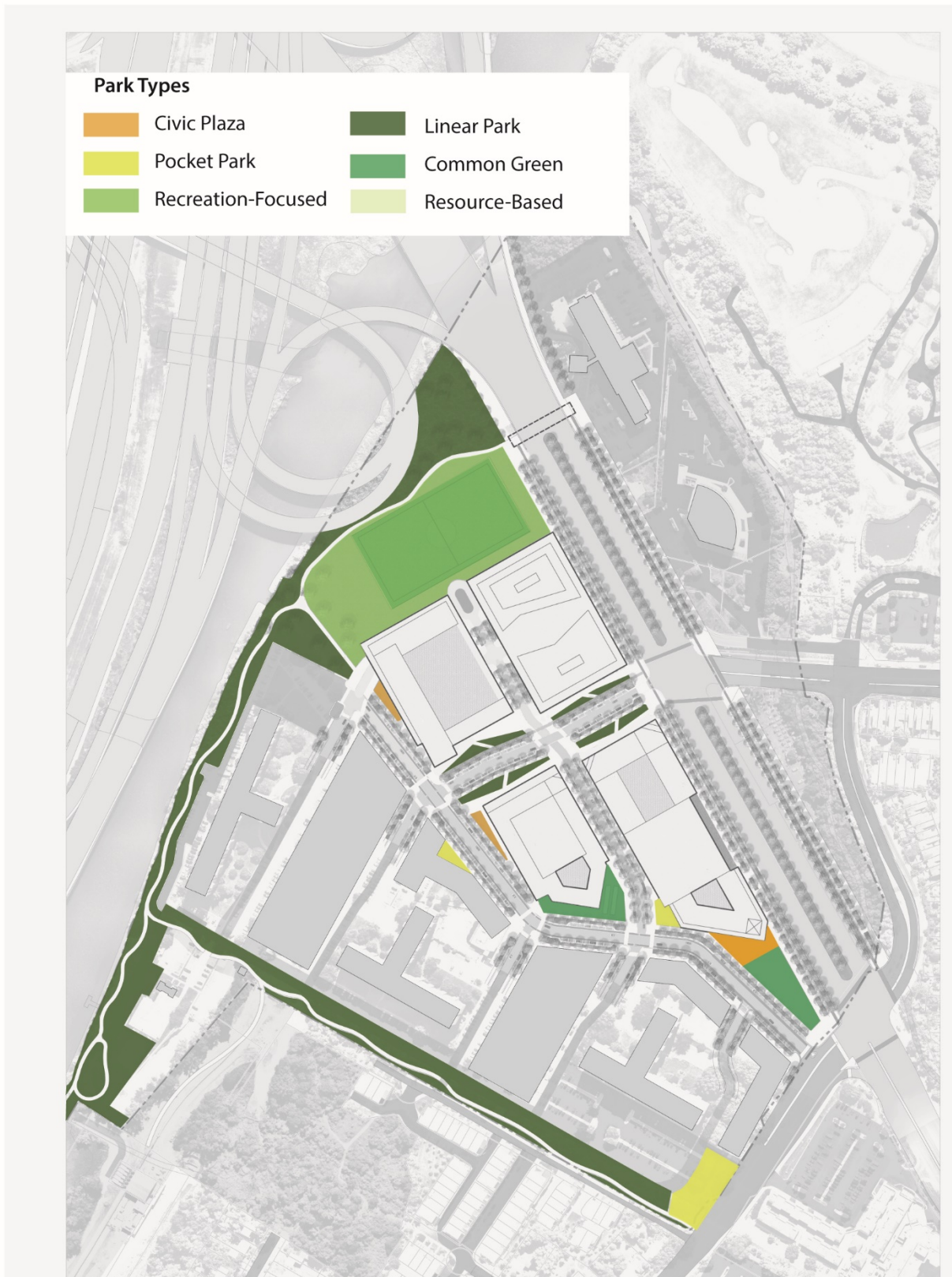
Pedestrian, bike, and non-automobile connectivity is an essential component of the CBC's open space network. Connectivity to the nearby Huntington Park, the planned Cameron Run recreational trail, and the Mount Vernon Trail should be enhanced to expand the availability of active recreation opportunities accessible from the North Gateway CBC. The Conceptual Plan for the North Gateway CBC includes a linear park area along Cameron Run that should incorporate the elements of an Ecological Spine type 4 (see cross section in Woodlawn CBC for additional details) and is envisioned to provide pedestrian and bicycle connectivity between Huntington Park to the northwest and Richmond Highway and the Mount Vernon Trail to the east. Various nodes positioned along the trail may provide opportunities for outdoor fitness, public art, natural resource-based education, or passive respite. Open space beneath the highway may be viable if enlivened with lighting, art and amenities. The Cameron Run linear park should be designed to improve the environment by providing a habitat for native plant and animal species. New developments are encouraged to restore the natural functions of the shoreline.

New development within the North Gateway CBC will generate the need for additional publicly accessible athletic fields to serve residents, visitors, and employees. A full-service rectangle field, with support amenities, should be developed within the CBC. Development projects that generate the need for less than a full athletic field are encouraged to consolidate their efforts in seeking creative solutions to address this need, preferably within the CBC. The Conceptual Plan envisions areas that may be able to support an athletic field and active recreation.

The linear park spaces of the Livability Spine are continuous corridors of publicly accessible urban park space that will provide access to recreation and outdoor spaces. A variety of

features should serve everyday needs for activity and community building such as outdoor fitness areas, sport courts, fenced dog parks, playgrounds, and a variety of seating options. It is encouraged that development of programmable areas, such as yoga plazas, tai chi spaces and sport courts, be accompanied by a commitment to program community use of those areas. Play features and design elements that reflect ties to the area's ecology and history are encouraged. Developments should contribute to the creation of a proportionate segment of the Livability Spine. Individual developments should expand upon the range of features within the overall linear park. Elements of the linear park may also be augmented through the provision of publicly accessible indoor and rooftop facilities.

Additional, smaller multi-use urban parks, positioned in key locations throughout the new development, are envisioned to provide publicly accessible recreational options and health-promoting opportunities. Features that encourage active lifestyles should be considered as the primary elements of these spaces such as multi-use sport courts, outdoor fitness stations, playgrounds, and similar amenities. The active features may be supplemented by passive features such as seating, tables, and points of interest that promote respite and social interaction. High quality landscaping of these areas will be important to provide visual elements and shade. Figure 25 is a visualization of the conceptual open space network and primary urban park goals for the North Gateway CBC.



CONCEPTUAL OPEN SPACE

NORTH GATEWAY CBC

FIGURE 25

MULTIMODAL TRANSPORTATION NETWORK

The North Gateway CBC is primarily served by Richmond Highway, Huntington Avenue, and Fort Hunt Road inclusive of the planned extension through Sub-unit A-1. Figure 26 graphically shows the planned transportation improvements in the CBC area, which are also noted in more detail, in the following bullets:

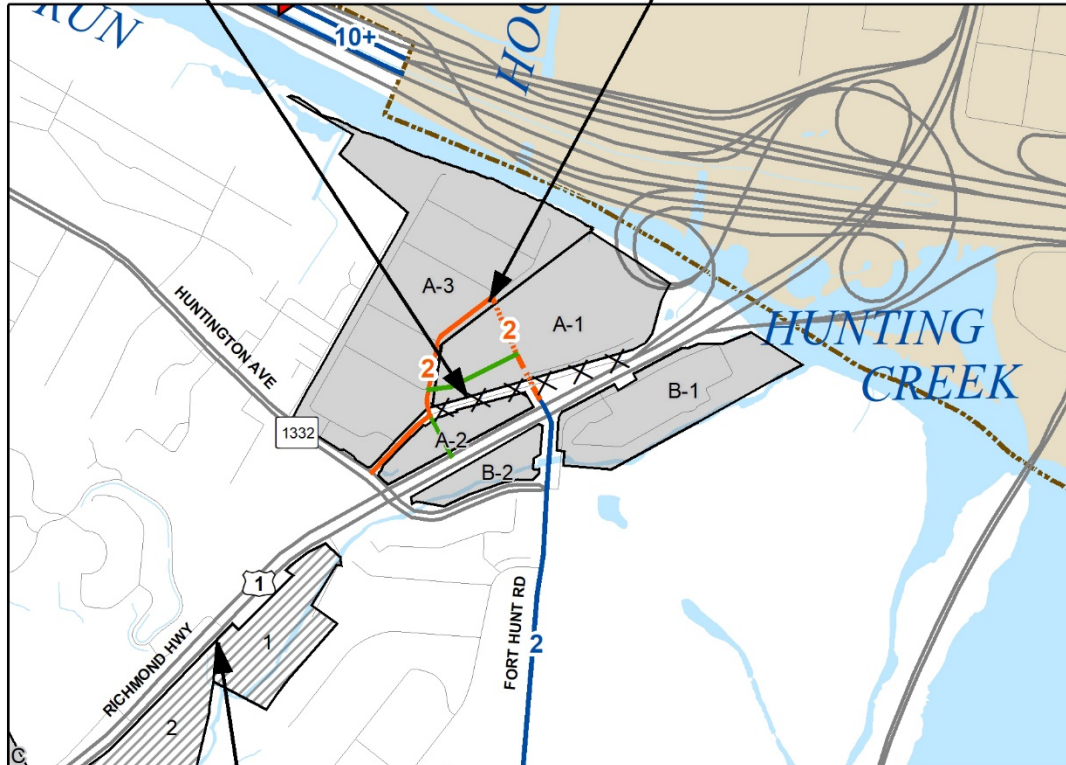
- An enhanced, at-grade intersection, with potential for future redesign which also factors impacts on adjacent intersections should be implemented at Fort Hunt Road and Richmond Highway. The Fort Hunt Road and Richmond Highway intersection and the adjacent intersections are considered the gateway to the Richmond Highway corridor and thus should be accommodating of an urban environment that is multimodal, contains appropriate wayfinding and signage for all modes, is creative in the future redesign to minimize any additional right-of-way solely for vehicles, and reflects the planned street network in Sub-units A-1 and A-2 to increase connectivity and mobility. Pedestrian and bicycle crossings of Richmond Highway at Fort Hunt Road and Richmond Highway and Huntington Avenue should be high quality and use necessary and innovative techniques to increase pedestrian and bicycle crossing awareness and safety.
- Fort Hunt Road from Old Richmond Highway to Cameron Run Terrace should be extended with redevelopment in the CBC as shown in Figure 26.
- The portion of Old Richmond Highway between Cameron Run Terrace and Richmond Highway should be replaced with a local grid street as shown in Figure 26. This connection can extend north of Fort Hunt Road extended and be integrated with development to increase circulation in the CBC.
- A multimodal grid of streets should be implemented within Sub-units A-1 and A-2 to organize circulation within the northwestern portion of the CBC and to connect to the streets on the west side of the CBC in Sub-unit A-3.
- The Cameron Run Trail should be enhanced and extended along the Cameron Run shoreline through Sub-unit A-1 to Richmond Highway and connections to the trail should be integrated into the redevelopment. Cameron Run Trail should connect to Mount Vernon Trail.

For more information on the specific cross-sections and road design characteristics of the multimodal network, see the Urban Street Network Design (USND) section of this Plan. Also, refer to the Fairfax County Bicycle Master Plan for bicycle facility guidelines.

RICHMOND HIGHWAY CORRIDOR AREA
NORTH GATEWAY COMMUNITY BUSINESS CENTER (CBC)

OLD RICHMOND HIGHWAY SHOULD BE VACATED BETWEEN CAMERON RUN TERRACE AND RICHMOND HIGHWAY

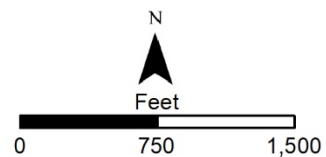
EXTEND FORT HUNT ROAD TO CAMERON RUN TERRACE



ENHANCED PUBLIC TRANSPORTATION CORRIDOR (SEE AREA PLAN OVERVIEW-TRANSPORTATION SECTION)

COMMUNITY BUSINESS CENTER
 SUBURBAN NEIGHBORHOOD

- | Existing | Proposed | |
|----------|----------|---|
| | | Metrorail Station |
| | | Commuter Parking Lot |
| | | Rail Station |
| | | Potential Bus Rapid Transit (BRT) Station |
| | | Widen or Improve Arterial Roadway (Number Indicates Proposed Number of Lanes Including HOV or HOT Lanes) |
| | | Construct Arterial on New Location |
| | | Widen or Improve Collector (Number Indicates Proposed Number of Lanes) |
| | | Construct Collector on New Location |
| | | Construct or Improve Local or Collector Street (Number Indicates Proposed Number of Lanes)
(Cross sections to be finalized during process of reviewing plans for proposed development) |
| | | High Occupancy Toll (HOT) Lanes |
| | | Rail Transit |



- | | |
|--|---|
| | Full Interchange Improvement (Study Required) |
| | Proposed Highway Underpass |
| | Proposed Highway Overpass |
| | Proposed Cul-de-Sac |
| | Bus Rapid Transit (BRT) |

NOTE: IMPROVEMENTS TO ARTERIAL FACILITIES SUBJECT TO COMPLETION OF CORRIDOR STUDIES. SEE DISCUSSION IN AREA PLAN OVERVIEW TEXT. FINAL ALIGNMENTS SUBJECT TO COMPLETION OF APPROPRIATE ENGINEERING STUDIES.

HOV LANES TO BE CONSIDERED IN PROJECT DEVELOPMENT. HOV LANES TO BE PROVIDED IF WARRANTED BASED ON DEMAND FORECASTS AND CORRIDOR STUDY.

LAND UNIT RECOMMENDATIONS

Development Potential

Figure 27 contains an estimate of the maximum development potential, assuming implementation of the redevelopment options, for the North Gateway CBC. Additional details about the base plan and redevelopment options are contained in CBC land unit descriptions that follow. As noted in the Land Use Section under Corridor-wide Guidelines, flexibility among non-residential uses is appropriate provided the overall vision of a vibrant mixed-use community is achieved and multimodal transportation needs are addressed.

It is expected that development will occur in phases. As such, phased development will need to advance the goals and the vision in the Plan, as described in the Implementation Section. Development applications must be reviewed in a manner that ensures appropriate phasing to the provision of public improvements. The construction of and/or commitment to the public facilities is expected to be provided appropriately with each phase of development.

Figure 27
 North Gateway CBC Maximum Development Potential under Redevelopment Options

Land Use	Comprehensive Plan development potential inclusive of redevelopment options ¹	
	Number of Dwelling units or jobs	Approximate Gross Square Feet
Residential ²	2,605 dwelling units	N.A.
Non-residential	2,678 jobs	1.04 million gsf
Office	2,070 jobs	621,000 gsf
Retail	415 jobs	166,000 gsf
Hotel	193 jobs	251,000 gsf
Total	2,605 dwelling units and 2,678 jobs	

Note 1: Development potential, employment estimates, and dwelling units are approximate. Conversion factors: residential - 1000 sf/dwelling unit; office - 300 gsf/job; retail - 400 gsf/job.

Note 2: The residential development potential does not include potential housing bonuses allowed under the Affordable Dwelling Unit (ADU) Ordinance and the Board of Supervisors Workforce Housing Policy (WDU).

Sub-unit A-1

The sub-unit comprises the area located on the west side of Richmond Highway between I-495 and Huntington Avenue.

Base Plan

The sub-unit is planned for retail, office and/or residential uses up to .50 FAR.

Redevelopment Option

With consolidation, Sub-units A-1 and A-2 are recommended for mixed-use development, consisting of up to approximately 825 residential units and 720,000 square feet of nonresidential uses. Substantial consolidation of parcels should be achieved. Where consolidation of parcels is not achieved, redevelopment proposals should be evaluated in the context of the existing and future development of the land unit. For example, the site design should provide interparcel vehicular and pedestrian access, as appropriate, to unconsolidated parcels. If substantial consolidation is not achievable, an alternative may be pursued that logically consolidates parcels in Sub-unit A-1 and Sub-unit A-2 in order to provide the extension of Fort Hunt Road to Cameron Run Terrace in the initial phase. In addition, redevelopment on a portion of the land units should prepare a master conceptual plan that demonstrates how the future redevelopment of unconsolidated properties can be integrated and should not preclude those unconsolidated parcels from redeveloping under the plan option in the future. Any redevelopment proposal should ensure that the Cameron Run RPA is re-vegetated per the CBC-wide guidance as a linear park, and that the floodplain and its associated functions are restored to the maximum extent possible, taking into consideration the existing highway ramps as well as aesthetic concerns and associated management needs.

Sub-unit A-2

The sub-unit comprises the "island" formed by Richmond Highway and Old Richmond Highway.

Base Plan

Redevelopment that enhances the importance of the CBC as an entry to Richmond Highway is strongly encouraged. Consolidation of all parcels within this "island" and redevelopment of this area with neighborhood-serving retail use up to .25 FAR is recommended. Buildings should be oriented to Richmond Highway but access should be to Old Richmond Highway.

Redevelopment Option

As an option, if Sub-unit A-2 is substantially consolidated and included in a unified mixed-use development plan with Sub-unit A-1, then Sub-unit A-2 may be appropriate for mixed-use development at an intensity up to 2.0 FAR. If substantial consolidation with Sub-unit A-1 is not achievable, an alternative option for logical consolidation of Sub-unit A-2 with at least Tax Map Parcel 83-2((1))2A is recommended. In addition to meeting the same conditions stated in the land use recommendation for Sub-unit A-1, as part of this mixed-use development, Old Richmond Highway should be vacated between Cameron Run Terrace and Richmond Highway and access should be provided from Sub-unit A-1.

As an additional option, Sub-unit A-2 or a portion thereof may be appropriate for consolidation with Sub-unit A-3, provided that Old Richmond Highway is vacated between Cameron Run Terrace and Huntington Avenue and the equivalent of a public street connection is provided through the western side of Sub-unit A-3 to provide access to Sub-unit A-1.

Sub-unit A-3

The sub-unit comprises the Riverside Apartments complex, located on the north side of Huntington Avenue between Cameron Run Terrace and Hunting Creek Road.

Base Plan

The sub-unit is planned for mid-rise and high-rise residential use with up to 40,000 square feet of a mix of first floor retail, restaurant use, and/or office use with structured parking at a density up to 61 dwelling units per acre and an overall intensity of 1.60 FAR. The site is almost entirely covered by impervious surfaces, includes outdated stormwater management facilities, little to no useable open space for residents, and minimal landscaping. Any redevelopment of the

site should be designed to substantially re-vegetate the Cameron Run floodplain, providing additional open space and park land to serve the recreational needs of residents and the surrounding community, and provide stormwater management facilities that address long standing water quantity and quality issues associated with the site and its impacts to Cameron Run and neighboring properties. Any proposed redevelopment should be subject to the following conditions:

- Provision of substantial, useable, additional open space areas and urban park amenities for residents and a Linear Park along the shoreline of Cameron Run that includes wayside areas with benches;
- Re-vegetation of the Cameron Run floodplain to the maximum extent possible;
- The proposed trail that appears on the county Trails Plan Map should be constructed within the Linear Park. It is not necessary for the trail to be constructed directly along Cameron Run; this is particularly relevant should flood controls (e.g., a levee) impact the area shown on the Trails Map. The trail should provide a link to the planned trail east of the site, and linkages to the existing Huntington Park and any new park that may be constructed by the Park Authority on land dedicated by the abutting property to the west.

Sub-unit B-1

The sub-unit comprises the area northwest of Belle Haven Country Club along Richmond Highway from the Beltway to Fort Hunt Road and developed with several commercial uses.

Base Plan

The most northern portion of this sub-unit is planned for hotel use up to .60 FAR with a maximum of 8 stories. Office use up to .50 FAR with a maximum of 8 stories is planned for Parcels 83-4((1))10 and 11. The remainder of this sub-unit is planned for neighborhood-serving retail use up to .25 FAR. This recommendation reflects current uses which should be retained. Future highway improvements may impact the accessibility of this sub-unit.

Sub-unit B-2

The sub-unit comprises the triangle-shaped area bounded by Richmond Highway on the northwest, Fort Hunt Road on the east and Huntington Avenue on the south.

Base Plan

The sub-unit is planned for community-serving retail use up to .35 FAR. Complete consolidation of these parcels is encouraged for a coordinated development. Screening and buffering should be provided along Huntington Avenue to mitigate any impacts on the townhouse community located across Huntington Avenue. Right of way and accommodations needed for implementation of the at-grade transportation improvements at the Huntington Avenue, and Fort Hunt Road intersections and with Richmond Highway intersections should be provided. In the event that highway improvements impact part or all of this land unit, this is an appropriate location for a gateway park or identifying features. In addition, impacts on sensitive environmental features located here should be mitigated.

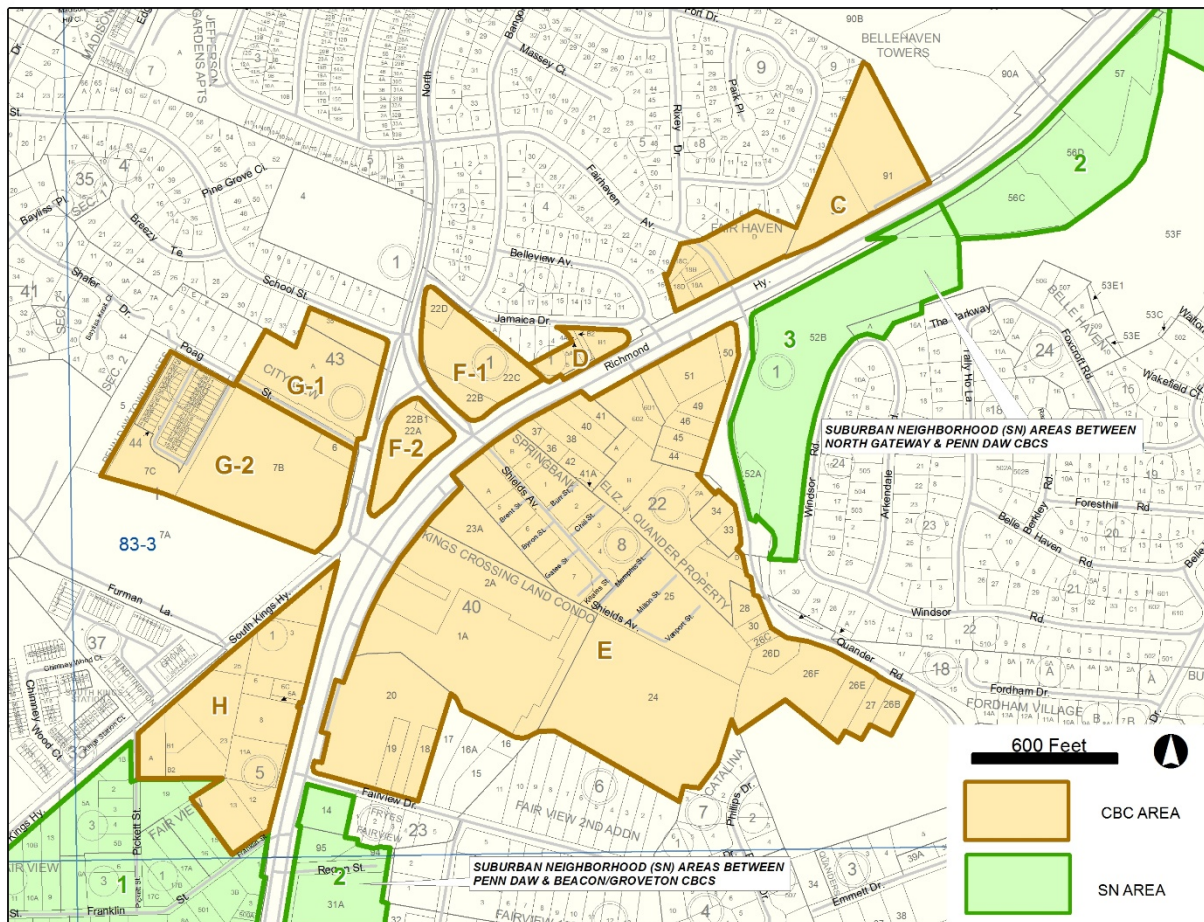
Redevelopment Option

As an option, if Sub-unit B-2 is fully consolidated and included in a unified development plan with Sub-units A-1 and A-2, then Sub-unit B-2 may be appropriate for mixed-use development up to 1.0 FAR provided that it is preserved in its entirety as an open space area and the development potential is transferred to Sub-units A-1 and A-2.

PENN DAW COMMUNITY BUSINESS CENTER

The Penn Daw CBC encompasses an important crossroads where North and South Kings Highways meets Richmond Highway. This crossroads area, along with Penn Daw’s proximity to the Huntington Metrorail Station, makes it a significant activity center for retailers and other businesses. However, the intersection of Richmond Highway and North Kings Highway presents challenges for visibility and accessibility, and hinders pedestrian activity. Major existing and approved uses in the Penn Daw CBC include the Kings Crossing retail center, the South Alex mixed-use development, other neighborhood and community-serving retail establishments, multi-family residential buildings, and townhouses. Stable residential neighborhoods abut the CBC. Mount Eagle Elementary School, Quander Road School, and West Potomac High School serve the area. Opportunities exist on the east side of Richmond Highway as well as in the area between South Kings Highway and Richmond Highway for additional mixed-use development.

A portion of the CBC located on the east side of Richmond Highway, Tax Map Parcel 83-3 ((1)) 24, often referred to as the Fairchild property, contains steep slopes, a stream valley, and other environmentally sensitive features that need protection, restoration, and enhancement. Figure 28 indicates the geographic location of land units in the Penn Daw CBC, shown in yellow, and the Suburban Neighborhood Areas on either side of the CBC, shown in green.



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 PATH TO REVISED LAND UNITS - X:\DPZ\Route1-Study\Revised_Land_Units\Rich_Hwy_Corr_Land_Units_revised_for_Embark.shp

PENN DAW CBC BOUNDARY AND LAND UNITS

FIGURE 28

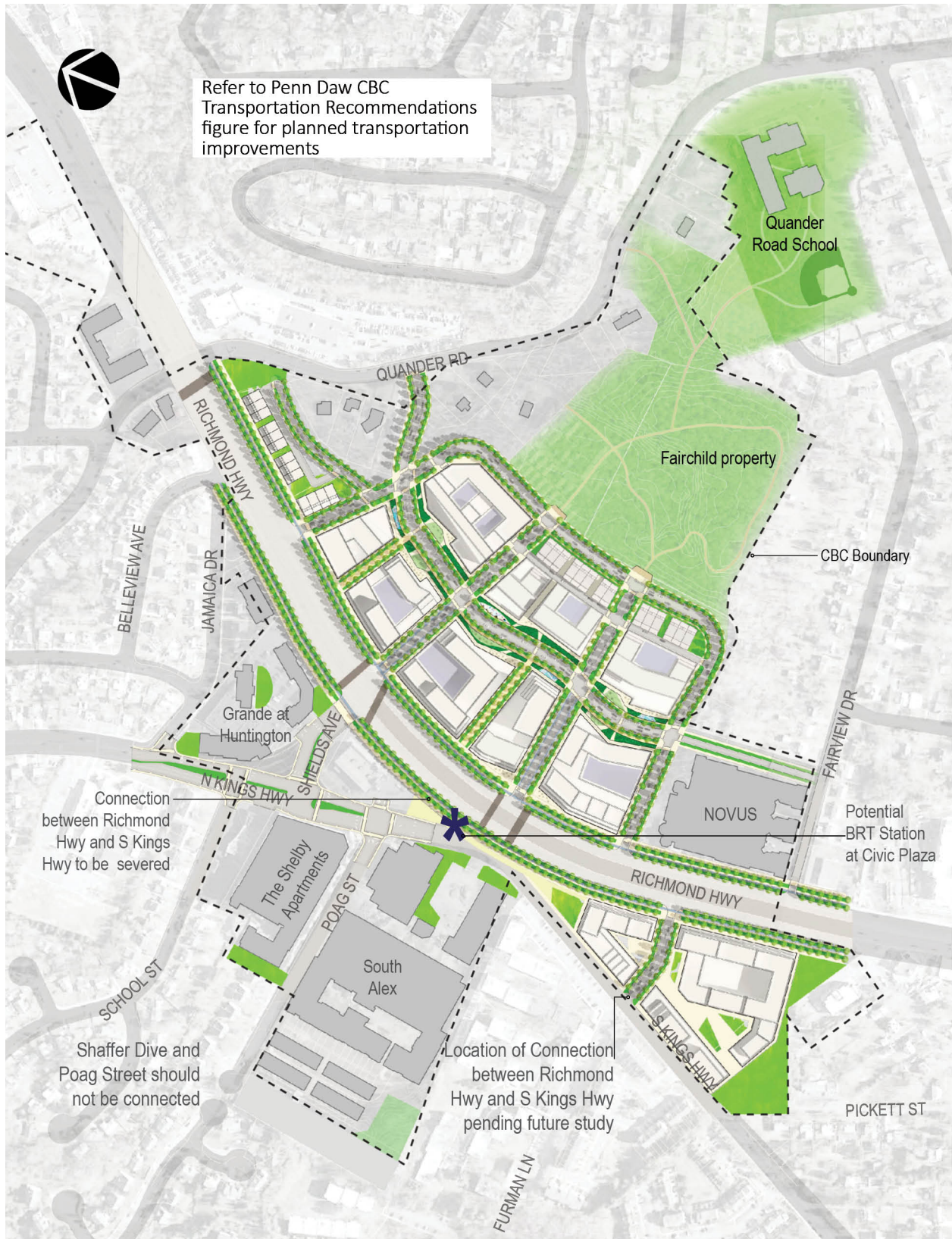
CONCEPTUAL PLAN

As shown in the Conceptual Plan (Figure 29), the vision for the Penn Daw CBC calls for the transformation of the crossroads area into a high intensity TOD node and a transportation gateway. A BRT station is planned in the vicinity of the intersection of Richmond Highway and Kings Highway; from there, the BRT is planned to connect to the Huntington Metrorail station via North Kings Highway. The intersection of Kings Highway and Richmond Highway should be redesigned to improve safety and access. This redesign creates an opportunity for new multimodal connections and new public spaces to link the east and west sides of the CBC for transit riders, cyclists, and those walking through the area. A series of Civic Plazas, created from the vacated right-of-way and small portions of the adjoining properties in Land Units G and F, should connect to station entrance plazas and mixed-use developments in both the western and eastern land units of the CBC using crosswalks and other high-quality pedestrian facilities.

A pedestrian connection from the central Civic Plaza should extend to the eastern station entrance plaza and along a new roadway that terminates at the Fairchild property along the eastern edge of the CBC. This property is anticipated to become a passive park space with trails and other amenities. Pedestrian access to the park is planned at several locations including from the planned streets in the CBC that terminate at the park. At these locations, public art or other gateway features should be used both as a visual terminus of the street and as an entrance feature into the park.

The eastern land unit, Land Unit E, is envisioned to redevelop around a multimodal grid of streets that will enhance circulation within the CBC, create developable and walkable-sized blocks, and connect to adjacent existing roadways. Intersections in the new grid of streets should be spaced so that blocks are pedestrian-scaled at walkable distances. Mid-block pedestrian connections within the grid of streets are recommended where large blocks may make walking inconvenient. Block sizes should be designed to accommodate large-format retailers where appropriate; however, opportunities for pedestrian connections that break up large blocks should be incorporated into proposed developments.

The Conceptual Plan should be used as a guide for development proposals. There is flexibility in how the Conceptual Plan can be implemented provided there is general adherence to the grid of streets, in particular the Livability Spine, the open space network, the location of station-area plazas, and the placement of ground-floor non-residential uses.



PENN DAW CBC CONCEPTUAL PLAN

FIGURE 29

A Livability Spine, extending parallel to Richmond Highway generally from Quander Road to the north and one block north of Fairview Drive to the south, will form the central organizing feature of the CBC and will function as Penn Daw’s “main street” with small scale, local commercial activity intended to augment non-residential uses on Richmond Highway and Kings Highway. The Livability Spine will serve as the primary connection and pedestrian corridor through the eastern side of the CBC; its Linear Park component will serve as the main public gathering place for people to enjoy outdoor activities. See the Open Space Network section for additional information about the design and types of activities planned for the Livability Spine. Figure 30 is a visualization of the character envisioned for the Livability Spine.



**CHARACTER AND FEATURES OF LIVABILITY SPINE
PENN DAW CBC**

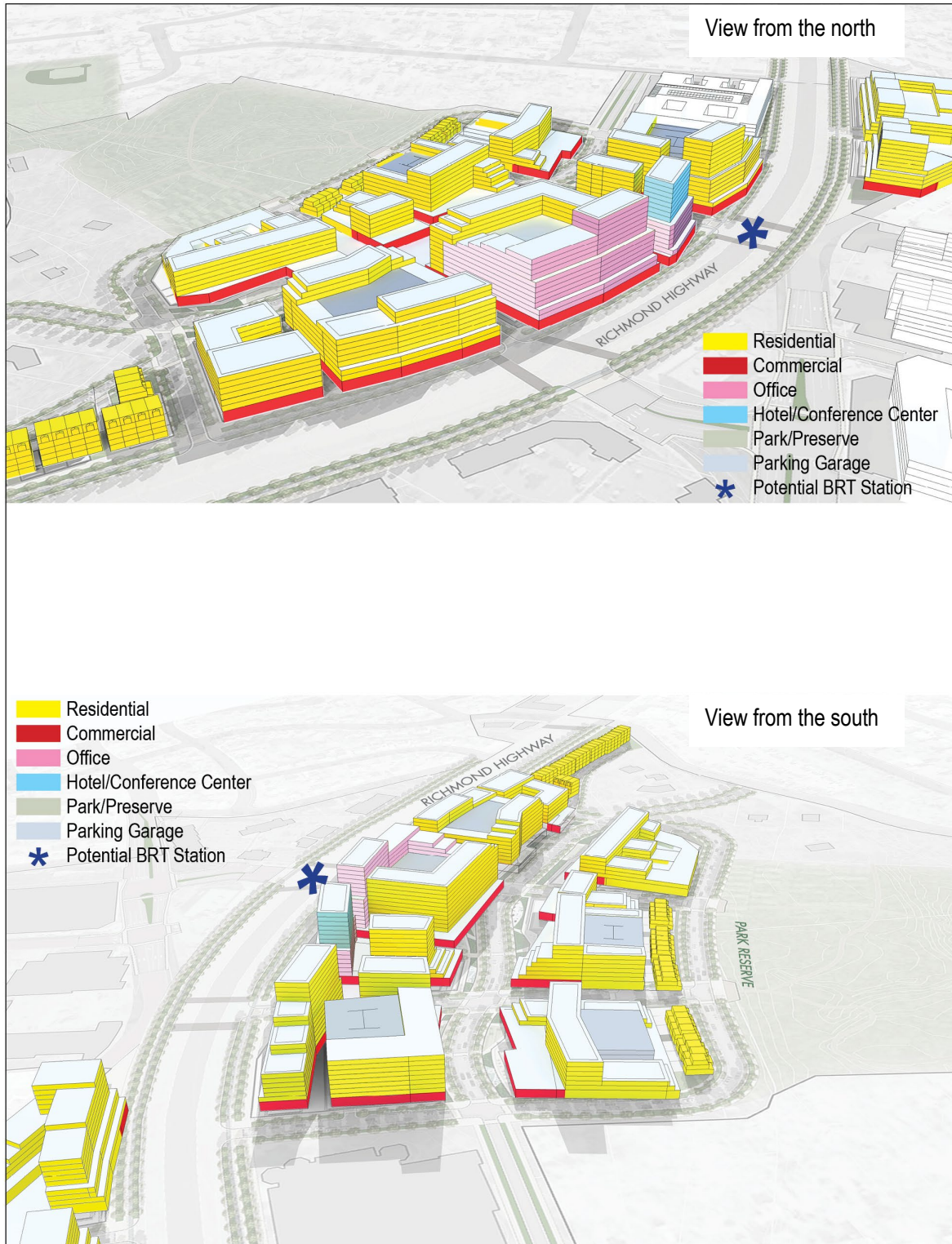
FIGURE 30

Land Unit E is planned to contain a diverse mix of residential, community-serving retail, office, and hotel uses in close proximity to one other. Planned residential uses should include multi-family units as well as townhomes. Non-residential uses are envisioned on the ground-floor of buildings. Uses that will activate the pedestrian environment should be located in buildings that face Richmond Highway, the Livability Spine, and the Avenue that connects the BRT station to the Livability Spine. Garage entrances or loading areas should not front on the Livability Spine.

The ground floors of buildings should generally be designed with higher ceiling heights to allow for maximum flexibility in accommodating non-residential uses. The ground floors of

buildings should adhere to the recommended build-to line, with the exception of buildings along the Livability Spine where facades are encouraged to vary from one another in an effort to create interesting outdoor spaces. Floors above the ground-floor should step back to create terraces with outdoor spaces and to create an interesting interplay of sunlight and shadows on the street below while avoiding wind tunnels and a canyon effect that can result from a continuous wall of buildings. The building step-backs and terracing also provide opportunities to integrate green infrastructure, such as stormwater collection and green roofs, into buildings.

Figure 31 shows the proposed land uses and building forms based on the redevelopment options. Buildings should be the tallest along Richmond Highway, particularly in the areas immediately adjacent to the BRT station, and then taper down in height for the buildings located farther from the station. Non-residential uses should be located on the ground-floor of buildings within the blocks adjacent to Richmond Highway as well as along both sides of the Livability Spine. Residential uses should be primarily located above the ground-floor, but may also be a ground-floor use where a building abuts existing residential uses. Office and hotel uses are planned in the general vicinity of the BRT station.



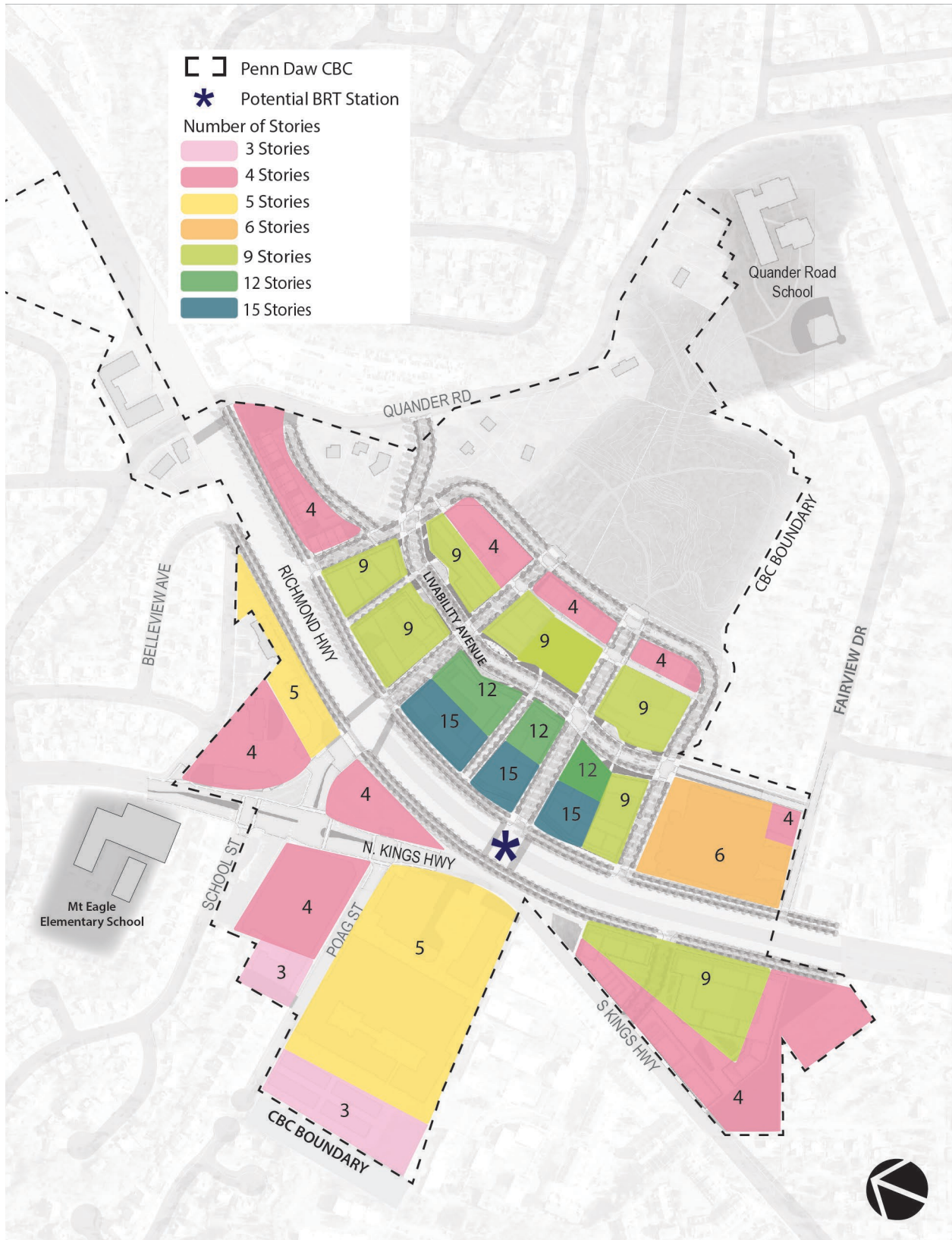
**BUILDING FORM, MASSING, AND PLANNED USES
 PENN DAW CBC**

FIGURE 31

BUILDING HEIGHTS

Figure 32 illustrates the recommended building heights in the Penn Daw CBC. Building height is one of the key elements to determine the amount of development potential that is achievable in each land unit. Building heights should not be homogenous within a development. Consult Vision Element 5 and the building height recommendations contained within the Urban Design section of the Corridor-wide Guidelines for further information.

On the east side of the CBC, the tallest buildings are recommended along Richmond Highway up to a maximum of 15 stories in height closest to the potential BRT station. Moving further away from the BRT station, heights should step down. Buildings along the Livability Spine are envisioned up to 12 stories in height, tapering to 4 stories in height where these buildings abut the planned park or single-family homes. On the west side of the CBC, existing uses include the Shelby Apartments, located at North Kings Highway and Poag Street, which is predominately 4 stories in height. The approved South Alex development immediately adjacent to the Shelby is proposed at a maximum height of 5 stories and tapers to 3-story townhomes to the rear of the site. The southern triangular portion of the CBC, situated between Richmond Highway and South Kings Highway, is envisioned at up to 9 stories in height along Richmond Highway, with heights tapering to 4 stories along South Kings Highway and adjacent to existing residential development.



**CONCEPTUAL BUILDING HEIGHTS
 PENN DAW CBC**

FIGURE 32

OPEN SPACE NETWORK

The Penn Daw CBC will be served by a variety of urban park spaces, following the guidance of the Urban Parks Framework in the Policy Plan. While each development is expected to address its urban park needs, there are several park spaces that are integral to the Conceptual Plan that should guide the provision of urban park space within the CBC.

A combination of Civic Plaza spaces are envisioned in the immediate vicinity of the BRT station, providing ease of access to public transportation as well as an entry feature into the Penn Daw CBC. The central Civic Plaza, located south of the potential BRT station between Richmond and Kings Highway, will serve to physically connect communities across the CBC through an enhanced pedestrian experience while establishing a visual identifier for the CBC. Largely envisioned to be constructed of hardscape surfaces, the Civic Plazas should include features that complement the identity of the CBC as an urban TOD node, including public art and placemaking elements. Hardscape patterns should define pedestrian routes and help to articulate ideas about area history and ecology. Interactive features that encourage engagement within the space and those that support multiple purposes are encouraged. Seating areas for respite and social interaction are vital, as is landscaping that provides visual interest and shade.

The Livability Spine should function as the heart of daily life for residents of the Penn Daw CBC and is envisioned to have continuous Pedestrian Zones that include publicly accessible urban park space on both sides of the street. The Pedestrian Zone is comprised of a combination of landscaped and hardscaped areas designed to provide everyday access to recreation and outdoor spaces. The Pedestrian Zone includes four components: a building zone, a Linear Park, walkways, and a landscape panel. Minimum dimensions for each component of the Pedestrian Zones are provided in the Urban Street Network Design; however each component has flexible dimensions to encourage creativity in the design and programming of the entire space between the roadway and the building. The walkway on the western side of the roadway closest to the potential BRT station should accommodate pedestrians and cyclists in a recreational atmosphere. Walkway surfaces should be constructed from high-quality, bike and pedestrian-friendly materials, and have well-defined edges. The landscape panel should provide space for shade trees and landscaping to effectively buffer pedestrians and cyclists from the roadway. The building zone may be used as an extension of the walkway or for outdoor dining, browsing, or other building functions.

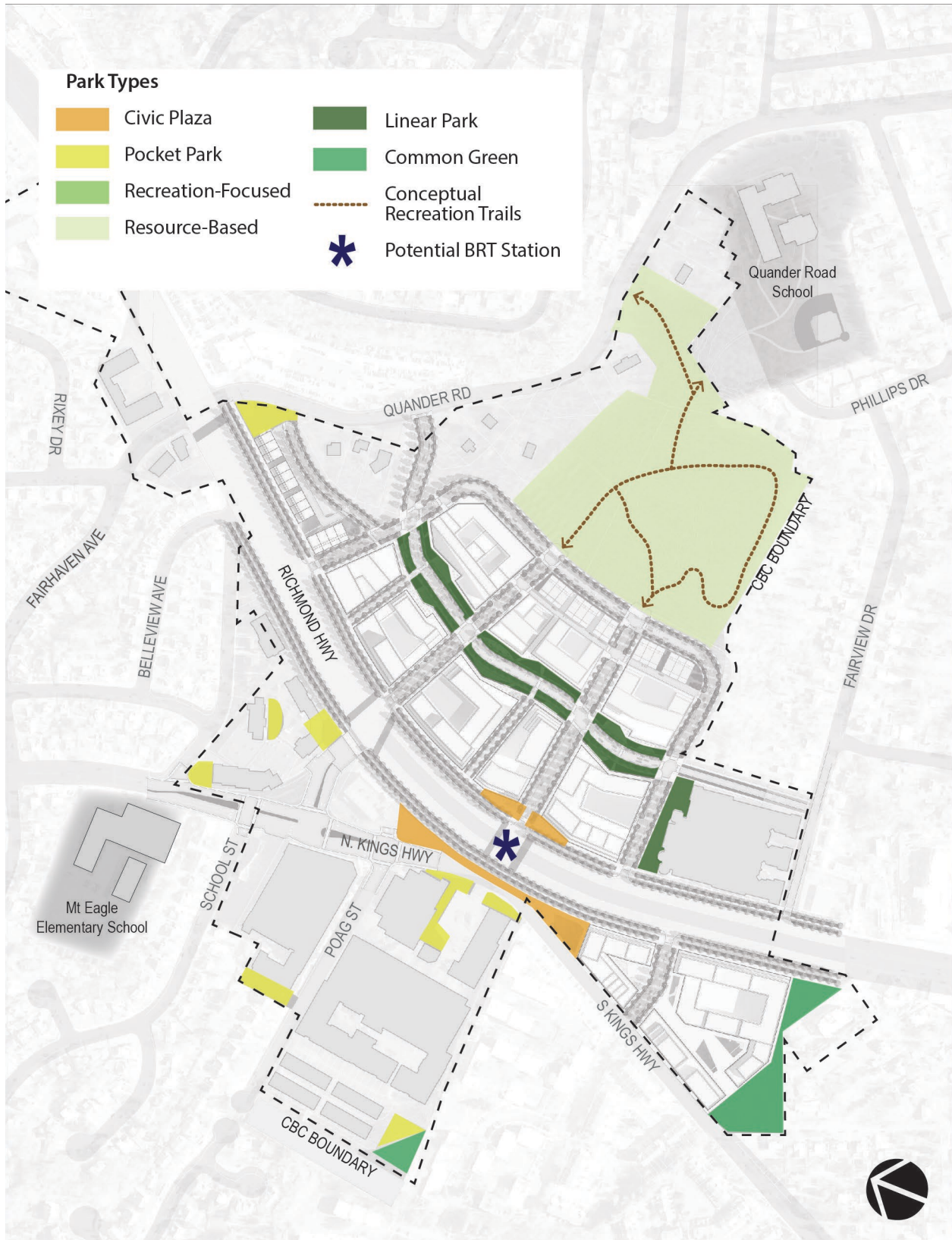
Within the Linear Park portion of the Pedestrian Zone, a variety of features and amenities will serve everyday needs for activity and community building, such as outdoor fitness areas, fenced dog parks, water features, playgrounds, and shade and seating options. The development of programmable areas for elements such as yoga plazas, tai chi, and various sports courts, accompanied by a commitment to program community usage of these areas, is encouraged. Play features and design elements that build upon narratives about the area's ecology and history are encouraged to enhance the CBC's sense of place.

Properties should provide for their portion of the Livability Spine and plan for its programming. Individual development programs are encouraged to expand upon the range of features included within the Linear Park. The Livability Spine may be expanded by the provision of adjacent indoor and rooftop facilities provided that there is clear, public access. If development proceeds incrementally, later development should align with previously approved components of the Livability Spine.

The county-owned properties, including the Fairchild property and the Quander property, [Tax Map Parcels 83-3 ((1)) 24 and 26F] along the eastern edge of the CBC should be preserved and developed as public park space and include ecological enhancements. These properties

provide a unique resource within an urban area, offering connections to a more naturalized and passive recreation space adjacent to the built environment. As a visual terminus of the Avenue extending from the BRT station, the Fairchild property should directly tie development to ecological resources and natural areas. Development of pedestrian connections across the park should provide opportunities for passive recreation and connectivity to the Penn Daw CBC and the BRT while being respectful of the area's topography.

Development within the Penn Daw CBC will generate the need for additional athletic fields to serve residents and employees. Development projects that generate the need for less than a full athletic field are encouraged to consolidate their efforts in seeking creative solutions to address this need, preferably within the CBC. Connectivity to the Quander Road School and nearby Mount Eagle Elementary School should be enhanced to expand the availability of active recreation opportunities accessible from the Penn Daw CBC. Figure 33 is a visualization of the conceptual open space network and primary urban park goals for the Penn Daw CBC.



**CONCEPTUAL OPEN SPACE
 PENN DAW CBC**

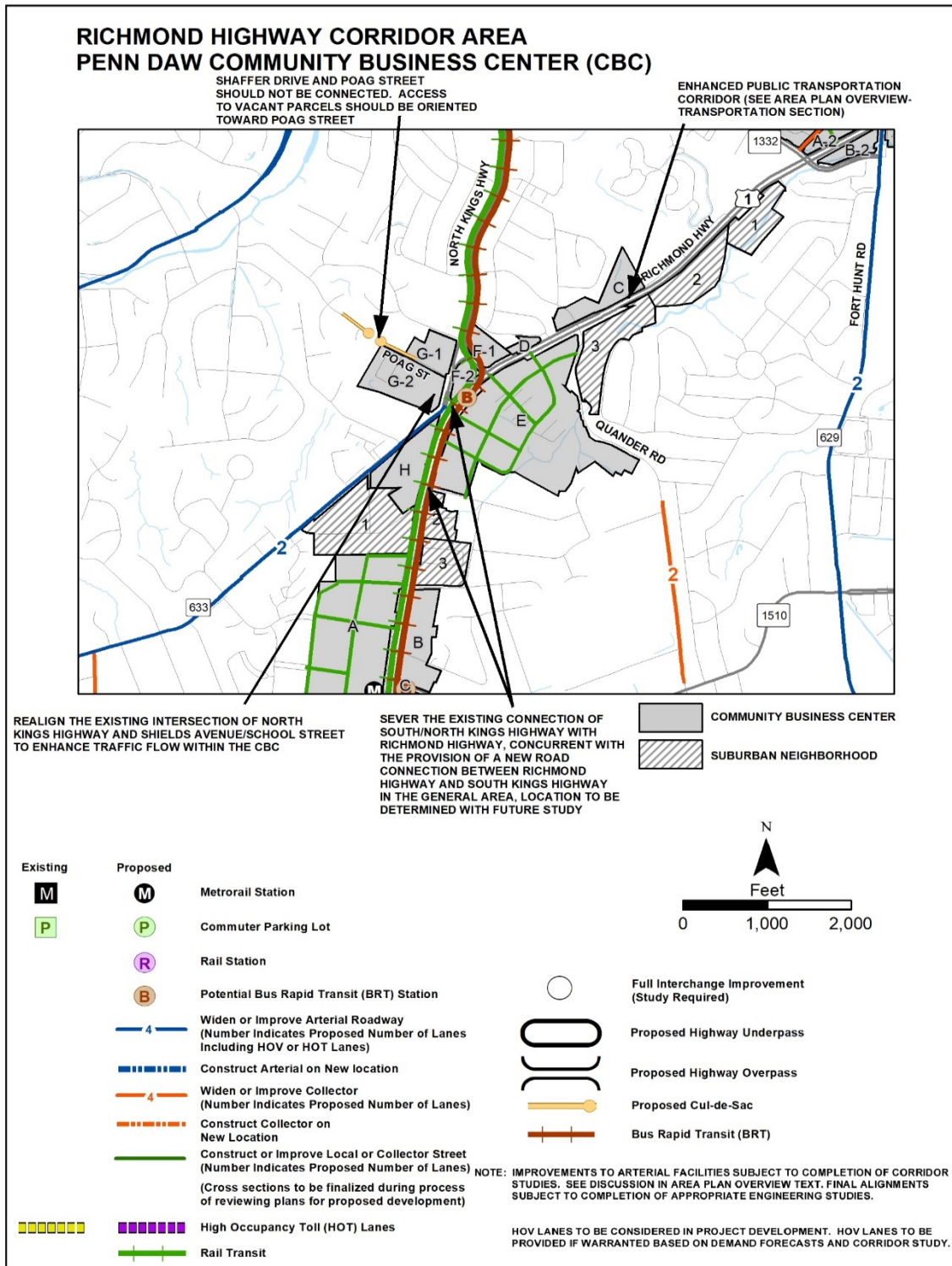
FIGURE 33

MULTIMODAL TRANSPORTATION IMPROVEMENTS

Penn Daw is primarily served by three roadways: Richmond Highway, North Kings Highway and South Kings Highway. One BRT station is planned within the Penn Daw CBC with the northern terminus of the BRT system at the Huntington Metrorail Station entrance on North Kings Highway. Several planned road improvements are not dependent on the redevelopment in the Penn Daw CBC area such as the improvements at the North Kings Highway/South Kings Highway and Shield Avenue intersections. These improvements are likely to move forward through publicly-led efforts and future capital improvement programs. See Figure 34 for the planned transportation improvements. The following is a list of improvements for the Penn Daw CBC:

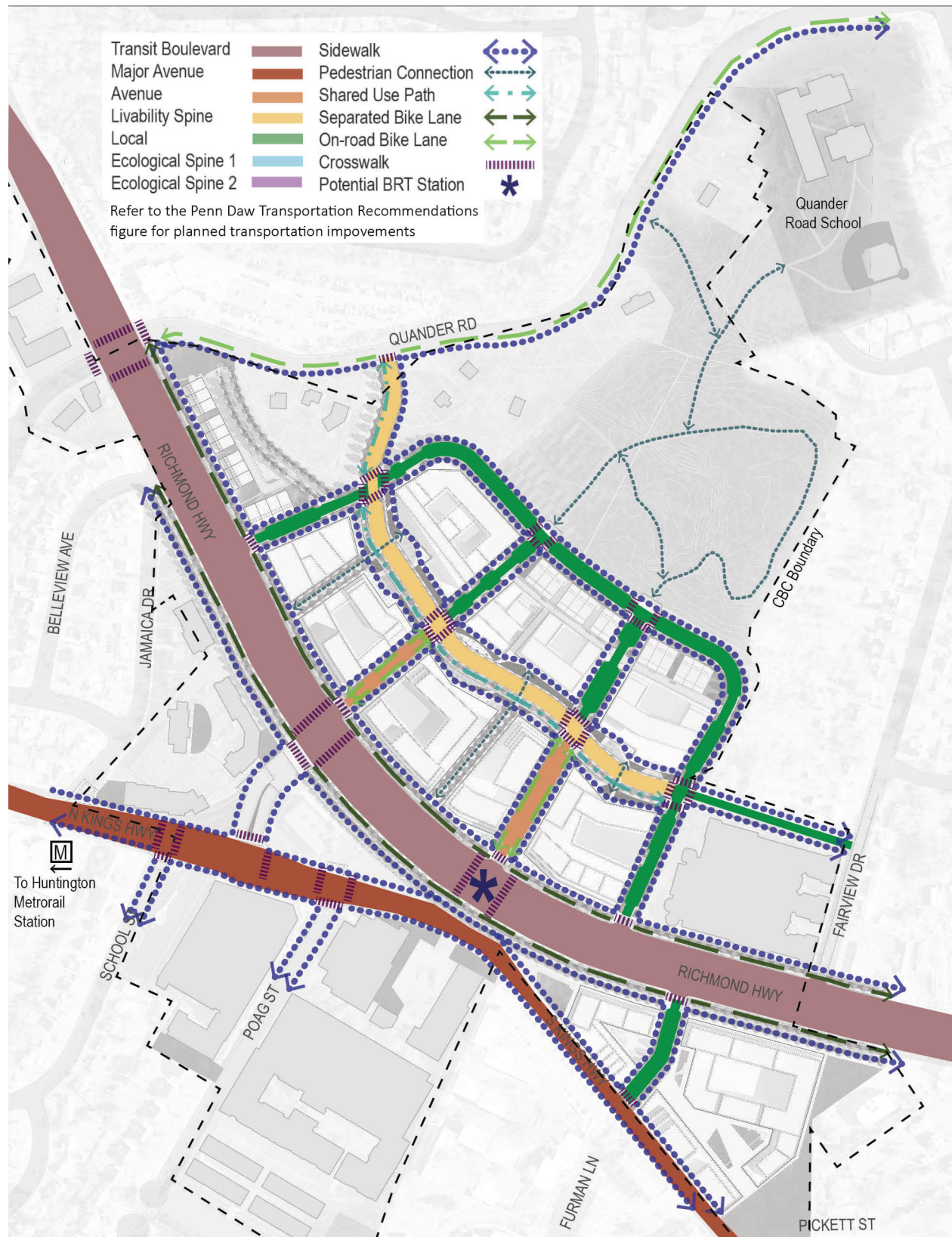
- Implement a new, multimodal grid of streets on the east side of Richmond Highway generally bounded by Quander Road to the north, Fairview Drive to the south, and the county-owned property and existing residential development to the east.
- Sever the connection of North Kings and South Kings Highway with Richmond Highway and concurrently provide a new road connection to the south to connect Richmond Highway and South Kings Highway. The location of the new road, to be determined with future study, should include community discussions and coordination. North Kings Highway and South Kings Highway should remain connected to retain their north and south through movements.
- Realign and reconfigure the intersection of North Kings Highway and Shields Avenue/School Street intersection to a perpendicular, three-way intersection to enhance traffic flow within the CBC.
- Provide pedestrian connections at the BRT station and the signalized intersection at Shields Avenue to facilitate pedestrian movement to and from either side of Richmond Highway.

For more information on the specific cross-sections and road design characteristics of the multimodal network, see the Urban Street Network Design (USND) section of this Plan. Specific types of bicycle facilities are planned for each roadway based on the street type and adjacent land uses. The location and type of streets and the bicycle and pedestrian facilities within the planned grid of streets is depicted in Figure 35, Penn Daw CBC Conceptual Multimodal Network. Also, refer to the Fairfax County Bicycle Master Plan for additional bicycle facility guidelines.



PLANNED TRANSPORTATION IMPROVEMENTS

FIGURE 34



CONCEPTUAL MULTIMODAL NETWORK
PENN DAW CBC **FIGURE 35**

LAND UNIT RECOMMENDATIONS

Development Potential

Figure 36 contains an estimate of the maximum development potential, inclusive of the redevelopment options, for the Penn Daw CBC. Additional details about the base plan and redevelopment options are contained in CBC land unit descriptions that follow. As noted in the Land Use Section under Corridor-wide Guidelines, flexibility among non-residential uses is appropriate provided the overall vision of a vibrant mixed-use community is achieved and multimodal transportation needs are addressed. Construction or commitments to the grid of streets, open spaces, parks and a mix of residential and non-residential uses, as applicable to each CBC, is expected to be phased with developments.

It is expected that development will occur in phases. As such, phased development will need to advance the goals and the vision in the Plan, as described in the Implementation section. Development applications must be reviewed in a manner that ensures appropriate phasing to the provision of public improvements. The construction of and/or commitment to the public facilities is expected to be provided appropriately with each phase of development.

Figure 36

Penn Daw CBC Maximum Development Potential under Redevelopment Options

Land Use	Comprehensive Plan development potential inclusive of redevelopment options ¹	
	Number of Dwelling Units or Jobs	Approximate Gross Square Feet (gsf)
Residential ²	3,155 dwelling units	N.A.
Non-residential	2,803 jobs	957,000 gsf
Office	1,640 jobs	492,000 gsf
Retail	1,163 jobs	465,000 gsf
Total	3,155 dwelling units and 2,803 jobs	

Note 1: Development potential, employment estimates, and dwelling units are approximate. Conversion factors: office - 300 gsf/job; retail - 400 gsf/job.
 Note 2: The residential development potential does not include potential housing bonuses allowed under the Affordable Dwelling Unit (ADU) Ordinance and the Board of Supervisors Workforce Housing Policy (WDU).

Land Unit C

This approximately 7-acre sub-unit includes the commercially-zoned lots fronting on the west side of Richmond Highway south of Belle Haven Towers between Richmond Highway and the Fairhaven neighborhood.

Base Plan

The sub-unit is planned for office use up to approximately 150,000 gross square feet and a maximum height of 50 feet. Buildings should be oriented toward Richmond Highway with parking in the rear. Substantial consolidation of lots, combined access points, and an efficient internal circulation pattern should be provided.

Land Unit D

This approximately one-acre land unit comprises the parcels fronting on the west side of Richmond Highway between Jamaica Drive and Sub-unit F-1.

Base Plan

This land unit is planned for low-rise office use up to approximately 15,000 gross square feet.

Redevelopment Option

Mixed-use development to include midrise multifamily residential use with ground-floor retail and/or office uses may be appropriate with consolidation of Sub-unit F-1. See Sub-unit F-1 for detailed recommendations.

Land Unit E (formerly Land Units E and G)

This approximately 53-acre land unit is the largest in the Penn Daw CBC, comprising the land area east of Richmond Highway from Quander Road to Fairview Drive.

Base Plan

As delineated on the Comprehensive Land Use Plan Map, properties fronting on the east side of Richmond Highway to include Tax Map Parcels 83-3((1))23A and 83-3((8))A and parcels between Quander Road and Shields Avenue are planned for neighborhood-serving office and/or retail uses up to 0.50 FAR with a maximum height of 50 feet. The Penn Daw Trailer Park is planned and developed as a mobile home park at a density of 5-8 dwelling units per acre. Any redevelopment of the mobile homes should comply with the county's voluntary relocation guidelines. Properties located along the south side of Quander Road between Richmond Highway and Quander Road School are planned for residential use at 3-4 dwelling units per acre.

The area south of Shields Avenue to Fairview Drive is planned for community-serving retail use up to 0.50 FAR. Tax Map parcels 83-3((1))24 and 83-3((1))26F are owned by the county and planned as a public park. Where past storm water management practices have degraded these slopes and streams, current bioengineering approaches should be followed to restore them to more natural conditions and functions. The remainder of Land Unit E is planned for retail use at an intensity up to 0.50 FAR.

Redevelopment Option

Residential use at a density of 5-8 dwelling units per acre may be appropriate with complete parcel consolidation of the properties along Quander Road. The homes should be clustered to minimize impacts on steep slopes in the area. Vehicular access points should be consolidated and/or limited in order to reduce congestion within the Richmond Highway and Quander Road corridors and their intersections.

The remainder of Land Unit E is envisioned to be the focal point of the Penn Daw CBC and is recommended for up to 1,600 dwelling units and 700,000 square feet of non-residential uses to create a mixed use environment. Development proposals should reflect a single integrated project or a project that allows for future coordination with other projects and should meet the following conditions in addition to the general CBC and corridor-wide guidance:

- Substantial consolidation of parcels should be achieved. Where consolidation of parcels is not achieved, existing uses should be integrated into the site design by providing interparcel vehicular and pedestrian access. Redevelopment on a portion of the land unit should not preclude the remainder of the land unit from redeveloping under the plan's redevelopment option in the future;

- Consolidated access for redevelopment along Quander Road should be provided to reduce congestion near the Richmond Highway/Quander Road intersection.

Midrise multifamily residential redevelopment up to approximately 375 dwelling units with ground-floor retail use or amenity space is planned and approved for the area south of Shields Avenue to Fairview Drive should achieve full consolidation of Tax Map Parcels 83-3((1))18, 19 and 20. A public street should be accommodated, including the dedication of right-of way, to connect Fairview Drive to Tax Map Parcel 83-3((40))1A. The street is intended to link to the Penn Daw CBC grid of streets that will be created with the future redevelopment of parcels 83-3((40))1A and 83-3 ((40)) 2A.

Sub-unit F-1

This approximately 3-acre sub-unit comprises the land area north of Shields Avenue, between North Kings Highway and Richmond Highway, including Tax Map Parcels 83-3((1))22B pt, 22C and 22D

Base Plan

This sub-unit is planned for retail use up to approximately 65,000 gross square feet and building heights of 50 feet. Consolidation of contiguous lots is desirable. Existing landscaping, which serves as a buffer to the adjacent residential neighborhood should be maintained. In any development proposal, sidewalks should be provided to facilitate pedestrian access and circulation. Vehicular access should be provided only at one point each on Richmond Highway and North Kings Highway.

Redevelopment Option

As an option, mixed-use development to include a maximum of 360 mid-rise multifamily residential units and 40,000 square feet of ground-floor retail, office, or other non-residential uses is planned and approved on this sub-unit with consolidation with Land Unit D.

Sub-unit F-2

This approximately 2-acre sub-unit comprises Tax Map Parcels 83-3((1))22A and 22B1 between Richmond Highway and North Kings Highway, south of Shields Avenue.

Base Plan

The sub-unit is planned for retail use up to approximately 30,000 gross square feet. Efforts should be made to coordinate the site design with any redevelopment plans on Sub-units G-1 and G-2 to maximize visibility and aesthetic relationships. Safe and convenient vehicular, bicycle, and pedestrian access and connections between Land Unit E and Sub-Units F-2, G-1 and G-2 should be provided.

Land Unit G (formerly Land Unit H)

The land unit is divided into Sub-units G-1 and G-2. In total, Land Unit G is approximately 16-acres in size.

Sub-unit -G-1

Base Plan

This approximately 5-acre sub-unit between School and Poag Streets along the west side of North Kings Highway is planned for retail, low-rise office, and/or compatible institutional uses up to approximately 50,000 gross square feet.

Redevelopment Option

The sub-unit has been developed through an option for residential use with ground-floor non-residential use, for a total of up to approximately 250,000 gross square feet of development, with the following conditions:

- The existing, community-serving retail center on School Street should be retained provided that functional and aesthetic coordination of design is demonstrated.
- A minor realignment of North/South Kings Highway should be considered. The improvement should be designed to minimize impacts to the Kings Garden Apartments in the vicinity of the existing connection of Richmond Highway; to enhance traffic flow on North/South Kings Highway; and, to create a pedestrian refuge for improved crossing of Richmond Highway and North/South Kings Highway. Dedication of right-of-way would be needed for this realignment to occur. If deemed appropriate, this realignment should take place concurrent with the severing of the Richmond Highway connection;
- The intersection of North Kings Highway with Shields Avenue/School Street should be improved concurrently with redevelopment to facilitate realignment of the intersection. If complete consolidation is not achieved in Sub-unit G-1, individual properties should work cooperatively during redevelopment to achieve this realignment;
- Design and/or construction of other planned transportation improvements, on-site and off-site, should be provided. A financial contribution may be provided towards facilitating implementation of off-site planned transportation improvements, as deemed appropriate;
- No new vehicular access should be provided to School Street;
- Traffic and safety concerns on School Street are addressed with traffic-calming and/or anti-mitigation to limit cut-through measures, where warranted; and,
- Shaffer Drive and Poag Street should not be connected.

Sub-unit G-2

Base Plan

This approximately 11-acre sub-unit located south of Poag Street along North Kings Highway is planned for retail use up to 170,000 gross square feet.

Redevelopment Option

The majority of the sub-unit has been approved under an option for a mix of predominately residential use and ground-floor retail use for 441 multifamily and single-family attached units and approximately 45,000 square feet of commercial use.

The following conditions should be met with redevelopment:

- Design should be coordinated throughout Sub-units G-1 and G-2, especially if redevelopment is phased;

- A minor realignment of North/South Kings Highway should be considered. The improvement should be designed to minimize impacts to the Kings Garden Apartments in the vicinity of the existing connection of Richmond Highway; to enhance traffic flow on North/South Kings Highway; and, to create a pedestrian refuge for improved crossing of Richmond Highway and North/South Kings Highway. Dedication of right-of-way would be needed for this realignment to occur. If deemed appropriate, this realignment should take place concurrent with the severing of the Richmond Highway connection;
- Design and/or construction of other planned transportation improvements, on-site and off-site, should be provided. A financial contribution may be provided towards facilitating implementation of off-site planned transportation improvements, as deemed appropriate.
- In the interim period prior to severing the connection between North/South Kings Highway and Richmond Highway, the entrance to Penn Daw Plaza south of Poag Street, which is currently offset, should be realigned with the existing connection to Richmond Highway. This realignment, along with an internal network of well-connected streets, is intended to improve access to the site and provide adequate circulation to more evenly distribute trips with Poag Street.
- Shaffer Drive and Poag Street should not be connected.

Land Unit H (formerly Land Unit I)

This land unit comprises the approximately 10-acre triangle-shaped land area between South Kings Highway and Richmond Highway.

Base Plan

This approximately 10-acre triangle-shaped land unit is planned for approximately 215,000 gross square feet of retail and office or office mixed-use up development. Full service restaurants with table service are especially encouraged.

Redevelopment Option

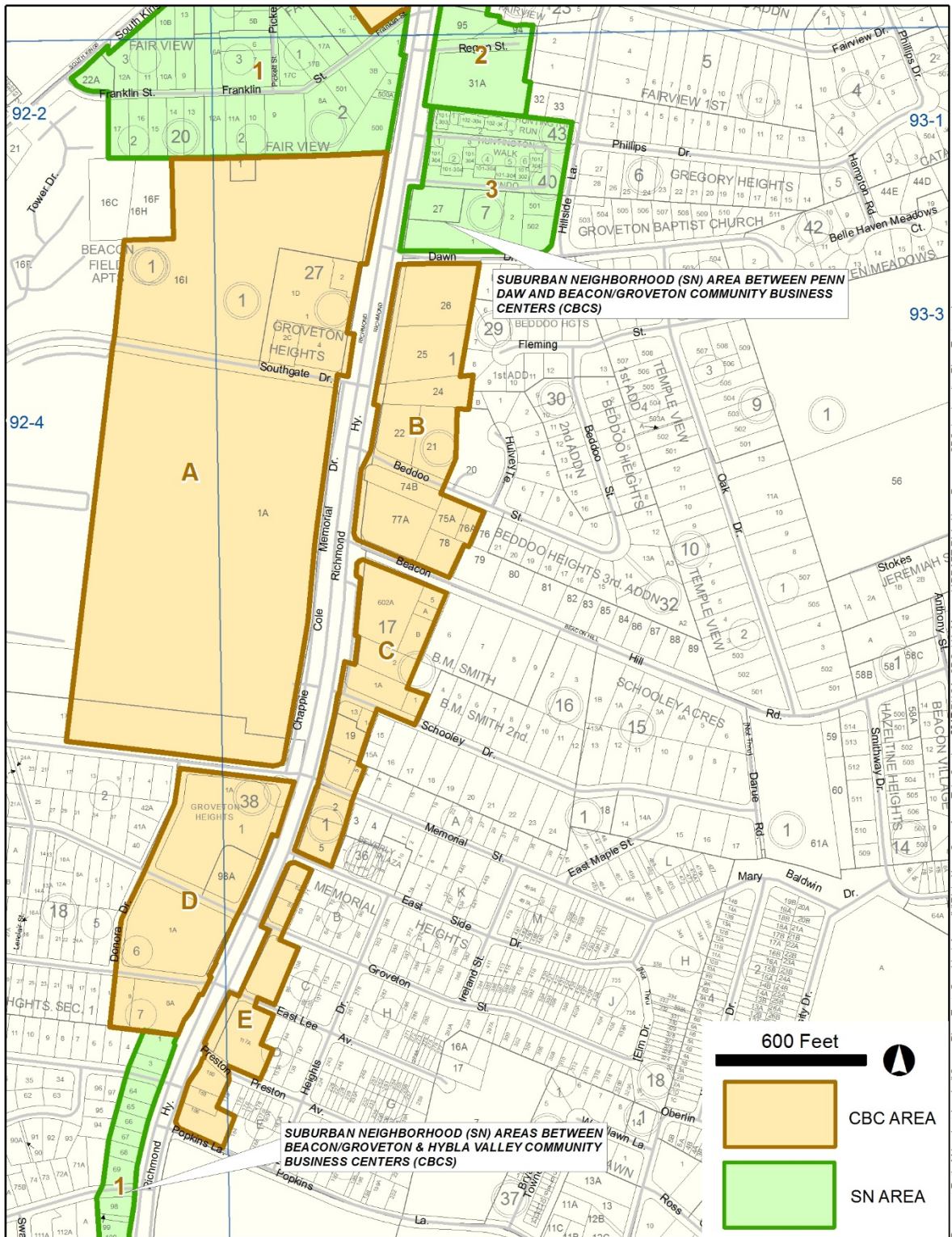
This land unit is planned for residential use up to 420 dwelling units.

BEACON/GROVETON COMMUNITY BUSINESS CENTER

Topography has played a central role in the evolution of the Beacon/Groveton CBC. Beacon Hill is one of the highest points in the metropolitan area, affording views of the Washington Monument, Old Town Alexandria, and surrounding natural features. Because of its elevation, the area was developed as an airfield in the 1920s. Beacon Field Airport operated for over 30 years, serving as a regional airport for airmail deliveries and a training facility for pilots during World War II. Taking advantage of elevation, it is also the location of two large water towers.

Since the 1960s, the area has developed as an important commercial node, with Beacon Center being one of the largest shopping centers in the area. Additional retail uses are located north of Beacon Center on the west side of Richmond Highway. These large retail centers provide the greatest opportunity for redevelopment, design and appearance enhancements, and access and circulation improvements along the corridor. Strip-retail uses are prevalent on the east side of Richmond Highway where commercially-zoned lots are shallow and abut stable residential neighborhoods. The Beacon at Groveton, the first urban, mixed-use residential project on the Corridor, is located at the intersection of Richmond Highway and Memorial Street. There is a small amount of office use in the Metrocall building at the corner of Groveton Street and Richmond Highway.

This CBC is planned to be served by BRT and, ultimately, by a Metrorail Station. Figure 37 shows the geographic location of land units within the Beacon/Groveton CBC, shown in yellow, and the Suburban Neighborhood Areas on either side of the CBC, shown in green. The redevelopment option for Land Unit A that is depicted on the Conceptual Plan corresponds to the level of development that would precede the ultimate Metrorail level. However, within the text there are general land use recommendations for additional density in Land Unit A that will be implemented with the Metrorail extension to Beacon/Groveton CBC. This additional development potential under a Metrorail scenario will be implemented in coordination with the execution of a Full Funding Grant Agreement or comparable funding agreement to design and build the Metrorail extension. Prior to any implementation of Metrorail levels of development, a corridor-wide transportation analysis assuming these Metrorail levels of development should be completed in coordination with the Virginia Department of Transportation.



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BOUNDARY AND LAND UNITS
BEACON/GROVETON CBC **FIGURE 37**

CONCEPTUAL PLAN

The Beacon/Groveton CBC is envisioned as the town center and focal point for the Richmond Highway Corridor, taking advantage of planned transit infrastructure. As the town center, the CBC should become the most urban and densely developed of all of the CBCs on the corridor, and should contain the tallest buildings. A BRT station is planned in the vicinity of the intersection of Richmond Highway and Beacon Hill Drive, which should be connected to a signature central Civic Plaza fronting on Richmond Highway in Land Unit A.

The Conceptual Plan, shown in Figure 38, should be used as a guide for development proposals. There is flexibility in how the Conceptual Plan can be implemented provided there is general adherence to the grid of streets, in particular the Livability Spine, the open space network, the location of station-area plazas, and the placement of ground-floor non-residential uses.

The western land units (Land Units A and D) are envisioned to redevelop around a multimodal grid of streets that will enhance circulation within the CBC, create developable and walkable-sized blocks, and connect to adjacent existing roadways. Intersections in the new grid of streets should be spaced so that blocks are pedestrian-scaled at walkable distances. Mid-block pedestrian connections within the grid of streets are recommended where large blocks may make walking inconvenient. Block sizes should be designed to accommodate large-format retailers where appropriate.

A Livability Spine, generally extending parallel to Richmond Highway from Memorial Street to intersect with Richmond Highway, will form the central organizing feature of the new grid of streets and will serve as the main focus of pedestrian-oriented commercial activity. The Livability Spine will serve as the primary connection and pedestrian corridor through the western side of the CBC, and its Linear Park component will serve as the main public gathering place for people to enjoy outdoor activities. See the Beacon/Groveton Open Space Network section for additional information about the design and types of activities planned for the Livability Spine.

The Conceptual Plan identifies three major open spaces that should connect to the Livability Spine, including a central Civic Plaza adjacent to the BRT station and two significant park spaces anchoring the ends of the Livability Spine. The central Civic Plaza on the west side and a smaller Civic Plaza opposite the BRT Station in the eastern land unit of the CBC should contain consistent design elements. The pair of Civic Plazas should create attractive gathering spaces for pedestrians accessing the BRT station from both the east and west. Figure 39 is a visualization of the character envisioned for the central Civic Plaza located west of the BRT station. The park at the southern end should link to the existing Lenclair Park to the west. At the northern end, the park should be located in the vicinity of the water towers. All public open spaces in the CBC should incorporate the legacy theme by creatively integrating references to elements such as the former airfield into the design features and character of these spaces.



Refer to the Beacon/
Groveton CBC
Transportation
Recommendations
figure for planned
transportation
improvements

**CONCEPTUAL PLAN
BEACON/GROVETON CBC** **FIGURE 38**

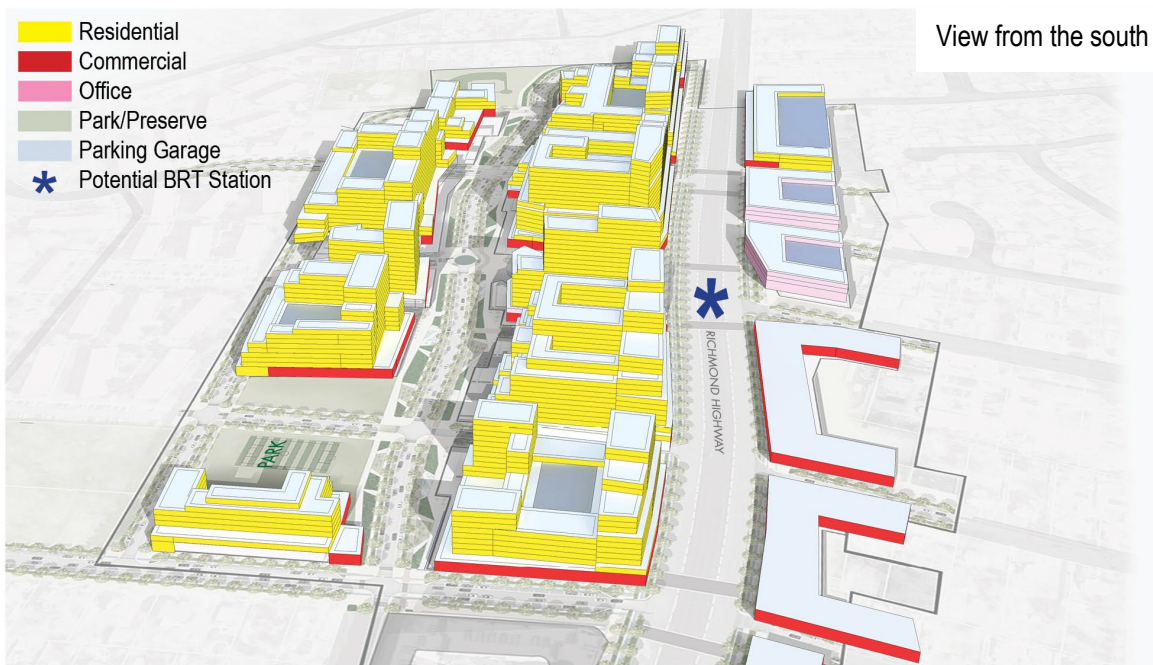
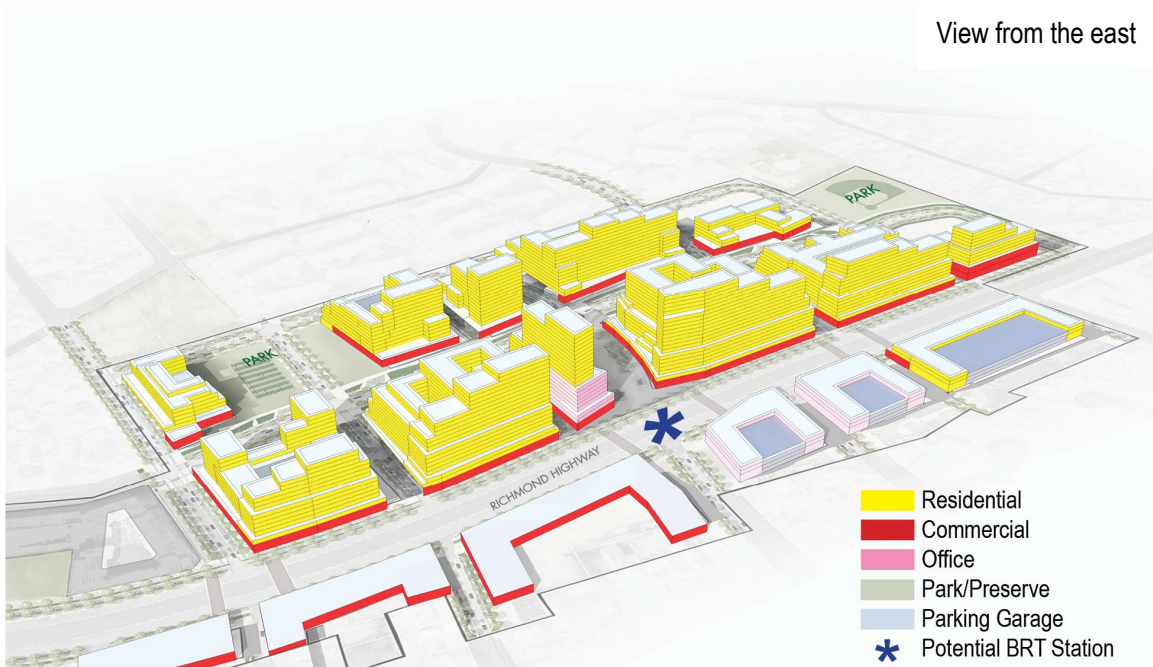


**CHARACTER AND FEATURES OF CIVIC PLAZA
BEACON/GROVETON CBC**

FIGURE 39

Figure 40 illustrates how land uses may be organized and generally distributed within the CBC. Most buildings should be designed to be mixed-use. Non-residential uses should be located on the ground-floor of buildings within the blocks adjacent to Richmond Highway, as well as along both sides of the Livability Spine. Residential uses should be primarily located above the ground-floor, but may also be a ground-floor use where a residential building abuts existing residential uses. Office use should be planned in the general vicinity of the BRT station. Buildings facing the Livability Spine should have retail or other activity-generating uses on the ground-floor level so as to create a lively pedestrian environment. Non-residential uses should have their entrances and any associated outdoor spaces open on to the Livability Spine. No garage entrances or loading areas should front on the Livability Spine.

Architectural designs should creatively address building scale through massing, terracing, and the modulation of facades that creates an interesting play of light and shadow on adjoining streets, while mitigating impacts to adjacent neighborhoods. In addition to land uses, Figure 40 also shows how building massing is envisioned. Buildings should have a consistent ground-floor plane next to the building zone but should step back above the ground-floor to prevent shadows and a canyon-like effect on adjacent streets. Building rooflines should not be uniform in a single building or within a block. Terraces, green roofs, and other roof top amenities should be provided to maximize outdoor recreational opportunities for residents and workers; provide environmental benefits, such as stormwater collection and heat island reduction; and enhance the views from the upper stories of buildings.



**BUILDING FORM, MASSING, AND PLANNED USES
 BEACON/GROVETON CBC**

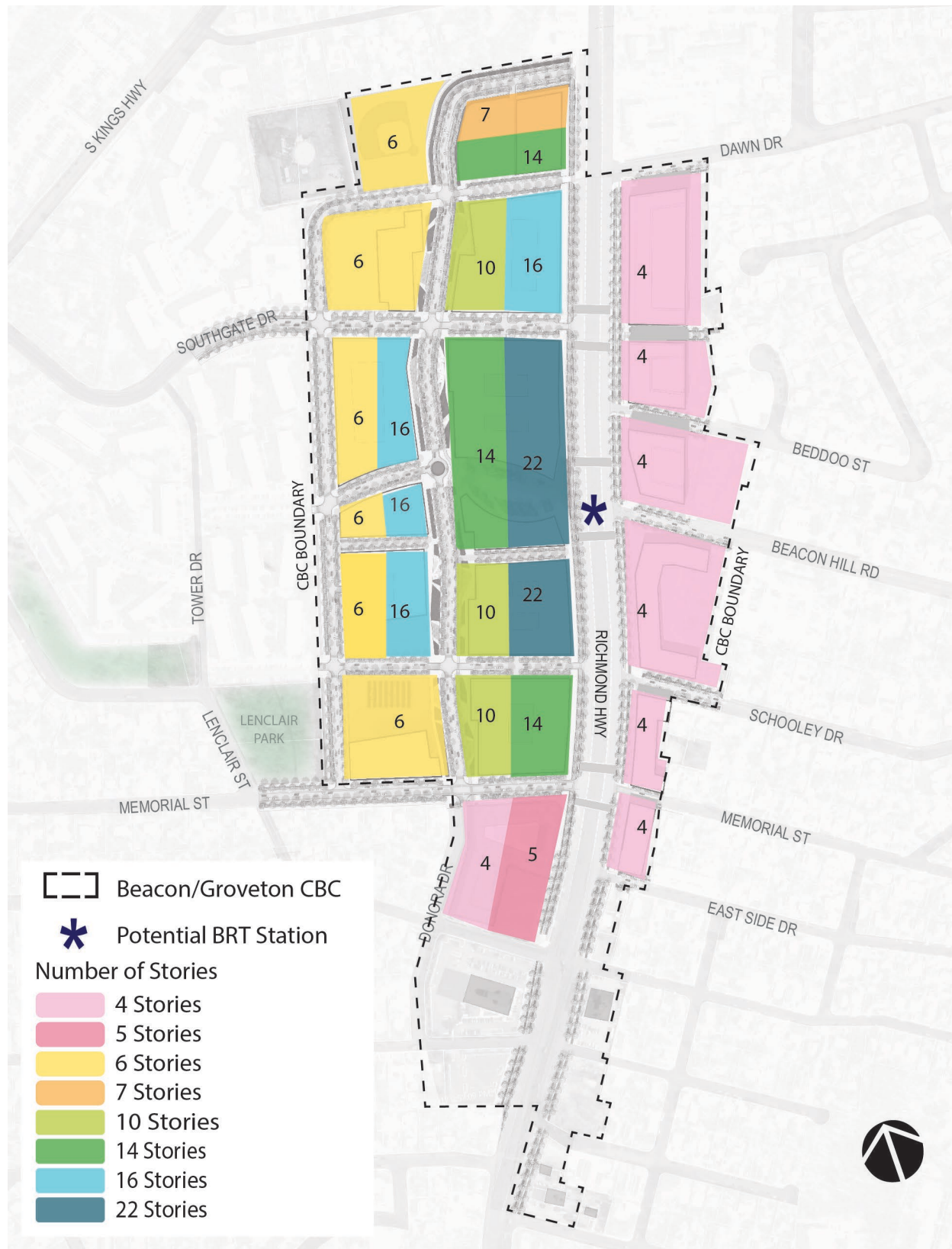
FIGURE 40

BUILDING HEIGHTS

Figure 41 illustrates the recommended building heights in the Beacon/Groveton CBC. Building height is one of the key elements to determine the amount of development potential that is achievable in each land unit. Building heights should not be homogenous within a development. Consult Vision Element 5 and the building height recommendations contained within the Urban Design section of the Corridor-wide Guidelines for further information.

Buildings should be designed to take advantage of the CBC's high elevation and views of the surrounding area. The tallest buildings are planned along Richmond Highway and closest to the BRT station. From those locations, buildings should taper in height and scale to create better transitions to adjacent residential neighborhoods.

On the west side of the CBC along Richmond Highway and closest to the potential BRT station, the tallest buildings are recommended at a maximum height of 22 stories. Moving further away from the potential BRT station, building heights should step down to create compatible massing on both sides of the Livability Spine. Buildings along the Livability Spine are envisioned to be up to 16 stories in height, tapering to 6 stories in height adjacent to existing residential uses. On the east side of the CBC, a height of 4 stories is recommended due to the relatively shallow parcel depth and proximity to adjacent existing low-density residential development.



Beacon/Groveton CBC
* Potential BRT Station
Number of Stories
 4 Stories
 5 Stories
 6 Stories
 7 Stories
 10 Stories
 14 Stories
 16 Stories
 22 Stories

CONCEPTUAL BUILDING HEIGHTS
BEACON/GROVETON CBC **FIGURE 41**

OPEN SPACE NETWORK

The Beacon/Groveton CBC should be served by a variety of urban park space, in alignment with the guidance of the Urban Parks Framework. While each development is expected to address the urban park need generated by the proposed development, there are several park spaces that are integral to the Conceptual Plan that should be provided to support the vision for the CBC.

Within the context of the overall Richmond Highway Corridor, the Beacon/Groveton CBC is envisioned as the town center, serving as a community-building core for the corridor. The CBC features a central Civic Plaza located across from the BRT Station on the west side of Richmond Highway that should connect seamlessly with the BRT station in a manner that will welcome visitors into this signature public space. It should also be designed to link with the Livability Spine. Activated and supported by planned adjacent retail uses, the central Civic Plaza should be able to support large community events such as festivals, farmers markets, and outdoor performances. Signature features such as public art and water features should complement the theme of the Beacon/Groveton CBC and support placemaking by including opportunities to capitalize on the area's aviation history as well the views afforded by the high elevation. Hardscape surfaces should support the high volume of pedestrian movements anticipated with large community events and include patterns that help define pedestrian routes. A variety of seating options, lighting, and wayfinding, as well as restrooms should be included. Landscaping should provide visual accents as well as opportunities for shade.

Planned transportation improvements indicate an interim local roadway may be required through the area of the central Civic Plaza. If this occurs, the design should address the ability to achieve the ultimate vision for central Civic Plaza once this interim roadway connection is no longer necessary.

The Livability Spine should function as the heart of daily life for residents of the Beacon/Groveton CBC and is envisioned to have continuous Pedestrian Zones on both sides of the street. The Pedestrian Zone is comprised of a combination of landscaped and hardscaped areas designed to provide everyday access to recreation and outdoor spaces. The Pedestrian Zone includes four components: a building zone, a Linear Park, walkways, and a landscape panel. The walkway on the eastern side of the roadway, closest to the potential BRT station, should accommodate pedestrians and cyclists in a recreational atmosphere. Walkway surfaces should be constructed from high-quality bike and pedestrian-friendly materials, and have well-defined edges. The landscape panel should provide space for shade trees and landscaping to effectively buffer pedestrians and cyclists from the roadway. The building zone may be used as an extension of the walkway or for outdoor dining, browsing, or other building functions.

Within the Linear Park portion of the Pedestrian Zones, a variety of features and amenities will serve everyday needs for activity and community building, such as outdoor fitness areas, fenced dog parks, water features, playgrounds, shade, and seating options. The development of programmable areas for elements such as yoga plazas, tai chi, and various sports courts, accompanied by a commitment to program community usage in these areas, is encouraged. Play features and design elements that build upon narratives about the area's ecology and history are encouraged to enhance the CBC's sense of place.

Properties should provide for their portion of the Livability Spine and plan for its programming. Individual development programs are encouraged to expand upon the range of features within the Linear Park. Minimum dimensions for each component of the Pedestrian Zones are provided in the Urban Street Network Design; however each component has flexible dimensions to encourage creativity in the design and programming of the entire space between the

roadway and the building. The Livability Spine may be expanded by the provision of adjacent indoor and rooftop facilities provided that there is clear public access. If development proceeds incrementally, later development should align with previously approved components of the Livability Spine.

Developments within the Beacon/Groveton CBC should capitalize on the adjacency of Lenclair Park, expanding on the recreational opportunities available to residents and workers, while enhancing non-motorized connectivity for communities to the north to the Beacon/Groveton CBC and future BRT station.

Development within the Beacon/Groveton CBC will generate additional need for athletic fields to serve future residents and employees. The Conceptual Plan for the Beacon/Groveton CBC envisions two areas for athletic fields and active recreation. Developments that generate the need for less than a full athletic field are encouraged to consolidate their efforts in seeking creative solutions to address this need. Figure 42 is a visualization of the conceptual open space network and primary urban park goals for the Beacon/Groveton CBC.



**CONCEPTUAL OPEN SPACE
 BEACON/GROVETON CBC**

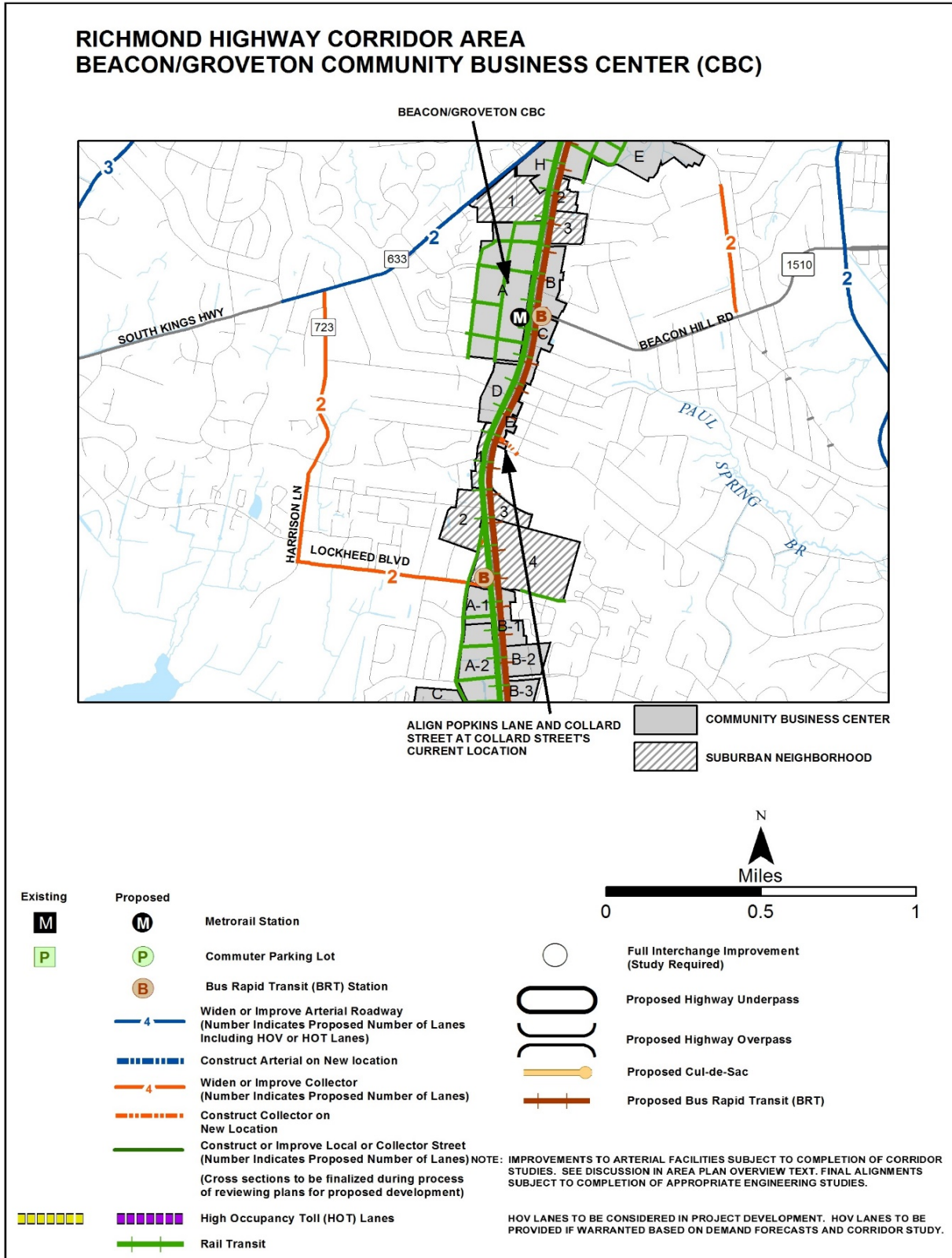
FIGURE 42

MULTIMODAL TRANSPORTATION IMPROVEMENTS

The Beacon/Groveton CBC is primarily served by Richmond Highway, Beacon Hill Road, Memorial Street, and Southgate Drive. Existing roads on the eastside of Richmond Highway from Dawn Drive south to Popkins Lane have mostly been constructed with perpendicular intersections and could serve as additional connections and complement the grid of streets recommended below. The general location for the proposed BRT station for this CBC is at the intersection of Richmond Highway and Beacon Hill Road. Additionally, an extension of the Yellow Line Metrorail from Huntington is planned with a single station in this CBC. See Figure 43, Planned Transportation Improvements, for recommendations to this and other nearby roadways. The following is a list of recommended improvements for the Beacon Groveton CBC:

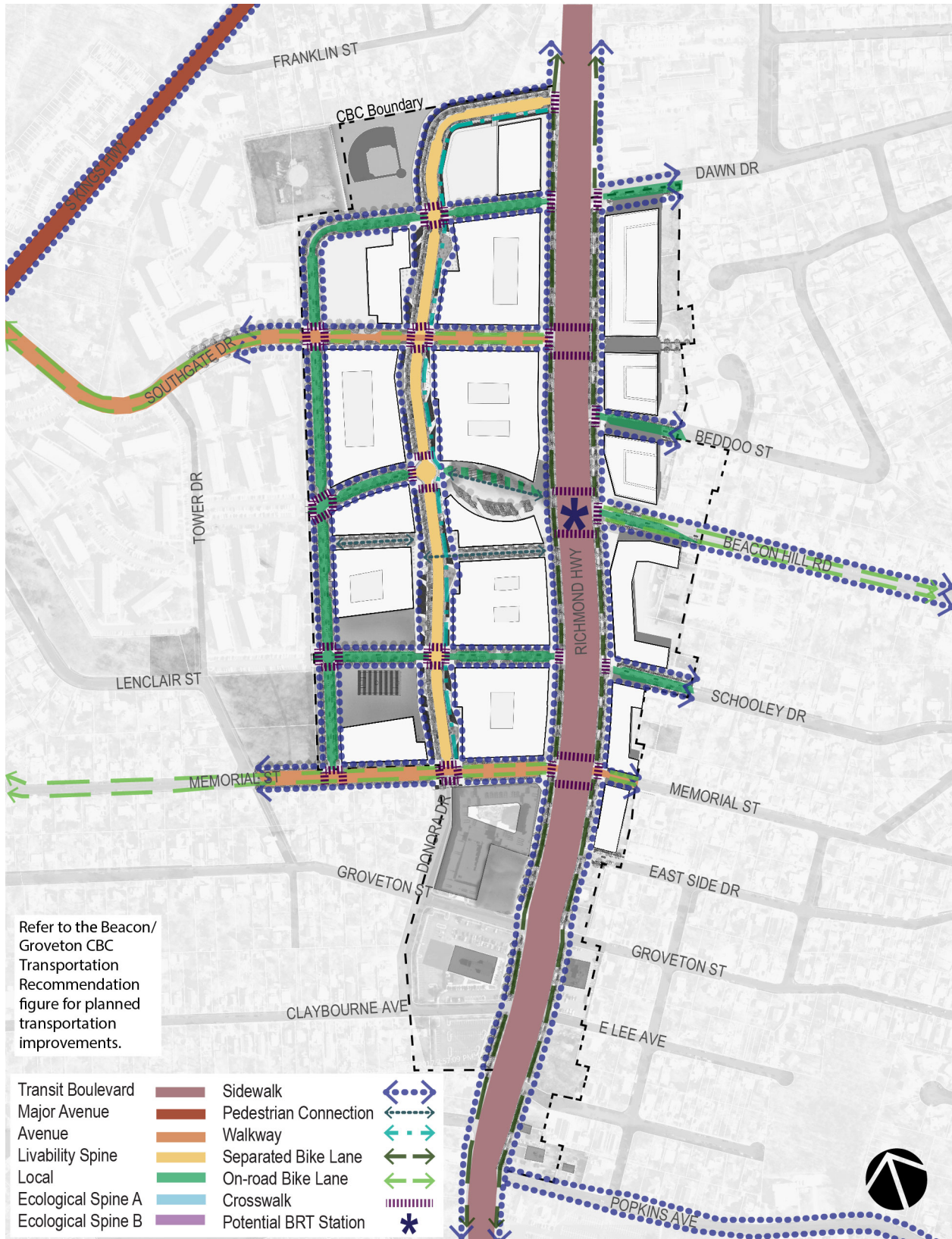
- Implement a new multimodal grid of streets network west of Richmond Highway generally bounded by the edge of the commercial development on the north, Memorial Street to the south and existing multifamily residential to the west.
- Construct the Livability Spine, generally parallel to Richmond Highway on the west side, from Memorial Street to intersect with Richmond Highway.
- Maintain an interim local roadway at the main entrance (where the future BRT station is located) to the western portion of the CBC via an interim local roadway; however, when redevelopment occurs, this local road should be reconstructed as a pedestrian plaza.
- Connect new streets within the proposed grid to existing roads, including Southgate Drive, Memorial Street, and Donora Drive.
- Realign Popkins Lane to Collard Street at Richmond Highway.
- Provide crosswalks at the BRT station and any signalized intersections to enhance pedestrian movement to and from either side of Richmond Highway.
- Provide pedestrian connections from within the CBC grid that connect to Richmond Highway and the BRT station, as well as to existing pedestrian facilities in adjoining neighborhoods, parks and open spaces.

The location and type of street, bicycle, and pedestrian facilities within the planned grid of streets is depicted in Figure 44, Conceptual Multimodal Network. Specific types of bicycle facilities are planned for each roadway based on the street type and adjacent land uses. For more information on the specific cross-sections and road design characteristics of the multimodal network, see the Urban Street Network Design (USND) section of this Plan, as well as the Fairfax County Bicycle Master Plan for bicycle facility guidelines.



PLANNED TRANSPORTATION IMPROVEMENTS

FIGURE 43



**CONCEPTUAL MULTIMODAL NETWORK
 BEACON/GROVETON CBC**

FIGURE 44

LAND UNIT RECOMMENDATIONS

Development Potential

Figure 45 contains the estimated maximum development potential inclusive of the redevelopment options for the Beacon/Groveton CBC. The estimate does not include additional development potential under a scenario where Metrorail is extended to this area in the future. Additional development potential of approximately 1.8 million square feet associated with a Metrorail station will be implemented when a corridor-wide transportation analysis is completed, coordinated with the Virginia Department of Transportation, and a Full Funding Grant Agreement or a comparable funding agreement to design and build the Metrorail extension is executed.

Additional details about the baseline and redevelopment options are contained in CBC land unit descriptions that follow. As noted in the Land Use Section under Corridor-wide Guidelines, flexibility among non-residential uses may be appropriate provided the overall vision of a vibrant mixed-use community is achieved and multimodal transportation needs are addressed.

It is expected that development will occur in phases. As such, phased development will need to advance the goals and the vision in the Plan, as described in the Implementation section. Development applications must be reviewed in a manner that ensures appropriate phasing to the provision of public improvements. The construction of and/or commitment to the public facilities is expected to be provided appropriately with each phase of development.

Figure 45

Beacon/Groveton CBC Maximum Development Potential under Redevelopment Options

Land Use	Comprehensive Plan development potential inclusive of redevelopment options ¹	
	Dwelling Units or Jobs	Approximate Gross Square Feet (gsf)
Residential ²	4,200 dwelling units	N.A.
Non-residential	3,560 jobs	1.3 million gsf
Office	1,590 jobs	480,000 gsf
Retail	1,970 jobs	790,000 gsf
Total	4,200 dwelling units and 3,560 jobs	

Note 1: Development potential, employment estimates, and dwelling units are approximate. Conversion factors: office - 300 gsf/job; retail - 400 gsf/job.

Note 2: The residential development potential does not include potential housing bonuses allowed under the Affordable Dwelling Unit (ADU) Ordinance and the Board of Supervisors Workforce Housing Policy (WDU).

Land Unit A (formerly Sub-units A-1 and A-2)

This approximately 49-acre land unit comprises the land area north and south of Southgate Boulevard, west of Richmond Highway.

Base Plan

This land unit is planned for retail and/or office uses up to approximately 1.1 million gross square feet.

Redevelopment Option

Mixed-use development is recommended, consisting of up to approximately 3,500 dwelling units and 720,000 square feet of nonresidential uses. Substantial consolidation of parcels should be achieved. Where consolidation of parcels is not achieved, redevelopment proposals should be evaluated in the context of the existing and future development of the land unit. For example, residual parcels should be integrated into the site design by providing interparcel vehicular and pedestrian access, as appropriate. In addition, redevelopment on a portion of the land unit should not preclude the remainder of the land unit from redeveloping under the plan option in the future. Under a Metrorail scenario, this area may be appropriate for a mix of uses up to a total of approximately 6 million square feet of development in coordination with the execution of a Full Funding Grant Agreement or comparable funding agreement to design and build the Metrorail extension. Prior to any implementation of Metrorail levels of development, a corridor-wide transportation analysis assuming these Metrorail levels of development should be completed in coordination with the Virginia Department of Transportation.

Land Unit B

This 10-acre land unit includes lots fronting on the east side of Richmond Highway from Dawn Drive to Beacon Hill Road and from Richmond Highway along Beacon Hill Road, including Tax Map 93-1((1))78.

Base Plan

This land unit is planned for office and/or retail uses up to approximately 220,000 gross square feet with building heights up to 50 feet, and/or residential use at a density of 8-12 dwelling units per acre, with the exception of Tax Map Parcels 93-1((1))75A, 76A and 78 which are planned for townhouse-style office use at an intensity of up to 0.35 FAR to transition to the stable residential neighborhood. An effective buffering and screening treatment is to be provided and maintained between the office use and the adjacent residential area.

Redevelopment Option

Mixed-use development up to approximately 110 dwelling units and 150,000 gross square feet of non-residential use may be appropriate with reasonable consolidation of the parcels between Bedoo Street and Dawn Drive, and a coordinated development plan is submitted.

Land Unit C

This land unit comprises approximately 6 acres of land generally fronting on the east side of Richmond Highway between Beacon Hill Road and East Side Drive.

Base Plan

The land unit is planned for non-residential uses up to approximately 130,000 gross square feet with maximum building heights of 50 feet. The development plan and architectural design should achieve consolidated access, should provide and maintain aesthetically pleasing and effective screening and buffering to adjacent residential properties, and should include stormwater management measures addressed in the Stormwater Management section under Corridor-wide Guidelines.

Land Unit D

The land units comprises approximately 10 acres of land between Richmond Highway and Donora Drive, extending from Memorial Street south to midway between Clayborne Avenue and Collard Street, and has been designated the Groveton Redevelopment Area.

Base Plan

The land unit is appropriate for redevelopment to medium intensity office use up to approximately 305,000 gross square feet of development. This development should be attractive, well-landscaped and be made compatible with adjacent residential uses through attractive building design, site planning, and architectural treatments as well as effective landscaping and buffering. Building height should be compatible with the adjacent community. In order to mitigate impacts on the community, there should be a decrease in building height from Richmond Highway to the west.

Redevelopment Option

Tax Map Parcels 93-1((38))(1)1A and 93-1((1))98A have been approved and partially developed through an option for residential mixed-use development for 290 residential units and 70,000 square feet of non-residential use. If the land approved for non-residential development is dedicated as parkland, the development potential may be transferred to another land unit within the Beacon/Groveton CBC.

Land Unit E

This land unit comprises approximately 4-acres of land generally fronting on the east side of Richmond Highway from East Side Street to Popkins Lane.

Base Plan

The land unit is planned for townhouse-style office and/or retail use up to approximately 50,000 gross square feet. With any development proposal, the commercially-zoned lots along Richmond Highway between Groveton Street and East Lee Avenue or East Lee Avenue and Preston Avenue or Preston Avenue and Popkins Lane should be consolidated; parking and compatibility with the adjacent residential neighborhood are addressed in accordance with the Urban Design section under Corridor-wide Guidelines and the Guiding Planning Principles.

Redevelopment Option

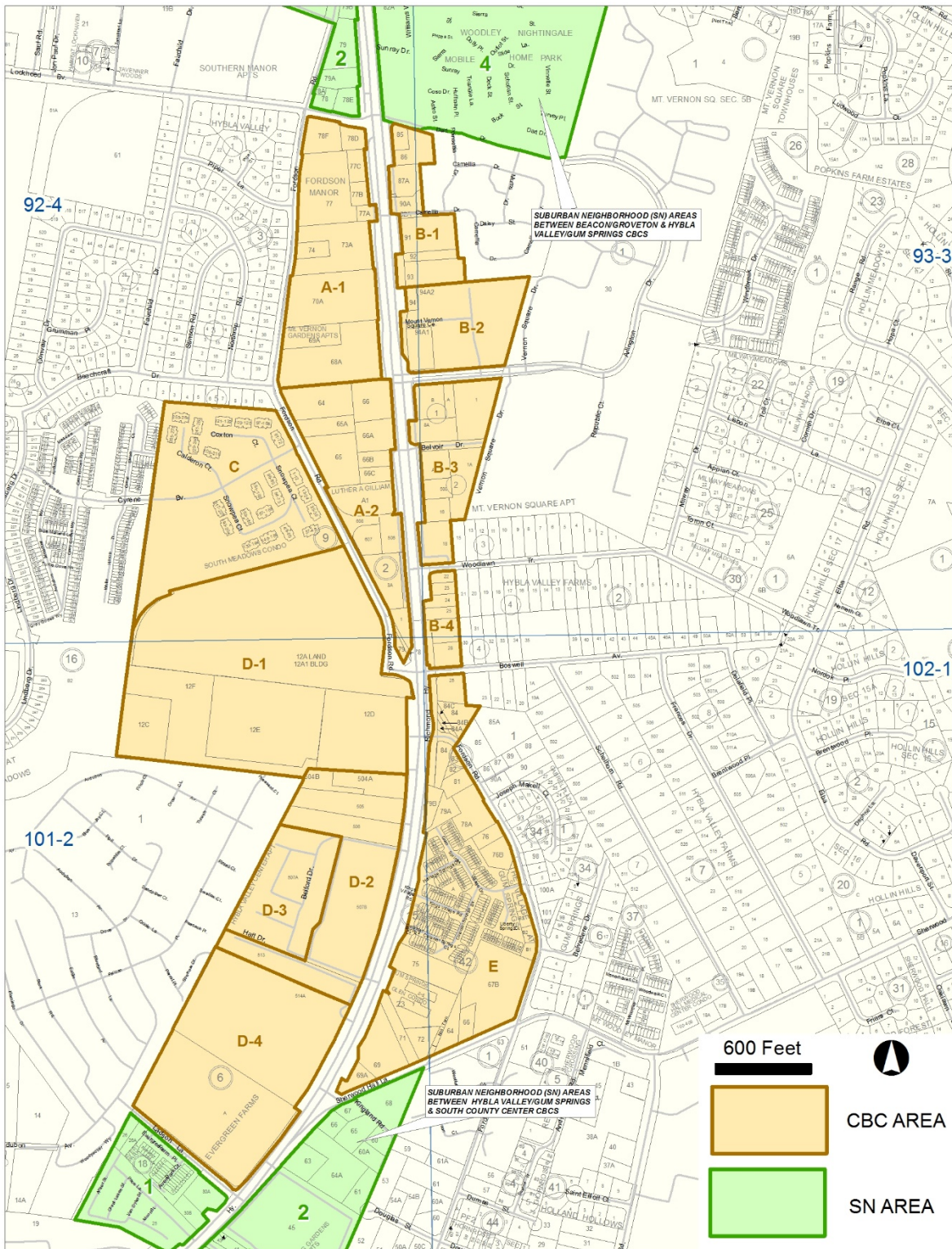
Tax Map Parcel 93-1((18))(D)117A located between East Lee Avenue and Preston Lane, is planned for and developed with 6,000 square feet of office and/or retail use to include eating establishments and fast food restaurants without drive thru facilities and with maximum building height of approximately two stories. Buildings and parking should be oriented to encourage pedestrian traffic; compatibility with the adjacent residential neighborhood is achieved; and, stormwater management is addressed. Limited parking may be considered along the property frontage provided the preceding conditions are addressed and all other applicable Richmond Highway Streetscape elements are met.

HYBLA VALLEY/GUM SPRINGS COMMUNITY BUSINESS CENTER

The Hybla Valley and Gum Springs communities have rich heritages that includes both existing historical sites, historic or cultural remnants of the past, and major ecological resources. Of special significance, Gum Springs was founded in the 19th century as a Free Black community where noteworthy sites and buildings include the Pride of Fairfax Masonic Lodge, Bethlehem Baptist Church and a former baptismal site. Other memorable uses dating from the early twentieth century through the 1950s were located in Hybla Valley, including the Mount Vernon Drive-in Theatre and the George Washington Air Junction, an airport used for navel flight training during World War II. Additionally, there are remnants of early roadway alignments still in use today such as Fordson Road, which follows the original path of Route 1 and, prior to that, the alignment of the former Potomac Path.

Along with its rich historical legacy, the area has many important environmental features, including stream valleys (some piped or channelized) that cross the area and connect to Huntley Meadows Park, a 1,500-acre Resource-based Park owned by Fairfax County Park Authority.

At over 1.25 miles in length, Hybla Valley/Gum Springs is the longest CBC on the Richmond Highway Corridor. Its center is the Mount Vernon Plaza and the South Valley Shopping Center, which have over 550,000 square feet of retail space. Buildings in these shopping centers are set back from the highway with large expanses of surface parking along the frontage. North and east of the two centers are areas of strip-commercial uses including auto dealerships, gas stations, convenience stores, fast food restaurants and auto repair establishments. Figure 46 indicates the geographic location of land units in the Hybla Valley/Gum Springs CBC, shown in yellow, and the Suburban Neighborhood Areas on either side of the CBC, shown in green.



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BOUNDARY AND LAND UNITS
HYBLA VALLEY/GUM SPRINGS CBC **FIGURE 46**

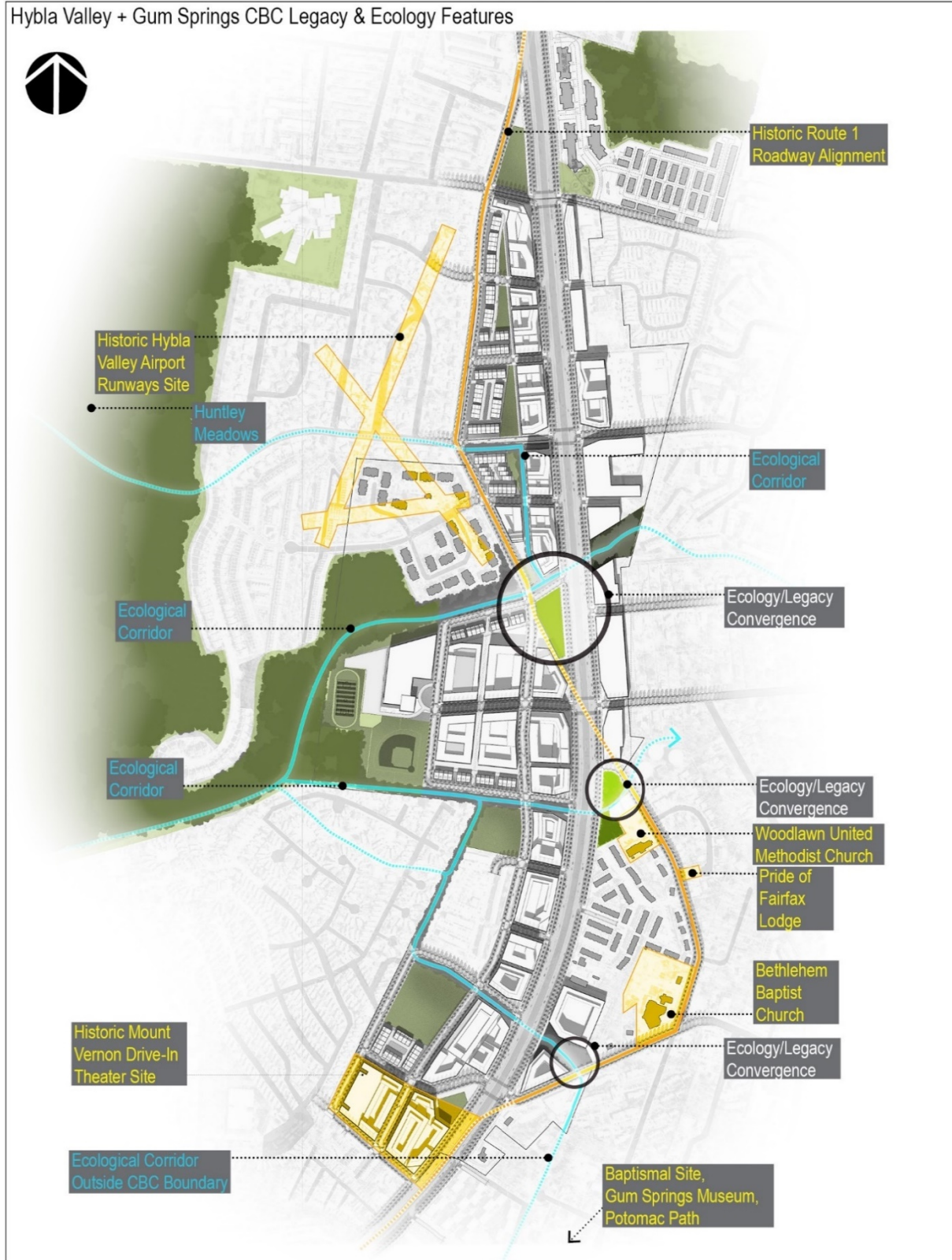
CONCEPTUAL PLAN

The vision for the Hybla Valley/Gum Springs CBC is to create a dynamic mixed-use transit-oriented activity center that integrates innovative environmental practices and technologies with the area's historical legacy. This CBC is envisioned to become known as an area where cutting edge environmental practices, design, and technologies are routinely applied, and where sustainability is showcased. The convergence of ecology and legacy of the area is particularly strong in this CBC, resulting in opportunities to build upon these assets during redevelopment. Figure 47 highlights sites of historical interest (represented in yellow) and existing stream valleys (represented in blue) in the Hybla Valley/Gum Springs CBC, and demarcates where these resources converge (represented as circles).

Within the context of the overall Richmond Highway corridor, the Hybla Valley/Gum Springs CBC is envisioned to contribute a unique focus on the environment through the waterways that cross the CBC and its proximity to Huntley Meadows Park. Historic development patterns in the CBC have had the effect of subjugating the natural flow of water, either by channelizing it or by containing it within underground structures. A primary focus of the design of the public realm within the CBC should be to embrace the importance of water in the area's ecology and to reconnect people to nature and the water. Covered or channelized waterways should be uncovered and restored to a condition that allows for the more natural flow of water, while providing stormwater, habitat, and other environmental benefits. This is a process known as daylighting. Bioswales and other stormwater facilities may also be incorporated into the public realm as a way to create enhanced public spaces and streetscapes.

Redevelopment within the CBC should greatly improve the area by combining housing, shopping, entertainment, dining, and employment opportunities in an environmentally conscious manner. The highest intensities of development should be focused around each of the three proposed BRT stations to form three distinct but interconnected TOD nodes. Each node is planned to consist of medium to high-density development, a mix of uses, and open spaces. In creating these nodes, buildings and open spaces should be designed to frame each of the BRT stations. Nodes should include a diverse range of residential and non-residential uses including office, hotel, and ground floor retail. Multifamily housing comprises the majority to the uses planned outside of the TOD nodes. However, at the western edge of Land Unit D-1, an educational campus is planned. This site should be designed as an urban-format school that maximizes the amount of available land in a multi-story, compact building. Figure 48 illustrates the Conceptual Plan for the Hybla Valley/Gum Springs CBC.

The Conceptual Plan should be used as a guide for development proposals. There is flexibility in how the Conceptual Plan can be implemented provided there is general adherence to the grid of streets, in particular the Ecological Spine, the open space network, the location of station-area plazas, and the placement of ground-floor non-residential uses.



**LEGACY AND ECOLOGY FEATURES
HYBLA VALLEY/GUM SPRINGS CBC**

FIGURE 47



CONCEPTUAL PLAN
HYBLA VALLEY/GUM SPRINGS CBC

FIGURE 48

Redevelopment should enhance multimodal connectivity within the CBC as well as to surrounding areas and to the three planned BRT and future Metrorail stations. A grid of streets should be created to organize circulation within the western portion of the CBC and to connect to streets on the east side of the CBC. The grid should form rectilinear and developable-sized blocks. The grid is envisioned to be multimodal and should provide for the needs of motorists, bicyclists and pedestrians on all streets. There are different types of bicycle facilities for each roadway based on the street type and adjacent land uses, all of which should form a connected network that provides access to existing and planned bicycle facilities, potential BRT stations, and local bus service. Pedestrian facilities should connect within the CBC, to the potential BRT stations, local bus service, and to existing pedestrian facilities in adjoining neighborhoods, parks and open spaces. Intersections in the new grid of streets should be spaced so that blocks are pedestrian-scaled at walkable distances. Pedestrian crosswalks at the potential BRT station locations and at signalized intersections should permit pedestrian movement to and from either side of Richmond Highway. Mid-block pedestrian connections, including pass-throughs and roadway crossings are recommended on large blocks. Refer to the Multimodal Transportation Improvements section for the location and type of street improvements, and bicycle and pedestrian facility recommendations.

In addition to the grid, a well-connected open space network is planned as a major organizing feature of the CBC. There are four major types of open space envisioned for the CBC, including environmentally-focused green corridors, termed Ecological Spines; Civic Plazas; Recreation-focused Parks; and, Common Greens. Collectively, these open spaces should incorporate the legacy theme by creatively integrating references to elements such as the former airfield and the history of Gum Springs into the design features and character of these spaces.

The Ecological Spine concept is an innovative design approach intended to allow multiple functions within the open space and road network. Ecological Spines celebrate waterways by naturalizing and/or daylighting streams; they provide green space in an environmentally-focused setting for peoples' enjoyment and passive recreation; they act as pedestrian and bicycle connections to unite neighborhoods both within and outside of the CBC; and, they provide environmental benefits for stormwater collection and treatment in addition to habitat enhancement. Detailed information on the design of the Ecological Spines is contained in the Open Space Network and the Urban Street Network Design sections.

Civic plazas are envisioned in the land units on either side of each potential BRT station to provide attractive and safe gathering spaces for pedestrians accessing a BRT station from the east or west. The rhythm of buildings alternating with plazas along Richmond Highway is envisioned to create a memorable feature when traversing the CBC. On the west side of the central BRT station, a larger Civic Plaza is envisioned to be the central gathering space of the CBC and is a primary location where the themes of legacy and ecology converge. Figure 49 is a visualization of the character envisioned for the central Civic Plaza. At the southern end of the CBC, west of Richmond Highway, a Recreation-focused Park and Common Green are planned in the vicinity of the former site of the drive-in theatre. Additional recreational amenities are envisioned to be located in conjunction with a planned educational campus in the western edge of Land Unit D-1.

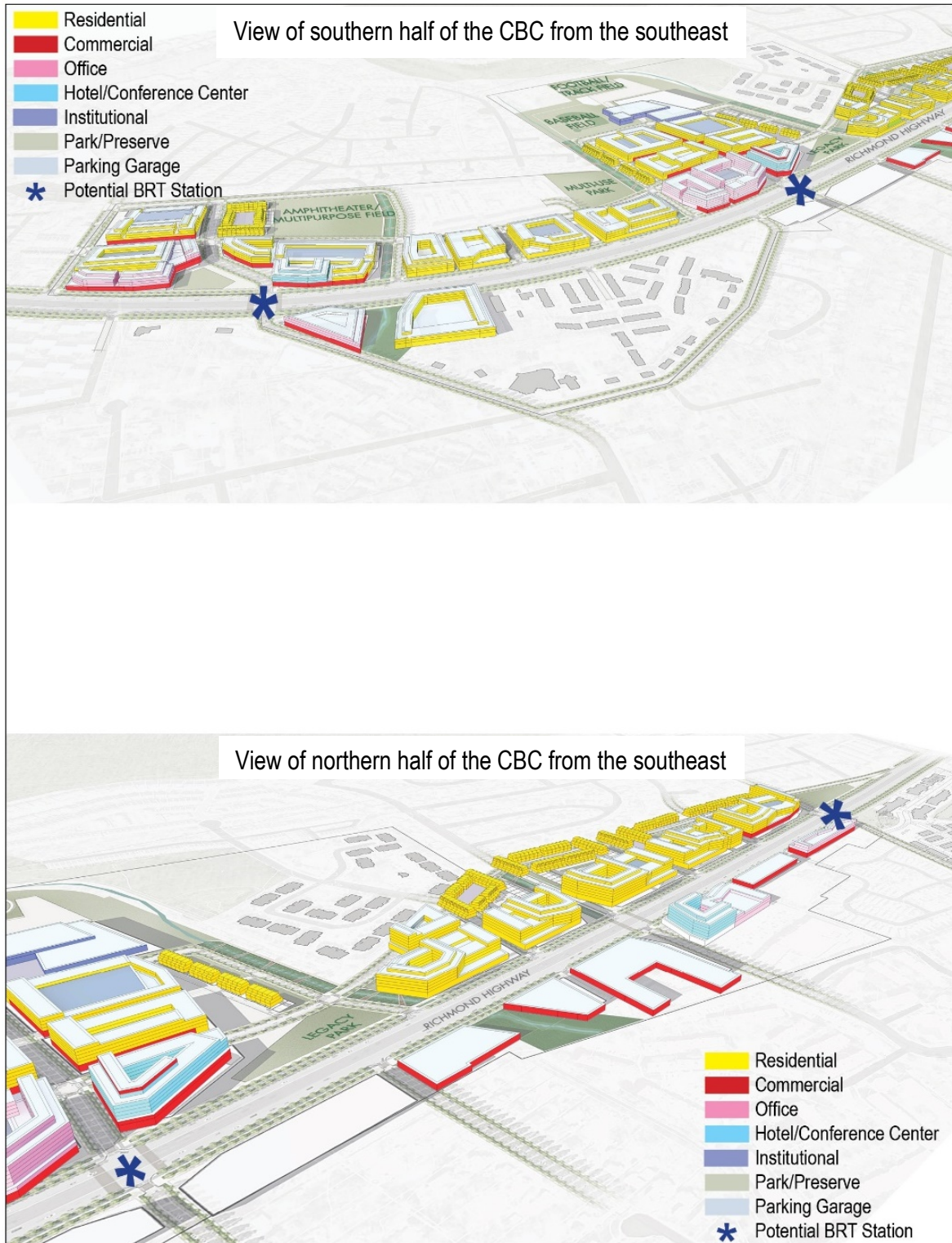


**CHARACTER AND FEATURES OF LEGACY PLAZA
HYBLA VALLEY/GUM SPRINGS CBC**

FIGURE 49

Most buildings should be designed to be mixed-use. Retail uses should be located on the ground floors of buildings within certain blocks adjacent to Richmond Highway as well as through the majority of Land Unit D-1 as shown on the conceptual plan. Office and hotel uses should be planned in the general vicinity of the BRT stations. These non-residential uses should have their entrances and any associated outdoor spaces open onto plazas, the streets leading from the BRT stations, Richmond Highway, and along the new north-south Major Avenue. New housing may comprise entire blocks or may be located above ground-floor retail. Lower density residential uses, such as townhomes or stacked townhomes, are envisioned to provide a compatible transition to existing neighborhoods. A proposed new educational campus is located in the western portion of Land Unit D-1.

Architectural designs should creatively address building scale through massing, terracing and variation of facades. Such designs should result in an interesting play of light and shadow on adjoining streets, while mitigating impacts to adjacent neighborhoods. Buildings should have a consistent ground-floor plane next to the building zone but are strongly encouraged to step back above the ground-floor to prevent shadows and a canyon-like effect on adjacent streets. Building rooflines should not be uniform across a block. Terraces, green roofs, and other roof top amenities are encouraged to maximize outdoor recreational opportunities for residents and workers; to provide environmental benefits, such as stormwater collection and heat island reduction; and to enhance the views from the upper stories of buildings. Figure 50 illustrates how building massing is envisioned and how land uses should be organized primarily within the Hybla Valley portion of the CBC.



BUILDING FORM, MASSING, AND PLANNED USES
HYBLA VALLEY/GUM SPRINGS CBC

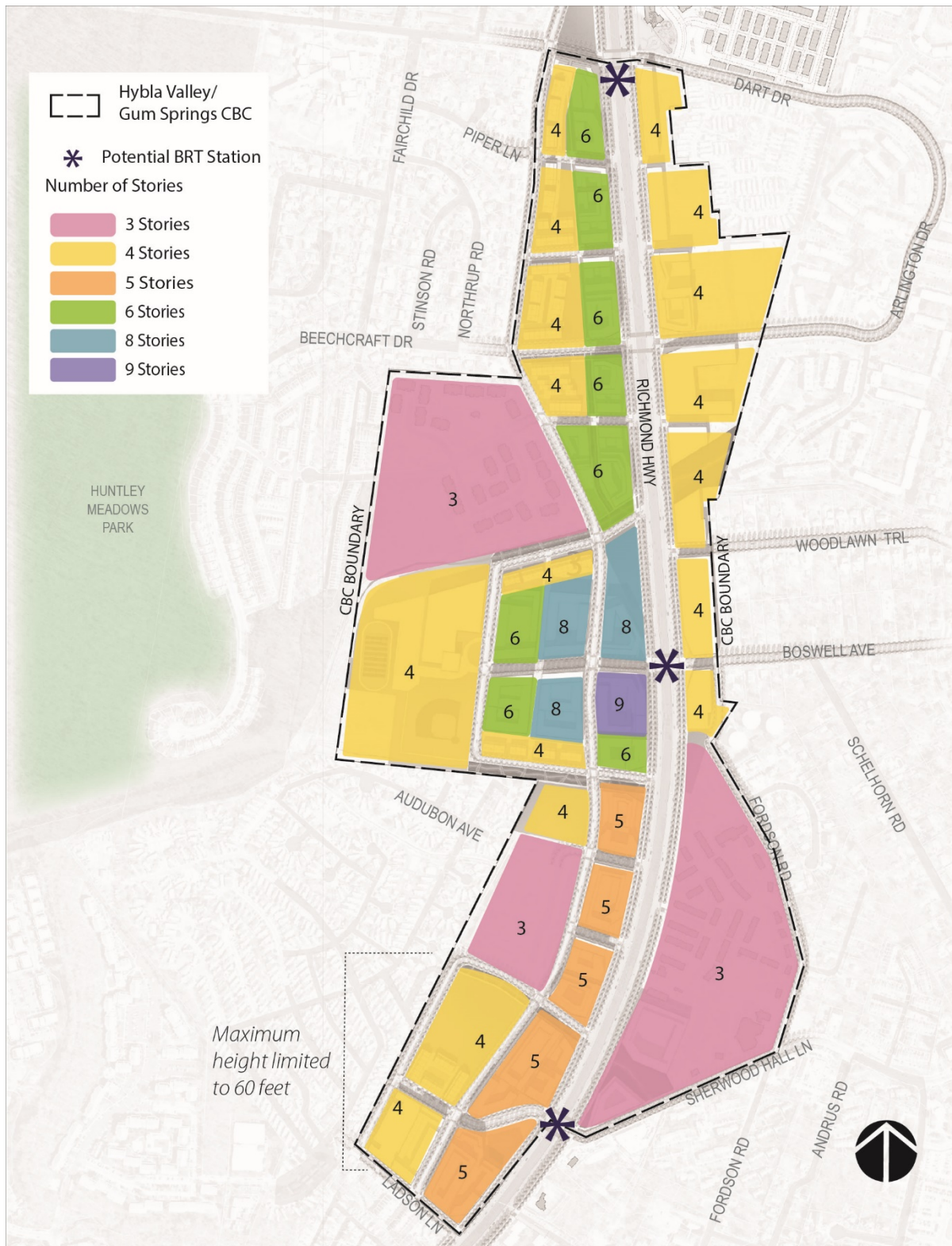
FIGURE 50

BUILDING HEIGHTS

Figure 51 illustrates the recommended building heights in the Hybla Valley/Gum Springs CBC. Building height is one of the key elements to determine the amount of development potential that is achievable in each land unit. Building heights should not be homogenous within a development. Consult Vision Element 5 and the building height recommendations contained within the Urban Design section of the Corridor-wide Guidelines for further information.

Taller buildings are anticipated along Richmond Highway and closest to potential BRT stations. As structures approach the north-south Major Avenue (extension of Fordson Road) and surrounding existing communities, buildings should taper down in height. A key consideration in the planning for redevelopment in Land Unit D-4 is the potential for new development to be visible from Historic Huntley, negatively impacting the value of this historic resource.

The ability to mitigate potential impacts to the viewshed from Historic Huntley is largely addressed by the maximum building heights envisioned for the land unit of noted concern. As such, buildings in D-4 should be limited to 60-feet in height. Future redevelopment within this targeted land unit will need to provide additional analysis, as part of the entitlement process, to demonstrate the extent to which the building heights of the development proposal would be visible from Historic Huntley. Development that indicates any potential for visibility may be expected to exclude building materials that would exacerbate impacts to views (e.g. highly reflective materials, building lighting).



**CONCEPTUAL BUILDING HEIGHTS
 HYBLA VALLEY/GUM SPRINGS CBC**

FIGURE 51

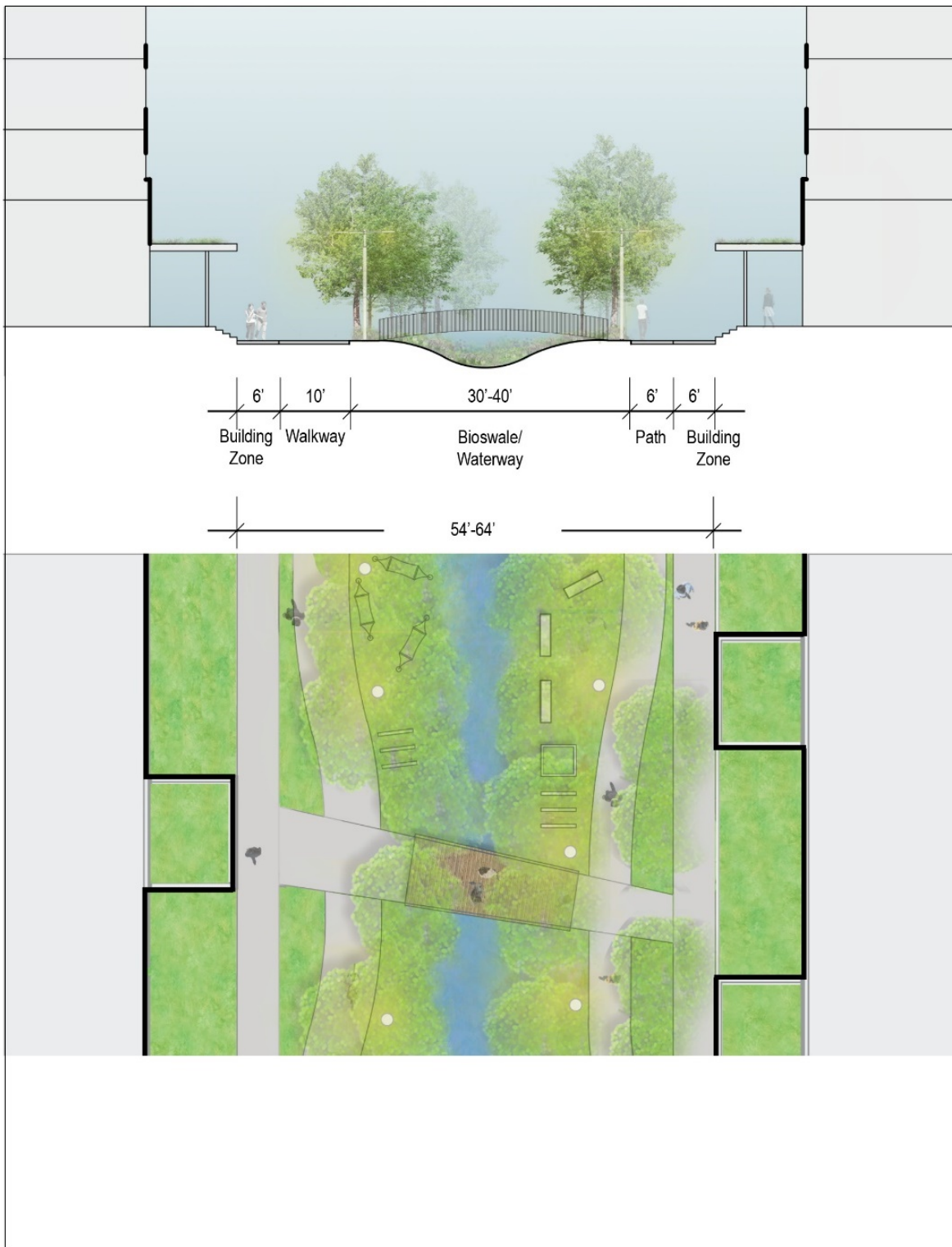
OPEN SPACE NETWORK

The Hybla Valley/Gum Springs CBC will be served by a variety of urban park spaces, following the guidance of the Urban Parks Framework. While each development is expected to address the urban park need generated by the proposed development, there are several park spaces that are integral to the Conceptual Plan that should guide the provision of urban park space within the CBC.

Within the context of the overall Richmond Highway Corridor, the Hybla Valley/Gum Springs CBC is envisioned to contribute a unique focus on the environment through the waterways that transect the CBC and its proximity to Huntley Meadows Park, a 1,500-acre Resource-based Park owned by Fairfax County Park Authority. Historic development patterns have sought to subjugate the natural flow of water, either channelizing it or containing it within underground structures. A primary focus of the urban park spaces within the Hybla Valley/Gum Springs CBC is to reconnect with the more natural flow of water, embracing the importance of water in the Richmond Highway Corridor's ecology. Key to the Conceptual Plan for the CBC is the orientation of a series of Ecological Spines that connect daily life with the area's natural systems. Three different types of Ecological Spines are envisioned for the CBC; two of the ecological spines are planned to have roadways associated with them and are further detailed in the Urban Street Network Design section. Ecological Spine Type 3 is primarily designed as a waterway and multi-use path located between residential uses, and does not include a roadway. Figure 52 shows the conceptual design of features within Ecological Spine Type 3.

From a functional standpoint, the Ecological Spines will serve to convey water flow and should be designed to enhance water quality with buffers of native plants to help filter run off. The Ecological Spines also are envisioned as Linear Parks that act as primary spaces for daily outdoor life in the CBC. Supported by parallel pedestrian and bicycle facilities, the Ecological Spines are intended to foster connectivity across the CBC. Bridges should be provided that cross the Ecological Spines to link adjacent communities together. The design of the Ecological Spines should also support daily opportunities for relaxation, activity, and enjoyment of the outdoors for the future residents and workforce. The Ecological Spines should offer a variety of seating and opportunities for social interaction. Elements that promote active recreation within a small footprint are encouraged, such as small play structures, fitness equipment, and bocce courts. Features that serve multiple functions, such as sculptural blocks that can be used for climbing or seating should be considered to maximize the use of these spaces. Programmed spaces should be designed to respect the natural hydrology of the Ecological Spine and serve to enhance the relationship between users and natural features to the extent feasible in an urban context.

Each Ecological Spine should be envisioned as one continuous space, available to serve the entire community, and individual developments along the Ecological Spines should contribute to the creation of its proportionate segment of the Spine. They should be designed to mimic natural systems by providing off-line stormwater treatment that complements the day-lighted/naturalized stream corridor. If daylighting is not possible, off-line stormwater features should be utilized that feed the piped system but mimic natural landscape features such as wetland cells, wet meadows and infiltration facilities where soils and topography allow.



ECOLOGICAL SPINE TYPE 3
HYBLA VALLEY/GUM SPRINGS CBC

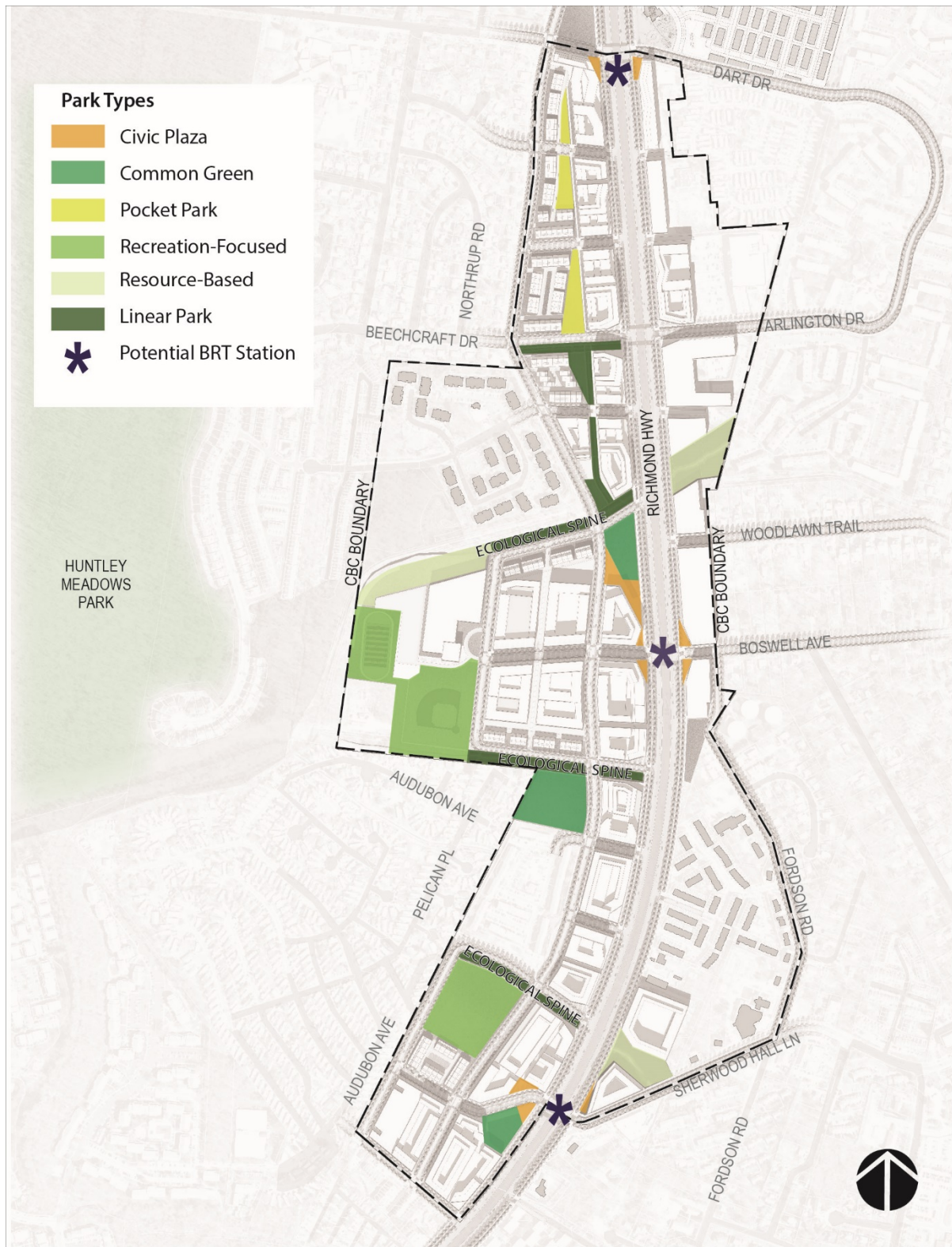
FIGURE 52

Civic Plaza spaces should be provided within the Hybla Valley/Gum Springs CBC in proximity to each of the three potential BRT stations. Their design should clearly welcome visitors and establish a coordinated placemaking vision for the entire CBC. Hardscape surfaces should define the pedestrian flow, supported by unified wayfinding signage. A variety of seating options and lighting should support the function of each BRT station and encourage activity in these key locations. The Civic Plaza located centrally within the CBC should be of a size to support larger community events. Complemented by the adjacent Common Green, this central location should support events such as art exhibits, craft shows of local artisans, or small concerts. The design of the plaza should acknowledge the current alignment of Fordson Road as the location of the original alignment of Richmond Highway. Elements that represent the history of the Gum Springs Community and the former George Washington Air Junction merit inclusion in the support of the legacy theme. Proximity of the Ecological Spine to the central Civic Plaza presents an opportunity to also focus on the theme of ecology. Opportunity exists to celebrate these themes of legacy and ecology at the southeastern corner of the existing Richmond Highway/Fordson Road intersection.

Supportive of the goal for community building, an amphitheater is envisioned for the southern end of the Hybla Valley/Gum Springs CBC, in the vicinity of the former Mount Vernon Drive-in Theatre. This feature may be collocated with active recreation space and easily accessible from the BRT station. In addition to these primary spaces, a series of Pocket Parks should be incorporated into development within the CBC to complement the larger urban parks and plazas.

Future development within the Hybla Valley/Gum Springs CBC should capitalize on the adjacency of nearby existing parkland, expanding on the ability for residents to connect to natural areas outside of the CBC. North Hill Park, located generally at the northeast corner of Richmond Highway and Dart Drive, will be developed as a passive park with trails and a picnic area in a wooded setting. Pedestrian connections into Huntley Meadows Park are limited to the main entrance on Lockheed Boulevard and a secondary entrance from South Kings Highway; however, opportunities exist for thematic connections to the park, which provides habitat for several rare plant and animal species.

Development within the Hybla Valley/Gum Springs CBC will generate additional need for recreation facilities, including athletic fields, to serve future residents and workforce. To the extent possible, these facilities should be located within the Hybla Valley CBC. The Conceptual Plan envisions several areas that are able to support athletic fields and active recreation. Developments that generate the need for less than a full athletic field are encouraged to consolidate their efforts in seeking creative solutions to address this need. Figure 53 is a visualization of the conceptual open space network for the Hybla Valley/Gum Springs CBC.



CONCEPTUAL OPEN SPACE
HYBLA VALLEY/GUM SPRINGS CBC

FIGURE 53

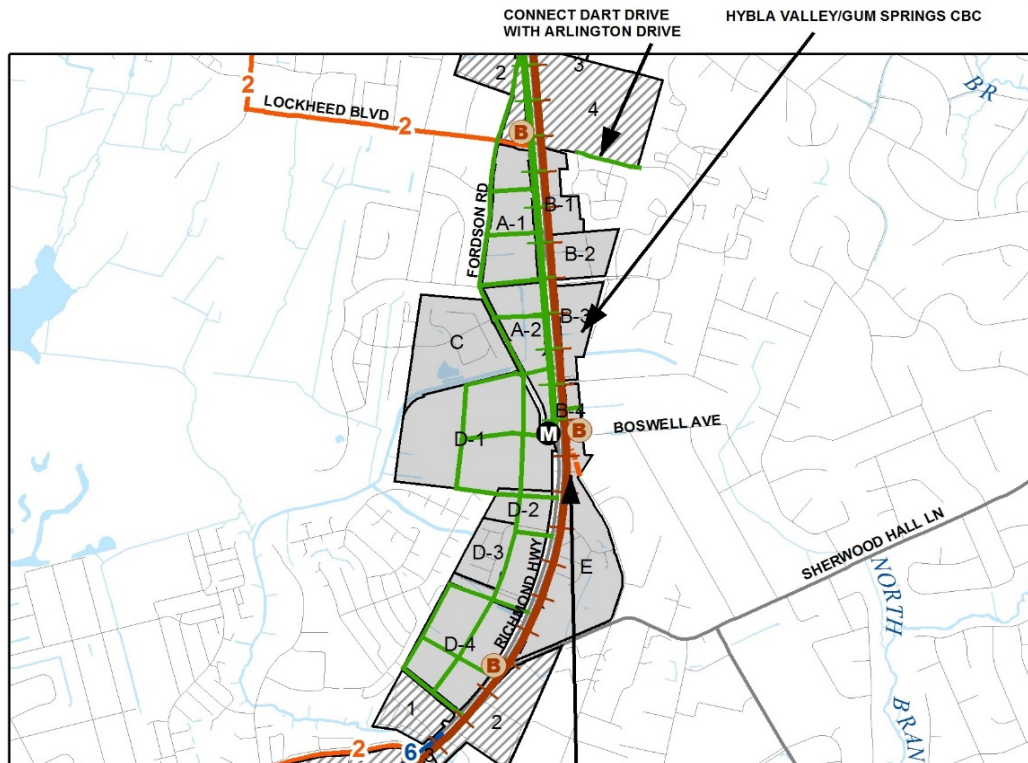
MULTIMODAL TRANSPORTATION IMPROVEMENTS

The Hybla Valley/Gum Springs CBC will be primarily served by Richmond Highway and a proposed north-south Major Avenue that would extend from a realigned Fordson Road on the west side of the CBC to parallel Richmond Highway. Three potential BRT stations on Richmond Highway are proposed for this CBC, which are generally planned at the intersections of Lockheed Boulevard and Dart Drive, Boswell Avenue, and Sherwood Hall Lane. In the longer term, an extension of Yellow-line Metrorail from Huntington is planned to terminate in this CBC with a single station. See Figure 54, Planned Transportation Improvements, for planned transportation improvements in the CBC area and other nearby roadways, as noted below:

- Implement a multimodal grid of streets to create and organize circulation within the western portion of the CBC and to connect to streets on the east side of the CBC.
- Realign and extend Fordson Road on the west side of Richmond Highway to Ladson Lane, to form a new Major Avenue that parallels Richmond Highway.
- Extend Beechcraft Road to Richmond Highway to align with Arlington Drive and form a new four-way intersection at Richmond Highway.
- Extend Boswell Avenue and Sherwood Hall Lane across Richmond Highway through the west side of the CBC to improve connectivity to planned BRT stations.
- Connect new streets within the CBC to existing roadways, including Lockheed Boulevard, Piper Lane, Cyrene Boulevard, and Ladson Lane.
- Provide a potential, new Fordson Road connection, or realignment, on the east side of Richmond Highway to Boswell Avenue, with an option to consolidate traffic signals on Richmond Highway, pending future study.
- Connect bicycle and pedestrian facilities within the CBC to the potential BRT stations, local bus stops, and existing facilities in adjoining neighborhoods, parks, and open spaces.
- Implement one of two alternative alignments recommended for the southern portion of the street grid on the western side of the CBC as shown on the Conceptual Plan. The final alignment will be dependent upon redevelopment proposals and functional roadway standards.

For more information on the specific cross-sections and road design characteristics of the multimodal network, see the USND section of this Plan. Also, refer to the Fairfax County Bicycle Master Plan for bicycle facility guidelines. The location and type of street, bicycle and pedestrian facilities within the planned grid of streets is depicted in Figures 55 and 56, Conceptual Multimodal Network.

RICHMOND HIGHWAY CORRIDOR AREA
HYBLA VALLEY / GUM SPRINGS COMMUNITY BUSINESS CENTER (CBC)

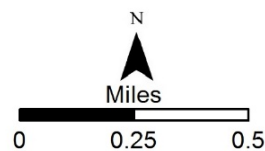


POTENTIAL NEW CONNECTION, OR REALIGNMENT, TO BOSWELL AVENUE, PENDING FUTURE STUDY

COMMUNITY BUSINESS CENTER
 SUBURBAN NEIGHBORHOOD

- | | | |
|-----------------|-----------------|---|
| Existing | Proposed | |
| M | M | Metrorail Station |
| P | P | Commuter Parking Lot |
| | B | Bus Rapid Transit (BRT) Station |
| | 4 | Widen or Improve Arterial Roadway (Number Indicates Proposed Number of Lanes Including HOV or HOT Lanes) |
| | 4 | Construct Arterial on New Location |
| | 4 | Widen or Improve Collector (Number Indicates Proposed Number of Lanes) |
| | 4 | Construct Collector on New Location |
| | 4 | Construct or Improve Local or Collector Street (Number Indicates Proposed Number of Lanes) (Cross sections to be finalized during process of reviewing plans for proposed development) |
| 5 | 5 | High Occupancy Toll (HOT) Lanes |
| | + | Rail Transit |

- | | |
|--|--|
| | Full Interchange Improvement (Study Required) |
| | Proposed Highway Underpass |
| | Proposed Highway Overpass |
| | Proposed Cul-de-Sac |
| | Proposed Bus Rapid Transit (BRT) |

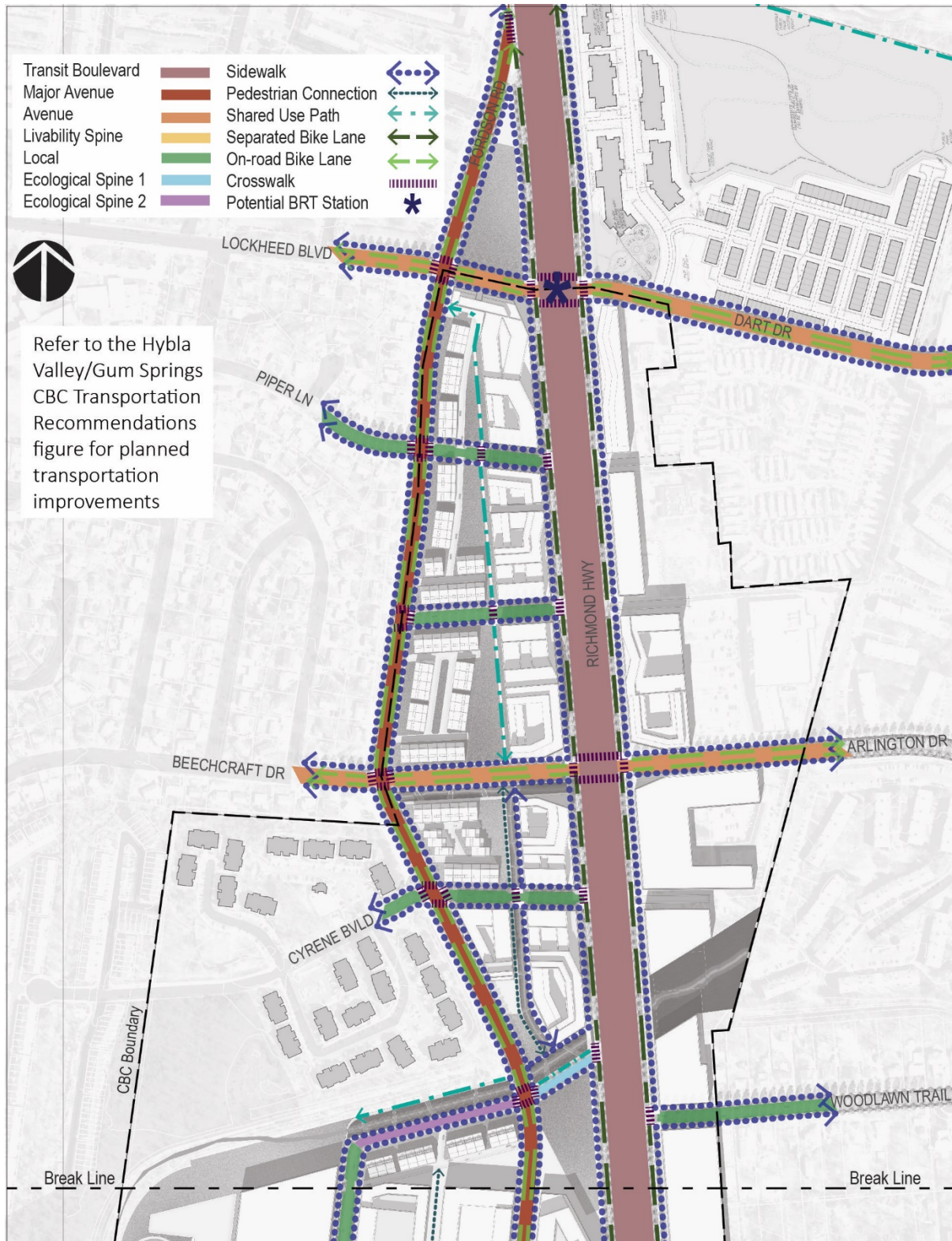


NOTE: IMPROVEMENTS TO ARTERIAL FACILITIES SUBJECT TO COMPLETION OF CORRIDOR STUDIES. SEE DISCUSSION IN AREA PLAN OVERVIEW TEXT. FINAL ALIGNMENTS SUBJECT TO COMPLETION OF APPROPRIATE ENGINEERING STUDIES.

HOV LANES TO BE CONSIDERED IN PROJECT DEVELOPMENT. HOV LANES TO BE PROVIDED IF WARRANTED BASED ON DEMAND FORECASTS AND CORRIDOR STUDY.

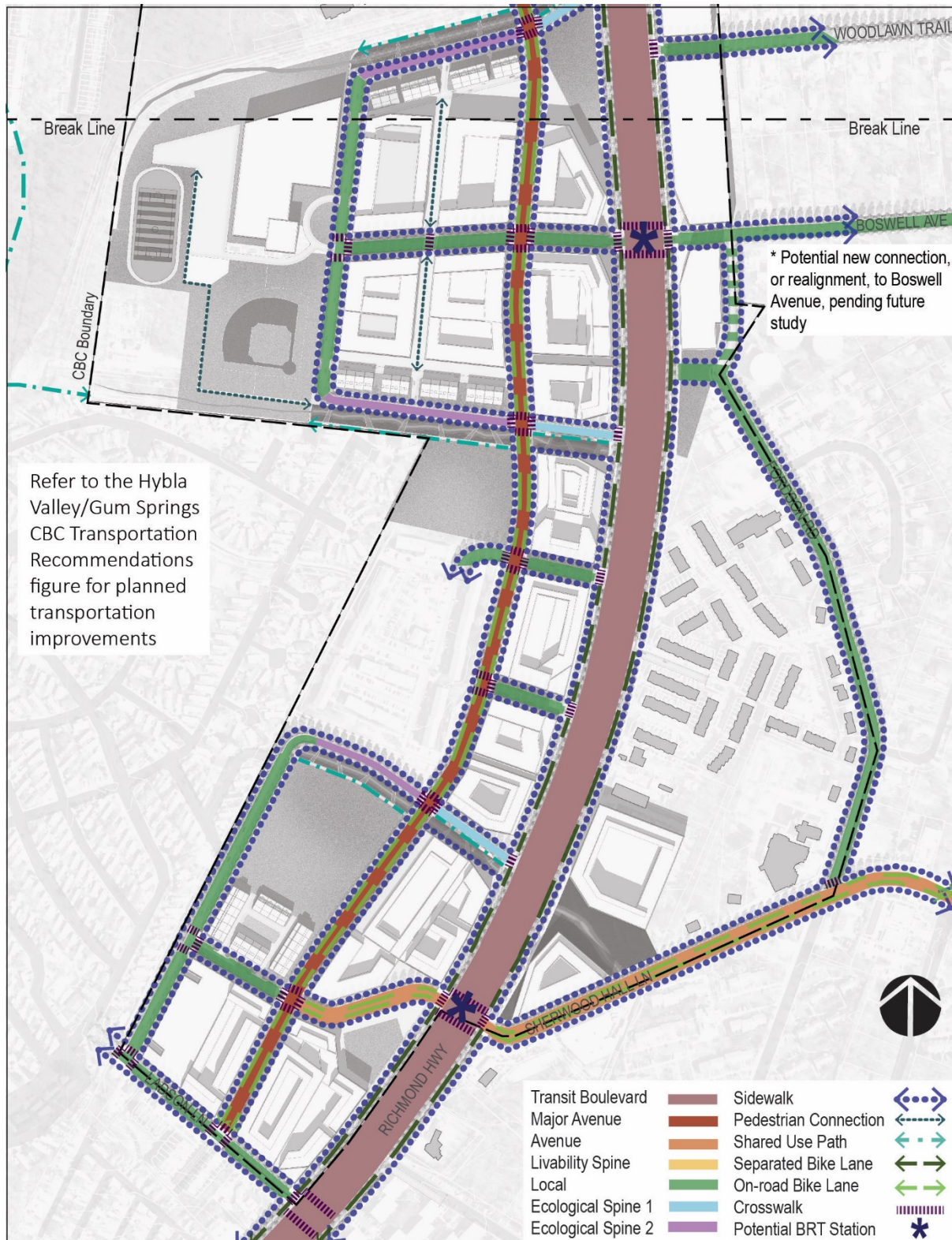
PLANNED TRANSPORTATION IMPROVEMENTS

FIGURE 54



CONCEPTUAL MULTIMODAL NETWORK – NORTHERN HALF

FIGURE 55



CONCEPTUAL MULTIMODAL NETWORK – SOUTHERN HALF

FIGURE 56

LAND UNIT RECOMMENDATIONS

Development Potential

Figure 57 contains the estimated maximum development potential inclusive of the redevelopment options for the Hybla Valley/Gum Springs CBC. The estimate does not include additional development potential under a scenario where Metrorail is extended to this area in the future. Additional development potential of approximately 910,000 square feet associated with a Metrorail station will be implemented when a corridor-wide transportation analysis is completed, coordinated with the Virginia Department of Transportation, and a Full Funding Grant Agreement or a comparable funding agreement to design and build the Metrorail extension is executed.

Additional details about the baseline and redevelopment options are contained in the CBC land unit descriptions that follow. As noted in the Land Use section under Corridor-wide Guidelines, flexibility among non-residential uses may be appropriate provided the overall vision of a vibrant mixed-use community is achieved and multimodal transportation needs are addressed.

It is expected that development will occur in phases. As such, phased development will need to advance the goals and the vision in the Plan, as described in the Implementation section. Development applications must be reviewed in a manner that ensures appropriate phasing to the provision of public improvements. The construction of and/or commitment to the public facilities is expected to be provided appropriately with each phase of development.

Figure 57
 Hybla Valley/Gum Springs CBC Maximum Development Potential under Redevelopment Options

Land Use	Comprehensive Plan development potential inclusive of redevelopment options ¹	
	Dwelling units or jobs	Approximate Gross Square Feet (SF)
Residential ²	3,400 dwelling units	N.A.
Non-residential	6,460 jobs	2.4 million gsf
Office	3,080 jobs	925,000 gsf
Retail	3,000 jobs	1,200,000 gsf
Hotel	100 jobs	130,000 gsf
Institutional	280 jobs	140,000 gsf
Total	3,400 dwelling units and 6,460 jobs	

Note 1: Development potential, employment estimates, and dwelling units are approximate. Conversion factors: office - 300 gsf/job; retail - 400 gsf/job; hotel - 1,300 gsf/job; institutional - 500 gsf/job.

Note 2: The residential development potential does not include potential housing bonuses allowed under the Affordable Dwelling Unit (ADU) Ordinance and the Board of Supervisors Workforce Housing Policy (WDU).

Sub-unit A-1

This approximately 19-acre area is bounded by Lockheed Boulevard to the north, Fordson Road to the west and Richmond Highway to the east.

Base Plan

Sub-unit A-1 is planned for office and/or retail uses up to approximately 415,000 gross square feet. Parcel consolidation and building orientation toward Richmond Highway or Lockheed Boulevard is encouraged with any development proposal. Development near Fordson Road and the Hybla Valley community should be well-screened and buffered from existing uses.

Redevelopment Option

As an option, residential use up to approximately dwelling 500 units may be appropriate on Sub-unit A-1.

Sub-unit A-2

This approximately 14-acre area is located northwest of the intersection of Fordson Road/Boswell Avenue and Richmond Highway.

Base Plan

This sub-unit planned for retail use up to approximately 305,000 gross square feet. Building orientation toward Richmond Highway and parcel consolidation is encouraged.

Redevelopment Option

As an option, residential use up to approximately 300 dwelling units may be appropriate on Sub-unit A-2.

Sub-unit B-1

This approximately 7-acre area is located on the east side of Richmond Highway, adjacent to the Woodley Hills Estate Mobile Home Park.

Base Plan

This sub-unit is planned for office and retail uses up to approximately 105,000 gross square feet.

Redevelopment Option

As an option, if substantial parcel consolidation is achieved, non-residential uses up to approximately 150,000 gross square feet and a maximum building of 50 feet may be appropriate.

Sub-unit B-2

This approximately 9-acre area is located on the northeast corner of Richmond Highway and Arlington Drive.

Base Plan

This sub-unit is planned for office or hotel use up to approximately 200,000 gross square feet.

Redevelopment Option

As an option, non-residential uses up to approximately 260,000 gross square feet may be appropriate, provided the following conditions are met:

- Parcels in this sub-unit are consolidated to facilitate a unified and coordinated development; and,

- Every effort is made to provide additional alternative access, other than from Arlington Drive.

If this area develops as a shopping center, a free-standing drive-through bank may be appropriate, provided the drive-through use meets the recommendations contained in the Land Use section under Corridor-wide Guidelines.

Sub-unit B-3

This approximately 9-acre area is located along the east side of Richmond Highway, south of Arlington Drive.

Base Plan

Sub-unit B-3 is planned for retail use up to approximately 200,000 gross square feet. A maximum building height of 50 feet may be appropriate. Substantial consolidation of lots and access points is encouraged.

Sub-unit B-4

This approximately 3-acre area includes all contiguous commercially-zoned property on the east side of Richmond Highway, between Woodlawn Trail and Boswell Avenue.

Base Plan

This sub-unit is planned for townhouse-style or well-designed retail and office uses up to approximately 60,000 gross square feet with maximum building heights of 40 feet. Substantial consolidation should be achieved to create a unified, coordinated development. Special attention should be given to mitigation of commercial development impacts on the adjacent Hybla Valley Farms subdivision through effective screening and other transition techniques. Access should be consolidated and oriented to Richmond Highway.

Land Unit C

This approximately 25-acre area is located adjacent to the Mount Vernon Plaza Shopping Center along the west side of Fordson Road.

Base Plan

This land unit is planned for residential use at 8-12 dwelling units per acre.

Redevelopment Option

As an option, residential use up to 15 dwelling units per acre may be appropriate if it can be demonstrated that such development is of sufficiently high quality to be an appropriate and compatible use adjacent to the stable Hybla Valley residential community. In order to accomplish that, development should meet the following conditions:

- The riparian buffer areas in the Resource Protection Area/Environmental Quality Corridor along the southern boundary of the land unit should be planted with native vegetation and restoration of the stream should be encouraged;
- Townhouses, at the lower end of the planned density range, buffered by a 60-foot landscaped strip, instead of the required 25-foot strip along the northern edge of the property, are the most dense type of development to occur next to the Hybla Valley subdivision;
- Garden apartments are restricted to the central and southern portions of the tract;

- Quality of construction and appearance of the development are compatible with the Hybla Valley subdivision;
- A drainage study is undertaken and any proposed development ensures that the contribution of stormwater runoff from the site to stream degradation downstream of the site will be reduced substantially because of the high water table in the area, noting that the application of Low Impact Development (LID) practices should be considered toward this end; and,
- Adequate recreational space should be supplied within the project boundaries to serve the needs of the residents.

Sub-unit D-1

This approximately 46-acre area includes Mount Vernon Plaza and South Valley Shopping Center, located on the west side of Richmond Highway at Fordson Road.

Base Plan

This sub-unit is developed with retail shopping centers and is planned for retail use up to approximately one million gross square feet.

Redevelopment Option

As an option, this sub-unit is planned for mixed-use redevelopment up to approximately 900 dwelling units and 1.1 million gross square feet of nonresidential uses. Full parcel consolidation should be achieved except for the Virginia Power substation located on Tax Map Parcel 101-2((1))12C. Non-residential uses should be located near the BRT station and within the ground-floor of residential buildings, as appropriate. A variety of non-residential uses should be provided to support a diverse employment base. Under a Metrorail scenario, this area may be appropriate for a mix of uses up to a total of approximately 2.7 million square feet of development in coordination with the execution of a Full Funding Grant Agreement or comparable funding agreement to design and build the Metrorail extension. Prior to any implementation of Metrorail levels of development, a corridor-wide transportation analysis assuming these Metrorail levels of development should be completed in coordination with the Virginia Department of Transportation.

Sub-unit D-2

This approximately 17-acre area is located on the west side of Richmond Highway and includes the Mount Vernon Crossroads and Hybla Valley Center shopping centers.

Base Plan

Sub-unit D-2 is planned for retail use up to approximately 370,000 gross square feet.

Redevelopment Option

As an option, this sub-unit is appropriate for predominately residential mixed-use development comprised of approximately 500 dwelling units and up to 100,000 gross square feet of non-residential use.

Sub-unit D-3

This approximately 8-acre area contains the Murraygate Apartments.

Base Plan

This sub-unit is planned for residential use at 16-20 dwelling units per acre.

Sub-unit D-4

This approximately 26-acre sub-unit on the west side of Richmond Highway contains the Wal-Mart and Costco centers.

Base Plan

This sub-unit is planned for retail use up to approximately 565,000 gross square feet with a maximum building height of 60 feet.

Redevelopment Option

As an option, this sub-unit is appropriate for mixed-use development up to approximately 200 dwelling units and 340,000 gross square feet of nonresidential use, with a maximum building height of 60 feet. Under a Metrorail scenario, this area may be appropriate for a mix of uses up to a total of approximately 800,000 square feet of development in coordination with the execution of a Full Funding Grant Agreement or comparable funding agreement to design and build the Metrorail extension. Prior to any implementation of Metrorail levels of development, a corridor-wide transportation analysis assuming these Metrorail levels of development should be completed in coordination with the Virginia Department of Transportation.

Land Unit E

This approximately 31-acre sub-unit, bounded by Richmond Highway to the west, Fordson Road to the east, and Sherwood Hall Lane to the south, contains the Village at Gum Springs townhouse community, developed at 12-16 dwelling units per acre, and the Gum Springs Center, a neighborhood serving retail center.

Base Plan

Existing and proposed land uses within the Gum Springs Conservation Area should develop in accordance with the Gum Springs Neighborhood Improvement Program and Conservation Plan, adopted by the Board of Supervisors on April 30, 1979, and amended on April 16, 1990.

Redevelopment should be done in accordance with the Gum Springs Redevelopment Plan, adopted by the Board of Supervisors on April 16, 1990. The heritage resources within the historic community of Gum Springs should be protected in all development proposals.

The Gum Springs Redevelopment Plan area is planned for residential development at 5-8 dwelling units per acre and for office and commercial uses along the Richmond Highway frontage. Residential development at 16-20 dwelling units per acre and a reconfiguration of the strip commercial areas into areas of office and/or retail uses may be appropriate, if the following land use and transportation conditions are met:

- Substantial consolidation of the land area to include the frontage along Richmond Highway is achieved, and a coordinated redevelopment as a well-integrated, high-quality, planned development of residential and community-serving office and/or retail commercial uses is provided;
- Residential development should consist of a mix of townhouses, apartments and single family detached units with landscape treatments used along Richmond Highway to buffer residential units from noise and visual impacts; single-family detached houses should be located along the Fordson Road frontage and should be compatible with and provide a transition to the single-family detached neighborhood to the east. These houses should be effectively protected from any adverse impacts generated by adjacent higher intensity residential or commercial development through a combination of architectural and landscaping treatments;

- A minimum 12.5% of the total number of units proposed should meet the standards for affordable housing, as determined by the Department of Housing and Community Development;
- New development is sensitive to the existing institutional and residential uses, which have long-standing ties to the Gum Springs Community, and effective measures should be taken to protect these institutional uses from any adverse impacts generated by adjacent higher intensity residential, office or retail development through a combination of architectural and landscaping techniques;
- Office and retail development is architecturally compatible with adjacent residential uses, fronts on Richmond Highway, and is oriented to community needs and services. Commercial development should be located north and south of Gum Springs Village. A mix of office development up to 0.35 FAR and retail development up to 0.25 FAR is appropriate. Townhouse-style office development not to exceed 40 feet in height is recommended. Retail development shall also not exceed 40-feet in height. Auto-oriented uses that contribute to strip commercial-type development are not appropriate;
- Pedestrian connections to the adjacent neighborhoods are provided as part of a continuous, coherent urban design treatment. Streetscape improvements along Richmond Highway should be in general conformance with the design standards outlined in the urban design recommendations. Usable open space to serve the residents should be provided in conjunction with any multifamily residential development; and
- Mitigation is provided for noise impacts, drainage, and poor soil conditions and existing vegetation is incorporated in the project design.

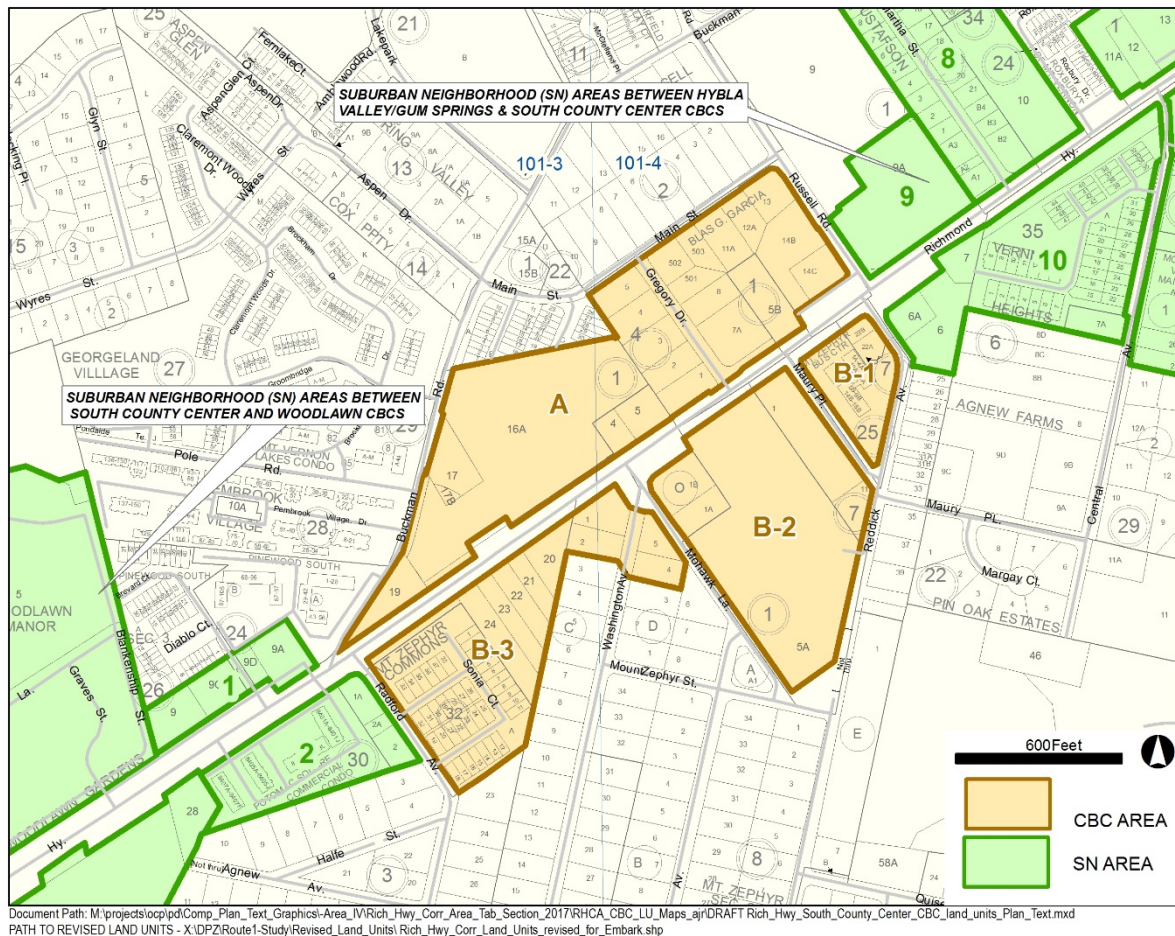
Future development in the Gum Springs Redevelopment Area should be based upon the following transportation considerations:

- Intersection improvements along Richmond Highway, in the vicinity of the redevelopment area and between the redevelopment area and the shopping centers on the west side of Richmond Highway, are planned to enhance traffic safety and flow and includes the potential, new Fordson Road connection, or realignment, on the east side of Richmond Highway, to Boswell Avenue, with option to consolidate traffic signals on Richmond Highway, pending future study;
- Provision of safe pedestrian access from the redevelopment area to the west side of Richmond Highway;
- Provision of left/right turn and through lanes at the Sherwood Hall intersection with Richmond Highway is recommended. The exact intersection design will be determined during future design studies along the corridor;
- Consolidation of access points to the property along the Richmond Highway frontage;
- Provision for interparcel access connecting the various sections of the redevelopment area;

- Provision on Richmond Highway for an additional northbound lane from Sherwood Hall Lane to Boswell Avenue for right turns, deceleration/acceleration, and future widening; and
- Provision for continuous sidewalks and bicycle lanes along the Richmond Highway frontage.

SOUTH COUNTY CENTER COMMUNITY BUSINESS CENTER

The South County Center is the focal point of this CBC. The center provides space for the Community Health Center, the General District Court, the Juvenile Domestic Court and other service providers. Diverse land uses are located within the CBC and in addition to the South County Government Center, including residential neighborhoods with retail and office uses located close by. Figure 58 indicates the geographic location of the land units in the South County Center CBC, shown in yellow, and the Suburban Neighborhood areas on either side of the CBC, shown in green.



SOUTH COUNTY CENTER CBC BOUNDARY AND LAND UNITS **FIGURE 58**

LAND UNIT RECOMMENDATIONS

Development Potential

Figure 59 contains the estimated maximum development potential inclusive of the redevelopment options for the South County Center CBC. Additional details about the baseline and redevelopment options are contained in the CBC land unit descriptions that follow. As noted in the Land Use section under Corridor-wide Guidelines, flexibility among non-residential uses may be appropriate provided the overall vision of a vibrant mixed-use community is achieved and

multimodal transportation needs are addressed.

Figure 59

South County Center CBC Maximum Development Potential under Redevelopment Options

Land Use	Comprehensive Plan development potential inclusive of redevelopment options ¹	
	Dwelling units or jobs	Approximate Gross Square Feet (gsf)
Residential ²	201 dwelling units	N/A
Non-residential	2,174 jobs	764,000 gsf
Office	1,432 jobs	430,000 gsf
Retail	379 jobs	152,000 gsf
Institutional	363 jobs	182,000 gsf
Total	201 dwelling units and 2,174 jobs	

Note 1: Development potential, employment estimates, and dwelling units are approximate. Conversion factors: office - 300 gsf/job; retail - 400 gsf/job; institutional - 500 gsf/job.

Note 2: The residential development potential does not include potential housing bonuses allowed under the Affordable Dwelling Unit (ADU) Ordinance and the Board of Supervisors Workforce Housing Policy (WDU).

Land Unit A

This land unit comprises the approximately 21-acre area bordered by Russell Road, Main Street, Buckman Road and Richmond Highway.

Base Plan

The land unit is planned for office and/or retail and/or mixed use up to approximately 610,000 gross square feet.

Sub-unit B-1

This 2-acre sub-unit comprises the Mount Zephyr Business Center.

Base Plan

The sub-unit is planned for office and/or retail use up to approximately 35,000 gross square feet with maximum building heights of 40 feet.

Sub-unit B-2

This 12-acre sub-unit comprises the Original Mount Vernon High School site, located on the east side of Richmond Highway between Maury Place and Mohawk Lane.

Base Plan

The Original Mount Vernon High School site should be retained in county ownership and preserved as a local historic site. The site is eligible for listing in the National Register of Historic Places. The building is planned for public facilities use, primarily for educational use. The campus includes a main building that is surrounded by, and attached to, smaller structures. Ancillary institutional uses to support non-profit services may be appropriate in the peripheral buildings.

Existing county owned open space at the rear of the property should be retained as publicly accessible park space, subject to Board of Supervisor' approval.

Tax Map Parcels 101-4 ((8))(O)1A and 1B, which are located at the northeast corner of Richmond Highway and Mohawk Street adjacent to the Original Mount Vernon High School are planned for institutional use. Uses may include a community recreation center and performing and visual arts center.

Any design and development plan should be compatible with the historic nature of the Original Mount Vernon High School. These uses are consistent with the Richmond Highway revitalization goals and present an opportunity for a community activity center and adaptive reuse of the site.

Redevelopment Option

The Original Mount Vernon High School and site may be appropriate for reuse and redevelopment. The mix of uses and intensities should be examined through a concurrent Comprehensive Plan amendment and zoning application.

Sub-unit B-3

This 10-acre sub-unit includes properties located on the east side of Richmond Highway between Mohawk Lane and Radford Avenue.

Base Plan

The sub-unit is planned for residential use at 5-8 dwelling units per acre. Substantial lot consolidation should be achieved and a landscaped open space buffer should be provided adjacent to the existing residential community.

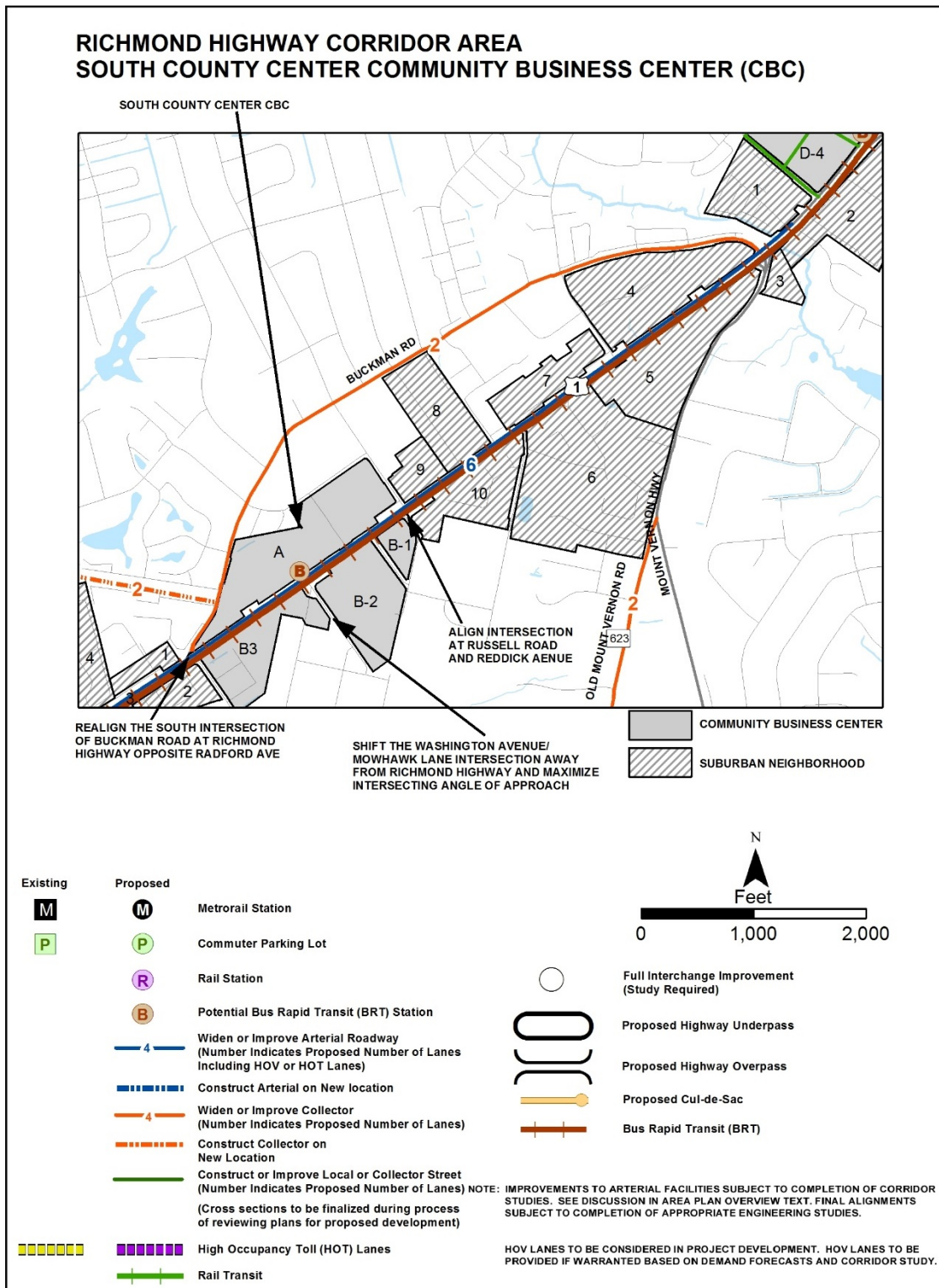
Redevelopment Option

As an option, the area from Mohawk Lane to and including Tax Map 101-3((1))20 may be appropriate for retail and/or office use at 0.35 FAR in order to create a gateway into the Mount Zephyr community. The design of the retail and/or office use should be compatible in scale and appearance with the residential neighborhood.

- Nonresidential uses should be oriented to Richmond Highway and Mohawk Lane and building heights should be tapered down toward the existing single-family area;
- Land use design techniques should be incorporated to minimize impact on adjacent residential neighborhoods from building heights, noise, light and any other adverse impacts associated with the development;
- Effort should be made to preserve specimen trees.

Transportation

Transportation recommendations for the South County CBC are shown on Figure 60. In some instances, site-specific transportation recommendations are included in the land use recommendations section. The figure shows access orientation, circulation plans, interchange impact areas and generalized locations of proposed transit facilities. The recommendations contained in the Area Plan text and maps, the Policy Plan and Transportation Plan map, policies and requirements in the Public Facilities Manual, the Zoning Ordinance, and other standards will be utilized in the evaluation of development proposals.

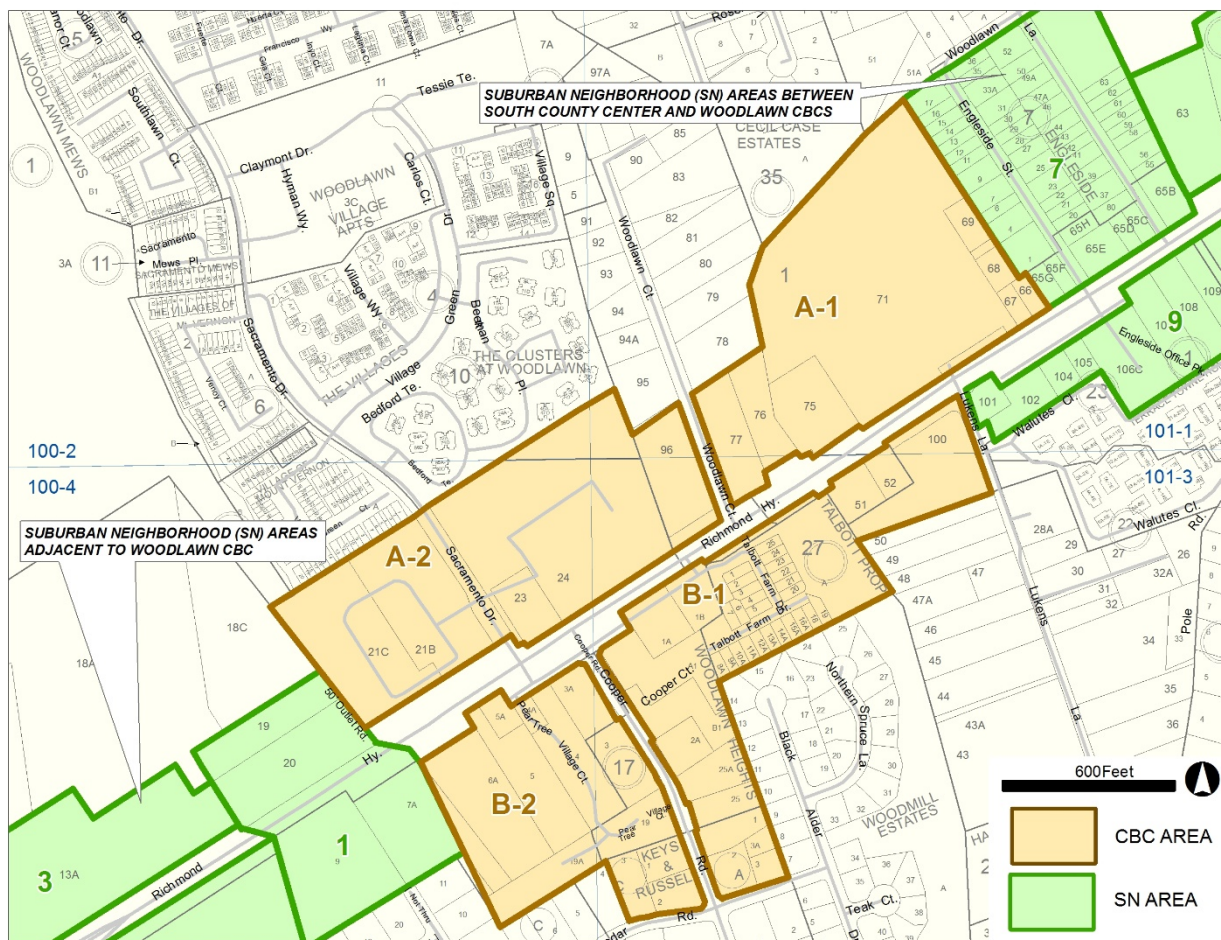


PLANNED TRANSPORTATION IMPROVEMENTS **FIGURE 60**

WOODLAWN COMMUNITY BUSINESS CENTER

The Woodlawn CBC is located near an abundance of historical sites and regionally important destinations, including Mount Vernon, Washington’s Grist Mill, the Woodlawn and Pope-Leighey House, the Mount Vernon Country Club, Fort Belvoir, and the planned National Museum of the United States Army. This area of Richmond Highway is also distinguished by its environmental assets and proximity to the Potomac River. Dogue Creek and associated environmental corridors traverse the area from north to south and ultimately lead to the Potomac River.

The Woodlawn CBC contains three major shopping centers located on the northwest side of Richmond Highway: Woodlawn Shopping Center, Engleside Plaza, and Sacramento Center. On the southeast side of Richmond Highway there are strip commercial uses, including fast food restaurants, auto repair establishments and converted residences. Two small shopping centers, Cooper Center and Pear Tree Village, located on the southeast side of Richmond Highway, offer a well-designed collection of locally-oriented retail and service businesses. Figure 61 indicates the geographic location of land units in the Woodlawn CBC, shown in yellow, and the Suburban Neighborhood Areas on either side of the CBC, shown in green.



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WOODLAWN CBC BOUNDARY AND LAND UNITS

FIGURE 61

CONCEPTUAL PLAN

The Woodlawn CBC is envisioned to provide a transit-oriented, mixed-use village and tourist hub around a potential BRT station at the intersection of a realigned Sacramento Drive and Cooper Road at Richmond Highway. Due to the planned BRT station and the CBC's close proximity to Fort Belvoir, the CBC should provide a mix of mid-rise office, residential, and other commercial developments. Redevelopment within the Woodlawn CBC should continue to meet the needs of the adjacent communities, while supporting the nearby tourist-oriented attractions through lodging, dining and other visitor facilities, and by providing a variety of ways to access recreational and cultural amenities. One possible means for providing residents and visitors with a new way of accessing the cultural and natural resources would be to create a network of multi-use pathways that lead from the CBC to these attractions via foot or bicycle. This network of pathways could form a cultural corridor that allows visitors to engage more fully with the area's natural and heritage resources. Figure 62 shows the historic sites and ecological features near the CBC and illustrates how they could possibly be connected in the future through multi-use paths. These paths would form a cultural corridor that connects the CBC to these assets.

Redevelopment should enhance multimodal connectivity within the CBC as well as to surrounding areas and to the planned BRT station. A multimodal grid of streets is planned to connect both sides of the CBC and organizes circulation and development within the CBC. The grid should form rectilinear and developable-sized blocks. It is envisioned to be multimodal and should provide for the needs of motorists, bicyclists and pedestrians on all streets. There are different types of bicycle facilities for each roadway based on the street type and adjacent land uses, all of which should form a connected network that provides access to existing and planned bicycle facilities, potential BRT stations, and local bus service. Pedestrian facilities should connect within the CBC, to the potential BRT stations, local bus service, and to existing pedestrian facilities in adjoining neighborhoods, parks and open spaces. Intersections in the new grid of streets should be spaced so that blocks are pedestrian-scaled at walkable distances. Pedestrian crosswalks at the potential BRT station locations and at signalized intersections should permit pedestrian movement to and from either side of Richmond Highway. Mid-block pedestrian connections, including pass-throughs and roadway crossings are recommended on large blocks. Refer to the Multimodal Transportation Improvements section for the location and type of street improvements, and bicycle and pedestrian facility recommendations. Figure 63 illustrates the conceptual plan for the Woodlawn CBC.

The Conceptual Plan should be used as a guide for development proposals. There is flexibility in how the Conceptual Plan can be implemented provided there is general adherence to the grid of streets, in particular the Livability and Ecological Spines, the open space network, the location of station-area plazas, and the placement of ground-floor non-residential uses. Figure 62 illustrates the conceptual trails network connecting community and historic assets to the Woodlawn CBC.



WOODLAWN CBC CONCEPTUAL TRAILS NETWORK

FIGURE 62



WOODLAWN CBC CONCEPTUAL PLAN

FIGURE 63

The realigned Sacramento Drive connection with Cooper Road should be designed to form a Livability Spine running perpendicular to Richmond Highway. The Livability Spine will be the center of activity in the CBC and should be lined with retail, restaurants, and other commercial uses along with park and plaza spaces to provide amenities for both visitors and local residents. Figure 64 is a visualization of the character envisioned for the Livability Spine near the BRT station. The hotel with conference center is envisioned to be located in the vicinity of the BRT station and the Livability Spine to serve visitors, including large groups and conference events.



CHARACTER OF LIVABILITY SPINE

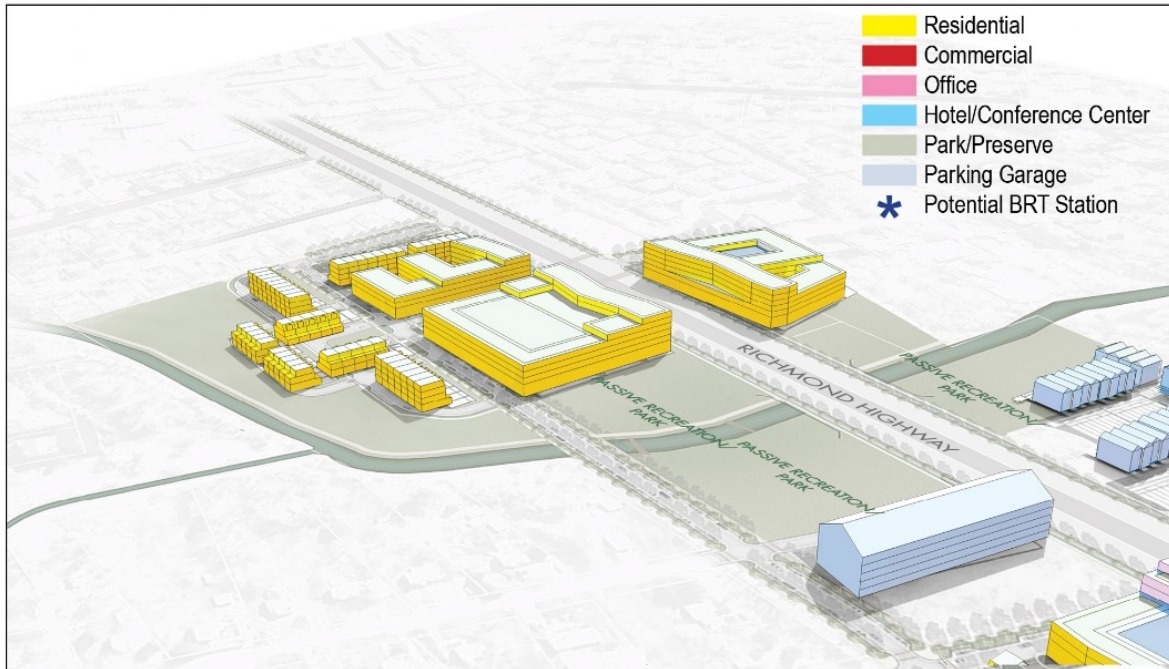
FIGURE 64

In addition to the grid of streets, open spaces should comprise a major feature of the CBC. Open spaces consisting of Civic Plazas, Resource-based Parks, Ecological Spine Type 4, Pocket Parks, and a Recreation-based Park should provide physical organization for redevelopment as well as new amenities for the community. Civic Plazas should be provided on both the north and south side of Richmond Highway directly across from the proposed the BRT station to provide attractive gathering spaces for pedestrians accessing the station from either side of Richmond Highway. Resource-based Parks may be considered in select portions of Resource Protection Areas (RPAs) within the Woodlawn CBC, including along Dogue Creek if designed to ensure environmentally sensitive resources are protected. The RPA located in the northern half of the Woodlawn CBC should include an Ecological Spine and if feasible, a below-grade pedestrian crossing of Richmond Highway to provide access to the Resource-based Park space for the surrounding neighborhoods. The Ecological Spine through the Resource-based Park provides several functions: it celebrates waterways by naturalizing channelized streams; forms pedestrian and bicycle connections to unite neighborhoods, parks, and historic sites; and provides

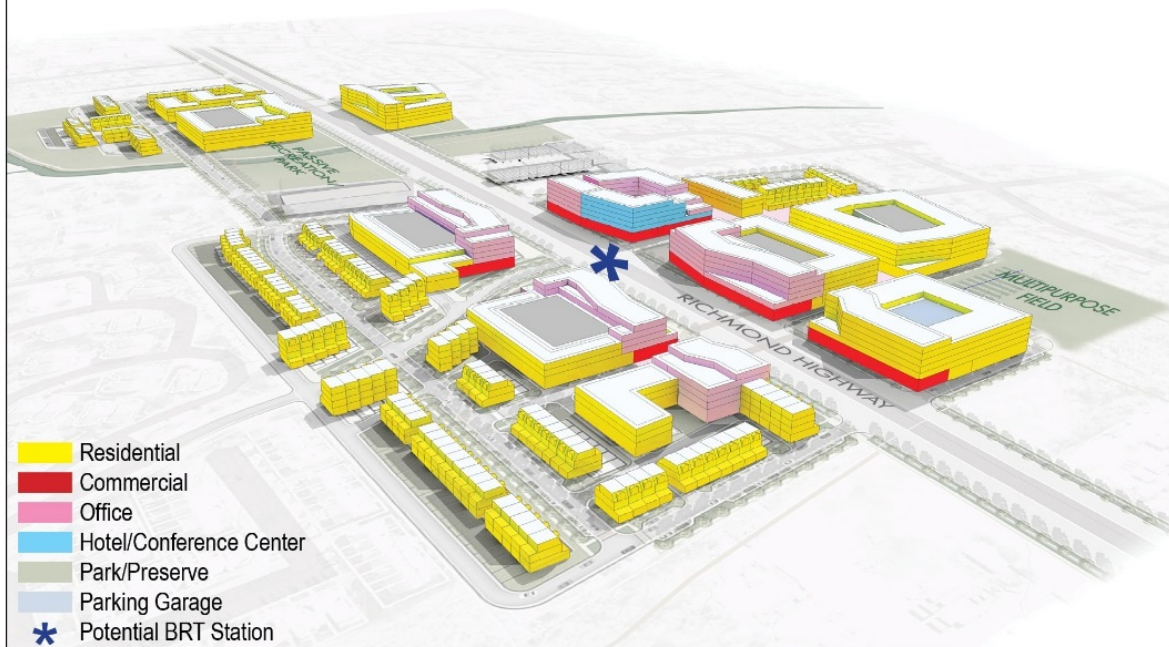
environmental benefits for stormwater collection and habitat restoration. Detailed information on the design of the Ecological Spine is in the Open Space Network. A Recreation-focused park should be located near the Resource Protection Area (RPA) that borders the southern edge of the CBC and connects to Pole Road Park.

Buildings along Richmond Highway should be mixed-use. Retail uses should be located on the ground-floor of buildings within certain blocks adjacent to Richmond Highway as well as along the Livability Spine. Office, hotel and conference center uses should be located in the general vicinity of the BRT station. Office space may be desired to support defense and health uses at Fort Belvoir. New housing should be a predominate use and may comprise entire blocks within the CBC or may be located above ground-floor retail. Lower density residential uses, such as townhomes or stacked townhomes, are envisioned along the edges of the CBC to provide a compatible transition to existing neighborhoods.

Architectural designs should creatively address building scale through massing. Buildings should have a consistent ground-floor plane next to the building zone. Building rooflines should not be uniform across a block. Non-residential uses should have their entrances and any associated outdoor spaces open onto plazas, Richmond Highway and the Livability Spine. Terraces, green roofs, and other rooftop amenities are encouraged in order to maximize outdoor recreational opportunities for residents and workers; provide environmental benefits, such as stormwater collection and heat island reduction; and enhance the views from the upper stories of buildings. Figure 65 illustrates how building massing is envisioned and how land uses should be organized.



View from the



BUILDING FORM, MASSING, AND PLANNED USES
WOODLAWN CBC

FIGURE 65

BUILDING HEIGHTS

Building height is one of the key elements to determine the amount of development potential that is achievable in each land unit. Figure 66 illustrates the recommended building heights in the Woodlawn CBC. Building heights in the same block should vary. Consult Vision Element 5 and the building height recommendations contained within the Urban Design section, Corridor-wide Guidelines, for further information.

Overall development should be less intense and have lower-scaled buildings in the Woodlawn CBC as compared to other CBCs in the Richmond Highway corridor. However, building form should generally follow a similar pattern as other CBCs where the tallest buildings are located on Richmond Highway. Buildings that are up to 6 stories in height are recommended on Richmond Highway and locations closest to the BRT station. Buildings abutting existing residential communities should be of a compatible scale and height, tapering to approximately 3 to 4 stories in height. An existing 2-story hotel and 4-story townhouse development are retained.

As part of the entitlement process, future redevelopment within the Woodlawn CBC will need to provide additional analysis to demonstrate the extent to which the building heights of the development proposal would be visible from Historic Huntley and Woodlawn. Development that indicates any potential for visibility may be expected to exclude building materials that would exacerbate impacts to views (e.g. highly reflective materials, building lighting).



**CONCEPTUAL BUILDING HEIGHTS
 WOODLAWN CBC**

FIGURE 66

OPEN SPACE NETWORK

The Woodlawn CBC is planned to be served by a variety of urban park spaces, following the guidance of the Urban Parks Framework. While each development is expected to address the urban park need generated by its development, there are several park spaces that are integral to the Conceptual Plan that should guide the provision of urban park space within the CBC. Within the context of the overall Richmond Highway Corridor, the Woodlawn CBC is the southern entrance to the corridor; as such, public spaces should be designed to welcome and orient visitors to the legacy of the corridor.

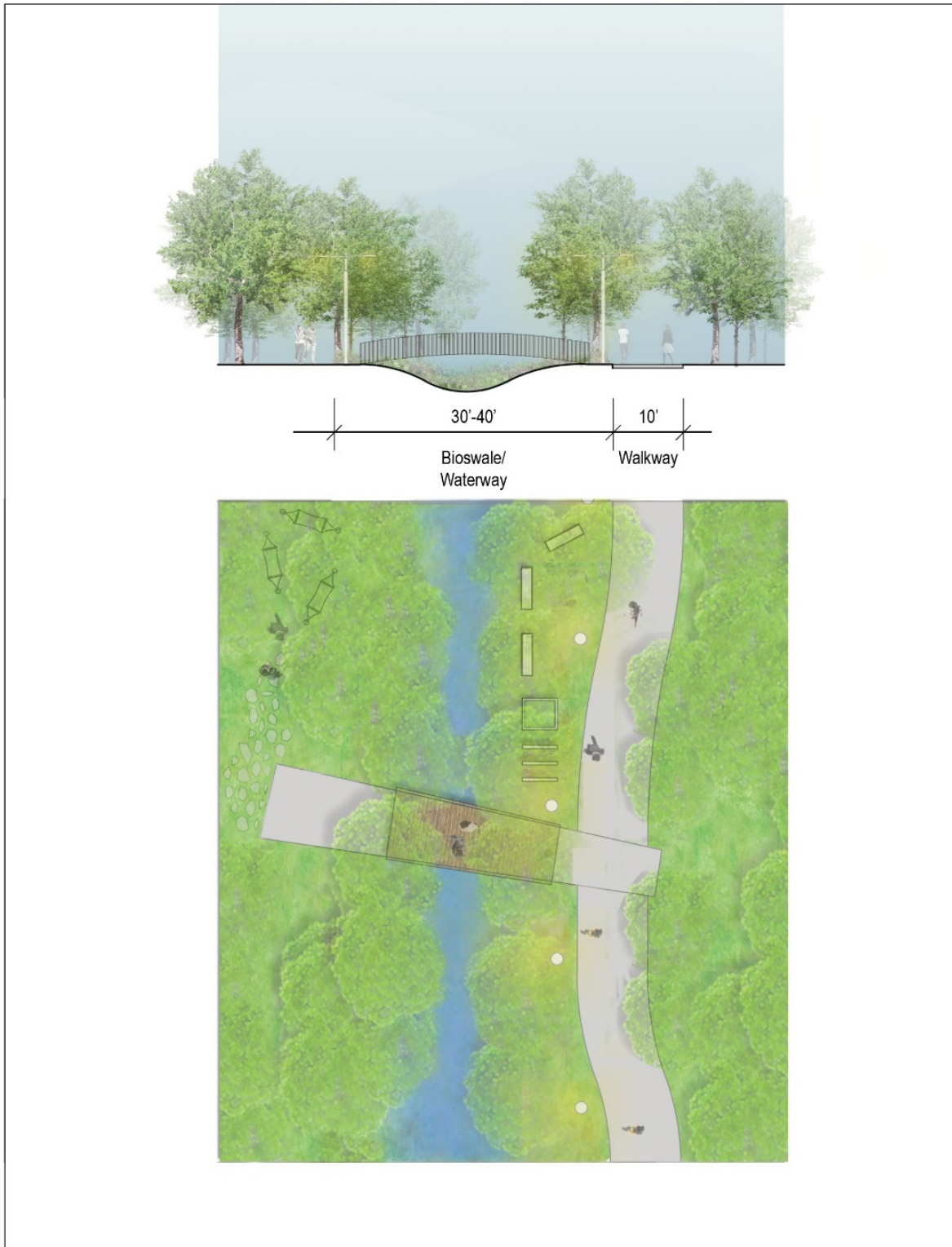
The Conceptual Plan for the Woodlawn CBC includes Civic Plaza spaces adjacent to the potential BRT station. In addition to supporting the function of the transit station, Civic Plazas should provide clear routes of pedestrian access and orientation for tourists, residents, and workers. Wayfinding signage, a variety of seating options, and lighting should encourage activity in these key locations and support the function of the BRT system. Design should include creative opportunities for interpretation of the area's history and ecology. Landscaping should provide visual interest throughout the year as well as shade for pedestrians.

The Linear Park spaces of the Livability Spine are continuous corridors of publicly accessible urban park space that will provide access to recreation and outdoor spaces. A variety of spaces and features should serve everyday needs for activity and community building such as outdoor fitness areas, sport courts, fenced dog parks, playgrounds, and a variety of seating options. It is encouraged that development of programmable areas, such as yoga plazas, tai chi spaces, and sport courts be accompanied by a commitment to program community use of those areas. Play features and design elements that reflect ties to the area's ecology and history are encouraged. Developments should contribute to the creation of a proportionate segment of the Livability Spine. Individual developments should expand upon the range of features within the overall Linear Park. Elements of the Linear Park may also be augmented through the provision of publicly accessible indoor and rooftop facilities.

The Woodlawn CBC is bisected by the North Fork of Dogue Creek, a significant tributary of the Potomac River. Development patterns that occurred prior to the enactment of the Chesapeake Bay Preservation Ordinance retained only minimal buffers along this watercourse. Opportunities should be explored to restore the RPA and increase buffer widths, emphasizing native plantings. Redevelopment options are encouraged that include consolidation of land area along Dogue Creek, permitting the Chesapeake Bay Resource Protection Areas to be developed as an Ecological Spine Type 4 as conceptualized in Figure 67.

From a functional standpoint, an Ecological Spine should serve to convey water flows and be designed to enhance water quality with buffers of native plants to help filter run-off. The Ecological Spine, however, is also envisioned as a Linear Park space for daily outdoor life and passive recreation in the Woodlawn CBC. Pedestrian and bicycle facilities should be provided along one side of the waterway. Selective bridge crossings may be provided, allowing the trail to engage both sides of the stream, in response to adjacent development patterns. Design of the Ecological Spine should also support daily opportunities for relaxation, activity, and enjoyment of the outdoors for the future residents and visitors. In context with adjacent uses, the Ecological Spine should offer a variety of seating and opportunities for social interaction. The width of the Resource Protection Area in the Woodlawn CBC allows for a naturalized development of this space. All programmed spaces should be designed to respect the hydrology of the Ecological Spine, the requirements of the Chesapeake Bay Preservation Ordinance, and draw upon the theme of valuing ecology. Although individual developments will contribute incrementally to the Ecological Spine, this Linear Park should be envisioned as one continuous space, available to the

serve the entire community. Individual development programs should seek to expand on the variety of spaces and features offered.



ECOLOGICAL SPINE TYPE 4 **FIGURE 67**

Future development within the Woodlawn CBC should capitalize on the adjacency of existing parkland, expanding on the ability of residents to connect to natural areas and passive recreation opportunities. Pole Road Park, located southwest of the CBC, offers the potential for views of nature and wildlife. A Pocket Park is shown at the western edge of the CBC, adjacent to Pole Road Park, which is owned by the Fairfax County Park Authority. This Pocket Park provides an opportunity to connect visually and thematically with this wetland park. Creation of an overlook with seating and interpretive features would be appropriate in this location. Opportunities to extend pedestrian connections to Pole Road Park that respect and preserve the area's sensitive hydrology should be considered, facilitating pedestrian access from the Woodlawn CBC and adjacent communities, providing additional opportunities for passive recreation, connection with nature, and resource interpretation. Careful engineering and design will be required to support connectivity without degradation of sensitive hydrology and habitats, such as elevated walkways and railings to prevent encroachment beyond designated pathways.

Development within the Woodlawn CBC will generate additional need for athletic fields to serve future residents and workforce. The Conceptual Plan for the Woodlawn CBC envisions an area able to support athletic fields and active recreation. Developments that generate the need for less than a full athletic field are encouraged to consolidate their efforts in seeking creative solutions to address this need. Figure 68 is a visualization of the conceptual open space network for the Woodlawn CBC.



**CONCEPTUAL OPEN SPACE
WOODLAWN CBC**

FIGURE 68

MULTIMODAL TRANSPORTATION IMPROVEMENTS

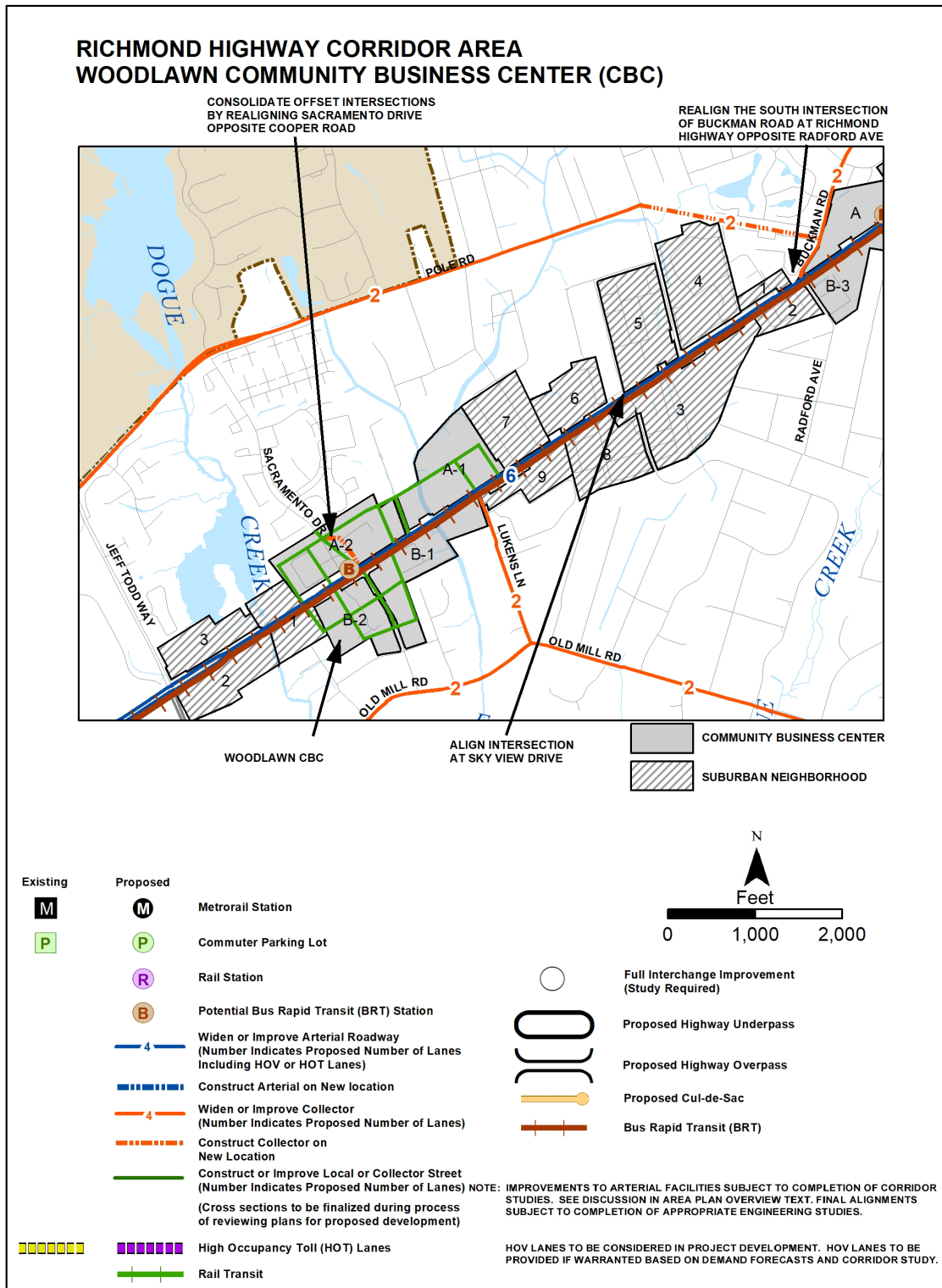
The Woodlawn CBC is primarily served by Richmond Highway. A BRT station on Richmond Highway is proposed for this CBC at the intersection of Sacramento Drive and Cooper Road. See Figure 69 for planned transportation improvements in the CBC area and other nearby roadways. The following is a list of improvements for the Woodlawn CBC:

- Implement a new multimodal grid of streets on both sides of Richmond Highway, including two new streets paralleling Richmond Highway that would provide additional connectivity within the CBC and offer alternative routes.
- Connect new streets within the CBC to existing roadways, including Lukens Lane, Cooper Road, and Sacramento Drive.
- Realign Sacramento Drive to Cooper Road to form a single intersection crossing Richmond Highway.
- Extend Lukens Lane across Richmond Highway to the west side of the CBC to improve connectivity.
- Connect bicycle and pedestrian facilities within the CBC, to the potential BRT station, local bus stops, and to existing facilities in adjoining neighborhoods, parks, and open spaces.

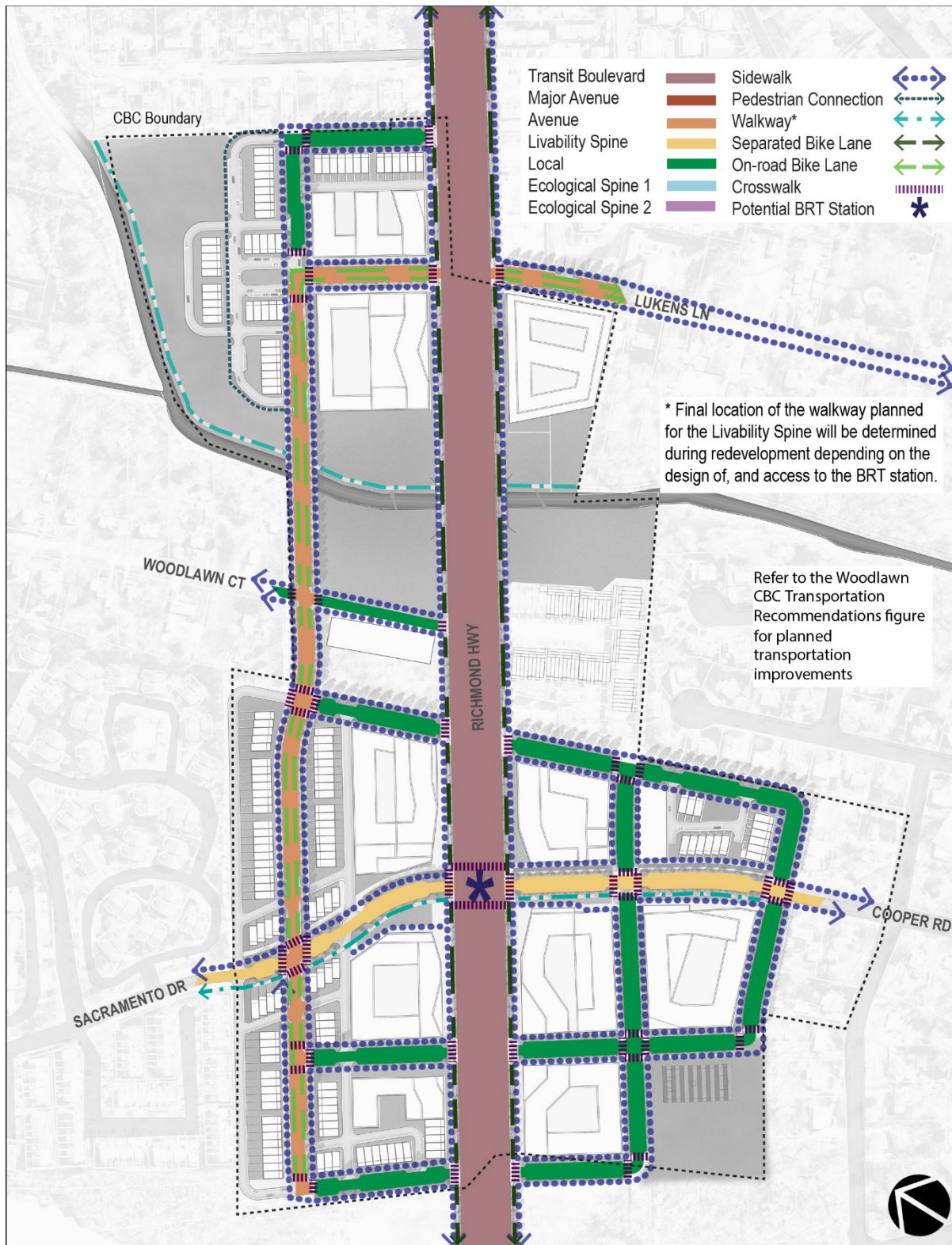
For more information on the specific cross-sections and road design characteristics of the multimodal network, see the USND section of this Plan. Also, refer to the Fairfax County Bicycle Master Plan for bicycle facility guidelines. The location and type of street, bicycle and pedestrian facilities within the planned grid of streets is depicted in Figure 70, Conceptual Multimodal Network.

Woodlawn Cultural Corridor

A large network of multi-use pathways should form a cultural corridor that allows visitors to engage more fully with the area's natural and heritage resources. This network would support tourism activities and provide a non-vehicular means of transportation to these resources. Starting within the CBC and extending beyond its boundaries, the network should consist of a series of multi-use paths within green spaces or along roadways that link the CBC to key destinations including parks, recreational amenities, historic, and cultural sites.



PLANNED TRANSPORTATION IMPROVEMENTS **FIGURE 69**



**CONCEPTUAL MULTIMODAL NETWORK
WOODLAWN CBC**

FIGURE 70

LAND UNIT RECOMMENDATIONS

Development Potential

Figure 71 contains the estimated maximum development potential inclusive of the redevelopment options for the Woodlawn CBC. Additional details about the baseline and redevelopment options are contained in the CBC land unit descriptions that follow. As noted in the Land Use section under Corridor-wide Guidelines, flexibility among non-residential uses may be appropriate provided the overall vision of a vibrant mixed-use community is achieved and multimodal transportation needs are addressed. Construction or commitment to the grid of streets, open spaces, parks, and a mix of residential and non-residential uses, as applicable to each CBC, is expected to be phased with development.

It is expected that development will occur in phases. As such, phased development will need to advance the goals and the vision in the Plan, as described in the Implementation section. Development applications must be reviewed in a manner that ensures appropriate phasing to the provision of public improvements. The construction of and/or commitment to the public facilities is expected to be provided appropriately with each phase of development.

Figure 71
 Woodlawn CBC Maximum Development Potential under Redevelopment Options

Land Use	Comprehensive Plan development potential inclusive of redevelopment options ¹	
	Dwelling Units or Jobs	Approximate Gross Square Feet (gsf)
Residential ²	1,020 dwelling units	N/A
Non-residential	2,614 jobs	887,250 gsf
Office	2,100 jobs	630,000 gsf
Retail	456 jobs	182,250 gsf
Hotel	58 jobs	75,000 gsf
Total	1,020 dwelling units and 2,614 jobs	

Note 1: Development potential, employment estimates, and dwelling units are approximate. Conversion factors: office - 300 gsf/job; retail - 400 gsf/job; hotel - 1,300 gsf/job.
 Note 2: The residential development potential does not include potential housing bonuses allowed under the Affordable Dwelling Unit (ADU) Ordinance and the Board of Supervisors Workforce Housing Policy (WDU).

Sub-unit A-1

This approximately 19-acre area primarily consists of the Engleside Plaza Shopping Center and other strip commercial uses located on the west side of Richmond Highway, north of Woodlawn Court.

Base Plan

This sub-unit is planned for community-serving retail use up to approximately 290,000 gross square feet.

Redevelopment Option

As an option, with substantial consolidation, Sub-unit A-1 is planned for primarily residential mixed-use redevelopment up to approximately 180 dwelling units and 30,000 square feet non-residential uses.

Sub-unit A-2

Sub-unit A-2 includes approximately 18 acres that primarily consists of the Woodlawn Shopping Center, the Sacramento Shopping Center, and other strip commercial uses located on the west side of Richmond Highway south of Woodlawn Court.

Base Plan

Sub-unit A-2 is planned for community-serving retail use up to approximately 320,000 gross square feet. An efficient internal vehicular circulation system should be provided to include consolidation of access points away from the existing intersection to the extent possible. A pedestrian and bicycle circulation system which encourages pedestrian and bicycle use within the development and to adjacent developments should also be provided.

Redevelopment Option

As an option, with substantial consolidation, the sub-unit presents an opportunity for mixed-use redevelopment up to approximately 245 dwelling units and 440,000 gross square feet of nonresidential use.

Sub-unit B-1

This approximately 16-acre sub-unit is located along the east side of Richmond Highway between Lukens Lane and Cooper Road to Cedar Road.

Base Plan

This sub-unit is planned for office and neighborhood-serving retail uses up to approximately 240,000 gross square feet. Open space should be preserved around the environmental quality corridor surrounding Dogue Creek as shown on the Plan map. Buildings should be oriented toward Richmond Highway tapering down in height toward adjacent residential areas preferably with parking located to the rear which is well-screened and buffered from adjacent residential uses.

Tax Map Parcels 110-1((15))(A)2 and 3A are currently developed with single-family dwelling units and may be retained as residential uses at 2-3 dwelling units per acre consistent with adjacent residential properties.

Redevelopment option

As an option, a portion of Sub-unit B-1, Tax Map Parcels 110-1((27))ALL, 101-3((1))100, 110-1((1))51 and 52 located along Richmond Highway, may be appropriate for residential use at 4-5 du/ac. Parcels 110-1((27)) ALL, which are located west of Dogue Creek, have been developed without consolidation with the other parcels under this option. However, full consolidation of the parcels located east of Dogue Creek would be required to exercise this alternative on Parcels 100, 51 and 52. Further, if this alternative is exercised on parcels east or west of Dogue Creek, the following conditions should be met:

- Preservation and restoration of the Environmental Quality Corridor surrounding Dogue Creek as open space;
- Dedication of needed right-of-way for planned roadway improvements is provided;
- Access is provided at a median break and coordinated with the planned roadway

improvements; and,

- An efficient internal circulation system is provided.

As an option for Sub-unit B-1 except for Parcels 110-1((15))(A)2, 3, and 3A, the area is planned for mixed-use redevelopment up to approximately 250 dwelling units and 260,000 gross square feet of nonresidential use.

Sub-unit B-2

This approximately 12-acre sub-unit is located along the east side of Richmond Highway south of Cooper Road.

Base Plan

Tax Map Parcels 109-2((2))3, 3A, 4, 4A, 5A; 110-1((17))3, 19 and 19A are planned for neighborhood retail use at 0.35 FAR. Parcels 110-1((15))1, 2, and 3 are planned for neighborhood office use at 0.35 FAR. Parcels 109-2((2))5 and 6A are planned for residential use at 16-20 dwelling units per acre.

Redevelopment options

As an option, a portion of Sub-unit B-2 (Tax Map Parcels 110-1((15))1, 2, 3) may develop as office use up to 0.50 FAR, if full consolidation can be achieved. Access should be oriented to Cooper Road, and substantial buffering should be provided to the adjacent residential uses.

Tax Map Parcels 109-2((2))5 and 6A may be developed for hotel use. Parking areas should be well-screened and buffered from adjacent residential planned uses. Impacts on the adjacent environmental quality corridor should be mitigated.

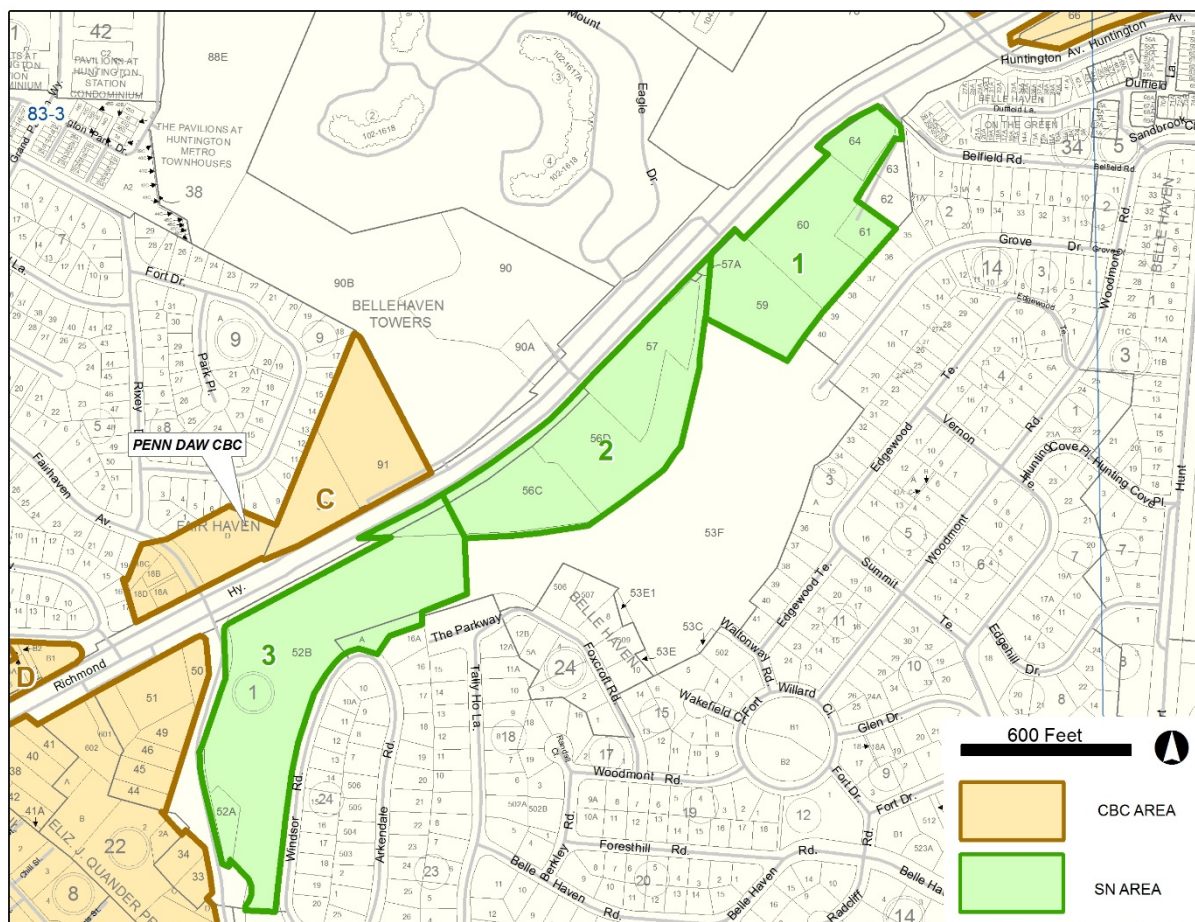
If Tax Map Parcels 109-2((2))3A, 3, 4A, 4, 5, 5A, 6A, 19A, 110-1((17))3, and 19 are substantially consolidated, an office, retail and/or hotel project at an overall intensity of up to 0.65 FAR may be appropriate.

As an option for Sub-unit B-2 except for parcels 110-1((15))1,2, and 3, the area is planned for primarily residential mixed-use redevelopment up to approximately 350 dwelling units and 160,000 gross square feet of nonresidential use.

SUBURBAN NEIGHBORHOOD AREAS

The Suburban Neighborhood Areas (SNAs) contain primarily residential communities, smaller scale retail and commercial businesses, and open spaces located in between the Community Business Centers (CBCs). As redevelopment occurs in the Richmond Highway Corridor Area, projects should demonstrate compatible and effective transitions from the high intensity CBCs to the lower intensity SNAs; provide appropriately scaled and logical multimodal connections between the CBCs and SNAs; and ensure the character of new development and redevelopment in the SNAs is complementary to the adjacent CBCs and SNAs, where applicable. In addition to the recommendations above, the Guiding Planning Principles and Corridor-wide Guidelines should be consulted in the review of all development proposals in the SNAs. In some cases, site-specific recommendations may differ from and supersede these recommendations.

Suburban Neighborhood Areas between North Gateway and Penn Daw CBCs



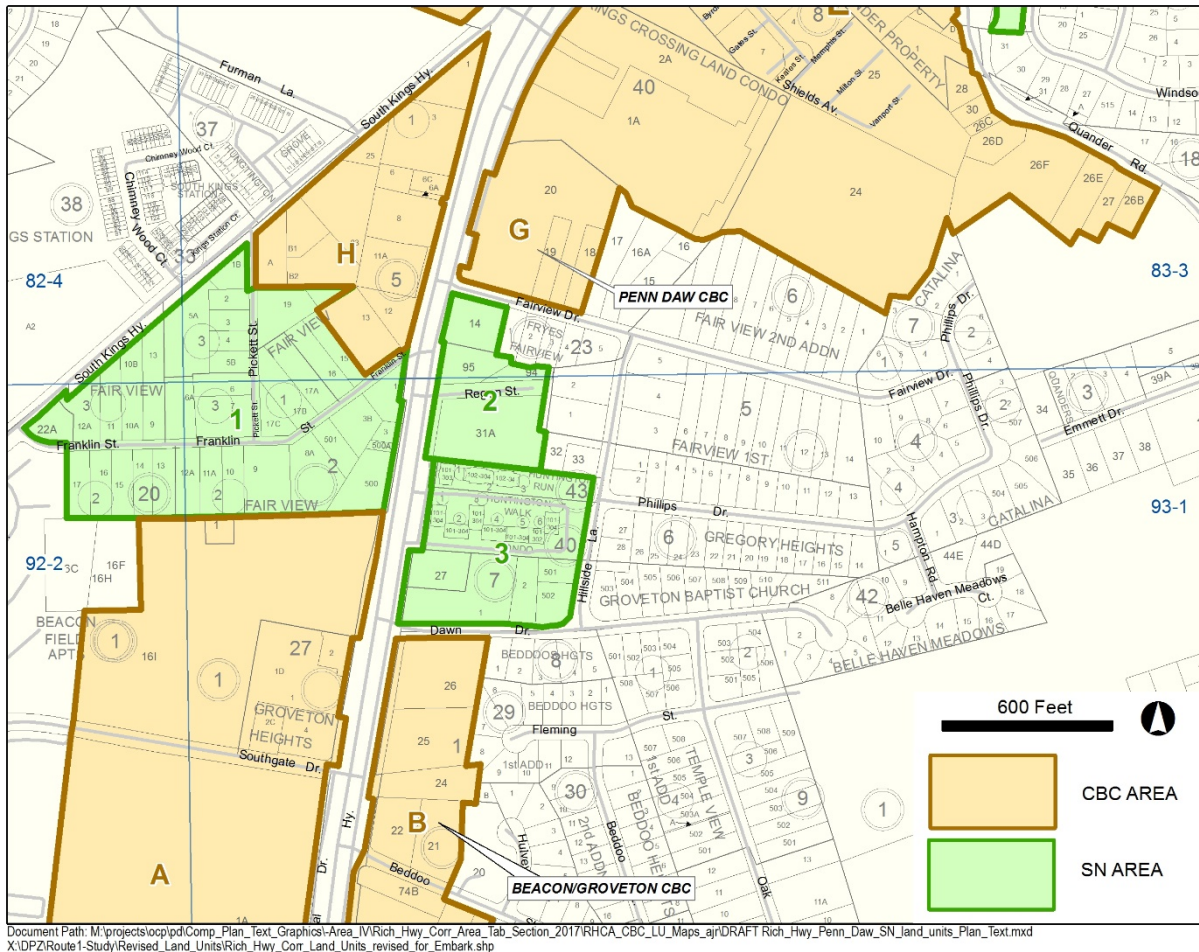
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SNAs BETWEEN NORTH GATEWAY AND PENN DAW CBCS

FIGURE 72

1. The area along the east side of Richmond Highway at the intersection with Belfield Road is planned for residential use at 5-8 dwelling units per acre, with an option for a public park. Consolidation is encouraged and effective screening and buffering should be provided between any proposed development and the adjacent neighborhood and other uses. Access points should also be consolidated and no access point should be closer than 200 feet to Belfield Road.
2. The lots located along Richmond Highway midway between Belfield Road and Quander Road (Tax Map Parcels 83-3((1))57, 57A, 56C and 56D) are planned for residential use at 5-8 dwelling units per acre with an option for a public park. Design of the project should leave the majority of the steep slopes undisturbed.
3. The site located at the northeast corner of Richmond Highway and Quander Road (Tax Map Parcel 83-3((1))52B) is planned for residential use at 5-8 dwelling units per acre to provide a transition from Richmond Highway to the stable, low density residential neighborhood to the southeast. The site is currently used for a car dealership. Residential project design should include clustered units with steep slopes left undisturbed. No more than one entrance point onto Richmond Highway that is no closer than 200 feet to Quander Road, and no more than two entrances on Quander Road, no closer than 200 feet to Richmond Highway should be provided. These latter provisions are intended to preclude congestion near the Richmond Highway/Quander Road intersection because of the importance of that road for carrying school traffic to and from West Potomac High School and Metro-related traffic to and from Huntington, as well as the residential traffic generated on these sites. As an option, this area is planned as a public park.

Suburban Neighborhood Areas between Penn Daw and Beacon/Groveton CBCs



SNAs BETWEEN PENN DAW AND BEACON/GROVETON CBCS **FIGURE 73**

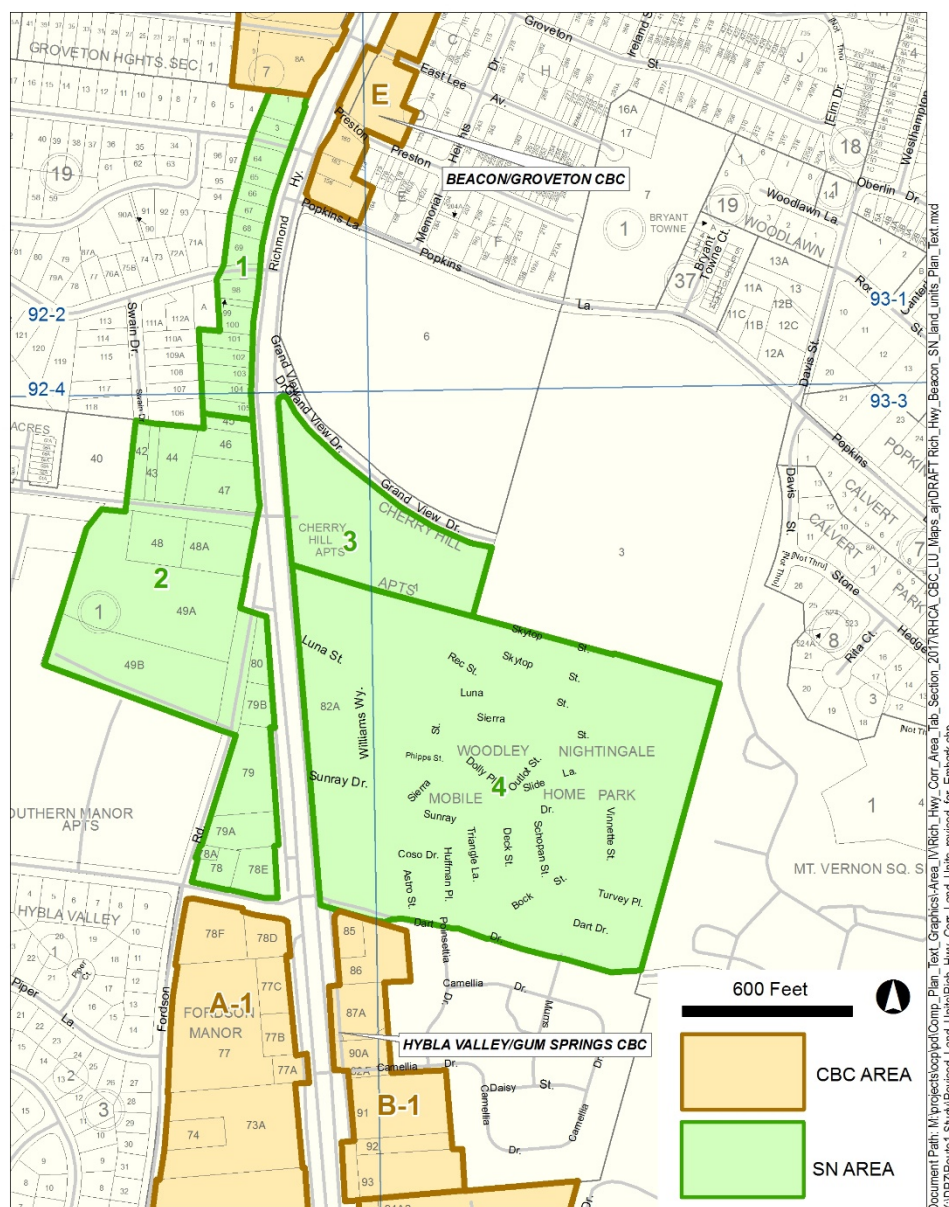
1. The area located between Richmond Highway and South Kings Highway, south of Penn Daw CBC Land Unit H, and north of Beacon Mall includes commercial and residential uses. The area is planned for residential use at 4-5 dwelling units per acre and 8-12 dwelling units per acre as shown on the Comprehensive Plan Map.
2. Lots fronting on the east side of Richmond Highway between Fairview Drive and the Alexandria Motel along Regan Street are planned for residential use at 16-20 dwelling units per acre, with substantial parcel consolidation. Elderly housing is encouraged. Landscape materials should provide effective buffering and screening to the residential community to the east.
3. This area located on the east side of Richmond Highway is bounded by Dawn Drive to the south and Hillside Lane to the east. It includes the Huntington Run and Huntington Walk Condominium Complexes, as well as the Groveton Baptist Church. The condominium complexes are planned for residential use at 16-20 dwelling units per acre. Should the

Groveton Baptist Church be redeveloped for residential use, a density of 8-12 du/ac may be appropriate if:

- Complete consolidation of Tax Map Parcels 93-1((7))1, 2, 501, 502 and 93-1((1))27 is achieved; and
- Substantial buffering and screening is provided adjacent to the existing residential neighborhoods.

This area may also be appropriate for low-rise office use at an intensity up to 0.50 FAR.

Suburban Neighborhood Areas between Beacon/Groveton and Hybla Valley/Gum Springs CBCs



SNAs BETWEEN BEACON/GROVETON AND HYBLA VALLEY/GUM SPRINGS CBCS **FIGURE 74**

1. Parcels fronting on the west side of Richmond Highway from north of Collard Sreet to Tax Map Parcel 92-2((19))105 located south of Spring Drive are planned for residential use at 2-3 dwelling units per acre. These shallow lots may be further impacted by roadway widening which will severely constrain potential redevelopment. Existing vegetation should be preserved on these parcels to the extent possible.
2. This area fronts on the west side of Richmond Highway from south of Spring Street to Lockheed Boulevard, and includes the Meadow Woods Apartments, Public Storage, the Nazarene Church, and retail uses. With substantial parcel consolidation, this area is planned for residential use at 8-12 dwelling units per acre with compatibility-scaled townhouse-style retail and/or office components to an intensity up to 0.35 FAR. As an option, housing for the elderly, or self-storage, at an intensity not to exceed 0.50 FAR may be appropriate for Tax Map Parcels 92-4((1))48 and 49A. These parcels have been developed with a self-storage facility. The following conditions should be met in any development proposal:
 - Disturbance to steep slopes and environmental features in this area is minimized;
 - No access points are provided onto Richmond Highway;
 - Effective screening and buffering is provided and maintained to the adjacent residential neighborhoods; and
 - An efficient internal circulation pattern including pedestrian travelways is provided.

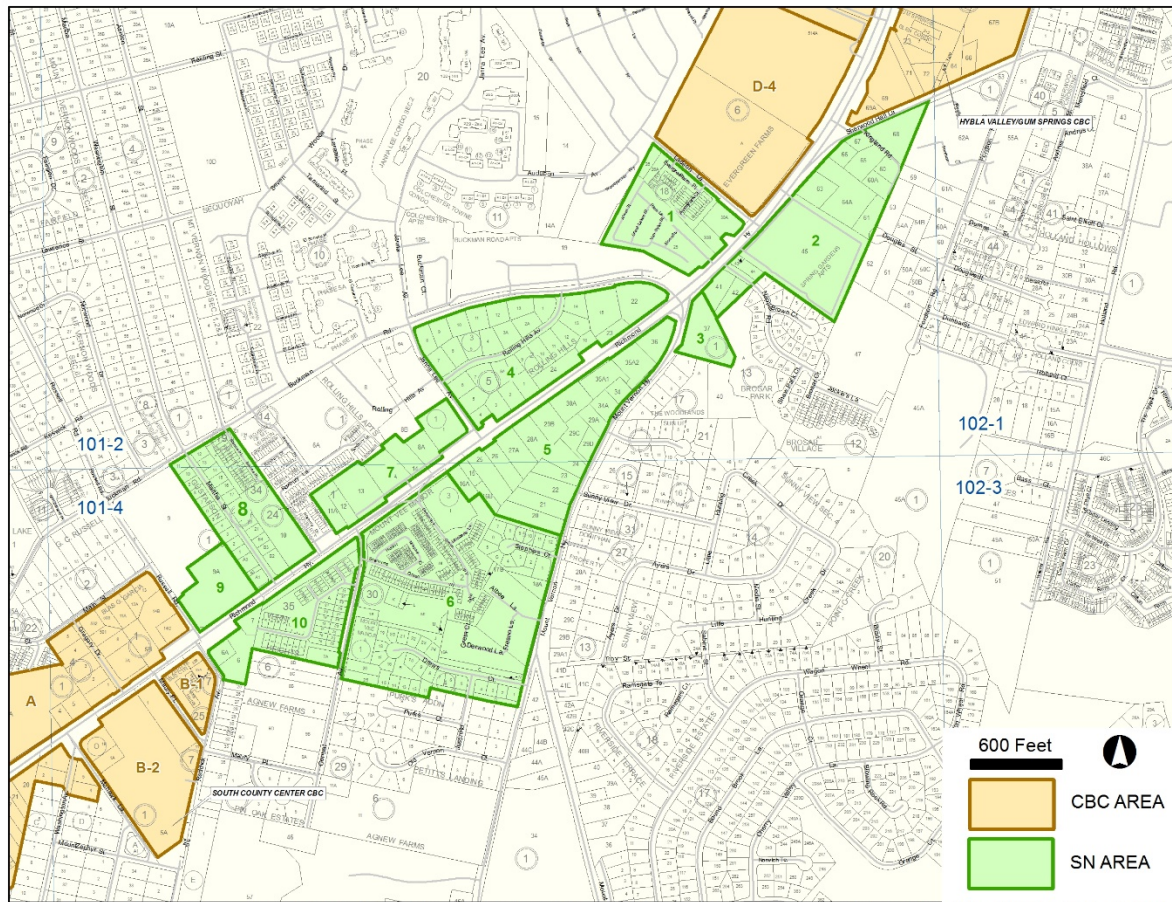
A potential Bus Rapid Transit (BRT) Station is recommended to be located in the vicinity of this area. Refer to the introductory sections and Transportation section of the Richmond Highway Corridor Area Plan for more details.

3. This area is located on the east side of Richmond Highway, across from its intersection with Holly Hill Road and contains the Cherry Arms Apartments. The apartments are planned for and developed as residential use at 16-20 dwelling units per acre.
4. The North Hill, a part of the former Woodley Nightingale Redevelopment Area (approximately 33 acres) located on the eastern side of Richmond Highway north of the Hybla Valley/Gum Springs Community Business Center and the Woodley Hills Estates Mobile Home Park, is planned for public park for passive recreational use. As an option, the site may be appropriate for up to 279 workforce and affordable multifamily units, which may include affordable independent living units, and up to 196 townhomes with limited community serving uses and the retention of a significant, contiguous portion of approximately 11 acres of the site for a publicly accessible park. Any development should be supported by a geotechnical study that shows how slopes and problem soils will be addressed. In addition, the following conditions should be met:
 - The residential development should be oriented to Richmond Highway and Dart Drive.
 - Buildings facing Richmond Highway should provide pedestrian entrances and direct access to the Richmond Highway frontage to the extent feasible in consideration of site constraints, topography and/or the safety and welfare of residents. If parking structures are planned in the ground floor of buildings, appropriate screening of parking should be achieved in order to avoid adverse impacts to the public realm.

- The walkability and multi-modal connectivity of the redevelopment should be enhanced through the addition of sidewalks, streetscape and bicycle facilities. Adequate right-of-way and streetscape improvements should be provided in line with the design guidance for the corridor, including secondary streets such as Dart Drive. Development should dedicate 89 feet from the centerline of Richmond Highway for planned transportation improvements. The right-of-way dedication along Dart Drive should be extended to the east property line to accommodate a future multimodal connection to Arlington Drive.
- On-site bicycle and pedestrian circulation should be provided and connect to off-site bicycle, pedestrian and transit facilities.
- Several points of physical access should be made to connect the public park with the planned community and the existing surrounding neighborhoods.
- Planned development of the property should include clean-up and restoration efforts focused on the portion of the site to remain as a public park so that it is safe for park visitors.
- Residential development should provide vehicular access and parking to serve the public park and should provide an ADA accessible route from the parking into the park.
- In addition to the public park, one or more well-designed, publicly accessible community gathering areas should be included to create a sense of place and provide recreational opportunities for residents and visitors, per the guidance of the Urban Parks Framework. The southwest corner of the property is well-suited for a Civic Plaza that would serve as a community gathering space for future residents and those waiting for a bus. Active recreation facilities should be provided onsite to meet the needs of future residents.

A potential Bus Rapid Transit (BRT) Station is recommended to be located in the vicinity of this area. Refer to the introductory sections and Transportation section of the Richmond Highway Corridor Area Plan for more details.

Suburban Neighborhood Areas between Hybla Valley/Gum Springs and South County Center CBCs



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SNAs BETWEEN HYBLA VALLEY/GUM SPRINGS AND SOUTH COUNTY CENTER CBCS **FIGURE 75**

1. The area bounded by Ladson Lane on the north, Richmond Highway on the east, Audubon Mobile Home Park on the west and Little Hunting Creek on the south is planned for residential use at a density of 5-8 dwelling units per acre with an option for 8-12 dwelling units per acre. Substantial parcel consolidation should be accomplished to allow for a well-designed project. Access points should be consolidated and oriented toward Ladson Lane. Tax Map Parcel 101-2((6))25 is the current location of Harmony Place Trailer Park, much of which has been developed in the Little Hunting Creek flood plain. Mobile homes currently located in the flood plain should be relocated into any areas planned for a mobile home park. Any redevelopment of this area is encouraged to comply with the county’s voluntary relocation guidelines. The environmental quality corridor located on Tax Map Parcel 101-2((6))25 should be preserved for open space.

2. The area on the east side of Richmond Highway from Sherwood Hall Lane to Little Hunting Creek is located within the Gum Springs Community. Adequate measures to mitigate against undue environmental impact should be provided. Streams and flood plains with their existing vegetation located on the property should be preserved. Where past practices have degraded

these streams, bioengineering approaches should be followed to restore them to more natural conditions and functions. A potential Bus Rapid Transit (BRT) Station is recommended to be located in the vicinity of this area. Refer to the introductory sections and Transportation section of the Richmond Highway Corridor Area Plan for more details.

3. The property located on the east side of Richmond Highway south of Little Hunting Creek near Mount Vernon Highway (Tax Map Parcel 101-2((1))37) is planned as open space to protect the integrity of the Environmental Quality Corridor.
4. The area fronting on the west side of Richmond Highway south of its intersection with Buckman Road to Janna Lee Avenue is planned for townhouse-style office and neighborhood-serving retail use up to 0.25 FAR to provide a transition to the adjacent single-family neighborhoods. The remainder of the land unit is planned for residential use at 2-3 dwelling units per acre. As an option, a mix of predominantly residential use up to 25 dwelling units per acre with 50,000 – 80,000 square feet of use consisting of office and ground floor retail may be appropriate if the area is redeveloped in accordance with Appendix 8 of the Land Use section of the Policy Plan “Guidelines for Neighborhood Redevelopment,” and all of the following conditions are met:

Phasing and Land Use:

- The nonresidential component of the project is constructed and completed with the first phase of the development to ensure its compatible integration. A minimum of 70,000 square feet of commercial space comprised of a minimum of 60,000 square feet of office use and a minimum of 10,000 square feet of retail use is desired. Retail uses should be located on the ground floor of office buildings. Freestanding retail uses are discouraged.

Design:

- Complete parcel consolidation is desired. If total consolidation is not achieved, the development plan should demonstrate how the unconsolidated parcels could be integrated within the project at a later date, and buffered from the development in the interim.
- High quality, pedestrian-oriented architectural and landscape design, open spaces, and other elements contained in the Urban Design, Urban Street Network Design, and other applicable sections of the corridor-wide Plan guidance are incorporated.
- Buildings provide appropriate transition in scale and mass from Richmond Highway towards existing adjacent residential areas along Buckman Road and Janna Lee Avenue.
- A mix of unit and building types including mid-rise structures are provided to create open space.
- Landscaping is employed to offset the effect of parking lots, driveways and pavement areas adjacent to the commercial and residential structures.
- All stacked townhouses and multifamily units are designed such that they include doors, windows, and recessed balconies in the front and rear elevations to ensure an attractive “front door” appearance from all sides. Commercial buildings

designed to provide an attractive appearance on all sides. Building materials of the highest quality should be used.

Environment:

- Potential noise impacts are addressed in accordance the Environment section under Corridor-wide Guidelines for the Richmond Highway Corridor Area and the Policy Plan.
- Trees determined to be of value by the Urban Forester are preserved if feasible.

Parks and Recreation:

- The existing park and recreation deficiencies are offset through provision of neighborhood park land through a dedication to the Park Authority of 2.5 to 4 acres, if provided on-site, or 3 to 4 acres, if provided off-site. As a substitute, funds may be dedicated to the Park Authority for off-site land acquisition and/or facilities. Appropriate neighborhood park recreation facilities should also be provided. In addition, urban park features should be integrated within the site, such as plazas, gathering spaces, special landscaping, street furniture, and pedestrian amenities.

Transportation and Pedestrian Circulation:

- Capacity issues associated with the Buckman Road/Mt. Vernon Highway/Richmond Highway intersection are resolved with the dedication of right-of-way for corridor and intersection improvements. Richmond Highway should be improved to a six-lane divided highway through this area consistent with the corridor, with a median for bus rapid transit.
- Primary access is provided via Janna Lee Avenue and Buckman Road. Vehicular access from Richmond Highway is limited to one right turn in and one right turn out access point only with a possibility of a pickup/drop off area along the highway frontage.
- Janna Lee Avenue between Richmond Highway and Buckman Road is improved and modifications of the Janna Lee/Richmond Highway intersection are made to achieve efficient circulation patterns.
- Continuous pedestrian and bicycle facilities consistent with corridor-wide transportation recommendations are provided along Richmond Highway, Janna Lee Avenue and Buckman Road. Hard surface material that enhances the corridor's urban character should be used. Within the site, trails and sidewalks are provided to create a pedestrian friendly environment and to connect the site with transit services along the Richmond Highway corridor and surrounding areas.
- An effective Transportation Demand Management (TDM) program applicable to residential and nonresidential uses that utilizes a combination of measures as deemed appropriate by the Department of Transportation is provided. These measures may include shuttle services, transit subsidies, vanpool or carpool matching services and bus shelters as well as telework office space with advanced telecommunication systems. The program should be monitored periodically.

As a second option, development of residential use at a density of 20 to 30 dwelling units per acre may be appropriate if the area is redeveloped in accordance with Appendix 8 of the Land Use section of the Policy Plan “Guidelines for Neighborhood Redevelopment,” and the following conditions are met. Redevelopment would consist of approximately 275 to 350 multifamily residential units and 150 to 225 townhome units, but flexibility in unit type mix may be appropriate to achieve Comprehensive Plan objectives. Accessory office and/or accessory retail use may be appropriate on the ground floor of one or more of the multifamily buildings. Construction of the residential units may be phased.

Design:

- Complete parcel consolidation is desired. If total consolidation is not achieved, the development plan should demonstrate how the unconsolidated parcels could be integrated within the project at a later date, and buffered from the development in the interim.
- High quality, pedestrian-oriented architectural and landscape design, open spaces, and other elements contained in the Urban Design, Urban Street Network Design, and other applicable sections of the corridor-wide Plan guidance are incorporated.
- Buildings provide appropriate transition in scale and mass from Richmond Highway towards existing adjacent residential areas along Buckman Road and Janna Lee Avenue.
- Landscaping is employed to offset the effect of parking lots, driveways and pavement areas adjacent to the residential structures.
- All buildings are designed to provide an attractive appearance on all sides. Blank walls should be avoided. High quality building materials should be used.

Environment:

- Potential noise impacts are addressed in accordance the Environment section under Corridor-wide Guidelines and the Policy Plan.
- Trees determined to be of value by the Urban Forester are preserved to the maximum extent possible. Preservation of existing trees within proposed open space areas is encouraged.
- Low Impact Development (LID) practices should be incorporated to the maximum extent possible. Other applicable stormwater management measures contained in the Environment section under Corridor-wide Guidelines should be incorporated.
- Contributions toward the restoration of Little Hunting Creek should be provided.

Parks and Recreation:

- Well-designed, publicly accessible urban parks should be integrated to enhance the recreational options and sense of place for the development, consistent with the Urban Park Framework, as modified by the Fairfax County Park Authority. Contributions to offset off-site public park facility service level impacts should be made commensurate with the impact of development approved.

Transportation and Pedestrian Circulation:

- Development should provide for the improvement of Richmond Highway as depicted in the Transportation and Urban Street Network Design sections, and associated improvements to address projected traffic congestion and relieve capacity issues at the Buckman Road/Mt. Vernon Highway/Richmond Highway intersection.
 - Janna Lee Avenue between Richmond Highway and Buckman Road is improved.
 - Continuous pedestrian and bicycle facilities consistent with corridor-wide transportation recommendations are provided along Richmond Highway, Janna Lee Avenue and Buckman Road. Hard surface material that enhances the corridor's urban character should be used. Within the site, trails and sidewalks are provided to create a pedestrian friendly environment and to connect the site with transit services along the Richmond Highway corridor and surrounding areas.
5. This area extends south from the intersection of Richmond Highway and Mount Vernon Highway, and includes all the parcels bounded by these two highways, up to and including Tax Map Parcels 101-4((1))16A, 16B and 20 which are planned for residential use at 5-8 dwelling units per acre. If substantial consolidation of these parcels is achieved, residential use at 8-12 dwelling units per acre may be appropriate to provide a transition to the adjacent single-family dwellings. Density should be tapered from Richmond Highway to Mount Vernon Highway and development along Mount Vernon Highway should be limited to single-family detached houses at 2-3 dwelling units per acre. Access points should be consolidated. Effective screening and buffering should be employed to provide a visual barrier between the existing residences and planned units as well as along Mount Vernon Highway. Existing retail and commercial uses on Tax Map Parcels 101-2((1))34, 34A, 35A1, and 35A2 are appropriate to be retained up to 0.30 FAR. Tax Map Parcel 101-2((1))36 is appropriate for retail use up to .035 FAR.
6. The area bounded by Richmond Highway, Mount Vernon Highway, Central Avenue, and located north of Purks Court is planned for residential use at 2-3 and 8-12 dwelling units per acre, as shown on the Plan map.

This land unit may be appropriate for a mix of single-family detached homes and townhouses with an option for a medical care facility for the elderly. Residential use at 2-3 dwelling units per acre should be developed adjacent to the existing single-family neighborhoods on Central Avenue and Mount Vernon Highway. The area adjacent to Richmond Highway may be appropriate for townhouse development at 8-12 dwelling units per acre, with an option for a medical care facility for the elderly, provided that:

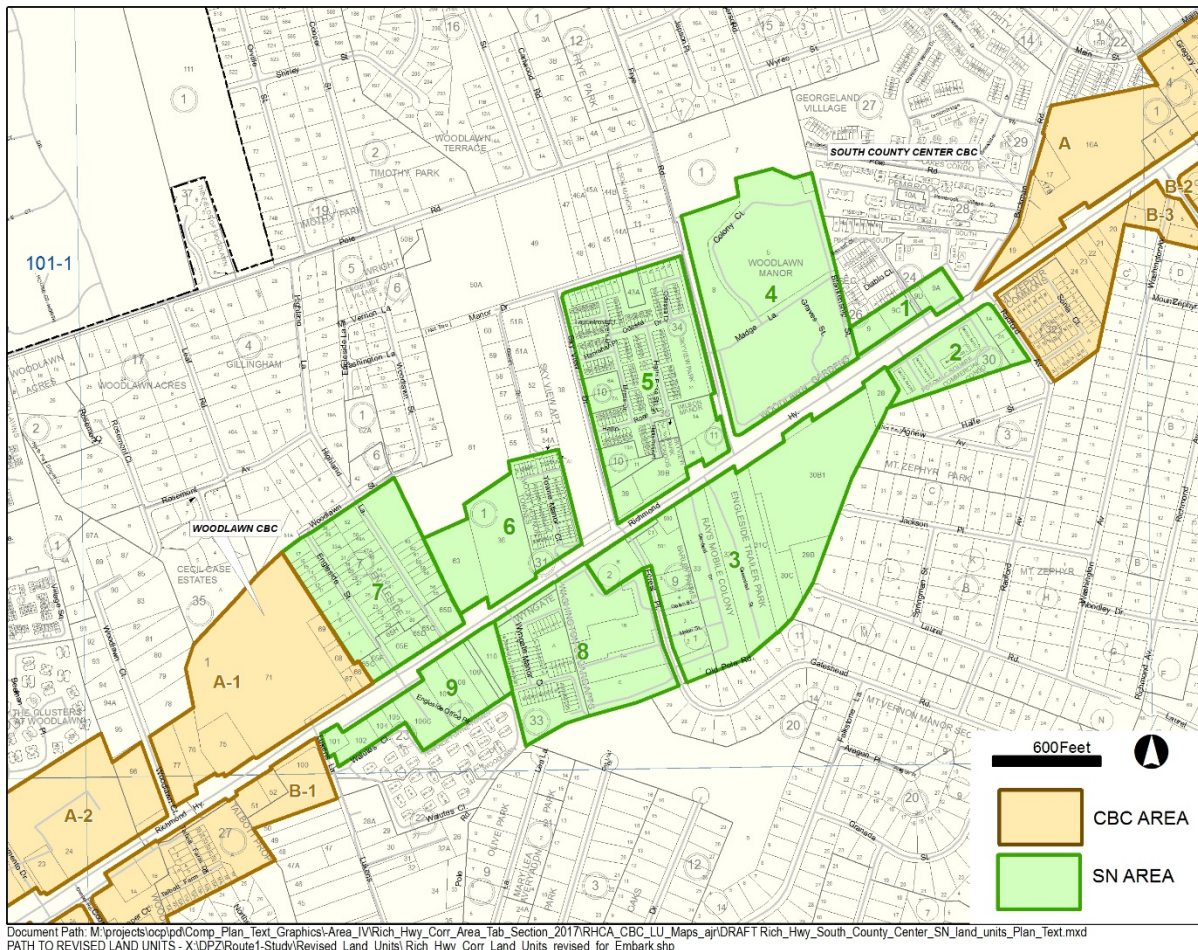
- A unified development plan is submitted;
- Structures are clustered away from Richmond Highway on Tax Map Parcel 101-2((1))34A to retain some of the existing open space along Richmond Highway;
- Sufficient and suitable screening and buffering are provided and maintained along Richmond Highway and adjacent residential lots;

- The medical care facility is limited to a maximum of 90 living units. If the medical care facility is not built, the balance of the development on this portion of the site may also develop in townhouse use; and
 - Access to the single-family detached development is limited to Mount Vernon Highway and Old Mount Vernon Road, while access to the townhouse development and medical care facility is from Central Avenue and Richmond Highway.
7. The area bounded by Richmond Highway and Janna Lee Avenue, and south Roxbury Lane and the Roxbury of Mount Vernon townhouse community is planned for a mix of predominantly residential use at a density of 8-12 dwelling units per acre and community-serving commercial uses up to 0.50 FAR with substantial parcel consolidation. Access points should be consolidated. Screening should be employed to provide a visual barrier between the existing residences and planned units and along Richmond Highway.

A landscape contractor's offices and/or a plant nursery, may be appropriate for the parcels located east of Roxbury Drive [Tax Map Parcels 101-4((1))11A and 12] if the proposed development meets the development conditions listed above and the following conditions:

- Provide and maintain substantial vegetated buffers and screening adjacent to parcels planned or developed for residential use;
 - Assure compatible building scale and height with the residential development;
 - Buildings are oriented toward Richmond Highway and away from parcels planned or developed for residential use and should be compatible with a residential context; and
 - Outdoor storage of heavy construction equipment and construction vehicles is prohibited.
8. This area is bounded by Richmond Highway, the Roxbury of Mount Vernon Townhouses, Buckman Road, and a shopping center. If consolidation of contiguous parcels fronting Richmond Highway is achieved on Martha Street, a residential density of 12-16 dwelling units per acre may be developed.
9. Tax Map Parcel 101-4((1))9A is developed as a a shopping center and is planned for retail use up to 0.50 FAR.
10. The area is bounded by Richmond Highway, Central Avenue, and Reddick Avenue, and includes the parcels along Mary Evelyn Way. These parcels are planned for residential use at 5-8 dwelling units per acre with the following conditions:
- Consolidation of parcels is achieved;
 - Access points are consolidated;
 - A well-integrated development plan with an efficient internal circulation pattern is provided; and
 - Effective screening and buffering are provided to the existing adjacent residential properties.

Suburban Neighborhood Areas between South County Center and Woodlawn CBCs



SNAs BETWEEN SOUTH COUNTY CENTER AND WOODLAWN CBCS

FIGURE 76

1. This area is located between the southern end of Buckman Road and Blankenship Street and is planned for retail and/or office use up to 0.35 FAR.
2. This area is bounded by Richmond Highway, Radford Avenue, New Hope Housing, Inc. and is located north of Halfe Street. It is primarily planned for and developed with the Potomac Square Shops & Offices, or office and/or retail use up to 0.35 FAR with building heights up to 40 feet.
3. This area is bounded by Richmond Highway, Potomac Square Shops & Offices and Forest Place, and includes the Engleside Trailer Park and Ray's Mobile Home Colony. This area is planned for residential use at 5-8 dwelling units per acre. Residential uses should be designed to provide for a transition to the adjacent single-family residential neighborhood by providing the required buffering, fencing, and/or screening to adjacent neighborhoods. Any redevelopment of this area is encouraged to comply with the county's voluntary relocation guidelines. No access should be provided to any proposed development from the Mount Zephyr or Mount Vernon Manor communities.

If substantial consolidation is achieved, this area may be appropriate for a mixed-use development using an urban/town center design concept with residential, office and retail uses. Based on the size of the land area, approximately 75 percent of the total development is planned for residential use at a density of 16-20 du/ac, with 25 percent of the development planned for retail and office uses at an intensity of 0.50 FAR.

In addition, the following conditions should be met:

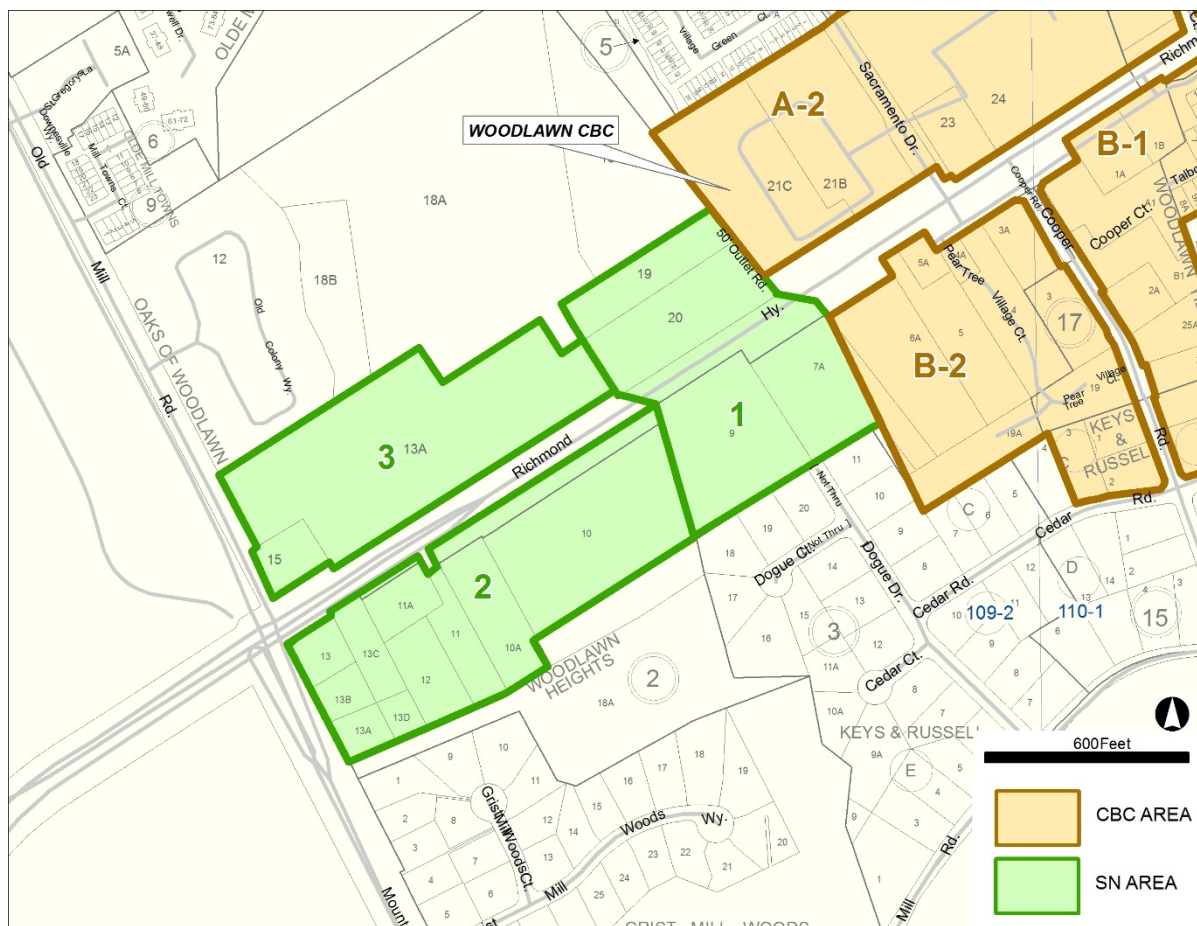
- The proposed “urban/town center” concept’s site design should enable the creation of a cohesive and walkable environment.
- High-quality architecture should be provided.
- Buildings should be oriented to internal/external streets and sidewalks, and sufficient open space should be interspersed with retail, residential, and office uses to provide usable public gathering areas.
- Building tapering, vegetative buffering, and screening with fencing along the yards of adjacent single-family residences should be provided as needed on the periphery to create a transition to the surrounding areas. Lighting and sound from any development should be designed so that it is not intrusive to adjacent residential development.
- Multifamily use may be appropriate if designed as townhouse-style structures. These structures may include ground floor retail and office uses.
- Any freestanding office or residential building is encouraged to meet at least U.S. Green Building Council’s Leadership in Energy and Environmental Design (LEED) Silver standards or other comparable programs with third party certification. Retail users are encouraged to meet applicable LEED standards, or other comparable programs, in design and construction to promote sustainable development. The impervious nature of hard surfaces should be offset through approaches such as providing vegetated planting strips in surface parking lots.
- Multi-story office buildings should include ground-floor retail use and other services where possible. To the extent possible, the new retail uses should be located in places that would encourage public usage, activate the town center, and reduce vehicular traffic. Such new retail uses should also be distributed throughout the site in the ground floors of the residential buildings and at prominent entrance points to the town center.
- The residential units should be distributed in buildings across the site in a manner that is well-integrated into the town center. The residential uses also should have convenient access to open space, community-serving retail uses, and other services.
- Usable open spaces such as Pocket Parks, Plazas, Common Greens and Recreation-focused urban parks should be integrated into the development with supporting pedestrian connectivity.
- Internal roadways, trails, sidewalks, and street crossings should connect buildings and open spaces. Streetscape treatments should include trees, landscaping, sidewalks, bicycle facilities, street furniture, and various paving textures, to the extent possible.

- The impact on parks and recreation levels of service should be offset per Objective 6 of the Parks and Recreation Section of the Policy Plan through the provision of on-site urban park amenities, parkland dedication, provision of active recreation facilities and/or improvements to existing nearby parks.
 - Transportation improvements should be provided that ensure that the impact of the proposed development is mitigated so that there is no overall degradation of the transportation network in the vicinity of the site.
 - Bus transit stops and accompanying shelters should be provided along Richmond Highway.
4. This area is bounded by Richmond Highway, Blankenship Street, Frye Road and Colony Court. These parcels are planned for residential use at 16-20 dwelling units per acre. As an option, the area is planned for mixed-use development up to 0.50 FAR with consolidation of Tax Map Parcels 101-3((1))8 and 101-3((1))5. The mixed-use development should consist of predominantly residential use with retail and/or office uses oriented to Richmond Highway.
5. The area bounded by Richmond Highway, Frye Road, Sky View Drive, and Manor Drive is planned for community-serving retail use up to 0.35 FAR and residential use at 2-3 dwelling units per acre, as shown on the Comprehensive Land Use Plan Map. Much of the area has previously been developed under a Plan option at approximately 13 du/ac, including some of the commercially zoned parcels along Richmond Highway. Residential development at this density is subject to the following conditions:
- Residual parcels not included in the prior consolidated Skyview Park rezoning(s) under this option may be appropriate for residential use up to 8 dwelling units per acre provided that units are fully integrated and compatible with development, either approved or constructed, under the initial Skyview Park rezoning in terms of unit type, design and architecture, except that Parcels 101-3 ((10)) 6A and 7A may be appropriate for residential use up to 13 dwelling units per acre, if fully integrated and compatible with the neighboring Skyview Park development, and if such additional density provides sufficient open space and appropriate tree preservation;
 - Single-family detached units should be located at the northern end of the area across from the single-family detached community along Manor Drive;
 - Effective buffering and screening should be provided by the residential development to screen it from nonresidential uses and Richmond Highway. The screening should consist of barriers comprised of brick, masonry, and/or wood;
 - Access should be provided from both Sky View Drive and Frye Road, and these two roadways should be interconnected with the internal street system for the residential development. There should be no access to Richmond Highway.
6. This area which includes the Knights of Columbus, the U.S. Post Office site, and the Mount Vernon Townes, is generally located between Towne Manor Court and Highland Lane. These parcels are planned for community-serving retail/office use up to 0.25 FAR or residential use at 12-16 dwelling units per acre without parcel consolidation. Effective

buffering and screening to adjacent residential development, high quality design, and efficient circulation patterns should be provided as part of any development plan.

7. This area bounded by Richmond Highway, Engleside Plaza, Woodlawn Street, and the Knights of Columbus is planned for neighborhood-serving retail and/or neighborhood-serving office use that is residential in character up to 0.25 FAR for lots fronting Richmond Highway, with the remainder planned for residential use at 2-3 dwelling units per acre. As an option, the residential portion may be appropriate for use at 5-8 du/ac if Policy Plan guidelines regarding neighborhood consolidation are met. In any development proposal, substantial parcel consolidation is encouraged. Access points should be minimized and effective screening and buffering should be provided to the single-family residences located to the north.
8. This area is bounded by Richmond Highway and Forest Place, and includes the Wyngate Manor townhomes and Washington Square apartments. It is and planned for residential use at 5-8 dwelling units per acre. As an option, retail and/or office uses up to 0.35 FAR may be appropriate
9. This area is located between the Virginia Power substation to Lukens Lane, and is planned for residential use at 5-8 dwelling units per acre, retail and/or office use up to 0.35 FAR.

Suburban Neighborhood Areas adjacent to Woodlawn CBC



Document Path: M:\projects\ocp\pdf\Comp_Plan_Text_Graphics-Area_IV\Rich_Hwy_Corr_Area_Tab_Section_2017\RHCA_CBC_LU_Maps_apt\DRAFT Rich_Hwy_Woodlawn_SN_land_units_Plan_Text.mxd
 PATH TO REVISED LAND UNITS - X:\DPZ\Route1-Study\Revised_Land_Units\Rich_Hwy_Corr_Land_Units_revised_for_Embark.shp

SNAs ADJACENT TO WOODLAWN CBC **FIGURE 77**

1. Tax Map Parcels 109-2((2))7A and 9 and Tax Map Parcels 109-2((1))19 and 20 on both sides of Richmond Highway are predominantly floodplain and planned for open space.
2. Tax Map Parcel 109-2((2))10 to Mount Vernon Memorial Highway, including Tax Map Parcels 109-2((2))10A-13D, are planned for tourist-oriented retail shops such as crafts, antiques, and collectibles up to 0.35 FAR. Development proposals should be consistent and compatible with those approved uses within the Woodlawn Historic Overlay District. The environmental quality corridor located in this area should be preserved as open space.

As an option and with substantial parcel consolidation, this area is planned for a well-designed hotel/conference center up to 0.50 FAR to serve Fort Belvoir and this tourist-related area. If this option is exercised, the following conditions should be met:

- Screening, landscaping and buffering should be provided in excess of that required in the Zoning Ordinance;
 - Design, architecture and building materials and heights should be compatible with the Woodlawn Historic Overlay District Ordinance and approved by the Architectural Review Board;
 - No access should be provided on Mount Vernon Memorial Highway;
 - Traffic and environmental impacts should be mitigated;
 - Internal pedestrian, bicycle and vehicular circulation should be well-designed and efficient to promote greater pedestrian/bicycle usage; and
 - Urban design elements, such as public art, pedestrian plazas, streetscaping, cultural/recreation facilities, landscaped open space, landmarks or building designs may be appropriate to highlight the area's adjacency to important historic landmarks.
3. Tax Map Parcels 109-2((1))15 and 13A at the intersection of Richmond Highway and Jeff Todd Way are planned for office, retail or hotel/conference center at an intensity up to 0.50 FAR. Development proposals should be consistent and compatible with those approved uses within the Woodlawn Historic Overlay District. The environmental quality corridor located in this area should be preserved as open space.