PRINCE WILLIAM COUNTY

North Woodbridge Small Area Plan

Adopted October 8, 2019

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INTRODUCTION AND BACKGROUND

The North Woodbridge Small Area Plan captures the elements necessary for transforming the area into a vibrant, transit-oriented town center that celebrates and protects cultural resources and natural features while leveraging assets for economic growth and a high quality of life. A primary focus of the North Woodbridge Small Area Plan is to continue to support existing assets within the study boundary, including existing businesses and retail spaces, and to identify vacant parcels with development potential. Over the years many studies and plans have been created for North Woodbridge; this Small Area Plan offers an opportunity to revisit and synthesize the previous plans into a single vision with an implementation plan that outlines actionable steps toward redevelopment and revitalization.

North Woodbridge is part of the Washington D.C. Metropolitan area, located just over 20 miles southwest of the Nation's Capital. The study area is situated at the edge of Fairfax County within proximity to major employment centers associated with Fort Belvoir to the north and Marine Corps Base Quantico to the south. The study area also has the benefit of being in an established transit hub, having nearby access to Interstate 95 and U.S. Route 1, Virginia Railway Express (VRE), and waterways with potential for fast ferry service. North Woodbridge is the best-positioned area in the County from which to access employment centers throughout the Metro area and to accommodate "reverse commutes".

The people of North Woodbridge, and the surrounding areas of Prince William County, aid in making this a place that is ripe for investment. The study area has a diverse and educated workforce with a low unemployment rate and is home to a large population of military veterans with specialized training. In addition, redevelopment opportunity areas have previously been identified within the study area as designated Opportunity Zones, further showing the suitability of the area for investment and redevelopment.

In addition to its location within the region, growing transportation options, and diverse workforce, North Woodbridge is a place displaying natural beauty that this Small Area Plan intends to preserve and emphasize. The study area is bounded by the natural resources of the Occoquan River and the Occoquan Bay National Wildlife Refuge and will contain a substantial segment of the Potomac Heritage National Scenic Trail that will engage these resources.

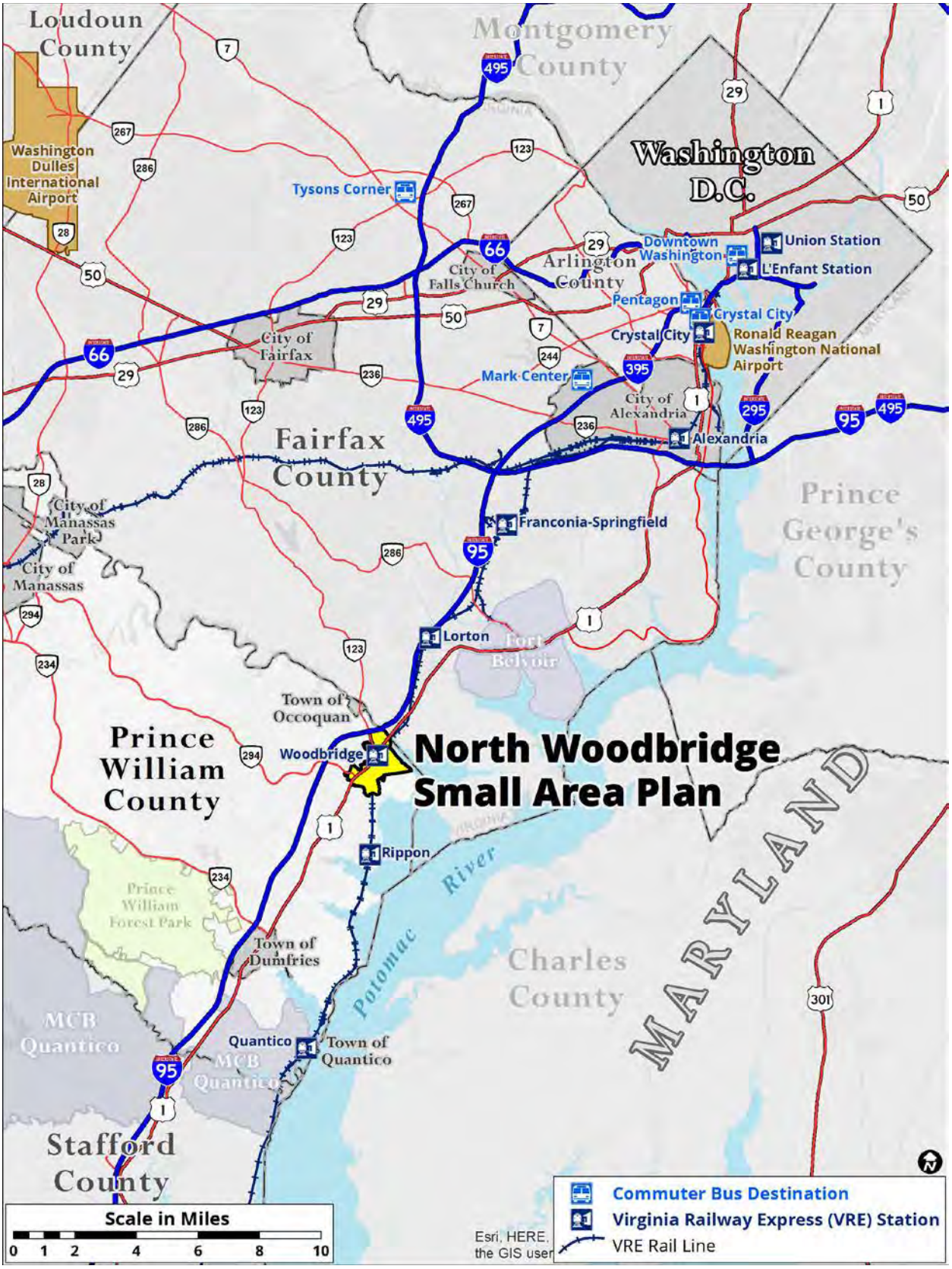

Figure 1: North Woodbridge in the Region

PURPOSE AND USE OF SMALL AREA PLAN

On August 3, 2016, the Board of County Supervisors initiated this new Small Area Plan for North Woodbridge. The Plan serves as a basis for the long-term vision for future growth. The Small Area Plan is consistent with the "New Woodbridge" vision created in 2008 and aligns with the overarching goal to improve the quality of life for Woodbridge residents and to increase economic opportunity. The vision and goals of the Small Area Plan are realized through the completion of the action items established in this Plan. The purpose of the North Woodbridge Small Area Plan is to organize and synthesize the existing area plans and analyses. This Plan consolidates the findings from previous studies into a single vision with actionable steps for implementation. The Small Area Plan process included research, stakeholder and public engagement, and visioning, leading to the final plan.

Areas of Transformational Change

The Plan provides a mechanism to help realize the development potential of the area. The transformational changes within the North Woodbridge Small Area Plan are focused on three geographic subareas that are explored more explicitly herein. They are:

- North Woodbridge Town Center
- Belmont Bay
- Marumsco

The Small Area Plan vision includes transformational changes for the North Woodbridge Town Center. In the North Woodbridge Town Center Subarea, the Small Area Plan is an update of the 2006 Potomac Communities Revitalization Plan, North Woodbridge Study Area. The need to update the Plan arose from several factors including the U.S. Route 1 widening project, new transit opportunities such as continued advancement of plans for a fast ferry service, new State laws affecting the proffer system, new Opportunity Zone investment incentives, and a desire to develop implementation strategies that can bring the vision for North Woodbridge to fruition. The North Woodbridge Town Center presents the greatest amount of desired change in character based on proximity to multimodal transportation resources and the need for a catalyst to help spur investment in underutilized properties. The Town Center is the focus for the highest densities, coupled with a walkable street grid crossing both sides of Route 123 and enhanced pedestrian connections across U.S. Route 1. The Plan establishes a "Transit Triangle" to integrate automobiles, buses, trains, and ferries into a strong multimodal network to enhance the development of a vibrant mixed-use town center. The existing VRE station is a vital anchor to the "Transit Triangle" concept.

The Belmont Bay community was developed in the early 2000s with a marina, golf course, town center and approximately 1,000 housing units with a potential for up to 700 additional units and 400,000 square feet of non-residential floor area. In 2015, The

Osprey's Golf Course closed which precipitated the need to plan for future uses of the course and ways to enhance the vitality of the retail in the town center without adversely impacting the existing community. The Belmont Bay Subarea Plan recommends some targeted implementation tools to help the Belmont Bay community complete its planned development with more vibrant uses in its town center and the consideration of both public and private investment in more active recreational uses for the golf course. The Potomac Science Center, George Mason University building is also a vital springboard for new development opportunities.

The Marumsco Subarea plan is focused on the existing strip retail centers along U.S. Route 1 including Marumsco Plaza which once was a vibrant retail heart of the area. The intent of the Small Area Plan is to develop tools to revitalize and redevelop this retail area, improve pedestrian connectivity, and provide linkages to transit and surrounding communities. The commercial uses within the Marumsco Subarea along U.S. Route 1 are also proposed for mixed-use development to increase densities within walking distance of bus transit along U.S. Route 1 and introduce residential development opportunities, although with development densities lower than those appropriate for the Town Center, given the increased distance from transit hubs with regional services. The remainder of the Small Area Plan consists primarily of either established residential communities, institutional uses such as schools and parklands, or small pockets of industrial uses. Beyond the three subareas of the North Woodbridge Town Center, Marumsco's commercial zone, and the remaining Belmont Bay development sites, the Small Area Plan recommends retention of the established residential communities and reinvestment in the industrial properties over time as needs and markets for such services evolve.

The County has recognized the need for multimodal levels of service through the Strategic Plan's Mobility Goal to "have an accessible, comprehensive, multimodal network of transportation infrastructure that supports local and regional mobility." This goal recognizes the need to build a robust economy and to provide more job opportunities within the County to help reduce commute times and congestion issues, while also lowering the tax burden on homeowners. In order to implement the goals of the North Woodbridge Small Area Plan, the County needs new performance measures to measure accessibility, economic development, sustainability and livability. This requires less reliance on achieving a specific Level of Service and more reliance on creating a sense of place with measures related to economic, social and environmental outcomes, where people live, and work and play in the same geographic area.

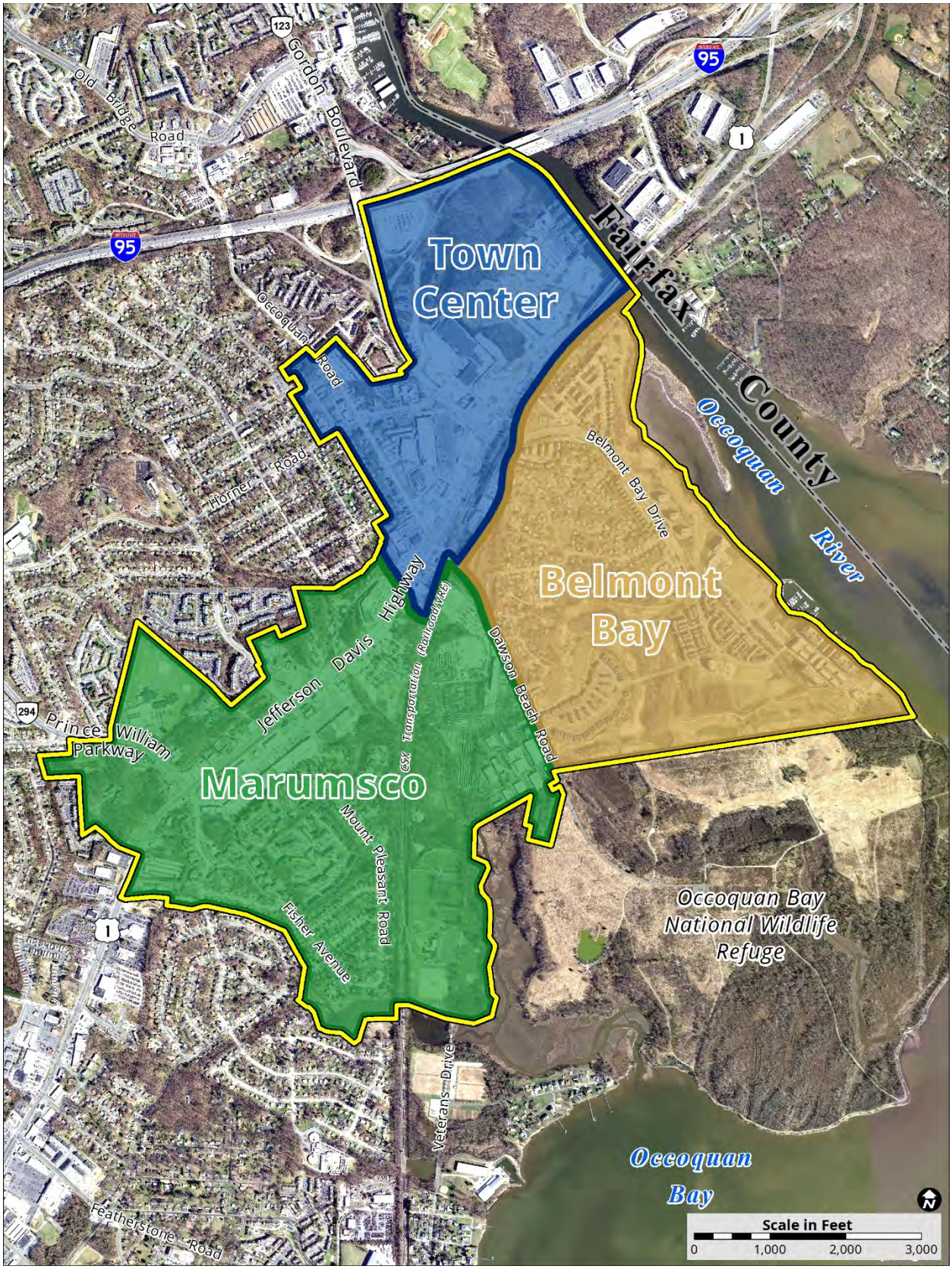

Figure 2: North Woodbridge Small Area Plan Subareas

Organization of the Small Area Plan

The Small Area Plan consists of eight major components which are identified below and will follow an extensive existing conditions and data analysis that sets the foundation upon which the plan is built (See Figure 3).

1. **Vision and Thematic Principles** – Establishes the long-term vision and supporting goals for the creation and guidance of the North Woodbridge Small Area Plan.
2. **Land Use Plan** – Consists of a land use plan with development standards including density, form, and layout. The transect identifies the relationship between density and mobility. An illustrative plan shows what the full build out of the plan could look like.
3. **Mobility Plan** - Mobility has a close relationship with land use; this plan calls for multimodal mobility with dense, mixed-use development.
4. **Green Infrastructure Plan** – Ensures that open space, active recreation, and passive recreation is supported in the Plan. With additional density of people living, working, and playing in North Woodbridge, there will be a demand for outdoor spaces and a requirement for environmental protection.
5. **Cultural Resources Plan** – Plans for the identification and preservation of architectural and archaeological sites, historic districts, cemeteries, battlefields, cultural landscapes, museum objects, and archival materials in the study area.
6. **Economic Development Plan** – Encourages the attraction and retention of diverse high-quality businesses and services that strengthen the economic vitality of this area.
7. **Level of Service Plan** – As North Woodbridge changes and grows over the next 20 years, it is necessary to ensure that level-of-service infrastructure improvements are programmed into the Plan.
8. **Implementation Plan** – This section activates the Plan so that action strategies are implemented in the short, mid, long term, and ongoing time frames to ensure the plan is fully actualized by 2040.

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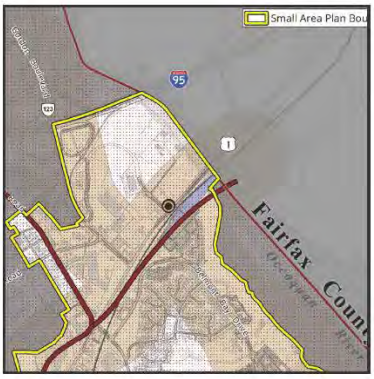

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Projected Police Facility Needs by Existing and Projected Population

Facility Type	Existing (2019)	Additional Need by 2040
Police Station	1	0.25
Satellite Field Offices	0	1
Administrative Support Facilities	0	7957 sq. ft.
Animal Control	0	1234 sq. ft.
Public Safety Training Center	0	7834 sq. ft.

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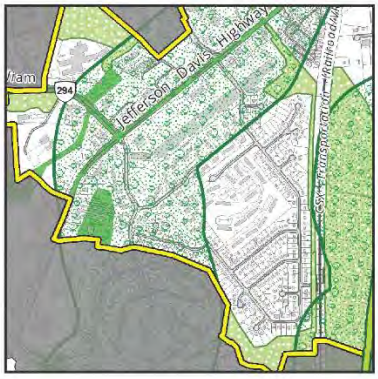

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IMPLEMENTATION MATRIX

Timeframe	Goal	Action Item
Short Term	Design	Adopt Design Guidelines
Short Term	Economic Development	Develop a robust Business Retention
Short Term	Green Infrastructure	Establish an alignment for the PHNST Shoreline
Short Term	Green Infrastructure	Explore temporary easements for pro planned waterfront access

Figure 3: Organization of the Plan

EXISTING CONDITIONS AND DATA ANALYSIS

History

The name for the Woodbridge area dates back 200 years. A wooden bridge was built over the mouth of the Occoquan River along the Potomac Path that was the major highway from Alexandria. Thomas Mason, a local plantation owner, named his plantation 'Woodbridge"[1]. By 1870 a new bridge was constructed, where Thomas Mason's bridge was located, for the northern extension of the RF&P railroad. Today, the RF&P Railroad is a subdivision of CSX Transportation[2]. Until World War II much of Woodbridge was dominated by tobacco plantations and then by dairy farms.

After World War II the G.I. Bill was enacted[3], making low-interest mortgages available to veterans. Almost a decade later, the Federal Highway Act of 1956 set the course for the proliferation of the interstate system. These two phenomena led to the growth of suburban development patterns; that are characterized by car dependence, large residential lots, and strip malls with overprescribed parking requirements. North Woodbridge's land development was largely influenced by these events, with successive waves of development reflecting the market's response to state and federal transportation investments in the burgeoning metropolitan Washington region. Commercial development spread along U.S. Route 1 as successive roadway improvements were made to widen and improve the primary highway connecting Washington D.C. to Richmond, Virginia in the 1950s and 1960s, spurred in part by the 1952 construction of the Shirley Highway (then Route 350) from downtown Washington to Woodbridge. The construction of Interstate 95 through eastern Prince William County in 1964 helped spur the first wave of suburban development, epitomized by large tracts of single-family homes separated from self-contained shopping centers. Notable developments in eastern Prince William County over the subsequent decades included the planned community of Dale City in the 1960s and 1970s and the opening of the Potomac Mills shopping center in 1985. During this timeframe, in the Woodbridge area, residential subdivisions such as Marumsco Village and commercial strip shopping centers such as Gordon Plaza followed the same pattern of separated land uses.

During the 1980s and 1990s, eastern Prince William County continued to grow to both serve as a residential resource for the greater Washington region as well as an economic engine. Regional congestion spurred more multimodal investments to connect Woodbridge to the regional core, including introduction of commuter rail service at the Virginia Railway Express station in 1992 and construction of carpool and bus lanes along I-95 in 1997.

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[1] Historic Prince William, *Woodbridge is 200 Years Old*, 1995.

[2] CSX, *About Us*, 2018

[3] History, *G.I. Bill*, 2018.

By this time, many of the original suburban developments were showing their age and suffering from disinvestment while other areas of the County were still being invested in greenfield developments. The 2003 Potomac Communities Revitalization Plan established a comprehensive approach to completing greenfield development and initiating redevelopment activity along the I-95, U.S. Route 1, and VRE corridors, establishing North Woodbridge as one of several discrete town centers to be developed in a mixed-use, walkable form with a focus on aging commercial properties near the VRE station. The North Woodbridge area has been the subject of several studies during the interim, including a 2005 County study, a 2008 study led by the Urban Land Institute, and a 2009 Metropolitan Washington Council of Governments (MWCOG) study. In each case, stakeholders supported redevelopment concepts that increased development densities, implemented a more walkable street grid, and incentivized investment in high-quality jobs and housing units. The challenges in each study included the tradeoff between the specificity of a desired end-state vision and the flexibility needed for individual property owners to develop incrementally. These challenges form the basis for the current Small Area Plan to further increase density and establish a new, comprehensive Mixed-Use Zoning District to help serve as policy catalysts to leverage the area's unique blend of regional access and natural resources.

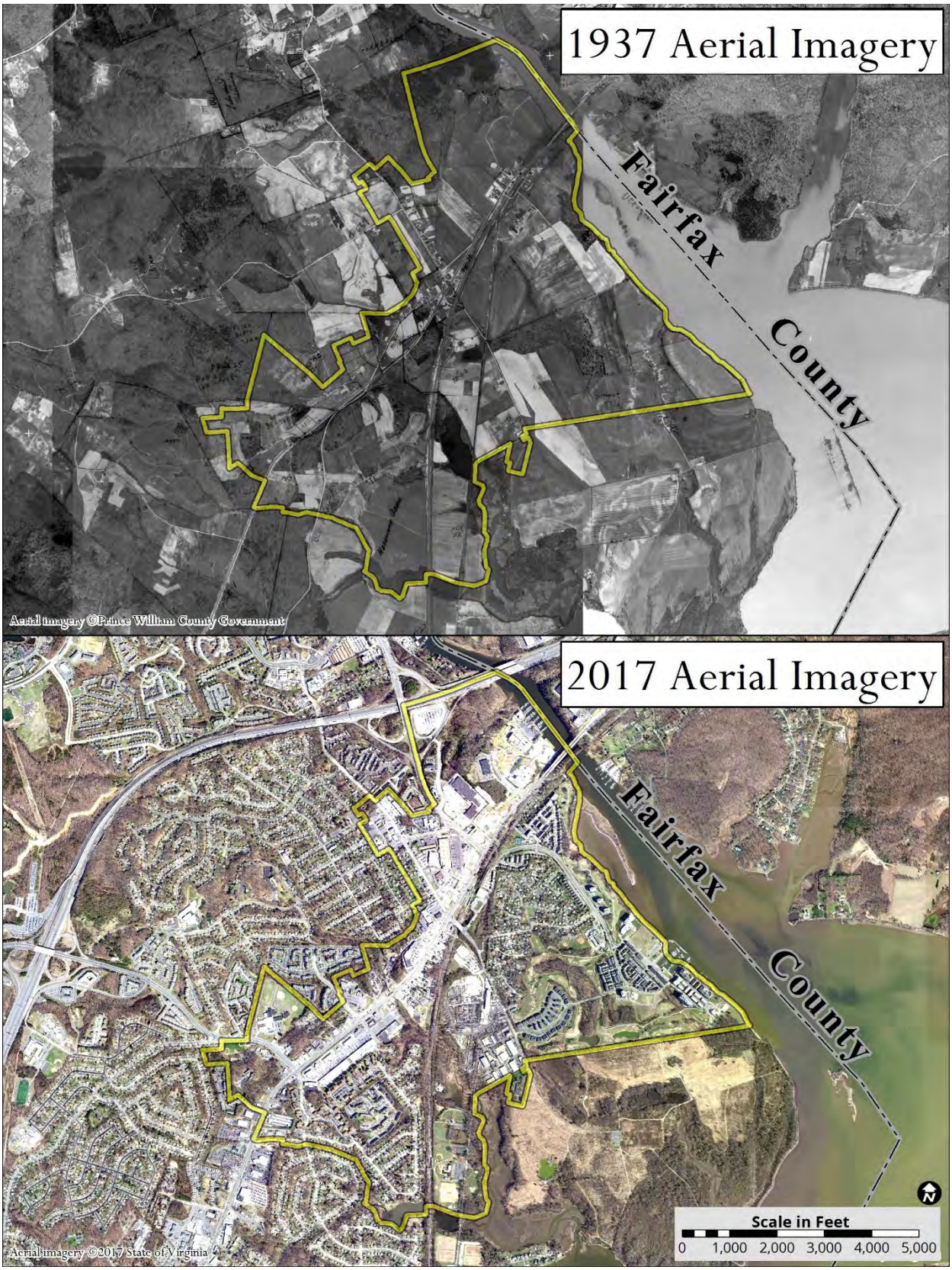


Figure 4: North Woodbridge, 1937 - 2017

Overview of Study Area Today

North Woodbridge is part of the Washington D.C. Metropolitan area. The North Woodbridge Community is located 20 miles southwest of the Nation's capital. The study area is bounded by natural resources (the Occoquan River and the Occoquan Bay National Wildlife Refuge) to the north and east, by I-95 to the northwest, and by predominantly residential communities along its western edge.

The location benefits from proximity to major employment centers including nearby Fort Belvoir and Marine Corps Base Quantico. Commuter bus and commuter rail connections between the major employment centers of downtown Washington, the Pentagon, Crystal City, Tysons Corner, Alexandria and Mark Center serve North Woodbridge. In addition, Prince William-Metro Direct bus service provides peak hour connections to the region's Metrorail transit system.

The North Woodbridge area is a critical northern gateway within the "Potomac Communities", an area that extends along the U.S. Route 1 corridor from Stafford to Fairfax Counties[4]. As of 2015, the population in North Woodbridge was 13,313 and provided 3,651 jobs. North Woodbridge is bustling with economic opportunity.

The Metropolitan Washington Council of Governments (MWCOG) has identified Woodbridge as an Emerging Employment Center. Emerging Employment Centers are a type of Activity Center with rapidly developing "campus-style" suburban employment areas less than six square miles (3,840 acres) in total area, with more than 15,000 jobs projected in 2040. This designation is used as a tool to help guide land use and transportation planning decisions such as increasing the amount of employment or housing in the Center[5].

Also, the State of Virginia designated North Woodbridge as an Opportunity Zone, as a provision of the new revitalization tool established by the Federal Tax Cuts and Jobs Act of 2017. The Opportunity Zone designation allows potential investors to receive tax benefits by investing in designated census tracts[6] (see the Economic Development section for more information on Opportunity Zones).

The U.S. Route 1 widening project from Marys Way to Annapolis Way in Prince William County will enhance access to the Woodbridge Virginia Railway Express kiss and ride facility. The project will expand the existing four lane section to six lanes and incorporate a ten-foot shared-use path and six-foot sidewalk. The project is anticipated for completion in 2020.[7] Furthermore, the County is widening U.S. Route 1 from Marys Way to Featherstone Road to six lanes with a sidewalk and shared use path. This project is scheduled to be completed in 2022.

[4] Prince William County, *Urban Mixed-Use Master Zoning Plan*, 2006.
[5] Metropolitan Washington Council of Governments, Regional Activity Centers and Clusters, 2007.
[6] Prince William County, *Federal Opportunity Zones*, 2018.
[7] Virginia Department of Transportation, *Route 1 Widening*, 2018.

Furthermore, (add Transportation This effort supports the vision to establish a multimodal, pedestrian friendly community.

Recent studies have been completed on the feasibility of developing a Fast Ferry Commuter Route from this area, providing the potential to create and establish a “transit triangle”. The vision to connect automobiles, rail and ferry opportunities could establish a dynamic multimodal transit corridor that not only enhances development of this small area but provides connection and linkage opportunities within the metropolitan region.

Comprehensive planning efforts will capitalize on the multi-faceted “existing conditions” of this area which provide a springboard for development and redevelopment opportunities. The following map series illustrates the existing conditions within the study area as of February 2019. This section unfolds the story of North Woodbridge and explores the area’s strengths and challenges.

Figure 5: Study Area Today

Existing Land Use – North Woodbridge Town Center

Most of the acreage in the Town Center is vacant land and retail uses including Gordon Plaza, Station Plaza, Woodbridge Center and Woodbridge Square shopping centers. Other major uses are a concrete plant, Rivergate Apartments and Occoquan Harbour Marina. A mixture of small retail, office and residential uses fill out the land area.

Current Land Use	Land Area (± Acres)	Share of Use (± %)
Commercial	93.3	32%
Industrial	13.3	5%
Institutional	1.7	1%
Undeveloped	48.2	17%
Railroad	17.4	6%
Residential – High Density	13.6	5%
Residential – Medium Density	3.7	1%
Residential – Low Density	2.5	1%
VDOT Right-of-Way	94.0	32%
Open Water	3.6	1%
Total	291.5	

Figure 6: Aerial View of North Woodbridge Town Center

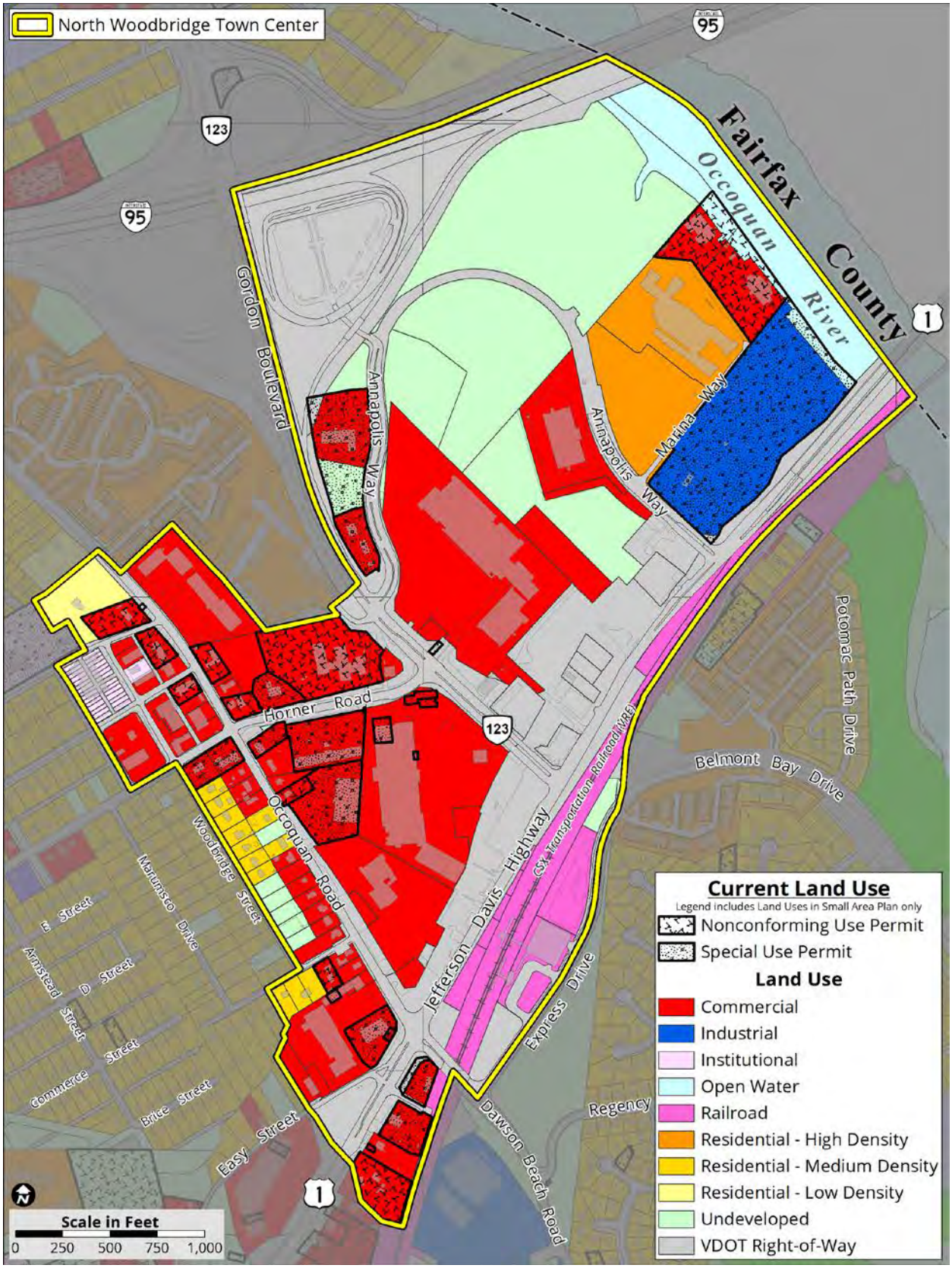


Figure 7: North Woodbridge Town Center – Current Land Use

Existing Land Use – Belmont Bay

The Belmont Bay area features a town center with an active waterfront and marina. The Belmont Bay development provides a variety of housing types, an elementary school and a large network of open space including a former golf course and other recreational land.

Current Land Use	Land Area (± Acres)	Share of Use (± %)
Commercial	1.8	0%
Former Golf Course	106.2	26%
Institutional	4.1	1%
Undeveloped	71.3	18%
Railroad	5.6	1%
Recreational Land	5.3	1%
Residential – High Density	79.5	20%
Residential – Medium Density	73.6	18%
School	14.3	4%
Utility	0.4	0%
VDOT Right-of-Way	37.0	9%
Open Water	3.4	1%
Total	402.6	

Figure 8: Aerial View of Belmont Bay

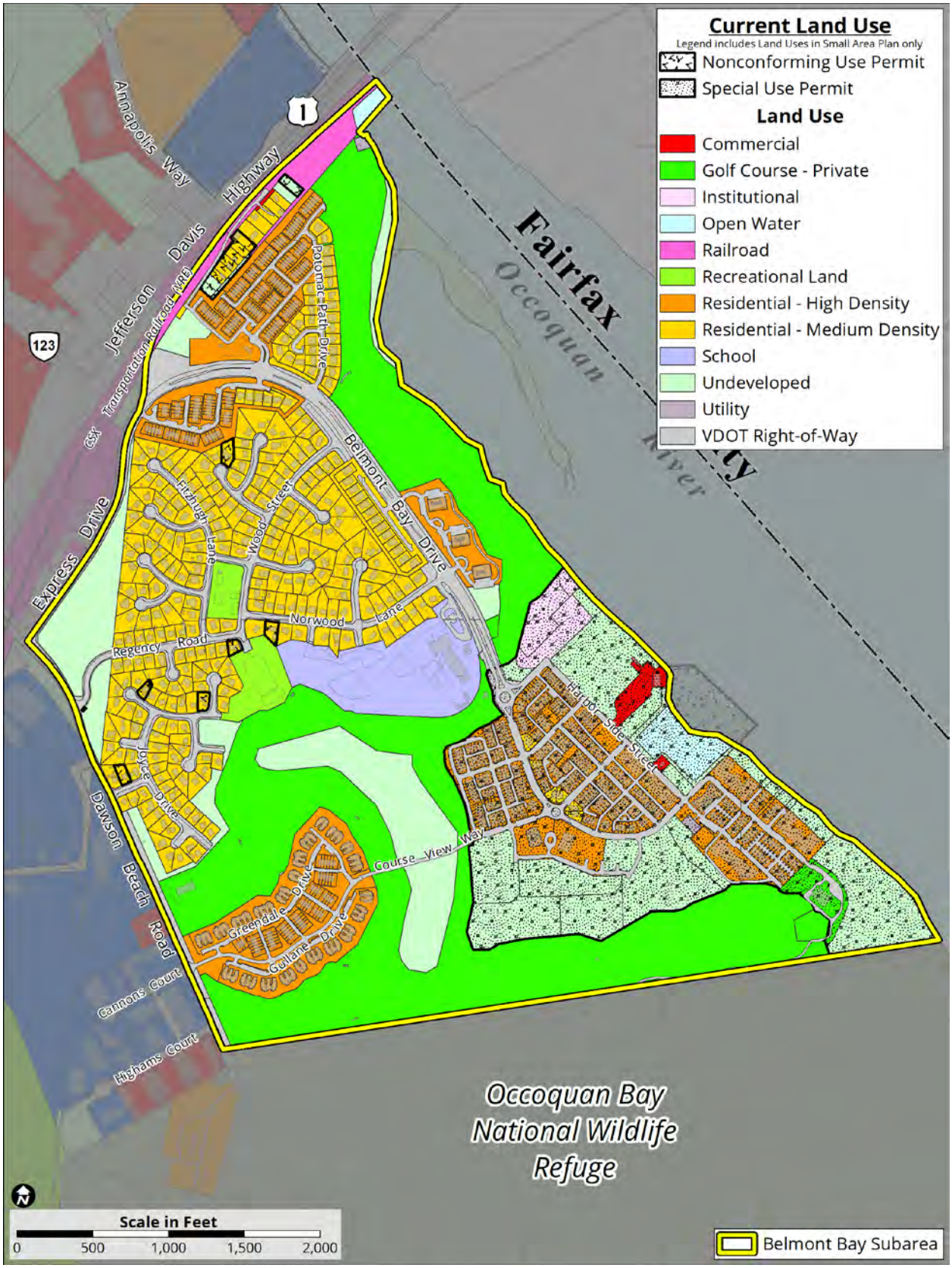


Figure 9: Belmont Bay – Current Land Use

Existing Land Use – Marumsco

Marumsco contains retail along the U.S. Route 1 corridor surrounded by a diversity of housing and several places of worship. Shopping centers include Potomac Plaza, Jefferson Plaza, Marumsco Plaza, and Woodbridge Plaza. Veterans Memorial Park and Dawson Beach Industrial Park take up most of the area on the east side of the railroad. Some vacant land can be found along the rear of the U.S. Route 1 retail corridor.

Current Land Use	Land Area (± Acres)	Share of Use (± %)
Commercial	76.0	13%
Industrial	64.1	11%
Institutional	28.2	5%
Undeveloped	34.0	6%
Railroad	21.9	4%
Recreational Land	110.5	20%
Residential – High Density	80.7	14%
Residential – Medium Density	67.7	12%
School	28.5	5%
Utility	0.1	0%
VDOT Right-of-Way	51.4	9%
Total	563.1	

Figure 10: Aerial View of Marumsco

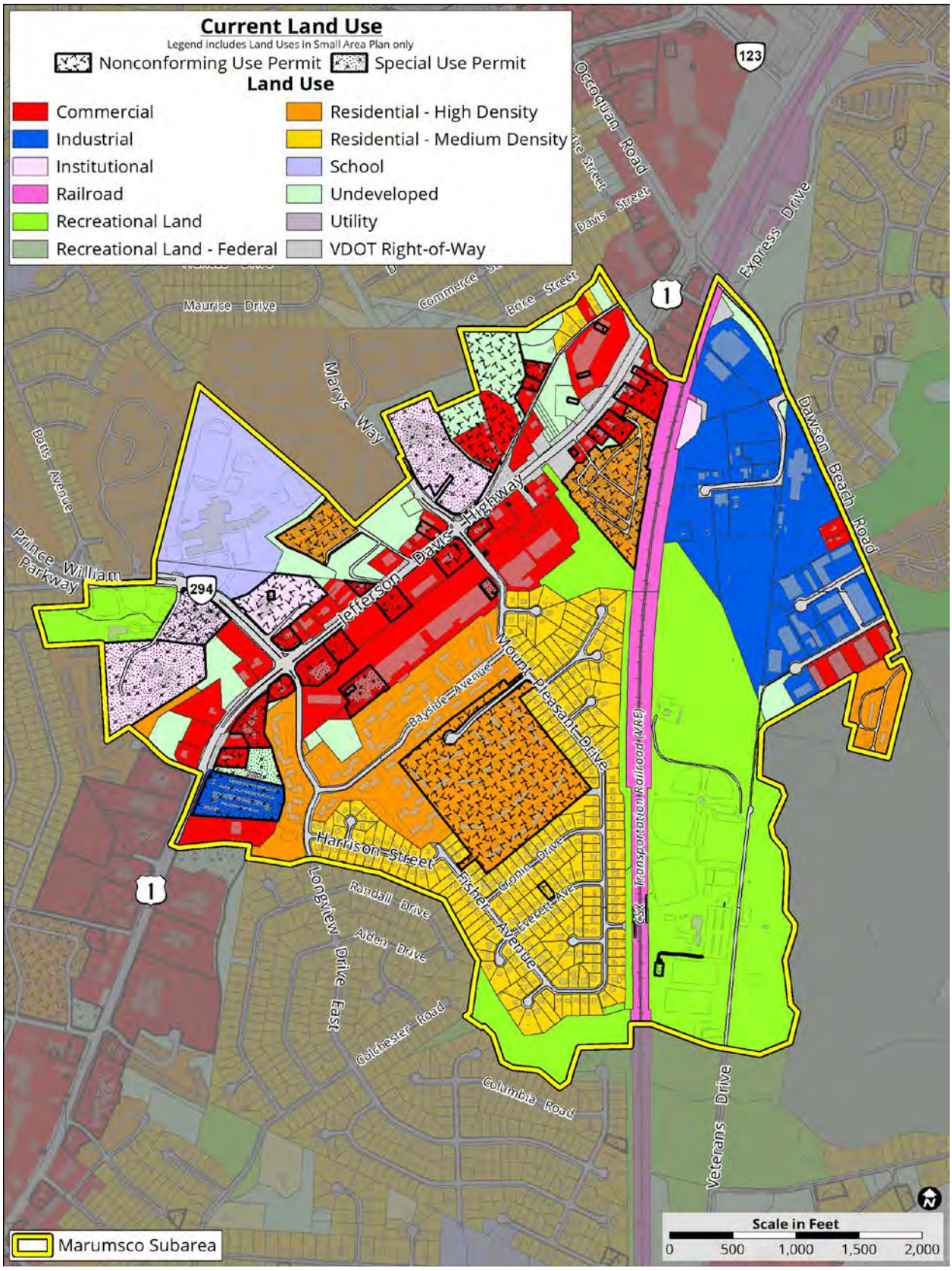


Figure 11: Marumsco – Current Land Use

Existing Zoning

The Zoning Ordinance for Prince William County consists of text and a map that classifies all land into zoning districts. The Zoning Ordinance is subject to periodic revisions upon action by the Board of County Supervisors.

The focus of transformational change for this small area plan is in the North Woodbridge Town Center and Marumsco commercial properties. Existing commercial development in these two areas is comprised of mostly large parcels. These properties are candidates for focusing redevelopment, in part, due to a prevalence of vacant or underutilized properties. A key small area plan strategy is to provide redevelopment incentives to spur desired development. The current zoning does not serve to promote the central vision for the study area. The challenge for North Woodbridge is to use its zoning regulations to promote a sense of place for each of its subareas. Well-defined districts help residents and visitors navigate their surroundings which support local businesses and strengthen the transportation network.

Existing Zoning – North Woodbridge

The area between U.S. Route 1 and I-95 is largely zoned B-1, General Business for general commercial development. The B-1 district provides for a wide range of commercial uses many of which would not be compatible with a mixed-use, pedestrian oriented town center. Pockets of A-1, Agricultural and M-1, Heavy Industrial zoning districts exist in the areas to a lesser extent. Route 123, Gordon Boulevard, is part of a Highway Corridor Overlay District which limits some uses, reduces the size and height of signage, requires landscape buffers and screening along the street, and limits direct access. In addition, a large portion of the area is in the Redevelopment Overlay District which has been largely ineffective. The purpose of the Redevelopment Overlay District is to promote and perpetuate the continued economic viability of older commercial neighborhoods that are experiencing economic decline. To achieve this purpose development regulations specific to the district are provisioned to encourage the redevelopment, upkeep and upgrade of existing businesses thereby providing an economic stimulus to the district.

Major Zoning Case/Project Name	Existing Units or Building Area	Remaining to be Built
Rivergate	410 units	310 units
Landing at Mason's Bridge	0 units	342 units
B-1, General Business Areas	908,759 Sq. Ft. GFA	±145,055 Sq. Ft. GFA

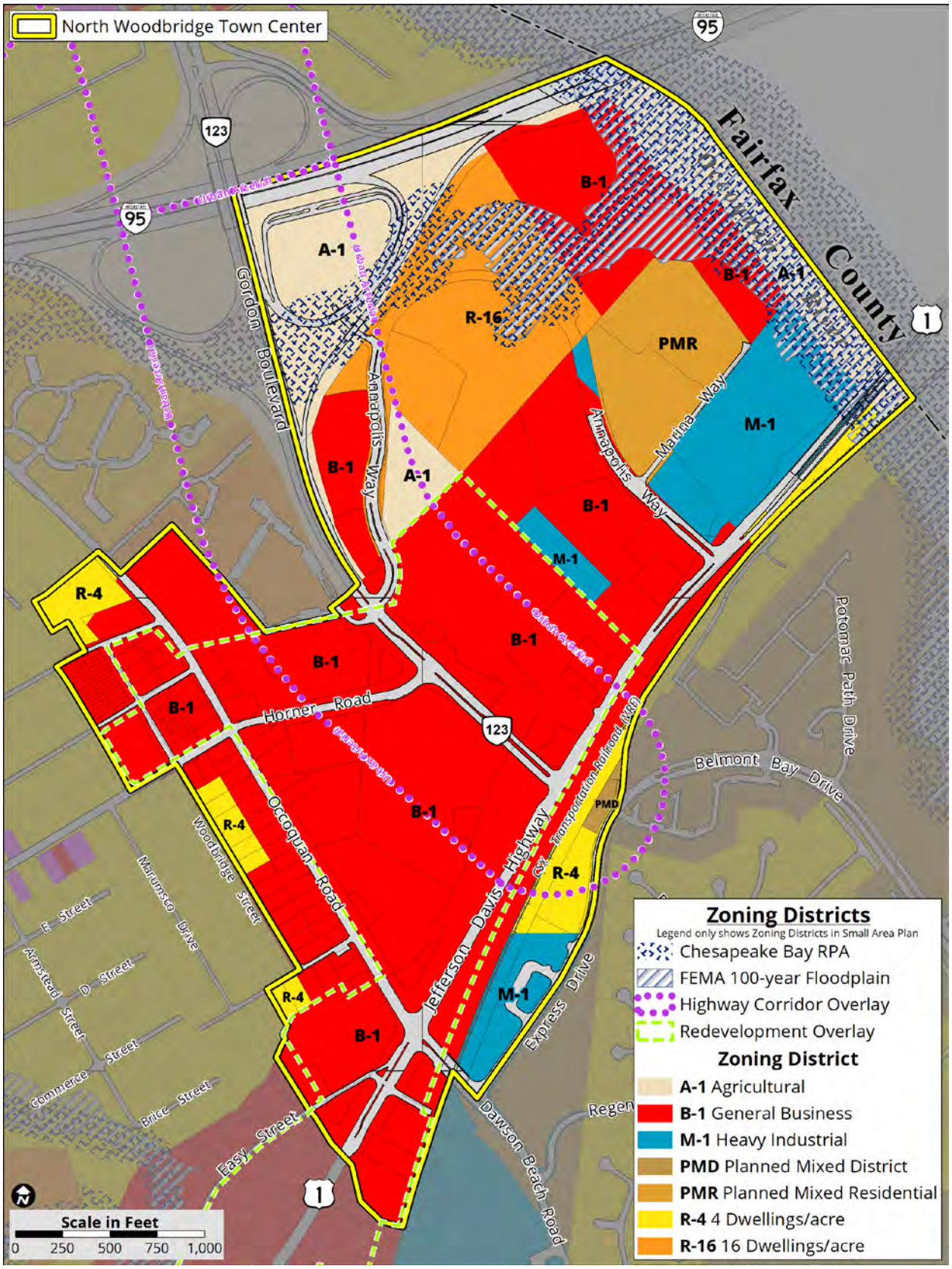


Figure 12: North Woodbridge Town Center – Existing Zoning

Existing Zoning – Belmont Bay

The Belmont Bay subarea, near the Occoquan River, is zoned as a Planned Mixed-Use District (PMD). The PMD designation provides a single zoning district that promotes an integrated business community within which businesses and residences are conveniently linked.[8] Current development guidelines for PMDs encourage multi-story buildings with an active ground floor. Additionally, internal streets are preferred to follow the grid system to the maximum extent possible to provide internal route choice.

Although the existing zoning provides an appropriate mix and density of uses, the former golf course, which closed in 2015, needs a new vision and perhaps a new zoning approval.

Major Zoning Case/Project Name	Existing Units or Building Area	Remaining to be Built
Belmont Subdivision	250 units	0 units
Belmont Center	1,063 units	345 units
Belmont Center (Age Restricted)	28 units	84 units
Belmont Center	134,593 Sq. Ft. GFA	±1,968,750 Sq. Ft. GFA

[8] Prince William County, *Zoning Code*, 2018.

Figure 13: Belmont Bay Harbor
Source: Inside NOVA, accessed October 2018

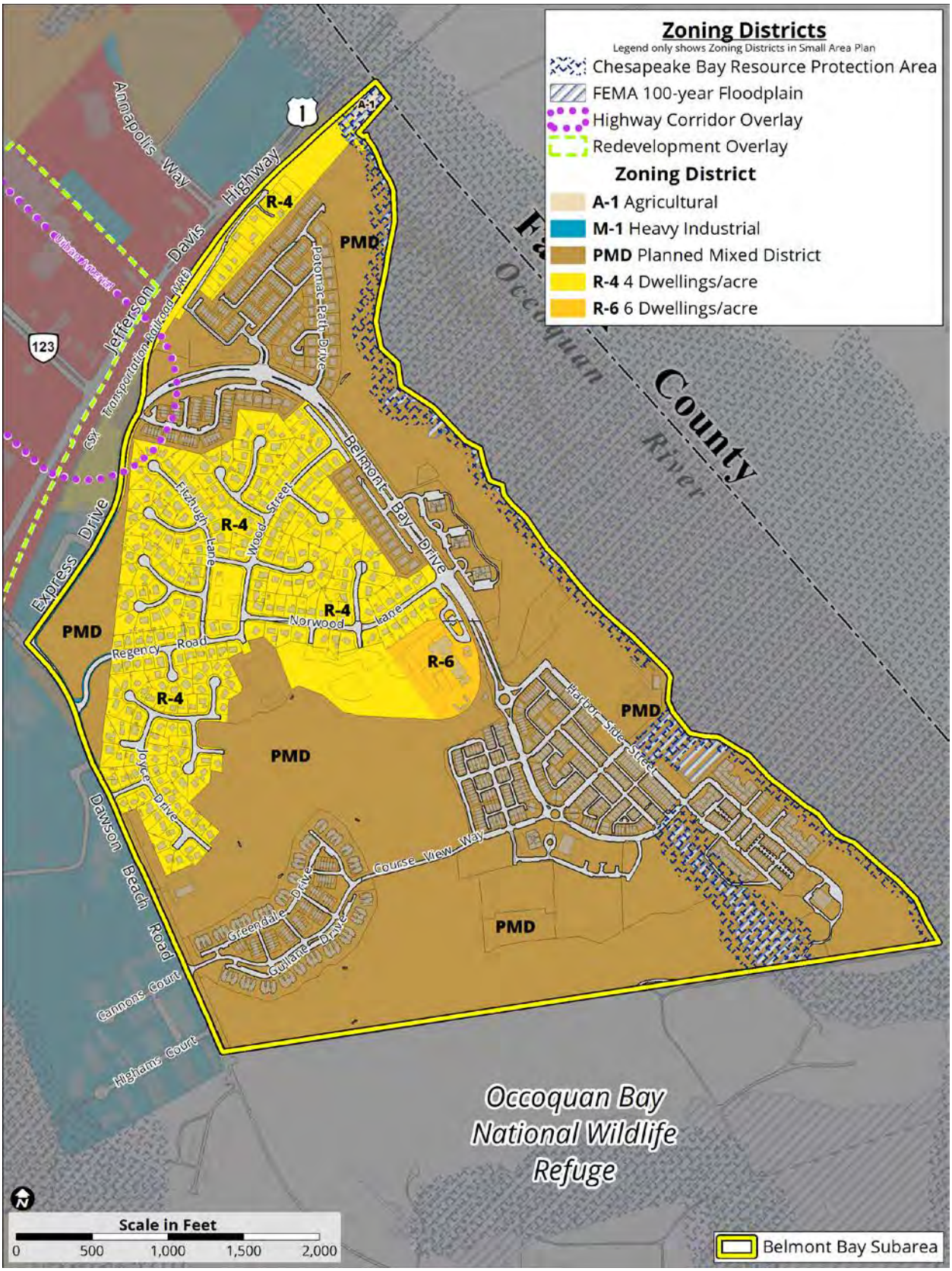


Figure 14: Belmont Bay – Existing Zoning

Existing Zoning - Marumsco

In the Marumsco subarea along U.S. Route 1, the area is largely zoned B-1, General Business for general commercial development. The General Business District is intended to provide areas for community-scale retail, office and institutional uses in appropriate areas. The B-1 district provides for a wide range of commercial uses many of which would not be compatible with a mixed-use, pedestrian-oriented place. In addition, a large portion of the area is in the Redevelopment Overlay District, which has been largely ineffective. The purpose of the Redevelopment Overlay District is to promote and perpetuate the continued economic viability of older commercial neighborhoods which are experiencing economic decline. To achieve this purpose development regulations specific to the district are provisioned to encourage the redevelopment, upkeep and upgrade of existing businesses thereby providing an economic stimulus to the district.

The existing residential zoning should remain as is with focus on the B-1 areas and connections between the two.

Major Zoning Case/Project Name	Existing Units or Building Area	Remaining to be Built
B-1, General Business Areas	618,219 Sq. Ft. GFA	±204,439 Sq. Ft. GFA
M-1, Heavy Industrial Areas	407,528 Sq. Ft. GFA	0 Sq. Ft. GFA
St. Margaret's Church	0 units	148 units
Residential Areas	1,428 units	0 units

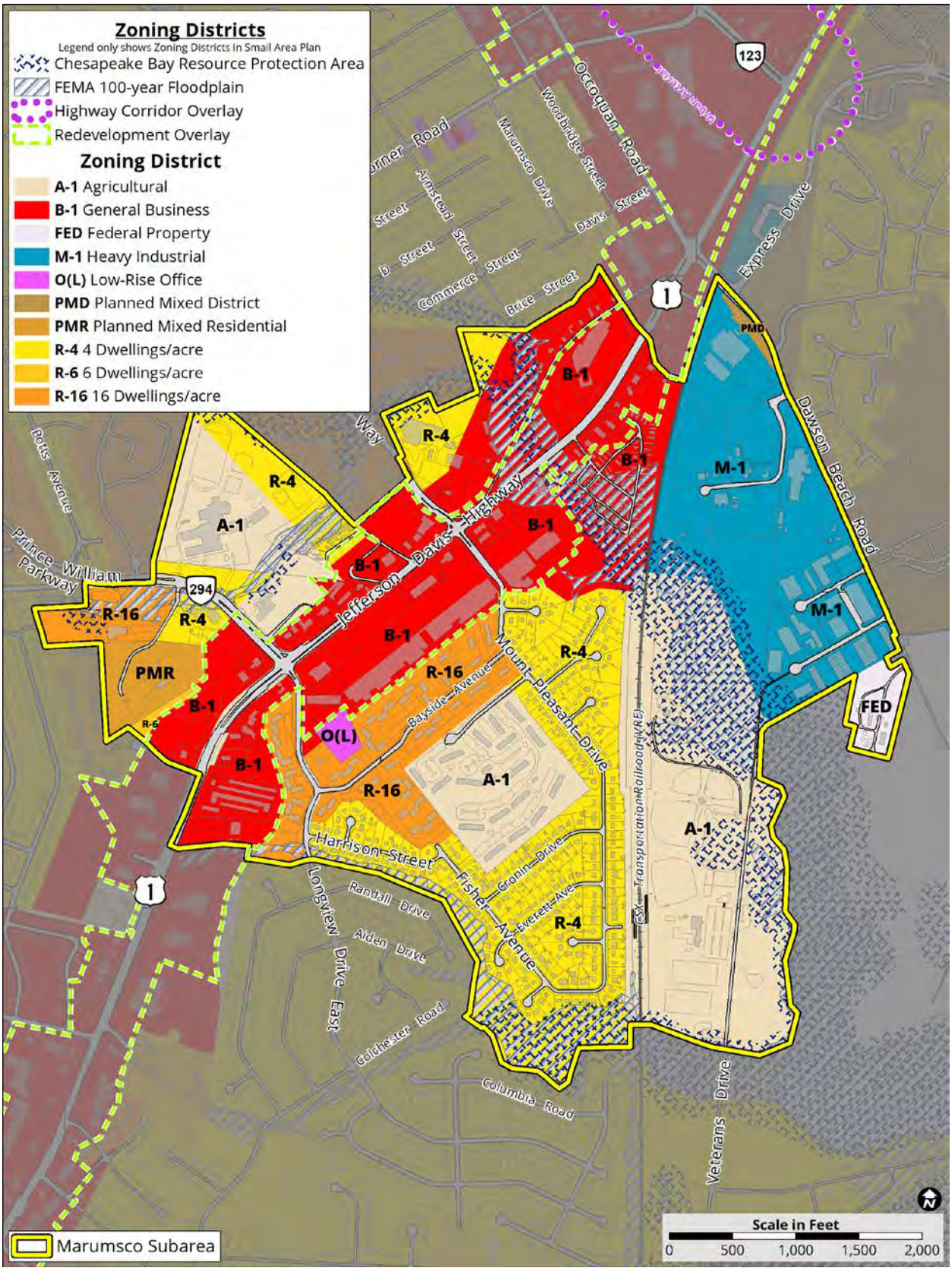


Figure 15: Marumsco – Existing Zoning

Existing Mobility

Road and Highway Network

The County's Comprehensive Plan provides a hierarchical street classification system that distinguishes streets based on their ability to move automobile traffic. It identifies five types of roadways based on access, number of lanes, right of way width, speed, transit potential and bike and pedestrian facilities. Roads are classified as freeway/interstate, parkways, principal arterials, minor arterials and major collectors. Local roads are not included in the roadway classification. The local street grid features many dead-end streets that hinder interconnectivity. Local streets primarily exist in residential areas. They are typically low speed roads with low traffic volumes that support safe travel for pedestrians and bicyclists.

Roadway classifications in part help dictate vehicular throughput and speed. The collector and minor arterial roadways have the most access points with relatively lower speeds than other classifications. Major collectors include Occoquan and Horner Roads. The minor arterials are Express Drive/Belmont Bay Drive. The major collectors and minor arterials connect residential and commercial areas. Principal arterials have fewer access points, but more vehicular throughput and higher speeds. Principal arterials include U.S. Route 1, Gordon Boulevard and Prince William Parkway. U.S. Route 1 and Gordon Boulevard are primarily fronted by commercial and industrial uses; Prince William Parkway has fewer access points along its frontage. I-95 allows for the highest throughput and speeds with limited access points in the form of on/off ramps. The local, major collector and minor arterial roads have the greatest potential to promote the local identity and reflect a sense of place through context sensitive design.

Intercounty travelers use principal arterials and freeways to connect throughout the region. Only three roads provide access over the Occoquan River, I-95, U.S. Route 1 and Route 123. Major corridors connecting North Woodbridge to other multimodal districts (i.e., small area plans) include Prince William Parkway and Occoquan Road-Old Bridge Road-Minnieville Road connecting to The Landing at Prince William Small Area Plan to the west and U.S. Route 1-Dale Boulevard Corridor connecting the Dale City Small Area Plan to the south.

The roadway network within the study area helps to disperse traffic and create a sense of place. However, as development continues, the network will benefit from improved connectivity through a reduction in dead-end streets.

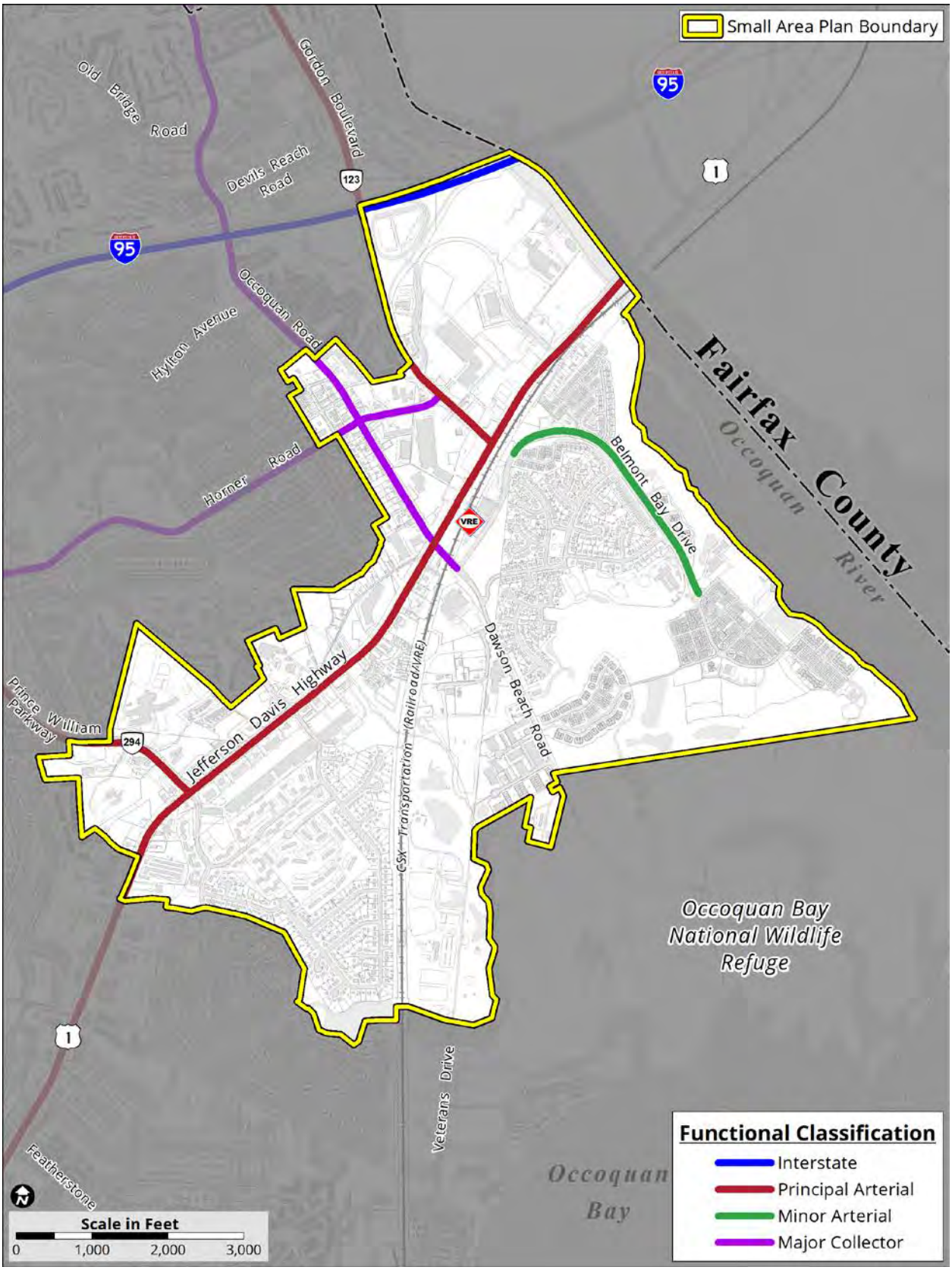


Figure 16: Existing Road and Highway Network

Transit Network

The study area is served by the CSX rail line that carries cargo trains, travelers, and commuters. The 54-mile Fredericksburg commuter rail line, operated by Virginia Railway Express (VRE), offers service between Washington, D.C. and Fredericksburg, VA. The Woodbridge VRE station is located between Express Drive and U.S. Route 1 and can be accessed from the proposed Town Center via Dawson Beach Road. Amtrak's Northeast Regional train also offers service from this line

During the morning commute the VRE provides northbound service to employment areas in eastern Fairfax County, the City of Alexandria, Crystal City and Washington, D.C. In the evening commute, the VRE provides return service southbound, extending past Woodbridge to Fredericksburg. OmniRide provides bus connections at the Woodbridge VRE. OmniRide Express is a service between Prince William County and major employment centers in Northern Virginia and Washington, D.C. OmniRide Local offers cross-county routes serving activity centers.

Transit options provide more alternatives for commuters that reduce gridlock and increase local economic productivity. As the study area continues to develop, it should seek to improve its transit connectivity, reliability and frequency.

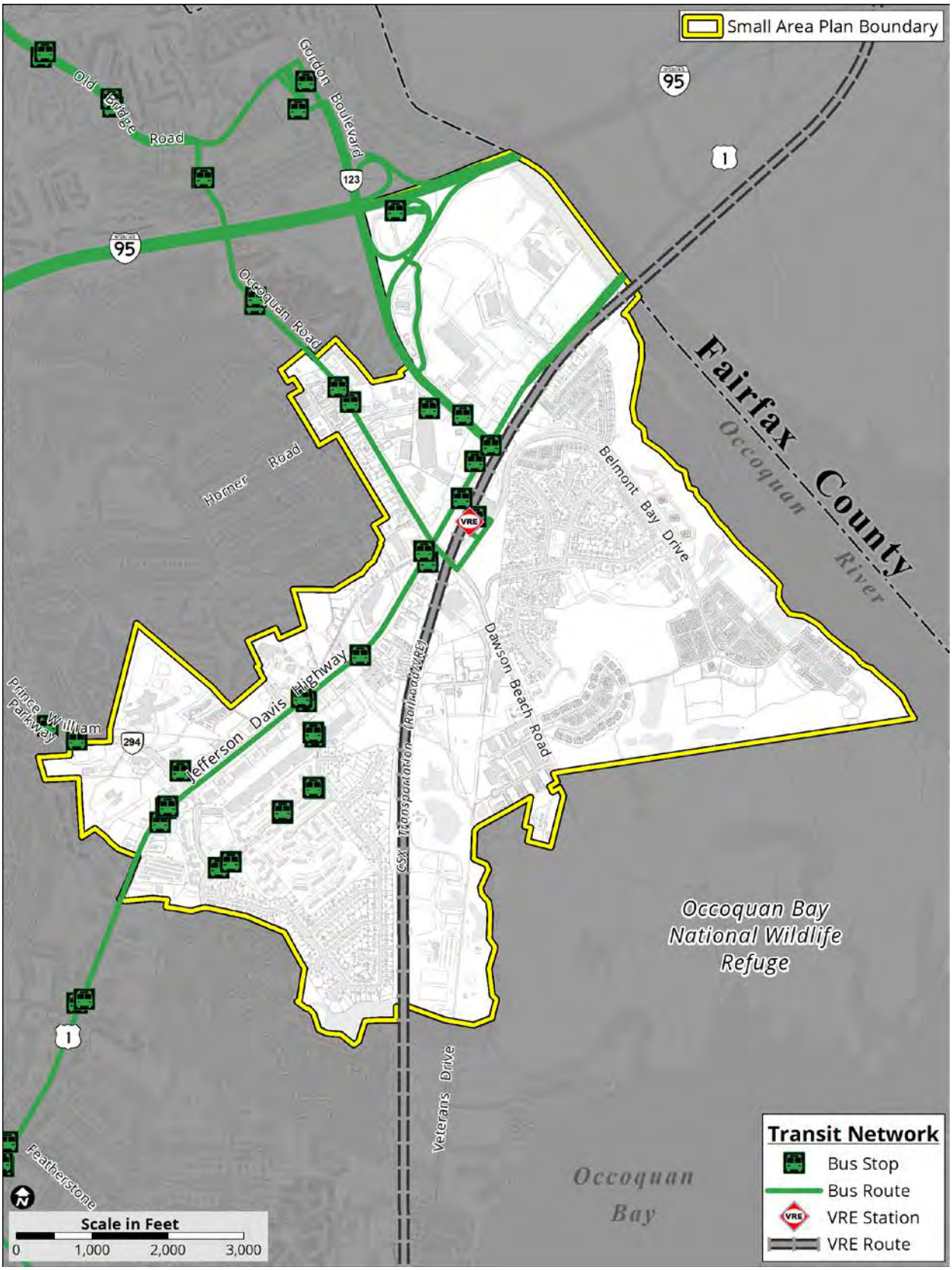


Figure 17: Transit Network

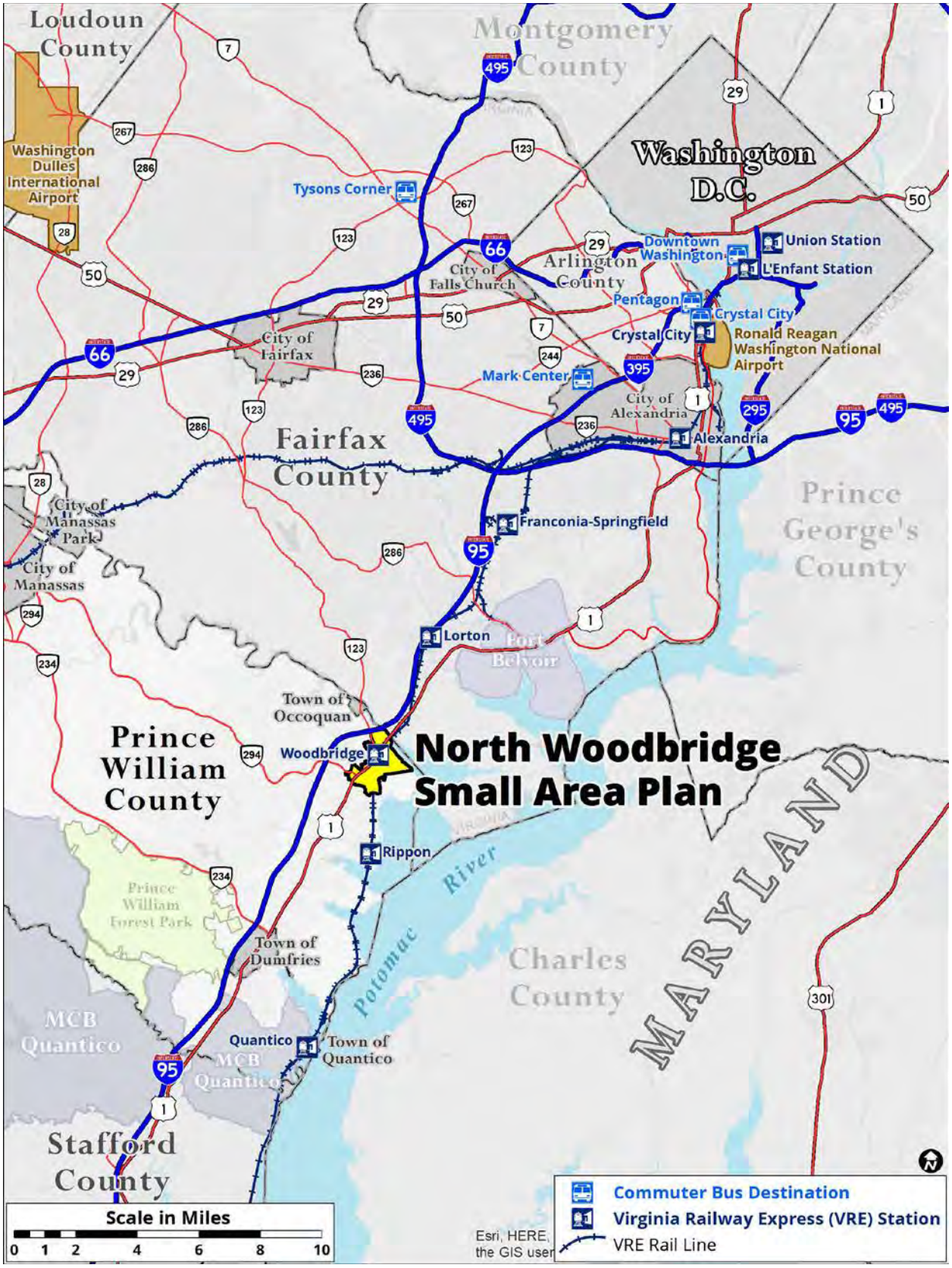


Figure 18: North Woodbridge Transit Destinations

Bicycle Network

The County's 2008 Comprehensive Plan includes action strategies aimed at incorporating and promoting the use of Crime Prevention Through Environmental Design (CPTED) concepts in the design of all transportation projects including, but not limited to, linear parks, greenways, bike and pedestrian paths, and mass transit sites. In support of these action strategies several entities have worked together to establish a connected bicycle and pedestrian network.

The Potomac Heritage National Scenic Trail (PHNST), authorized by Congress in 1983 as a component of the National Trails System, is a developing network of locally-managed trails between the mouth of the Potomac River and the Allegheny Highlands. The trail system has almost 40 miles of existing trails and another 76 miles planned statewide. There are approximately 2.13 miles of existing shared use paths along Belmont Bay Drive and along Prince William Parkway. An additional 2.29 miles of bicycle/shared use paths are planned along Express Drive, U.S. Route 1, Horner Road, and Gordon Boulevard.

The County's Gap Analysis map reflects the need for shared use and bicycle infrastructure along all roads that are classified as collectors and above.

Shared use paths are typically 8 - 10 feet wide providing access for both pedestrians and bicyclists separate from vehicular traffic. The shared use path adjacent to Prince William Parkway from U.S. Route 1 to Old Bridge Road is a 10-foot asphalt path.

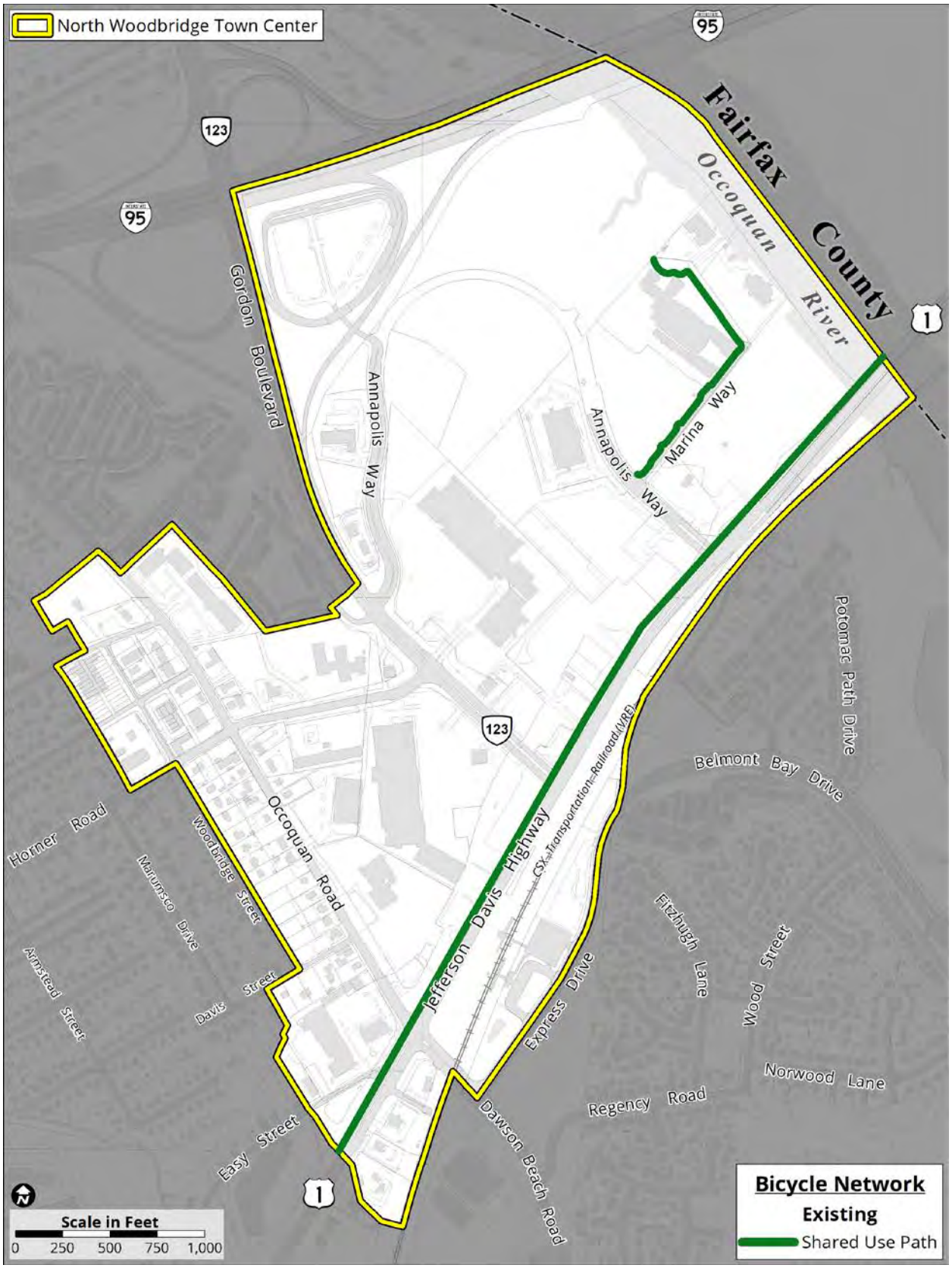


Figure 19: North Woodbridge Town Center – Existing Bicycle Network

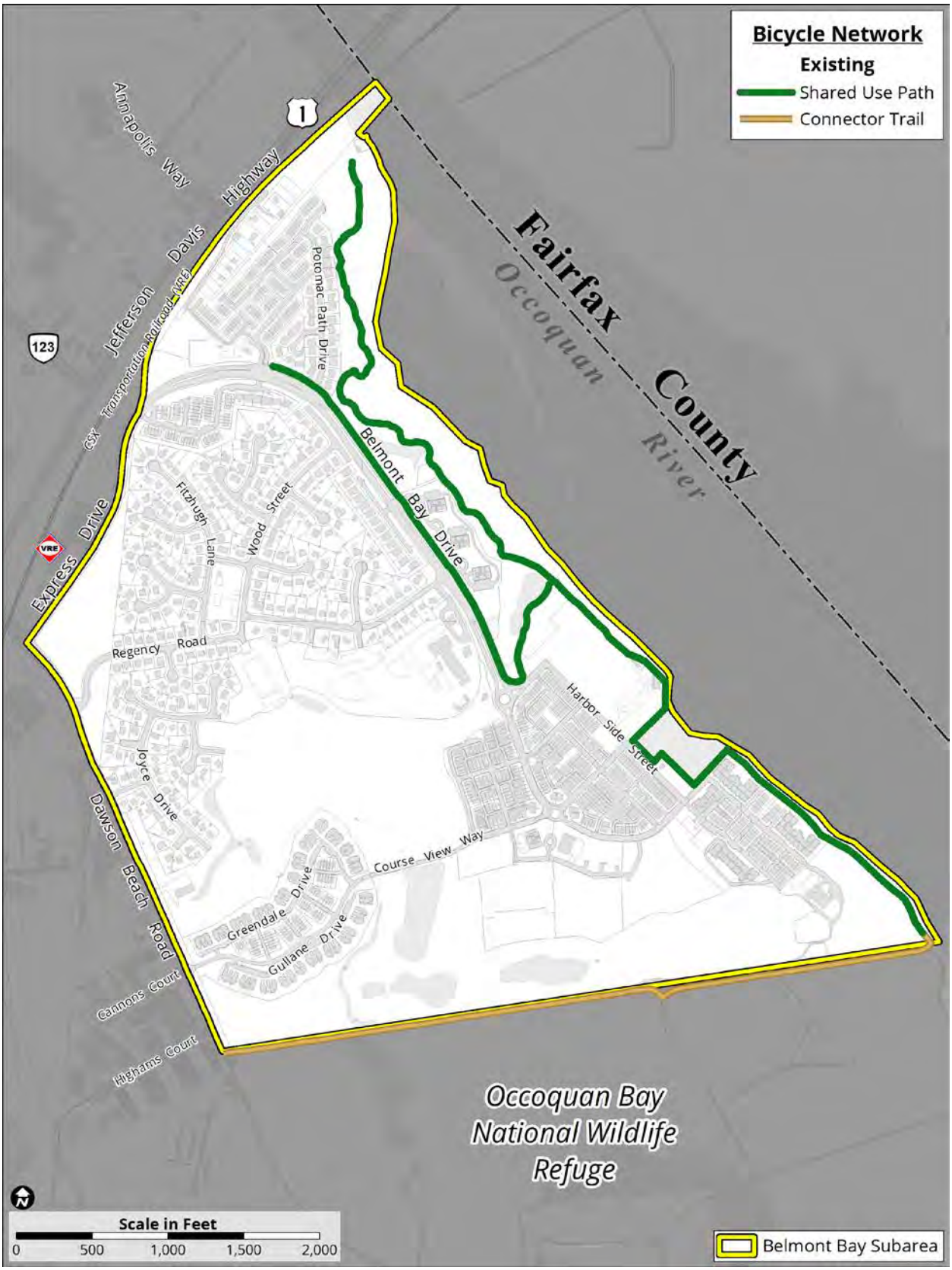


Figure 20: Belmont Bay – Existing Bicycle Network

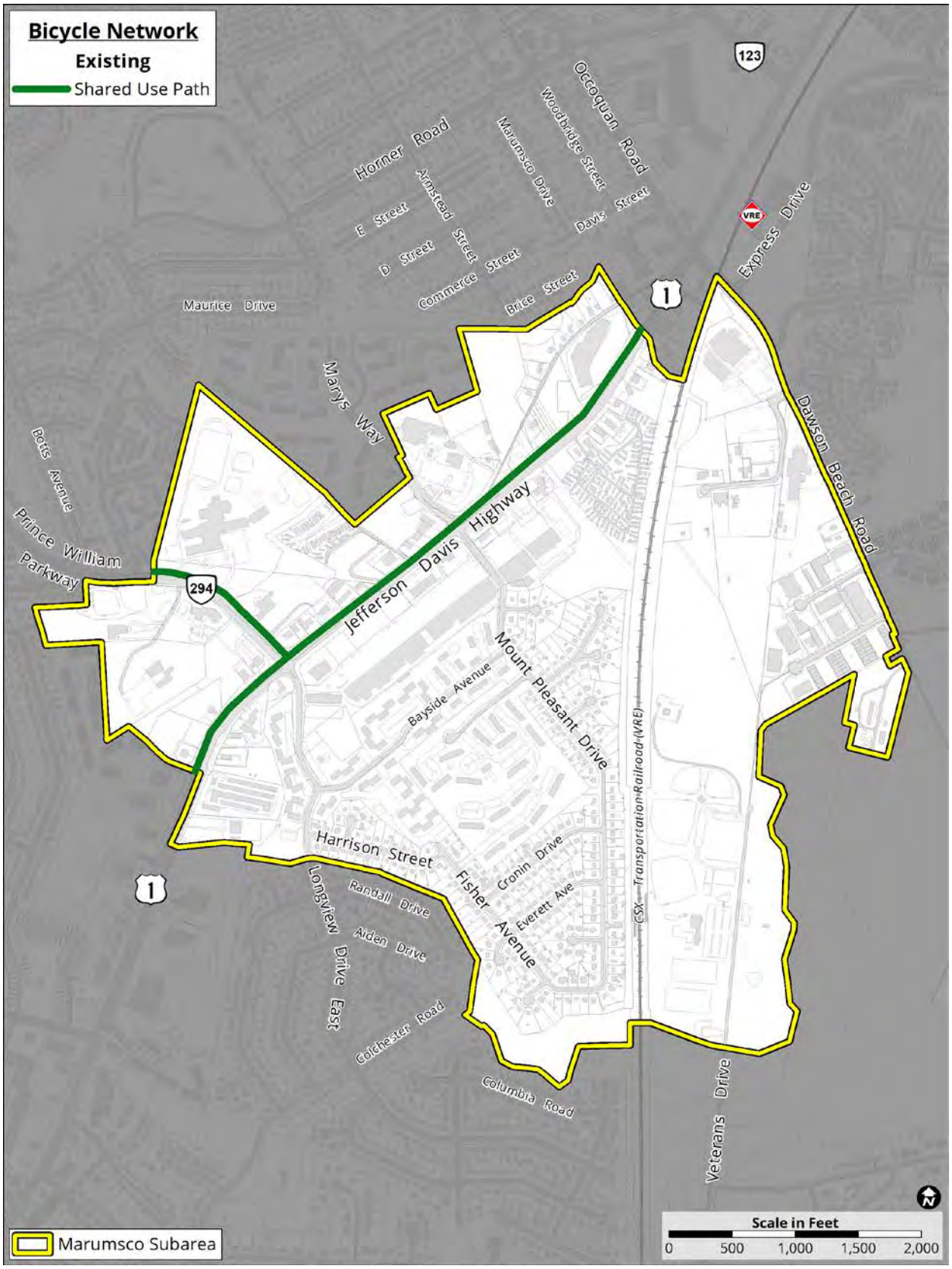


Figure 21: Marumsco– Existing Bicycle Network

Pedestrian Network

There are numerous gaps in the pedestrian network that should be remedied with this plan. Pedestrian crossings of major roads are challenging, in particular, pedestrian crossing of U.S. Route 1 near the VRE Station is deficient. Currently, the existing sidewalks in the area are sporadic and generally narrow (approximately 4 feet in width).

Multimodal connectivity is an important element in transportation equity. The provision of bicycle and pedestrian facilities along with robust and dependable transit can help improve access to jobs, educational institutions and other resources. The existing infrastructure is one of the study area's strengths; the challenge is providing further connections as the area develops and re-develops.

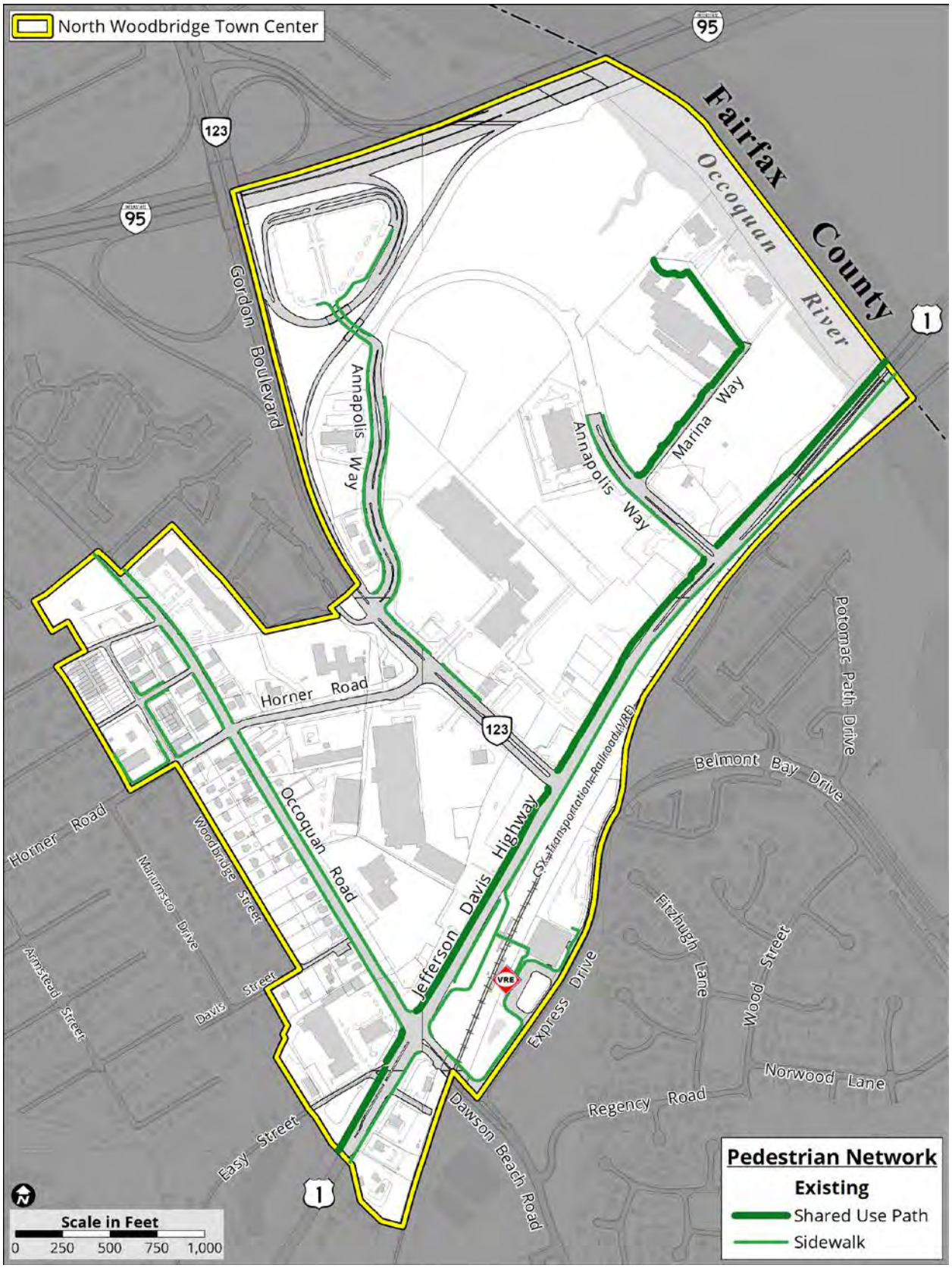


Figure 22: North Woodbridge Town Center – Existing Pedestrian Network

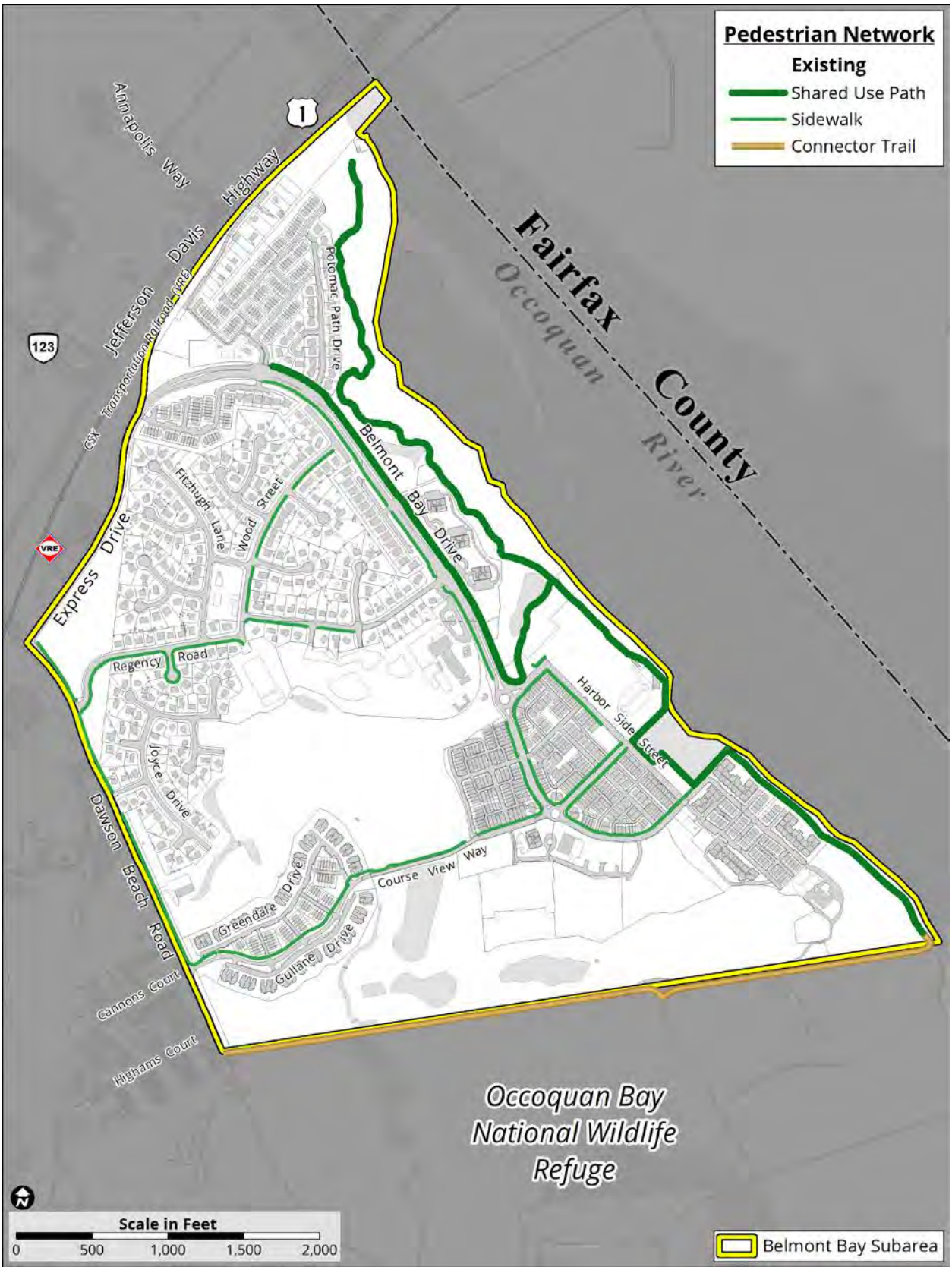


Figure 23: Belmont Bay – Existing Pedestrian Network

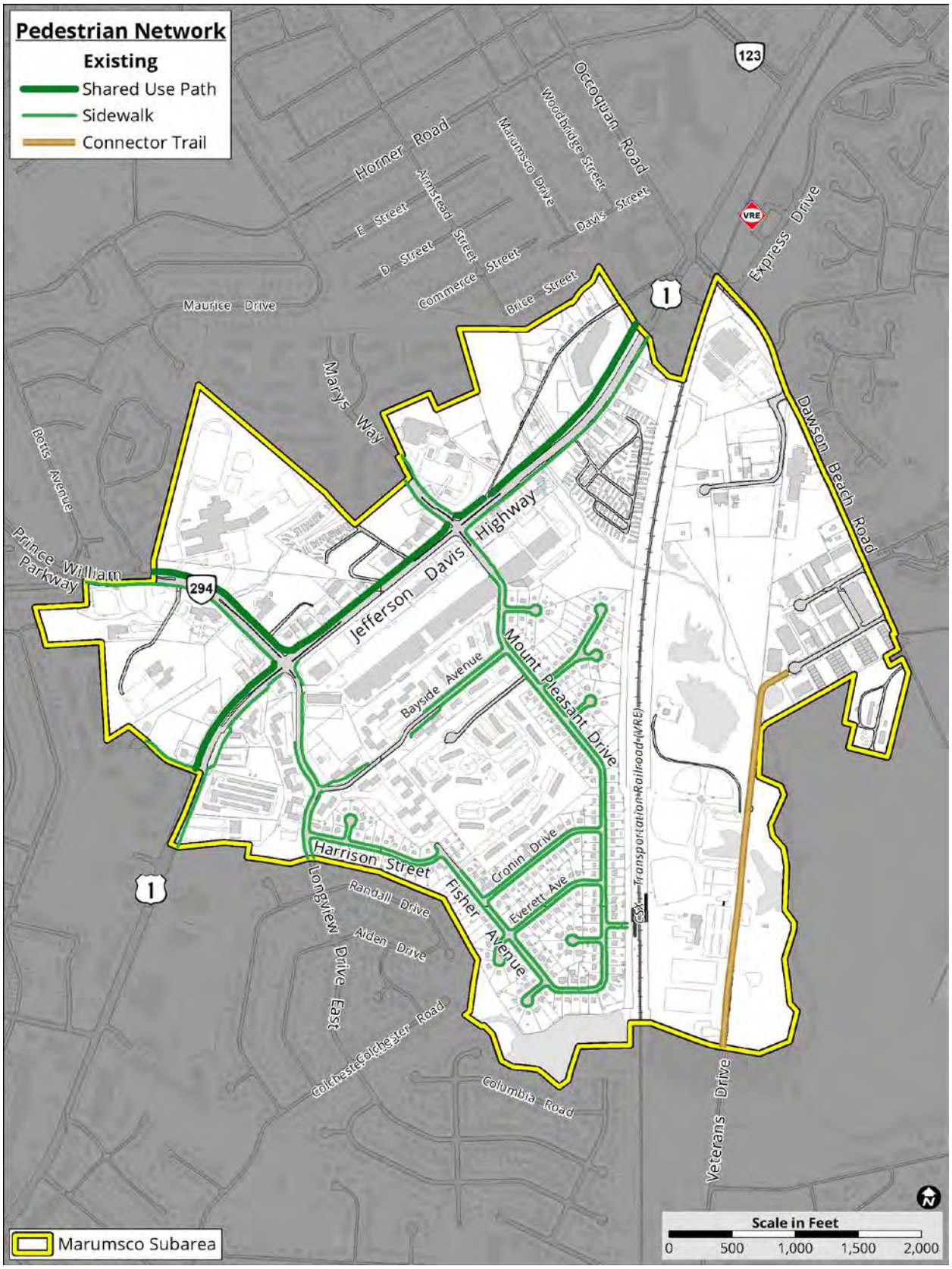


Figure 24: Marumsco – Existing Pedestrian Network

Commuter Parking

There are two existing commuter lots in the study area. The Virginia Railway Express commuter rail station provides a combined 730 parking spaces in structured and surface parking. As of July 2016, this parking lot was at 65% capacity. The Route 123 and I-95 commuter lot provides 580 spaces and bus transit service. This lot is underutilized and access to I-95 is not ideal.

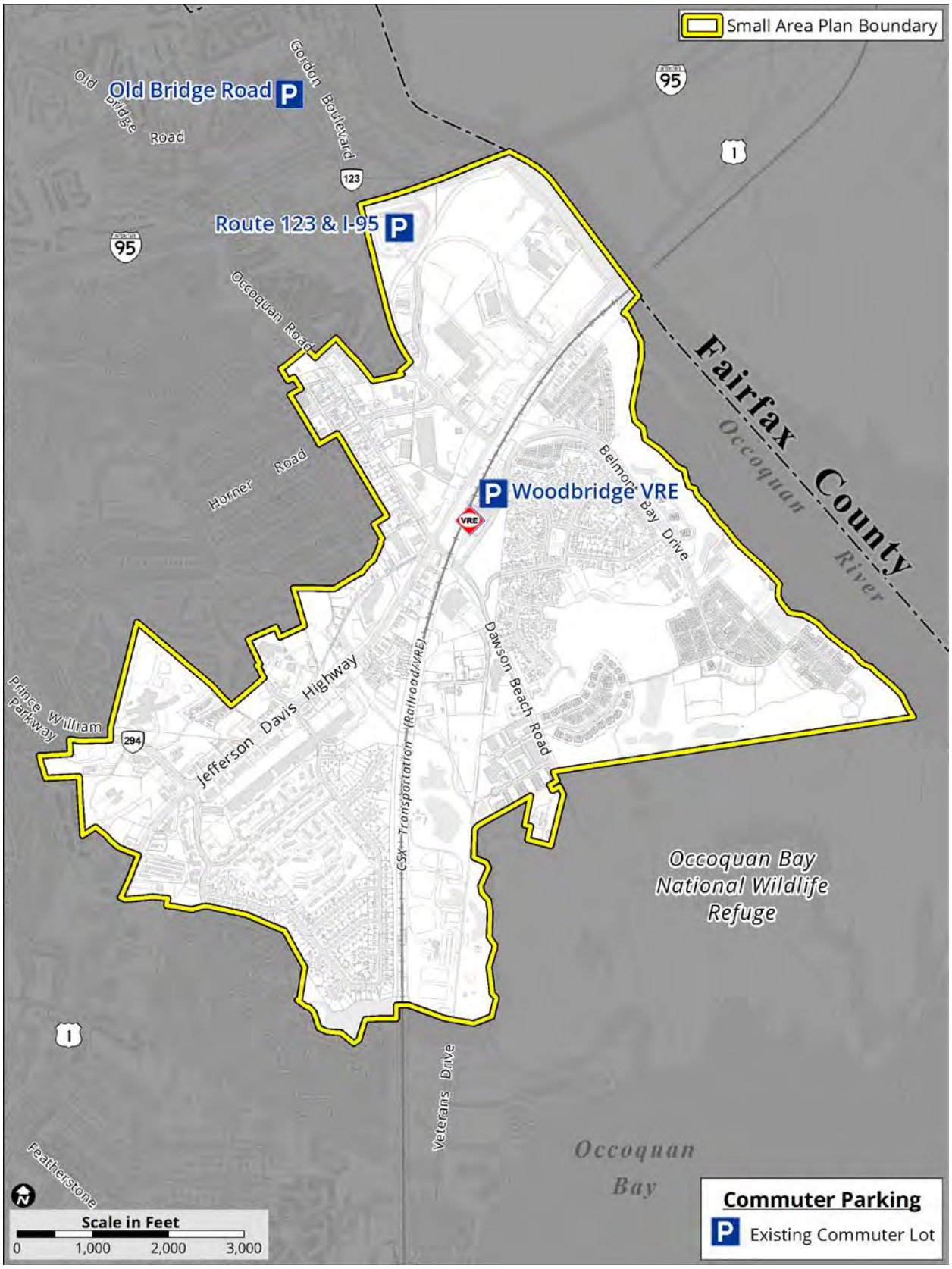


Figure 25: Existing Commuter Parking

Existing Utility Infrastructure

Public utility infrastructure provides electricity, communications networks, stormwater management, drinking water and sewer services for residential and commercial uses. There are electrical distribution lines through the plan area providing service to residential and commercial customers. There are no high voltage electrical transmission lines above 130kV.

There are three telecommunication facilities in the plan area and two that are within 0.5 mile of the plan area's boundary. The telecommunications facilities in the plan area are at Veterans Park, Harbor Side at Belmont Bay, and south of the plan area between U.S. Route 1 and East Longview Drive.

Within the small area plan, water distribution is provided through the Prince William County Service Authority facilities. Countywide, there are 22 water towers and 15 water booster stations. There are no water towers or water booster stations in the plan area. There are three sewage lift stations in the plan area. See the following subarea maps showing sewer and water line alignments.

Stormwater runoff control and compliance with Chesapeake Bay regulations is accomplished through a system of collection, conveyance and temporary impoundment pond infrastructure. Chesapeake Bay stormwater regulations are focused on reducing siltation and meeting Total Maximum Daily Load (TMDL) for the tributaries of the Occoquan and Potomac Rivers, as these rivers ultimately feed into the Chesapeake Bay. Stormwater impacts the water quality of tributaries and rivers. Most of this plan area was planned and built before these regulations were adopted. Since adoption, new development has complied with these regulations. When possible, Prince William County has retrofitted and built new stormwater infrastructure and restored tributaries to the Occoquan and Potomac Rivers to meet TMDL requirements.

> A Total Maximum Daily Load (TMDL) is a "pollution diet" that identifies the maximum amount of a pollutant a waterway can receive and still meet applicable water quality standards. A TMDL is the sum of wasteload allocations for point sources, load allocations for nonpoint sources, and a margin of safety to account for uncertainty. Point sources include sewage treatment plants, stormwater discharges, industrial discharges, etc. Nonpoint sources include pollutants carried by rainfall runoff from forests, agricultural lands, atmospheric deposition, abandoned land mines, etc. (Source EPA.gov).

The existing infrastructure and utility systems accommodate the current demands within the study area. Additional infrastructure may be required as new developments are constructed.

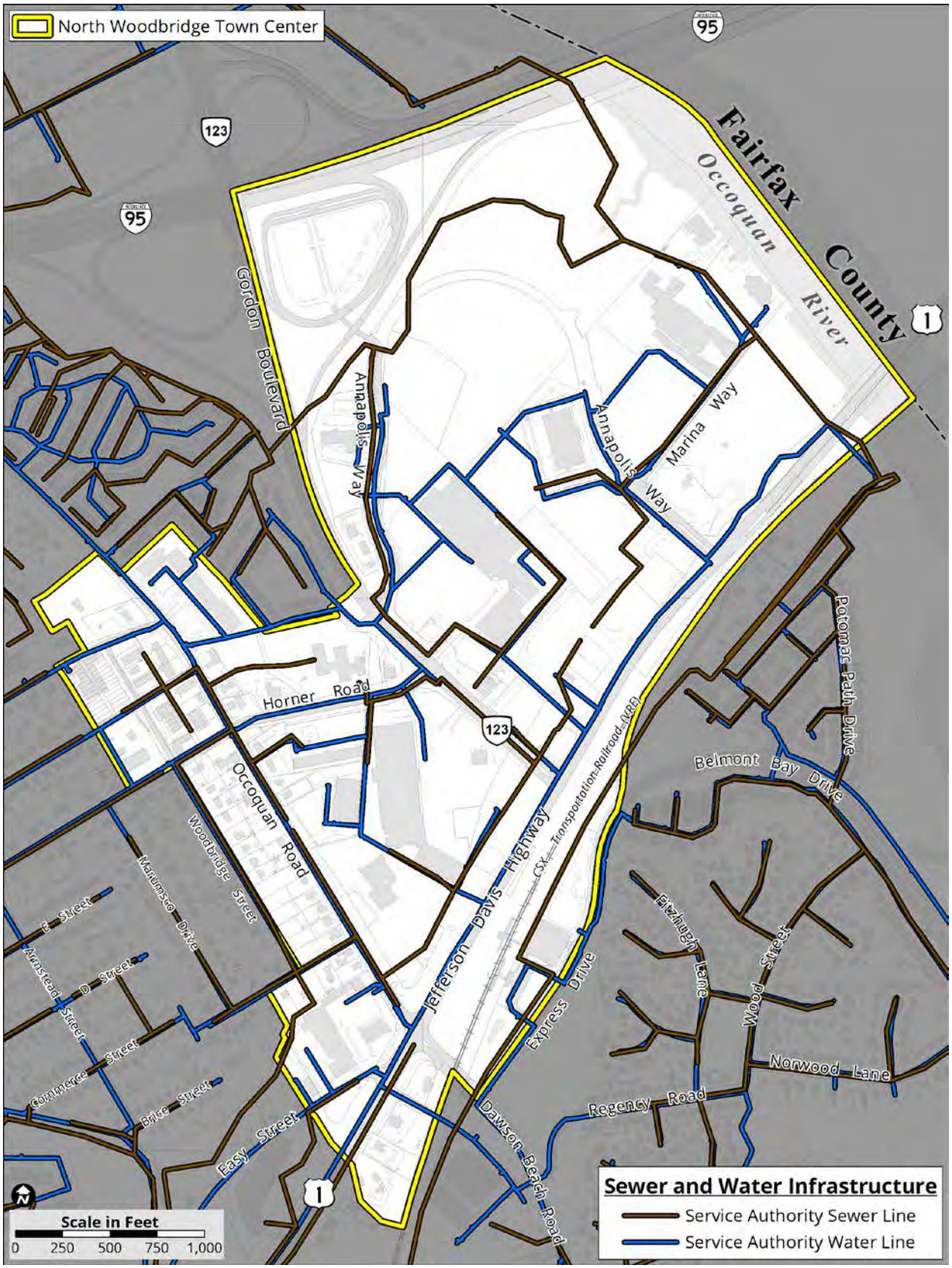


Figure 26: North Woodbridge Town Center – Existing Utility Infrastructure

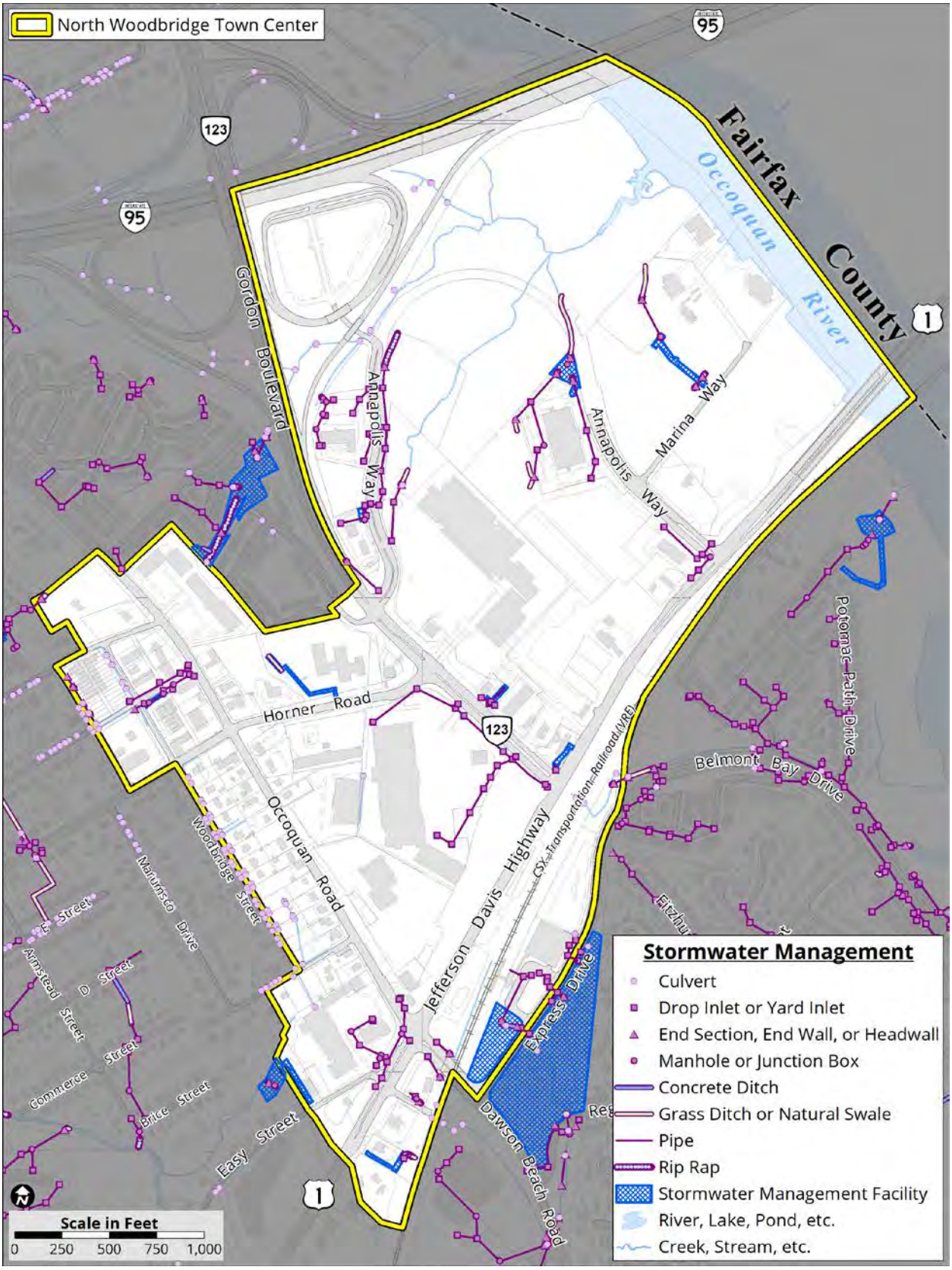


Figure 27: North Woodbridge Town Center – Existing Stormwater Infrastructure

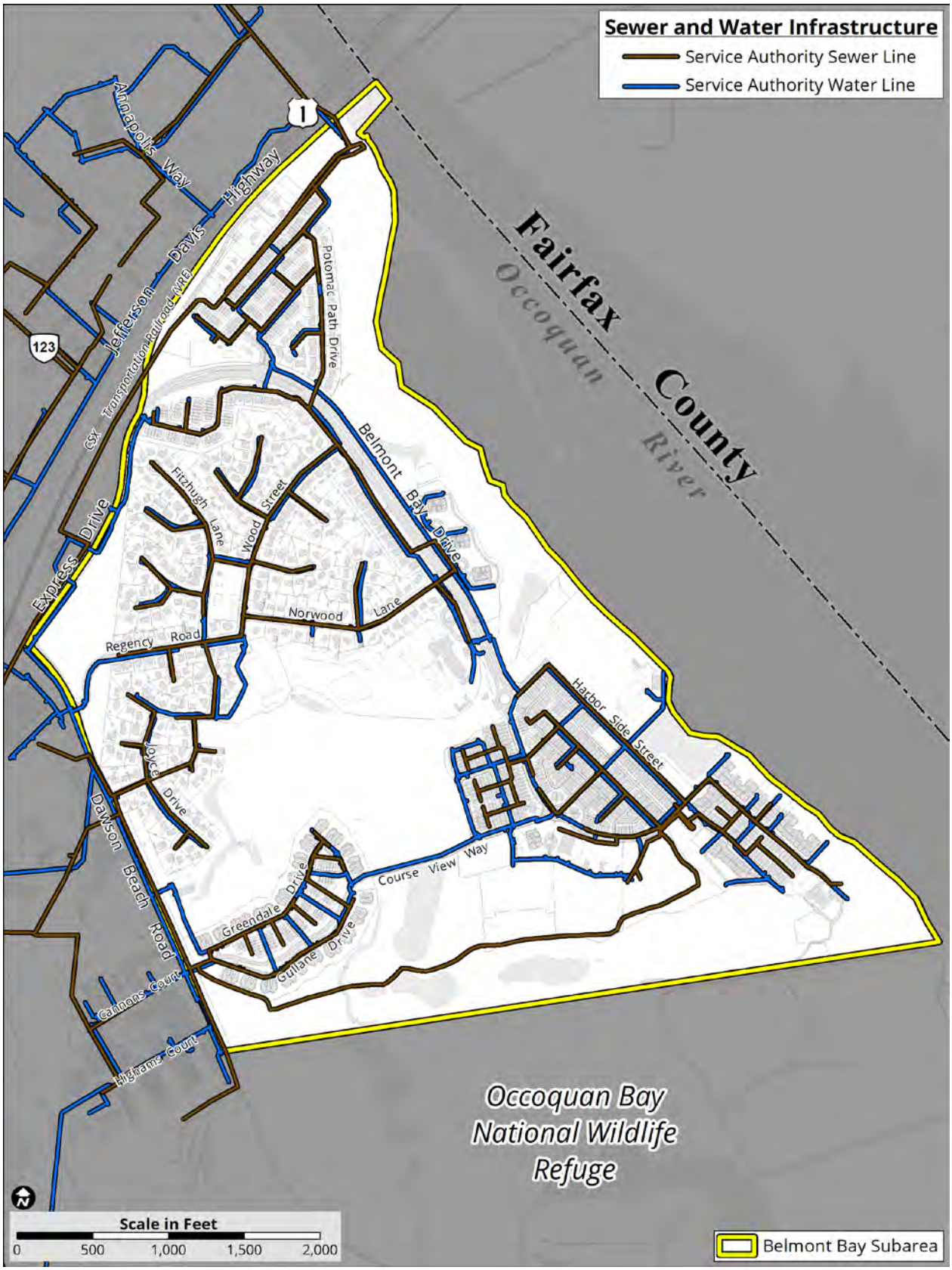


Figure 28: Belmont Bay – Existing Utility Infrastructure

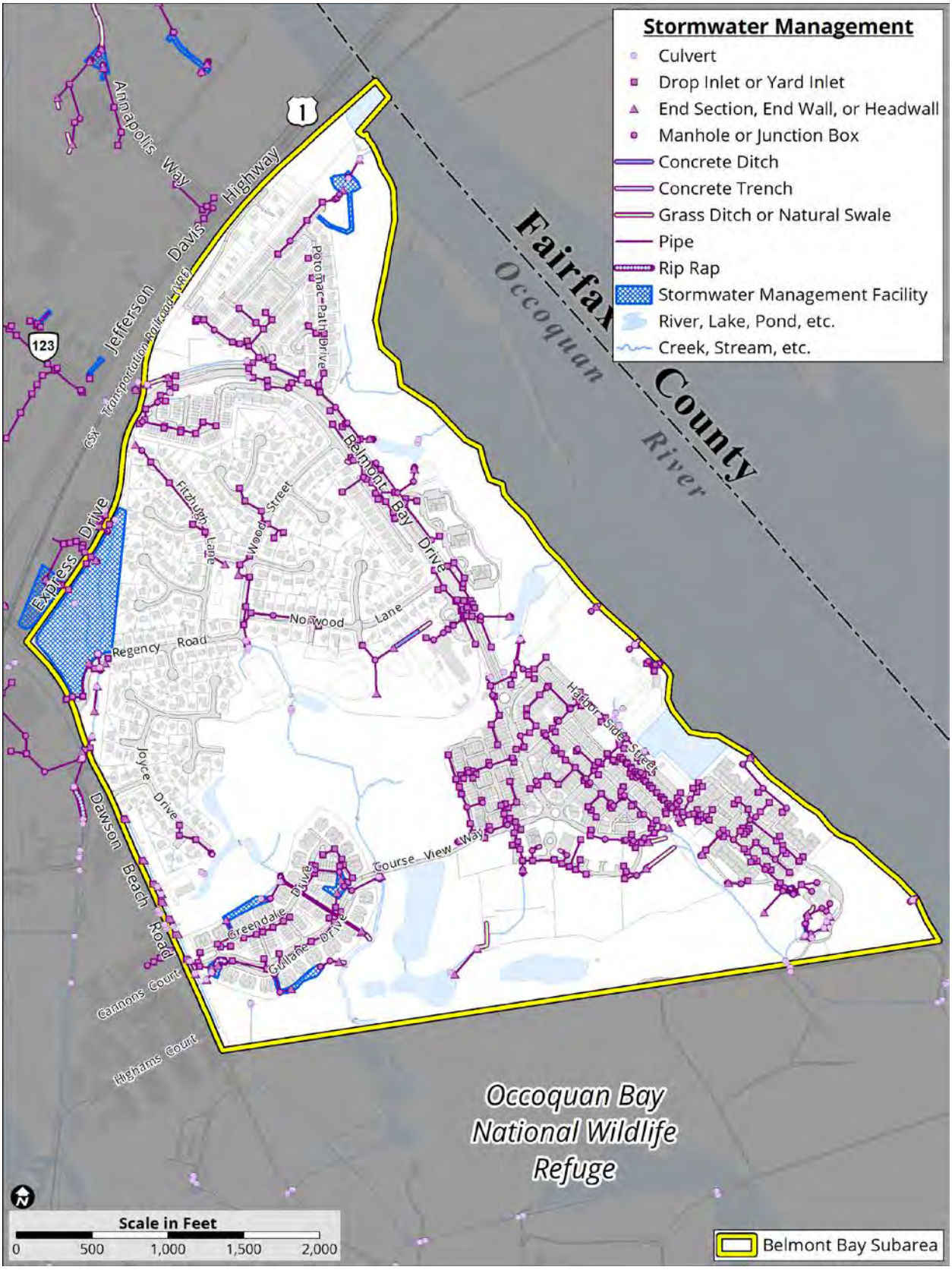


Figure 29: Belmont Bay – Existing Stormwater Infrastructure

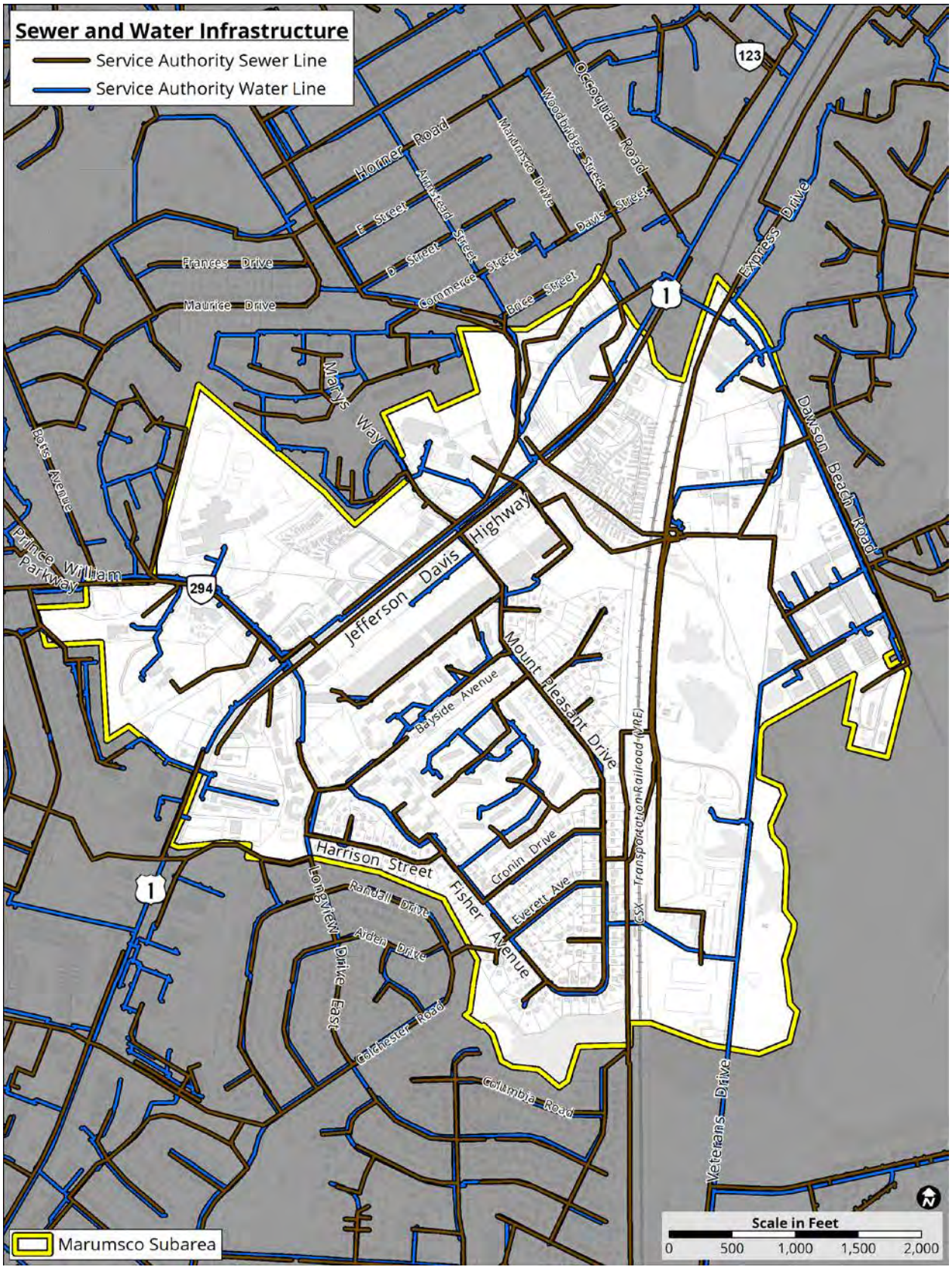


Figure 30: Marumsco – Existing Utility Infrastructure

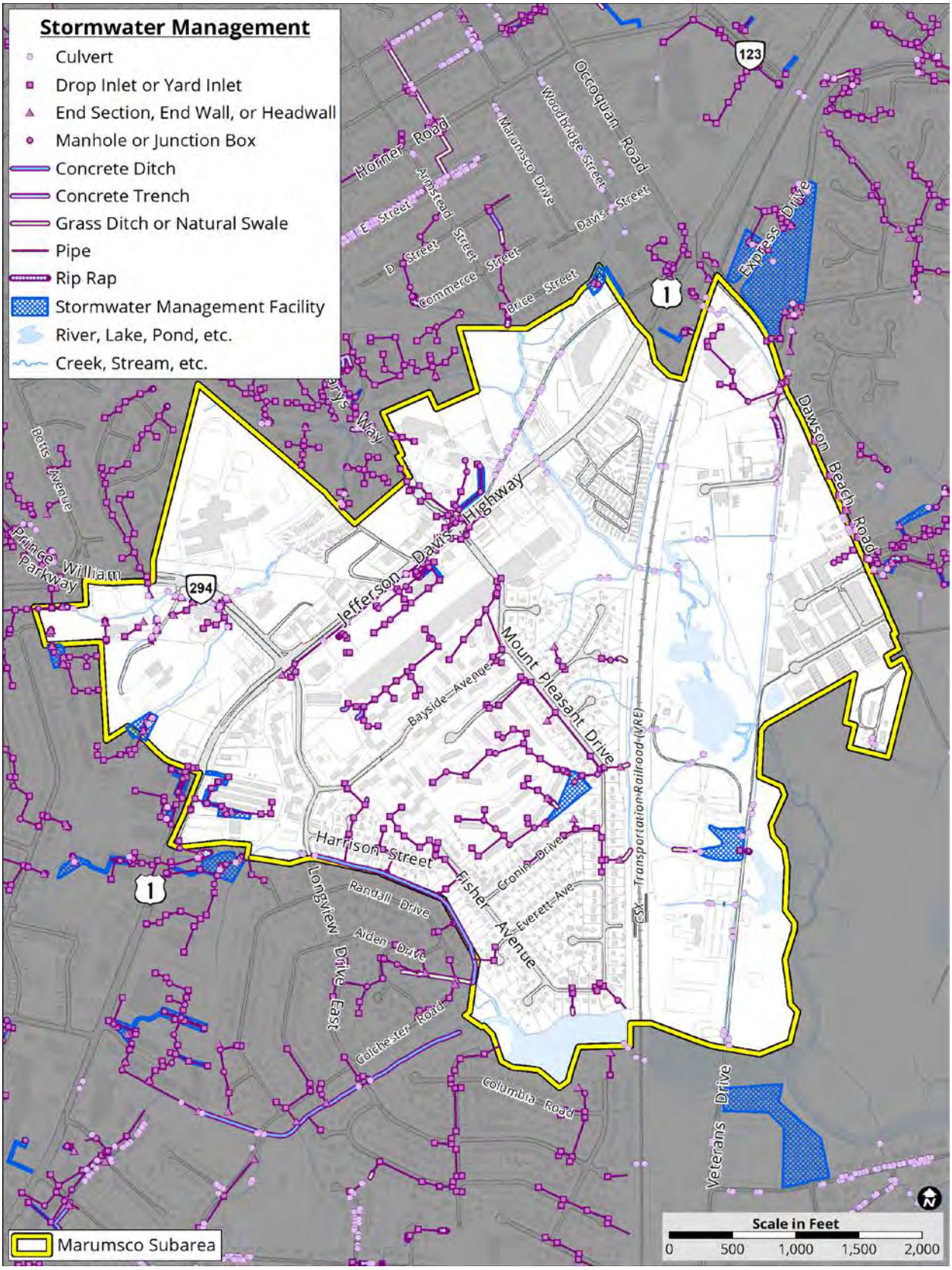


Figure 31: Marumsco – Existing Stormwater Infrastructure

Existing Environmental Conditions

The small area plan is comprised of three subareas, Belmont Bay, Marumsco and North Woodbridge Town Center. This plan area is bounded on the northeast by Interstate 95, to the north by the Occoquan River, to the east and southeast by Occoquan Bay National Wildlife Refuge and Featherstone National Wildlife Refuge, and to the south and southwest by single family home subdivisions. All surface water drains into the Occoquan River, which then empties into the Potomac River, or directly into the Potomac River, and then into the Chesapeake Bay. The plan area encompasses approximately 1,264 acres. From an environmental perspective, it is comprised of Chesapeake Bay Resource Protection Area (RPA), FEMA 100-year floodplain, forest, other non-forest cover (shrubs, grassy and bare areas), and impervious surfaces. The table below gives the acreage for each element listed.

Environmental Area	Acres
RPA	154
FEMA 100-year floodplain	119
Forested (tree canopy)	394
Non-Forest	417
Impervious Area	654
Total Area	1,264

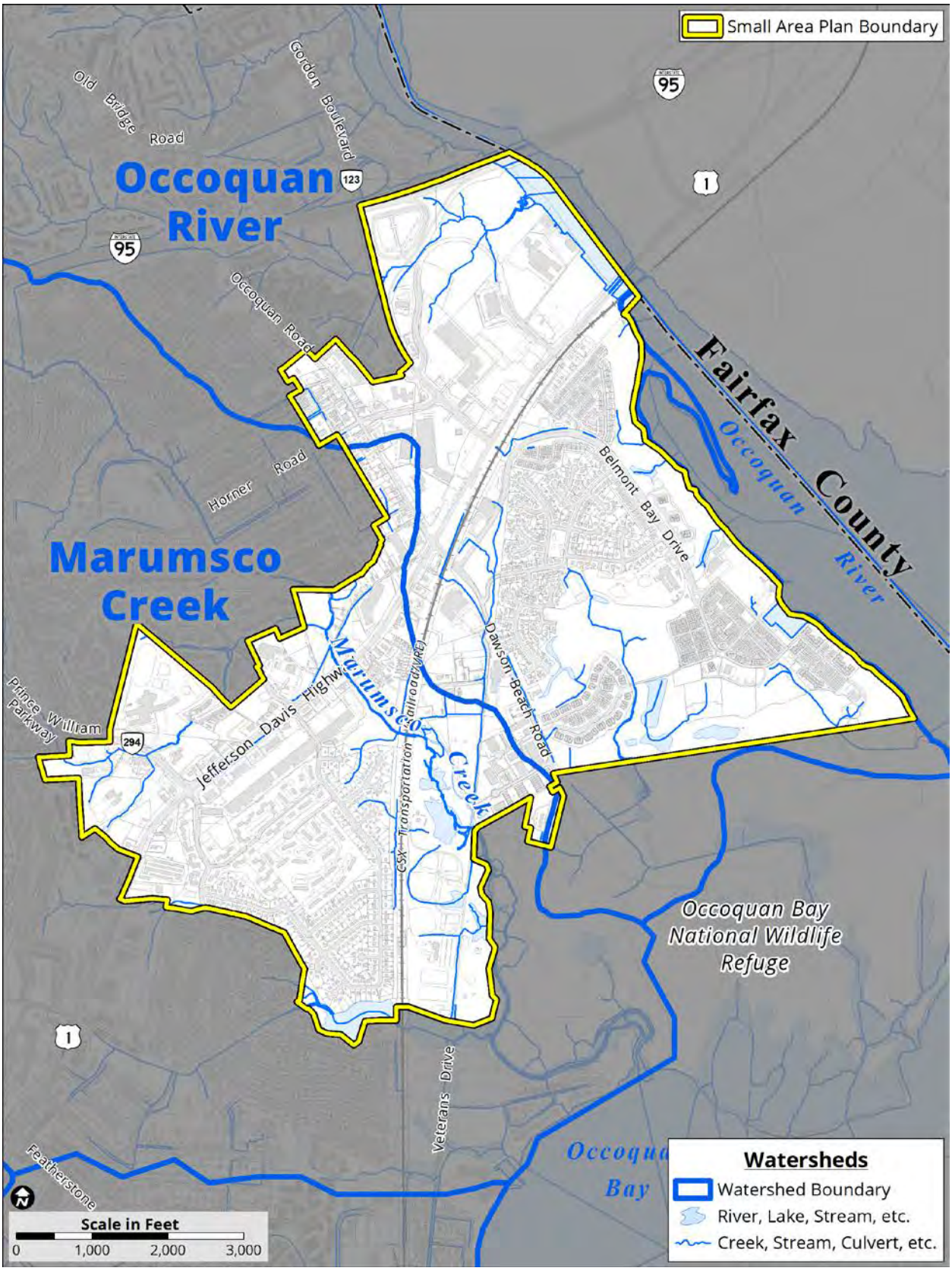


Figure 32: Subwatershed Map

North Woodbridge Town Center

The North Woodbridge Town Center subarea is bound on the northwest by Interstate 95 and on the northeast by the Occoquan River. U.S. Route 1 forms the east boundary. Single family and townhomes form the south and southwest boundaries of this subarea. Elevations are highest on the bluffs overlooking the Occoquan River, between 50 and 70 feet. Generally, the topography is flat as it trends north to south across the subarea. The only significant concentration of woody vegetation is mapped in this same area. Only the north corner exhibits natural topography, first order stream from the Occoquan River, FEMA 100-year floodplain, and Chesapeake Bay Resource Protection Area (RPA). No significant ponds were observed in this subarea. Impervious surfaces comprise 48 percent of the subarea. Steep slopes are in the northern-most corner.

Environmental Area	Acres
RPA	42
FEMA 100-year floodplain	33
Forested (tree canopy)	72
Non-Forest	84
Impervious Area	145
Total Area	301

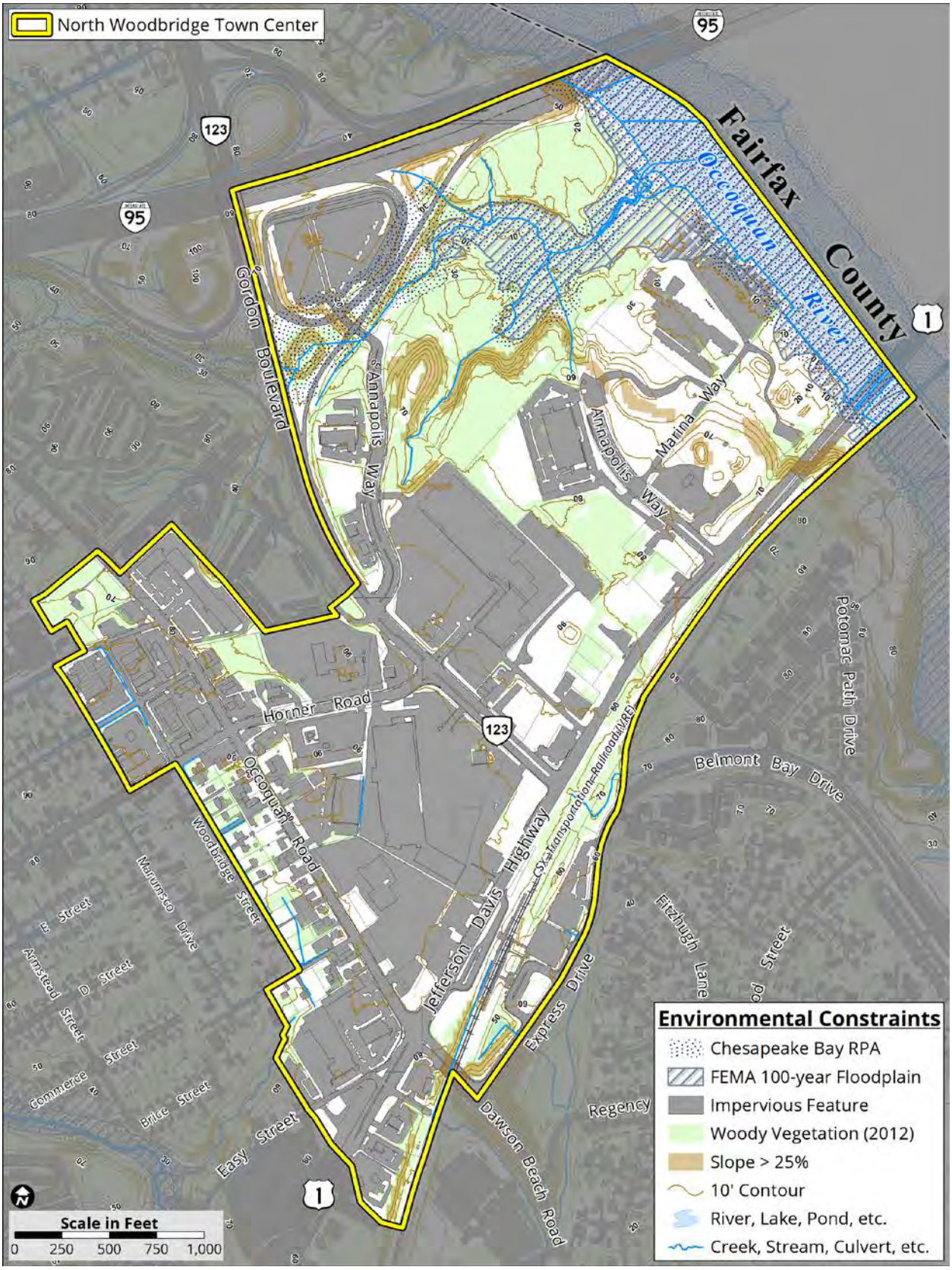


Figure 33: North Woodbridge Town Center – Environmental Constraints

Belmont Bay

The Belmont Bay subarea is defined by 1960 era single family subdivisions, the more recent Belmont Bay mixed use development and the now-defunct The Osprey's Golf Club at Belmont Bay. U.S. Route 1 and the CSX railroad form the northwest border of this subarea, while bluffs ranging from 20 to 80 feet overlook the Occoquan River to the north. Occoquan Bay National Wildlife Refuge forms the southern border and Dawson Beach Road the southwest border. The highest elevations, 80 – 90 feet, are recorded adjacent to the railroad and trend downward, west to east, to a range from 30 feet to 10 feet. The extant golf course is the primary open space feature. Stands of woods create internal and external buffers to the extant golf course greens and fairways. Approximately 26 percent of the subarea is impervious surface. FEMA 100-year floodplain and Chesapeake Bay Resource Protection Area (RPA) are mapped in the east corner of the subarea. Three small first-order tributaries cut through bluffs overlooking the Occoquan River. Four ponds were found within the extant golf course along with streams and wetlands. Steep slopes are contained to areas adjacent to the Occoquan River.

Environmental Area	Acres
RPA	31
FEMA 100-year floodplain	14
Forested (tree canopy)	112
Non-Forest	182
Impervious Area	106
Total Area	400

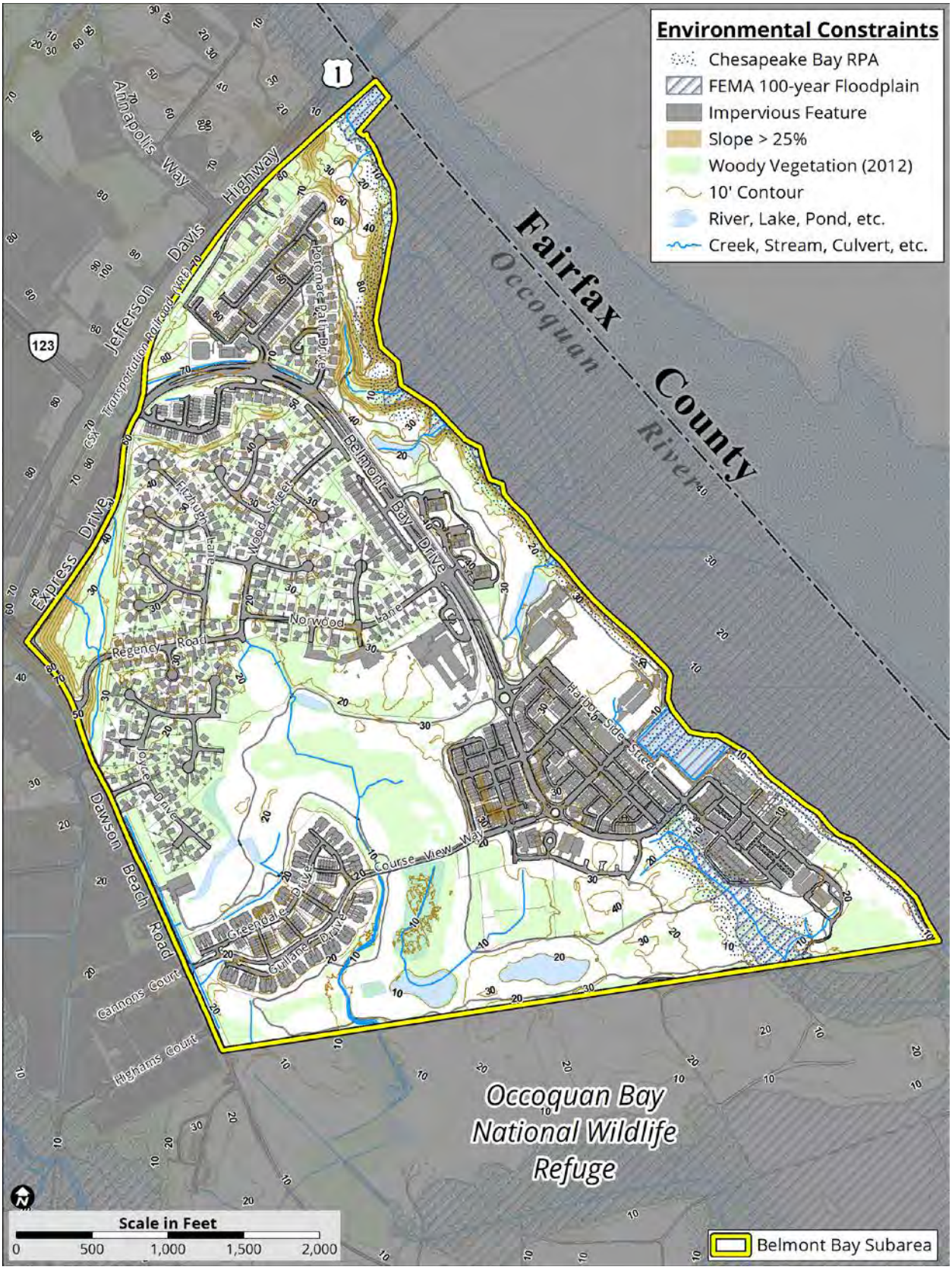


Figure 34: Belmont Bay – Environmental Constraints

Marumsco

The Marumsco subarea is bound on the northeast by Dawson Beach Road, to the southeast by Marumsco Creek, to the south, southwest, and west by a combination of single-family homes, commercial business in strip malls, and multifamily housing. Land in the north corner has elevations ranging from 70-80 feet that trend down in elevation toward the Marumsco Creek at 20 feet. Elevations in the south of this subarea are highest in the Marumsco Plaza area, between 90 – 100 feet, and trend downward to the north to Marumsco Creek (20 feet), to the south to an unnamed tributary of Marumsco Creek at 20 feet, and to the west to another tributary of Marumsco Creek at 60 feet. There is a paucity of woody vegetation. The only stands of trees are found along Marumsco Creek and along discrete isolated sections of its unnamed tributaries. Marumsco Creek contains FEMA 100-year floodplain and Chesapeake Bay Resource Protection Area (RPA) and is a first-order tributary to the Potomac River. The unnamed tributaries contain narrow, in width, elements of both. No significant ponds were observed in this subarea. Approximately 36 percent this area exhibits impervious surface. Very minor portions of the subarea consist of steep slopes because of development.

Environmental Area	Acres
RPA	82
FEMA 100-year floodplain	73
Forested (tree canopy)	210
Non-Forest	152
Impervious Area	202
Total Area	563

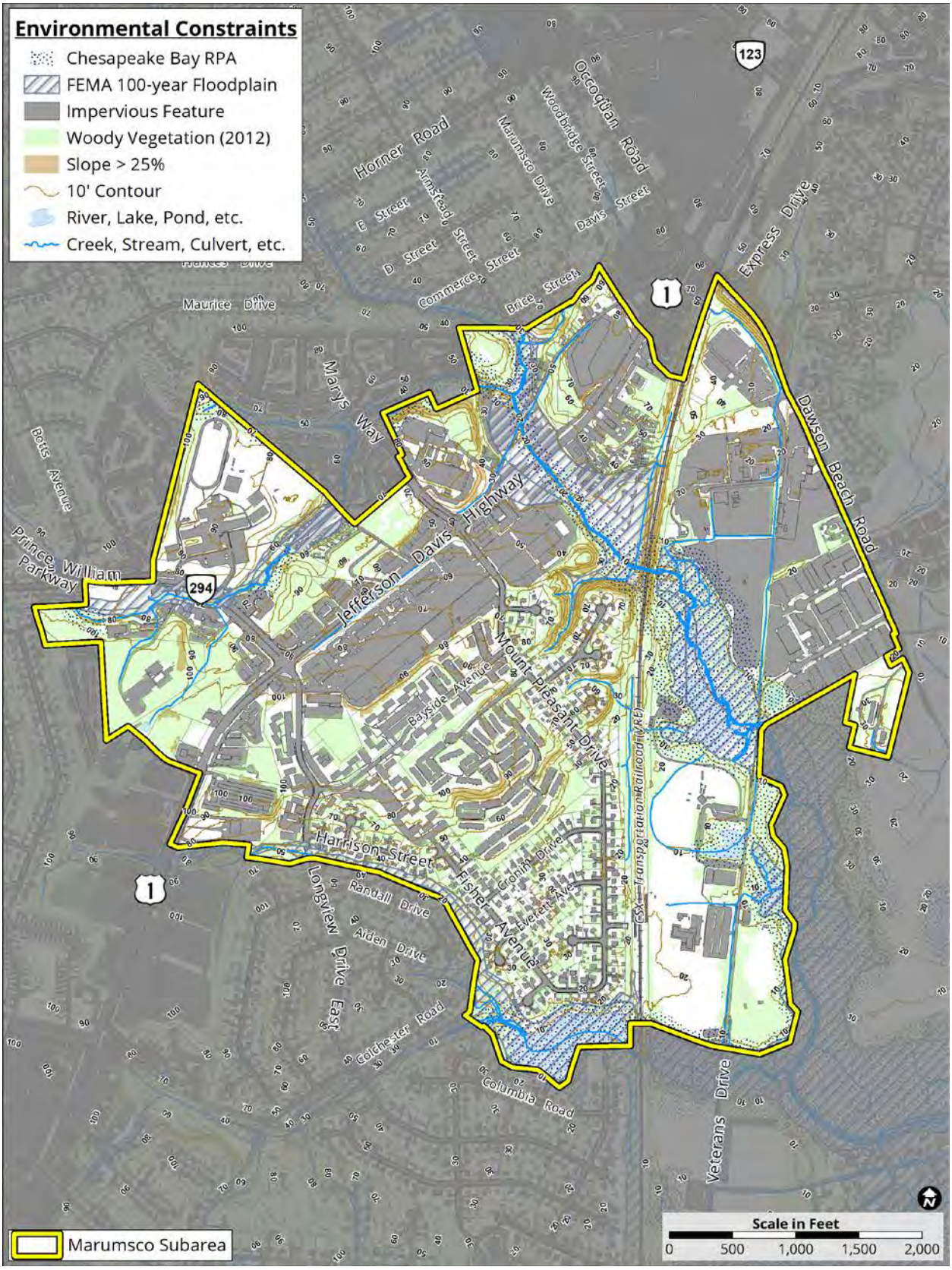


Figure 35: Marumsco – Environmental Constraints

Existing Cultural Resources

Cultural resources are those tangible elements of our shared history left behind by previous inhabitants. They are found in individual architectural and archaeological sites, historic districts, cemeteries, battlefields, cultural landscapes, museum objects, and archival materials.

Prince William County has two cultural resource properties identified as CRHS, County Registered Historic Sites, within the small area plan:

- King's Highway near Railroad Avenue in Woodbridge – privately owned;
- Railroad Avenue Houses – privately owned.

Other properties within the small area plan are eligible for or listed on the National Registry of Historic Places:

- Fourth District Highway Marker, United Daughters of the Confederacy Commemorative Marker, U.S. Route 1
- 500-0001 Richmond, Fredericksburg and Potomac Railroad (RF&P)
- 500-0001-0022 RF&P Bridge over Occoquan River

Other resources, such as Civil War earthworks and cemeteries, have been identified. As development proposals are received, surveys are conducted to assist in the identification of additional resources.

Almost the entire plan area is within the Prehistoric Sensitivity Area and there are two Heritage Corridors: Potomac Heritage National Scenic Trail and the Washington-Rochambeau National Historic Trail.

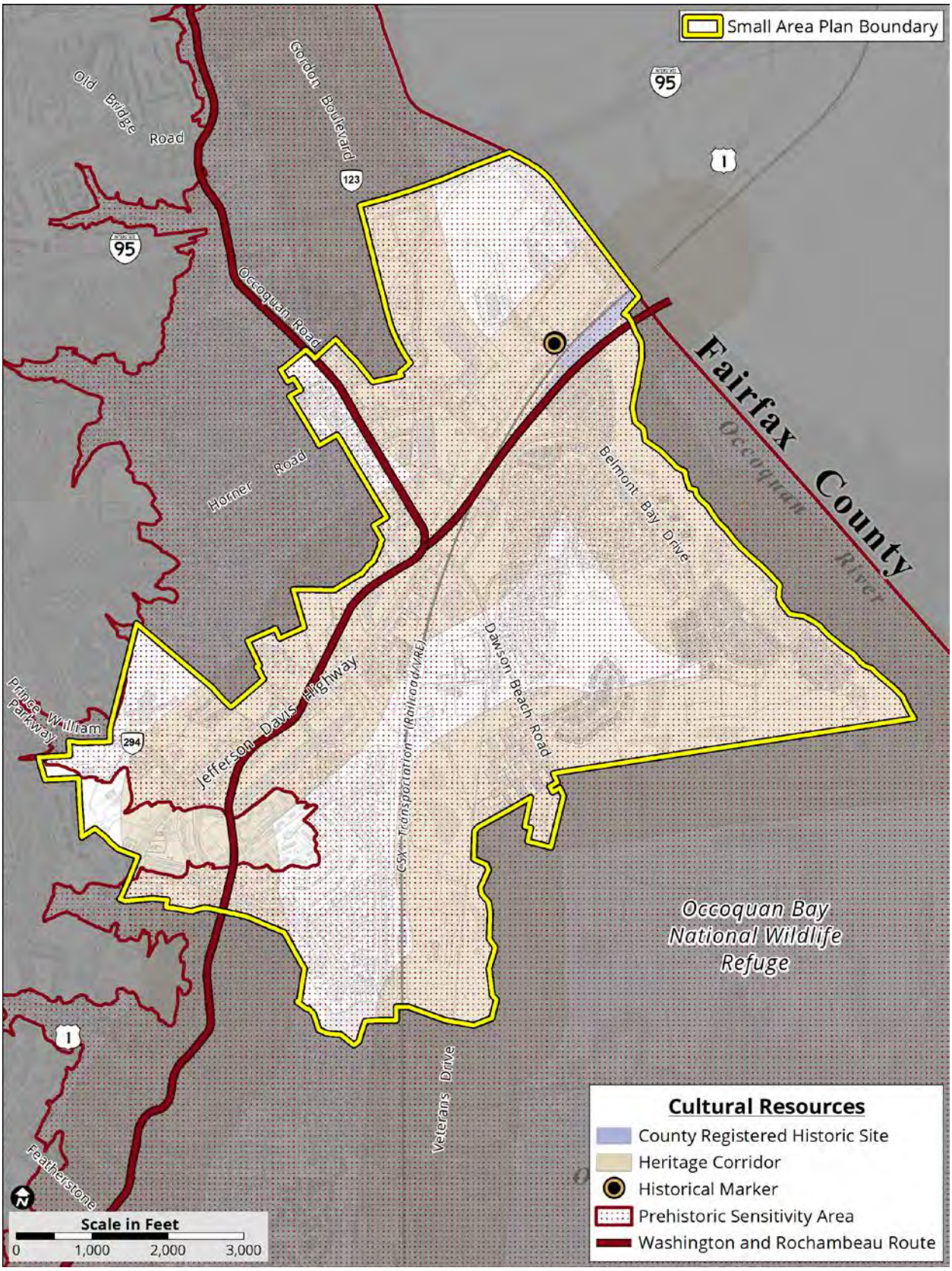


Figure 36: Cultural Resources - Existing Conditions

Existing Schools

There are seven schools' boundaries serving the study area including three elementary schools, two middle schools, and two high schools. The majority of the study area lies within the Belmont Elementary School boundary, with portions of Marumsco served by Potomac View Elementary and Kilby Elementary. The entire study area is currently served by Fred M. Lynn Middle. The small portion that would be served by Veterans Park and therefore generates no students. Finally, the majority of the study area lies within the Freedom High School boundary with only a small portion south of Occoquan Road served by Woodbridge Senior High School.

Existing School Inventory 2018-2019				
Elementary Schools				
School Name	**Student Capacity**	**Portable Classrooms**	**Students**	**% Utilized**
Belmont ES	540	1	457	84.6 %
Potomac View ES	529	10	706	133.5 %
Kilby ES	646	0	727	112.5 %
Middle Schools				
Student Capacity	**Student Capacity**	**Portable Classrooms**	**Students**	**% Utilized**
Rippon MS	1,390	0	1,331	95.8 %
Fred M. Lynn MS	1,170	0	1,084	92.6 %
High Schools				
Student Capacity	**Student Capacity**	**Portable Classrooms**	**Students**	**% Utilized**
Freedom HS	2,053	6	2,225	108.4 %
Woodbridge HS	2,734	0	2,690	98.4 %

Commercial Community Indicators

Community indicators are numeric tools that help governments, citizens or businesses understand the health and vitality of their communities, alert them to problems and help them recognize what to do to fix those problems. This section reflects major economic indicators related to current employment in the North Woodbridge zip code.

As of 2017, Woodbridge (zip code 22191) had an estimated population of 68,338 residents and a median age of 34.1.[9] Between 2012 and 2017 the population increased by 12.6%. The ethnicities within the study area include 31,558 White residents (40%), 21,171 Hispanic residents, of any race (26%), 22,135 Black residents (28%), 4,579 Asian and Pacific Islander residents (6%), and 113 residents identified as "Other" (0.17%).

Education and training play a large role in producing the local labor force. According to Census estimates, 84.9% of the residents earned at least a high school diploma; which is on par with both the state of Virginia (89%)[10], and the national average (87.3%).[11] Strong graduation rates can relate to a robust workforce. Additionally, the workforce is highly educated, with 36.5% of residents holding a bachelor's degree or higher. There are also nearly 6,500 military veterans living in 22191, often with specialized training and/or security clearances. A 2012 survey of business owners identified 1,599 companies operating locally, employing nearly 11,000 people.[12] Also, more than half (53%) the local working age population is employed. The most common employment sectors for those who live in the study area are Education, Professional Services, and Retail.

Employment clusters exist near the U.S. Route 1 and Dawson Beach Road intersection and the I-95 and Route 123 intersection.

[9] U.S. Census American Fact Finder, 2017 5-yr ACS data estimates for Woodbridge CDP, 2019.
[10] U.S. Census American Fact Finder, 2017 5-yr ACS data estimates, 2019.
[11] U.S. Census American Fact Finder, 2017 5-yr ACS data estimates, 2019.
[12] https://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?src=CF

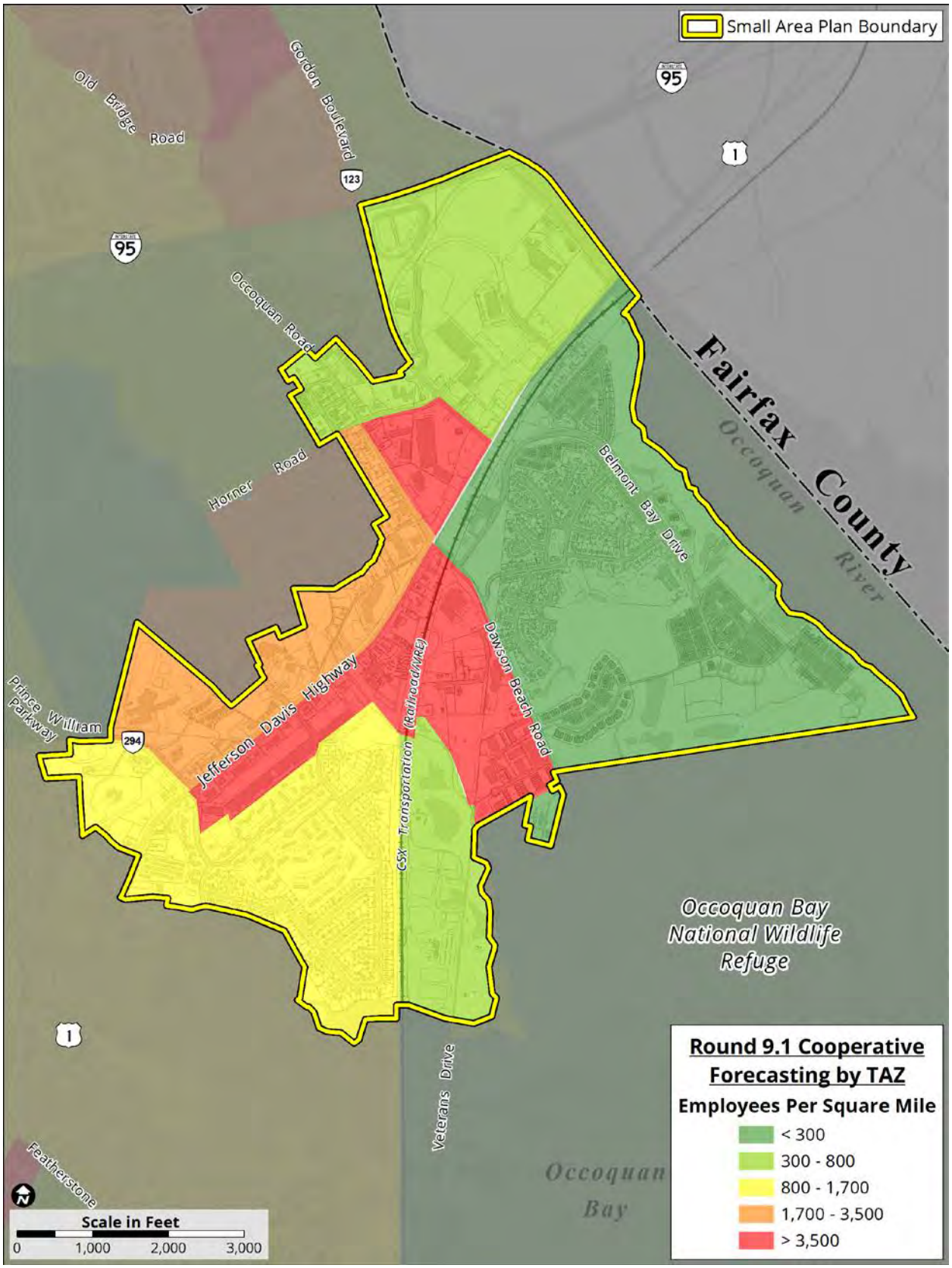


Figure 37: Employees per Square Mile

Residential Community Indicators

As of 2017, the median property value for Woodbridge (zip code 22191) was $288,000, which is higher than the national average of $205,000. The homeownership rate is 54.6%, which is lower than the national average of 63.6%. Lower home ownership rates may point to a lack of affordable housing in the study area. Renters make up 40.8% of local households; median rents are $1,589 per month.

As of 2015, the highest density of households is in the Marumsco area, anchored by the Woodbridge Station apartment community west of U.S. Route 1 and the Potomac Vista apartment community located between U.S. Route 1 and the CSX rail line.

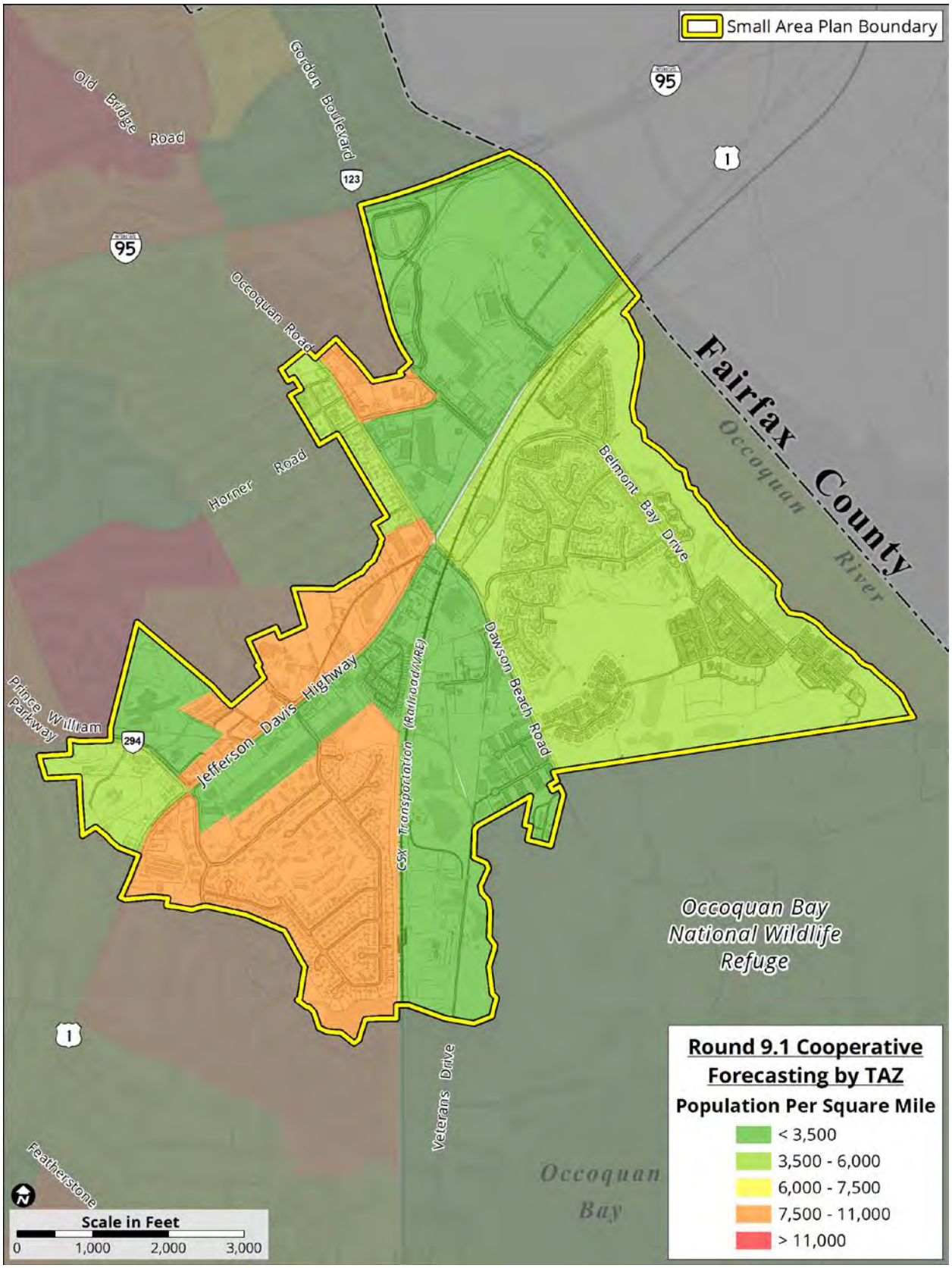


Figure 38: Population per Square Mile

Prior Planning Efforts

The North Woodbridge area has been the subject of several background studies, including the following studies developed prior to the national recession:

- The 2005 Proposed Urban Mixed-Use Master Zoning Plan[13] contemplated a phased development concept that generally received positive reviews from stakeholders but was insufficiently flexible to gain full support.
- A 2008 three-day charrette reaffirmed general community interest in property investment and an urban form, but development plan flexibility remained an unresolved concern.
- A 2009 MWCOG Transportation/Land Use Connections[14] (TLC) Sustainability of Mixed-Use Development around Woodbridge VRE Station study included a summary of previous planning efforts and/or previous mentions in the Comprehensive Plan (sector plans, site specific language, etc.).

Other design plans include:

- The 2003 Potomac Communities Revitalization Plan[15] was a product of Prince William County's Comprehensive Plan. It was a concentrated planning effort to identify strengths, weaknesses, and opportunities, build coalitions between individual residential and business communities, and set the stage for the future of that portion of Prince William County lying east of I-95, from Stafford County to Fairfax County.
- The 2014 Potomac Communities Design Guidelines[16] was commissioned by Prince William County's Planning Office. These design guideline tools convey ideas, design approaches, and practices to be applied in the design and development of projects in the U.S. Route 1 Corridor of Prince William County.

Other regional plans include:

- The Visualize 2045 Plan[17] is the regional Transportation Planning Board's Long-Range Transportation Plan that identified a set of unfunded and unenacted projects, programs, and policies that are designed to address some of the biggest transportation challenges that the region is expected to face in the coming decades.

[13] More information found here: http://eservice.pwcgov.org/planning/documents/n_woodbridge_summary.pdf
[14] More information found here: https://www.mwcog.org/transportation/planning-areas/land-use-coordination/tlc-program/
[15] More information found here: http://eservice.pwcgov.org/planning/documents/26_potomac%20communities.pdf
[16] More information found here: http://www.pwcgov.org/government/dept/planning/Documents/FINAL_PotomacCommunitiesDesignGuidelines.pdf
[17] More information found here: https://www.mwcog.org/visualize2045/whats-in-the-plan/

- The Region Forward[18] is the Metropolitan Washington Council of Governments plan to focus on creating a more prosperous, accessible, livable, and sustainable metropolitan Washington.

Other transportation plans and projects include:

- The 2015 Route 1 Multi-Modal Study[19] provided guidance for the improved performance for transit, bicycle and pedestrian, and vehicular conditions and facilities along the U.S. Route 1 corridor to support long-term growth and economic development.
- The 2019 Route 1 Widening Project[20] is the Virginia Department of Transportation's project to widen U.S. Route 1 from four to six lanes between Marys Way and Annapolis Way. The project will include multimodal features for transit, pedestrian and bicyclists. Construction is scheduled to be completed by 2019.
- The Virginia Railway Express (VRE) 2040 System Plan[21] identifies capital investments to expand system capacity and defines a logical sequence of VRE service expansions through 2040 to sustain and grow the service to meet regional travel needs.
- Fast Ferry Studies[22] have been commissioned to examine the opportunities for providing both commuter and recreational services along the Potomac River, connecting North Woodbridge to the regional core and other destinations such as Bolling Air Force Base, Old Town Alexandria, National Harbor, Fort Belvoir, and Marine Corps Base Quantico.
- U.S. Route 1 and Route 123 Interchange[23] – Preliminary Design and Interchange – the 1.25-mile project will provide an interchange at the intersection of Routes 1 and 123 and widen both roads from four lanes to six lanes. Route 123 will be extended over the CSXT tracks to connect with Belmont Bay Drive. Sidewalks and shared-use paths along Routes 1 and 123 will provide bicycle and pedestrian access to the community and to the Woodbridge VRE/Amtrak Station.
- U.S. Route 1 Richmond Highway Widening Project (Jeff Todd Way to Napper Road) in Fairfax County.
- U.S. Route 1 Richmond Highway BRT Project Phase I and Phase II.

[18] More information found here: https://www.mwcog.org/regionforward/
[19] More information found here: http://www.drpt.virginia.gov/media/1531/route-1-aa-final-report-01-29-15.pdf
[20] More information found here: http://www.virginiadot.org/projects/northernvirginia/route_1_widening.asp
[21] More information found here: https://www.vre.org/vre/assets/File/2040%20Sys%20Plan%20VRE%20finaltech%20memo%20combined.pdf
[22] More information found here: http://newwoodbridge.org/fastferry/
[23] More information found here: http://www.virginiadot.org/projects/resources/NorthernVirginia/Route_1-123_Public_Hearing_Brochure.pdf

Figure 39: North Woodbridge – A Gateway in Transition
Source: Renaissance Planning

Public Participation Process

The North Woodbridge Plan benefitted from extensive public participation including:

- Stakeholder meetings in the community on June 7, 2017; June 14, 2017; and September 14, 2017. Participants discussed transportation connectivity and its effects on economic development, recreational and tourist attractions and neighborhood stabilization and affordable housing.
- A community charrette on January 10, 2018 with five breakout sessions to focus on design elements. Participants in each group considered strategies that would leverage the area's strengths and address weaknesses.
- Community Conversations Meetings on October 30, 2018; November 13, 2018; and November 14, 2018.
- The Urban Land Institute (ULI) conducted a Technical Assistance Panel on December 11 and 12, 2018 to evaluate the area's potential for attracting and implementing fast ferry service, including review of both the prior fast ferry study results and means to facilitate use of the existing Occoquan Harbour Marina as a commercial ferry station that could be integrated into the North Woodbridge Town Center.
- Planning Commission Small Area Plan work session and open house on March 20, 2019.
- Planning Commission Small Area Plan public hearing on June 19, 2019.

Figure 40: North Woodbridge Charrette Activity, January 10, 2018

VISION AND THEMATIC PRINCIPLES

The vision for the North Woodbridge Small Area Plan will be implemented through a series of goals and action strategies that are introduced in the following paragraphs and woven throughout the Small Area Plan recommendations. With the establishment of an implementation plan, the plan will be activated such that action strategies occur in the short-, mid-, and long-term, and ongoing time frames to ensure that the plan is actualized by 2040.

Vision Statement

Building on North Woodbridge's rich history and environmental resources, create a dynamic community focused on a dense, mixed-use North Woodbridge Town Center, while strengthening the existing communities of Marumsco and Belmont Bay, oriented around a multimodal transportation network and a vibrant waterfront, nurturing a high quality of life and economic vitality for the residents and businesses of North Woodbridge.

Small Area Plan Goals and Action Strategies

Figure 41 identifies the goals for each functional area of the Small Area Plan, providing thematic principles for achieving the Small Area Plan vision and guiding the Small Area Plan recommendations.

Within the following pages, these Goals are further elaborated upon and supported by specific Action Strategies. The Action Strategies are summarized in matrix form in the Implementation Matrix.

VISION: Building on North Woodbridge's rich history and environmental resources, create a dynamic community focused on a dense, mixed-use North Woodbridge Town Center, while strengthening the existing communities of Marumsco and Belmont Bay, oriented around a multimodal transportation network and a vibrant waterfront.

PLACETYPES: Create a sense of place with a vertical mixed-use town center and capitalize on the waterfront as a unique feature. Create neighborhoods with a balanced mix of housing types and affordability.

MOBILITY: Create a multimodal network that leverages, connects, and expands the community's mobility hubs.

DESIGN: Create and implement high-quality design standards for pedestrian-scaled private and public development. Integrate facility design and public safety programs to enhance safety and personal security.

GREEN INFRASTRUCTURE: Ensure a robust and connected system of greenways, blueways, trails, open space and corridors that provide a benefit to the environment, community and local wildlife.

CULTURAL RESOURCES: Identify and protect Prince William County's significant historical, archaeological, architectural, and other cultural resources, including those significant to the County's minority communities, for the benefit of all the County's citizens and visitors.

ECONOMIC DEVELOPMENT: Encourage economic development to attract and retain high quality businesses and services.

LEVEL OF SERVICE: Ensure an adequacy of public facilities including high-quality schools, fire stations, police facilities, libraries, and other government buildings.

Figure 41: Vision and Thematic Principles

LAND USE

A major goal of the North Woodbridge Small Area Plan is to "Create a sense of place with a mixed-use town center and capitalize on the waterfront as a unique feature. Create neighborhoods with a balanced mix of housing types and affordability." This section of the Plan is integral in the development, vision, and implementation of this goal.

This land use plan refers to the characteristics of density, diversity, and design present for a specific geography. A small area plan informs the linkages between several land use types and presents an overarching goal for the identity of these spaces. The framework for developing this Small Area Plan includes creating a transportation network that supports mixed-use development and a high quality of life in a waterfront community.

Transect and Activity Density Framework

The framework of this Plan utilizes the core concepts of Transect and Activity Density. The Transect is a way to describe the range of natural and built environments from the countryside to the center of the city as a set of bands of uniform density called Transect Zones (See Figure 42). Each Transect Zone defines a consistent scale of density and intensity of development and the entire complement of streets, buildings, and open space that goes along with that level of intensity. Figure 43 is a standard table of Transect Zone densities defined for all of Virginia using Activity Densities. This table of Transect Zone densities and typical characteristics was developed through an analysis of real Virginia places, ranging from large urban downtowns to rural village centers. Figure 44 provides a 3-dimensional illustration of the form, layout, intensity, and type of transit technology that typically supports each of the Transect Zones.

Activity Density is a way to combine the density of existing or future population and jobs in an area to allow them to be classified more simply. Activity Density for an area is the sum of people and jobs in the area divided by the acreage, yielding a total density of jobs plus people per acre. The Transect is a relatively common way of describing density and intensity of development in the urban planning profession.

This Plan identifies specific Transect densities for North Woodbridge and has been used to define the types and surrounding contexts of both Multimodal Centers and Multimodal Corridors. The Activity Densities for each Transect Zone reflect both existing and future densities, although the future, planned land uses and densities are the primary consideration in the development of the Mobility and Level of Service sections of this Plan.

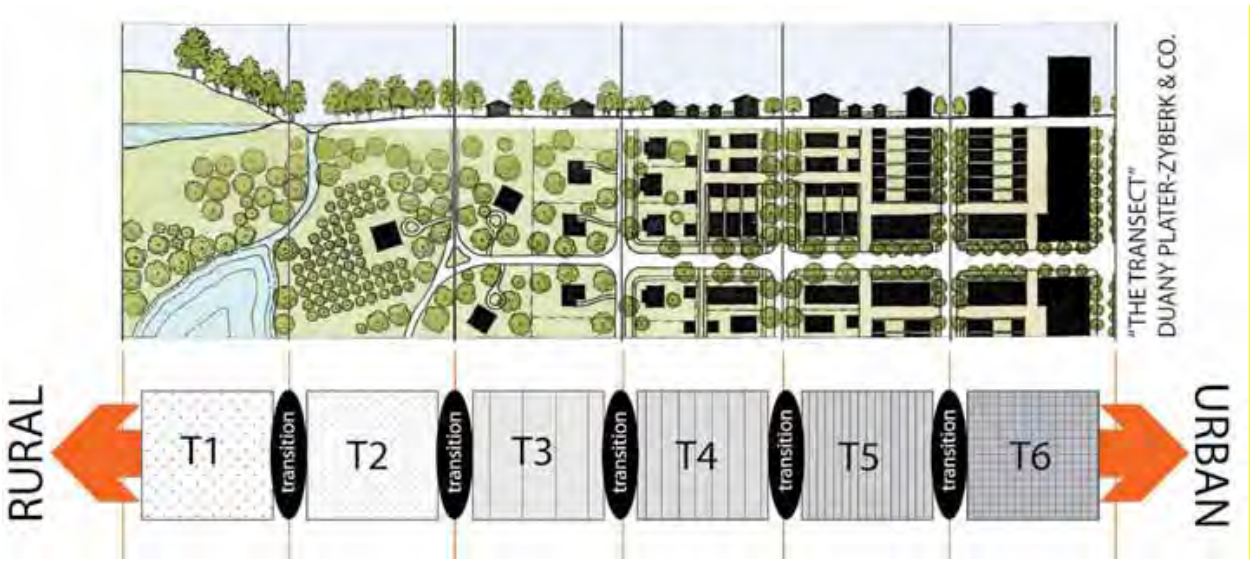


Figure 42: Transect Zones

TRANSECT ZONE INTENSITY			
Transect Zone	**Activity Density (Jobs + People/acre)**	**Gross Development FAR (residential + non-residential)**	**Net Development FAR (residential + non-residential)**
T-1	1 or less	0.01 or less	0.02 or less
T-2	1 to 10	0.01 to 0.15	0.02 to 0.23
T-3	10 to 25	0.15 to 0.37	0.23 to 0.57
T-4	25 to 60	0.37 to 0.9	0.57 to 1.38
T-5	60 to 100	0.9 to 1.49	1.38 to 2.3
T-6	100 or more	1.49 or more	1.38 to 2.3

Figure 43: Transect Zone Intensity Measures

Source: Virginia Department of Rail and Public Transportation Multimodal System Design Guidelines

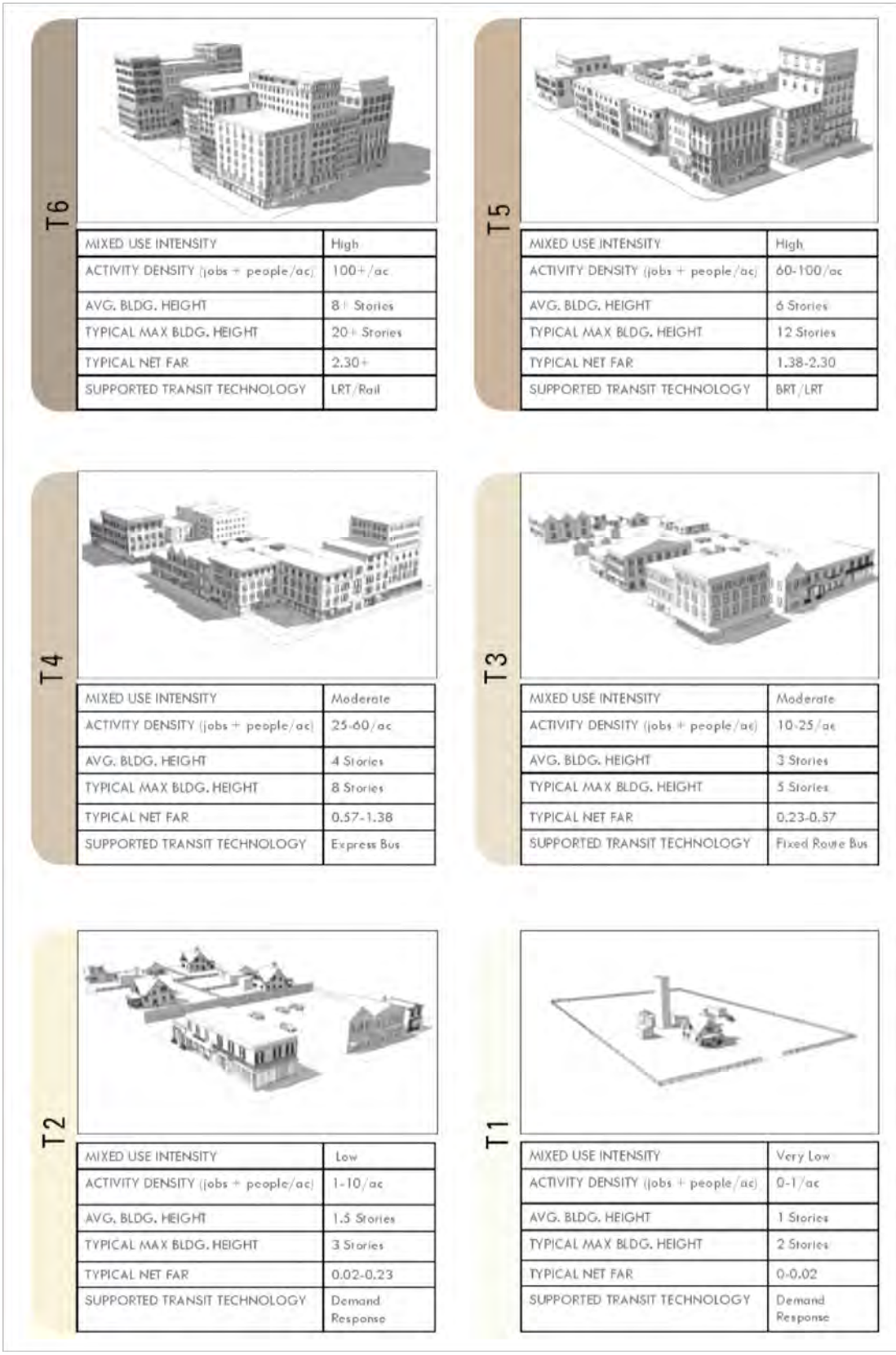


Figure 44: Transects for Future Planned Land Uses

Figure 45 identifies the transects for the future planned land uses and densities for North Woodbridge. Walkshed walking radii are utilized in the development of the transect to ensure the relationship between land use, density, and access to transit is considered.

The T-6 Transect in North Woodbridge is located adjacent to the Woodbridge VRE station and is largely within a ½ mile walking radius. This area is selected for the highest mixed-use intensity in the study area due to the relatively large parcels, potential for redevelopment, and adjacency to an existing rail and bus station.

The T-5 Transect is located on both sides of the T-6 Transect with roughly half of the acreage within ¼ mile of the VRE station and roughly half of the acreage over ½ mile of the VRE station. This Transect has a high mixed-use intensity, but at a lower density and intensity then the T-6 Transect and provides a transition between the most and least dense areas of North Woodbridge.

The T-4 Transect is located adjacent to the T-6 and T-5 Transects and provides a transition in mixed-use intensity to a moderate level. The T-4 Transect along Occoquan and Horner Roads acts as a transition from the urbanity of the Town Center to represent a neighborhood scale of intensity. The T-4 Transect in Marumsco acts as a semi-autonomous, neighborhood scale subarea of the Plan. The Marumsco T-4 Transect would be anchored by a future bus rapid transit station on U.S. Route 1.

The T-3 Transect is located mostly within an area ½ mile south of the VRE station and consists of flex/industrial uses.

The T-2 and T-1transcets reflect existing land use intensities.

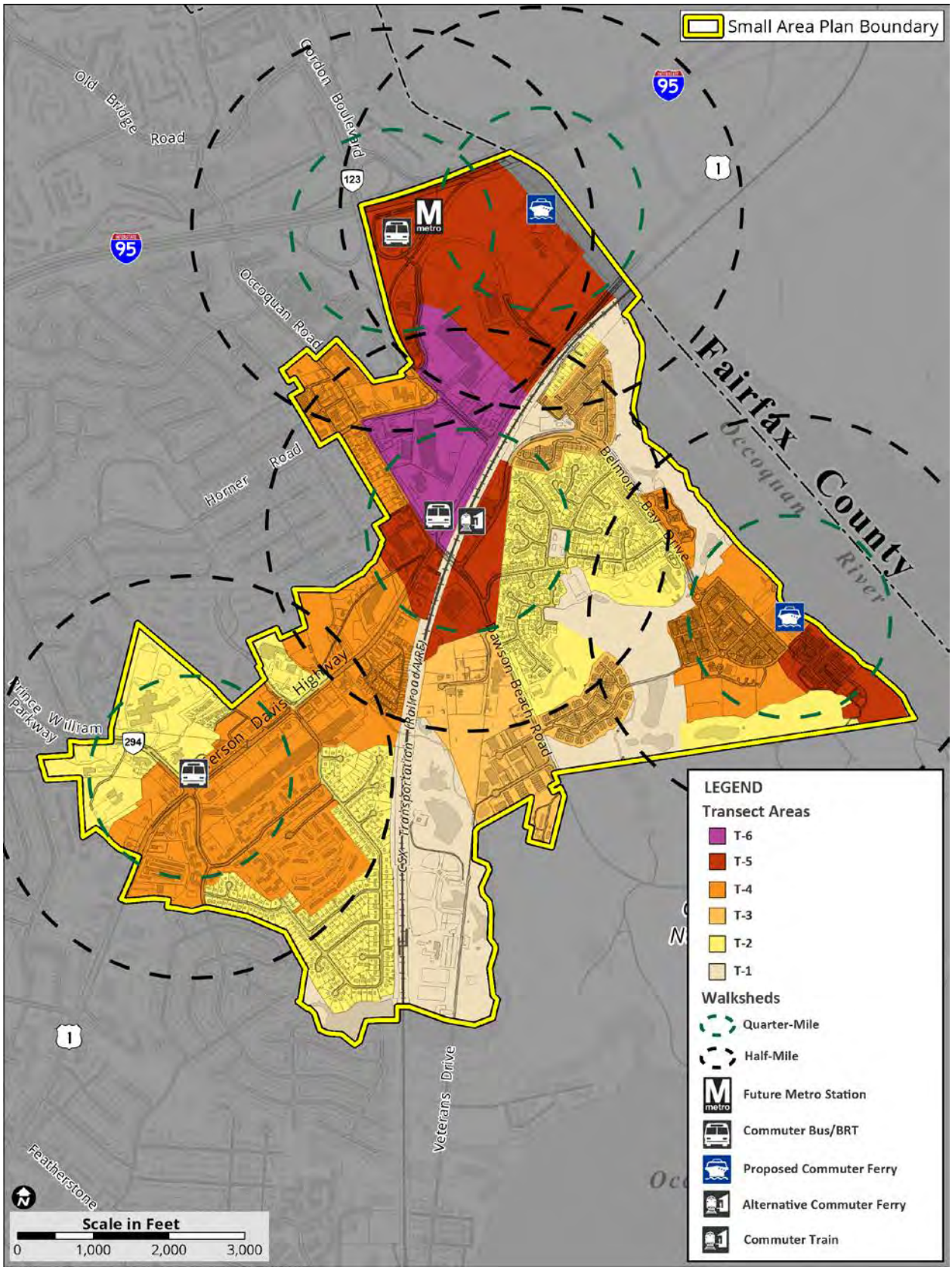


Figure 45: Transects for Future Planned Land Uses

Future Land Use Map

Figure 46 illustrates the proposed Long-Range Land Use classifications for the North Woodbridge Small Area Plan. New long-range land use designations are proposed to implement the vision and goal of the plan to create a sense of place with a mixed-use town center and to capitalize on the waterfront as a unique feature. The proposed land use designations align with the designated Transects in the Plan:

- Transect 6: Proposed Town Center Land Use
- Transect 5: Proposed Urban Neighborhood Land Use
- Transect 4: Proposed Neighborhood Land Use
- Transect 3: Proposed Technology/Flex Land use
- The Regional Employment Center long-range land use designation for Belmont Bay has been replaced with an Urban Neighborhood designation to better reflect the status and trajectory of the Belmont Bay planned community.

Figure 47 provides a description of the uses, form, and character of each of the proposed long-range land use classifications developed for this Plan. These long-range land uses are instrumental in implementing the vision of the North Woodbridge Small Area Plan. The Zoning Ordinance will require a review and a likely update to ensure that these proposed land uses can be realized.

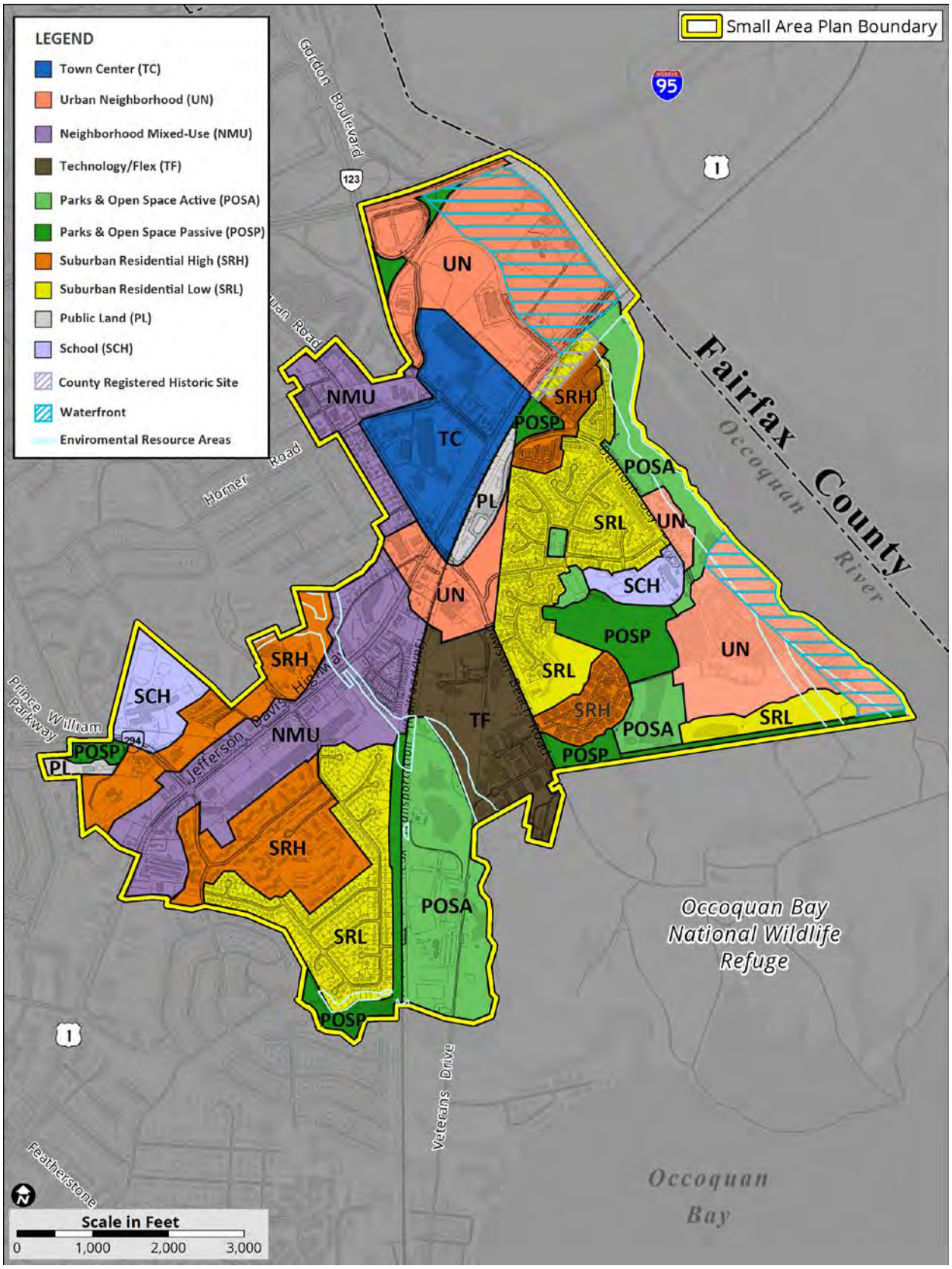


Figure 46: Proposed Long-Range Land Use Classifications

	Town Center	Urban Neighborhood	Neighborhood Mixed-Use	Technology/Flex
DESCRIPTION				
	Town Centers provide a mix of uses arranged in a pedestrian-friendly urban form. These centers are locations for regional commercial and entertainment destinations as well as access to amenities for adjacent residential and employment centers. Streets are interconnected and multi-modal with parking located behind buildings. Short blocks with shallow setbacks and on-street parking are appropriate.	Urban Neighborhoods are an opportunity to develop higher density, mixed-use residential close to transit (VRE) or town centers. They mix housing types that meet the needs of all ages and economic groups. Small-scale office, retail and service uses are integrated into the neighborhood. Neighborhood design is based on traditional neighborhood principles, emphasizing pedestrian activity. Development should be in short blocks with homes oriented to the front of the lot with shallow setbacks. Parking is on-street or in alleys. Waterfront areas of Urban Neighborhoods are more densely developed and have a greater proportion of non-residential uses.	Neighborhoods provide a focus on local employment uses within an urban, mixed-use environment. First-floor retail and commercial establishments and/or the inclusion of multi-family housing can support developments. The intent is to create vibrant, diverse places to accommodate a variety of business and housing development needs. Buildings have short to medium setbacks and varying block sizes. Parking is predominantly structured with accommodations for on-street and limited surface parking.	Technology/Flex Industrial areas provide opportunities for production, flex office/warehouse space, and warehousing uses that do not require large outdoor storage or produce nuisances such as noise, dust or vibration. They are less hazardous and limited impacts on surrounding areas compared to heavy manufacturing. Buildings in this area have medium to deep setbacks and larger block sizes. Surface parking is acceptable.

Figure 47: Description & Uses of Proposed Long-Range Land Use Classifications

	Town Center	Urban Neighborhood	Neighborhood Mixed-Use	Technology/Flex
Primary Uses	• Retail & Service Commercial • Office • Entertainment Commercial • Multi-Family Residential • Government Contracting • Hotel	• Multi-Family Residential • High-Density Townhouses • Retail & Service Commercial Waterfront Uses Only: • Hotel/Conference Center • Office • Government Contracting	• Multi-Family Residential • Retail & Service Commercial • Civic, Cultural, Community Institutional	• Healthcare • Federal Government Contracting • Research & Development • Flex Space • Light Industrial • Information Communications Technology • Warehousing & Logistics • Advanced Manufacturing
Secondary Uses	• Civic, Cultural, Community Institutional	• Active Adult Retirement Communities • Office Waterfront uses Only: • Recreation • Entertainment /Commercial	• Office • Institutional • Hotel • Healthcare • Local Government Contracting	• Retail & Service Commercial • Office • Institutional • Trade/Tech School
Use Pattern	Based on Street Typology	Based on Street Typology	Based on Street Typology	Based on Street Typology
Target Residential Density	T-6 -50-100 du/acre T-5- 12-50 du/acre	T-5 12-50 du/acre	T-4 -8-24 du/acre	n/a
Target Non-Residential FAR	T-6- 2.3-3.0 FAR T-5 -1-2.3.0 FAR	T-5 -1-2.3 FAR	T-4- 0.57-1.38 FAR	T-3 -Up to 0.57 FAR
Target Land Use Mix	Residential: 40-80% Non-Residential: 10-65% Civic: 5%+	Residential: 70-90% Non-Residential: 0-20%: Civic: 5%+ Waterfront only: Residential: 40-80% Non-Residential: 10-65% Civic: 5%+	Residential: 80 -90% Non-Residential: 10-50% Civic: 5%+	Residential: 0% Non-Residential 100% Civic: 0%+

Figure 48: Form & Character of Proposed Long-Range Land Use Classifications

	Town Center	Urban Neighborhood	Neighborhood Mixed-Use	Technology/Flex
Target Building Height	T-6- 8-20+ stories T-5 -6-12 stories	T-5 -6-12 stories	T-4- Up to 8 stories	T-3 - 5 Stories
Minimum Open Space	10% of site	10% of site	10% of site	20% of site
Implementing Zoning Districts*	PMD PMR PBD R-U	PMD PMR PBD R-U	PMD PMR PBD v	PBD O(F) M-2

*Future Mixed-Use Zoning Districts (i.e., MUZD) may apply.

Figure 49: Form & Character of Proposed Long-Range Land Use Classifications (continued)

		Suburban Residential High	Suburban Residential Low	Parks & Open Space Active	Parks & Open Space Passive	Public Land
DESCRIPTION		 	 	 	 	 
		Suburban Residential High classification provides for areas of a variety of housing opportunities at the highest suburban density. The preferred housing type in this classification is multifamily (apartments and condominiums). The density range in SRH projects is 10-16 dwellings per acre, less the ER designated portion of a property.	Suburban Residential Low classification is to provide for housing opportunities at a low suburban density. The housing type in this classification is single-family detached, but up to 25 percent of the total land area may be single-family attached. The density range in SRL projects is 1-4 units per gross acre, less the ER designated portion of a property. Cluster housing and the use of the planned unit development concept may occur, provided that such clustering and planned district development furthers valuable environmental objectives as stated in EN-Policy 1 and EN-Policy 4 of the Environment Plan, the intent stated in the Cultural Resources Plan and preserves valuable cultural resources throughout the County.	The purpose of this classification is to designate existing and projected parks and recreational areas of the County. Active uses involving development of parkland to provide facilities including the construction of buildings, fields, courses and other related infrastructure to support recreational activities.	The purpose of this classification is to designate existing and projected parks and recreational areas of the County. Passive uses generally require or result in little or no alteration of the landscape and produce little or no light, noise or visual intrusion on their surroundings.	The purpose of identifying public lands in the Comprehensive Plan is to provide an indication of existing and planned public facilities, institutions, or other government installations such as but not limited to detention/correctional facilities, government centers, judicial centers, and related facilities. The appropriate Comprehensive Plan chapter (Telecommunications, Potable Water, Sanitary Sewer, Transportation, Fire and Rescue, Libraries, Police, or Schools) should be consulted for a more complete presentation regarding these public facilities.
USES	**Primary Uses**	• Multifamily Uses • Apartments • Condominiums	• Single Family detached • Cluster housing	• Active Recreation • Sport fields • Courses • Swimming Pools	• Passive recreation • Trails, hiking, bicycles • Fishing • Canoeing, kayaking	• Public facilities • Institutions • Government Center • Judicial Centers
	Residential Density / Zoning	10-16 du/acre R-16 and PMR	1-4 du/acre SR-1, R-2, R-4, R-6 and PMR	N/A	N/A	N/A

Figure 50: Description and Uses of Existing Long-Range Land Use Classifications

Multimodal Planning

Prince William County is implementing multimodal planning using the methodology developed by the Department of Rail and Public Transportation (DRPT). The *Multimodal System Design Guidelines (2013)* established a process to facilitate the coordination of integrated multimodal transportation systems throughout Virginia. This process includes analysis of existing and future population and employment density, designation of multimodal districts and corridors, determination of modal emphasis, and ultimately, the planning for specific street cross sections within activity centers. Although this plan is not intended to be reviewed under the DRPT system, by using the guidelines future incorporation of the plan into a Multimodal System should be seamless. The DRPT Multimodal Design Guidelines define Activity Density as (population + jobs)/acre. Prince William County will determine the activity density for each small area plan district by calculating the potential number of jobs and population expected with planned residential and non-residential development of the planning area. The table below provides detail on the activity density for the North Woodbridge Small Area Plan (a multimodal district), consistent with the Transect Zones and Future Land Use maps. The planned activity density for North Woodbridge is between 26 and 37 activity units per acre, which corresponds to a P4 Large Town or Suburban Center type according to the DRPT Multimodal System Design Guidelines.

District (Small Area Plan)	North Woodbridge Estimates		
	Low	Medium	High
Non-residential (Potential GFA)	2,390,382	3,137,500	3,884,619
Total Jobs	6,411	8,664	10,917
Dwelling Units	10,245	12,917	15,587
People	27,375	33,521	39,662
Total People + Jobs	33,786	42,185	50,579
Total Land Area	1,264 Acres		
Activity Density	26.73	33.37	40.02
Density Classification	P-4	P-4	P-5

MULTIMODAL CENTER INTENSITY			
Center Type	**Activity Density (Jobs + People/acre)**	**Gross Development FAR (residential + non-residential)**	**Net Development FAR (residential + non-residential)**
P-1 Rural or Village Center	2.13 or less	0.03 or less	0.05 or less
P-2 Small Town or Suburban Center	2.13 to 6.63	0.03 to 0.10	0.05 to 0.15
P-3 Medium Town or Suburban Center	6.63 to 13.75	0.10 to 0.21	0.15 to 0.3
P-4 Large Town or Suburban Center	13.75 to 33.75	0.21 to 0.5	0.3 to 0.8
P-5 Urban Center	33.75 to 70.0	0.5 to 1.0	0.8 to 1.6
P-6 Urban Core	70.0 or more	1.0 or more	1.6 or more
SP Special Purpose Center	Varies	Varies	Varies

Figure 51: Multimodal Center Intensity

ILLUSTRATIVE PLANS

A series of illustrative drawings were created to demonstrate, in detail, the development potential of the North Woodbridge Town Center, Belmont Bay, and Marumsco Subareas. Each of these illustrations incorporates the major themes of place, mobility, and the waterfront interconnected with civic and green spaces.

North Woodbridge Town Center

The North Woodbridge Town Center is a dynamic town center, which includes walkable mixed uses containing office, retail, residential, and civic spaces. The Town Center comprises the commercial and transportation hub of the northern end of the Potomac Communities, served by three multimodal hubs:

- The Woodbridge VRE Station, a candidate site for future high-speed rail service and Bus Rapid Transit (BRT).
- The I-95/Route 123 interchange, Omni-Link and commuter lot, a candidate site for a future Metrorail Blue Line extension.
- The Occoquan Harbour Marina, a candidate site for future Fast Ferry Terminal.

The multimodal access provided by these hubs and the remaining highway system connections help create a market for a premier mixed-use town center containing residential, commercial, and civic uses in a compact and walkable setting.

The North Woodbridge Town Center Illustrative Plan (Figure 51) demonstrates the following development and redevelopment opportunities:

- Connect Horner Road with Marina Way as a main street for the town center with a focus on vertical mixed-use, ground floor retail, and walkable streets.
    - A main street would provide a pedestrian spine through the town center connecting to a future Fast Ferry Terminal and a proposed waterfront boardwalk.
- The greatest intensity of mixed-use development takes place across U.S. Route 1 from the Woodbridge VRE station in the T-6 Transect, Town Center Land Use.
- Mixed-use development along the southwest side of Occoquan Road provides a transition zone from the areas of greatest intensity to the lower density, single-family homes just outside the study area.
- Connect the Woodbridge VRE station to a potential public/private partnership project consisting of office, retail, commuter parking, and a bus rapid transit center. In the long-term, the functions of the existing VDOT Park and Ride could transition to this mixed-use transit center.
- Leverage the scale and intensity of the town center to encourage a high-speed rail stop on the Richmond-Washington, D.C. Amtrak line.
- Focus building entrances along walkable pedestrian focused streets.

- Activate the most northern portion of the study area as a vibrant waterfront district with a river walk and Urban Neighborhood (T5) density development providing access via the Potomac Heritage National Scenic Trail (PHNST). Properties along the waterfront within the Urban Neighborhood area are encouraged to develop on the high end of the Activity Density range for the T5 transect.
- Within the North Woodbridge Town Center area, the preferred trail connection of the PHNST is to be located within the area shown as a Waterfront within the Urban Neighborhood land use designation. If the trail is not located directly along the waterfront of the Occoquan River, then a spur or multiple spurs of the trail should be established to provide public waterfront accessibility. The existing trail segment along the Rivergate property should be incorporated into the trail as a trail spur.
- Create pocket parks to provide civic and green space to all residents of the Town Center.
- Create a pedestrian bridge for the Potomac Heritage National Scenic Trail across U.S. Route 1. This provides connectivity to the Town of Occoquan to the north and Belmont Bay to the south and will act as a gateway feature entering Prince William County from Fairfax County along U.S. Route 1.
- Improve at-grade pedestrian and bicycle infrastructure at the intersection of U.S. Route 1, Occoquan Road, and Dawson Beach Road.
- Create a trolley bus shuttle to connect the North Woodbridge VRE station and the Fast Ferry Terminal.

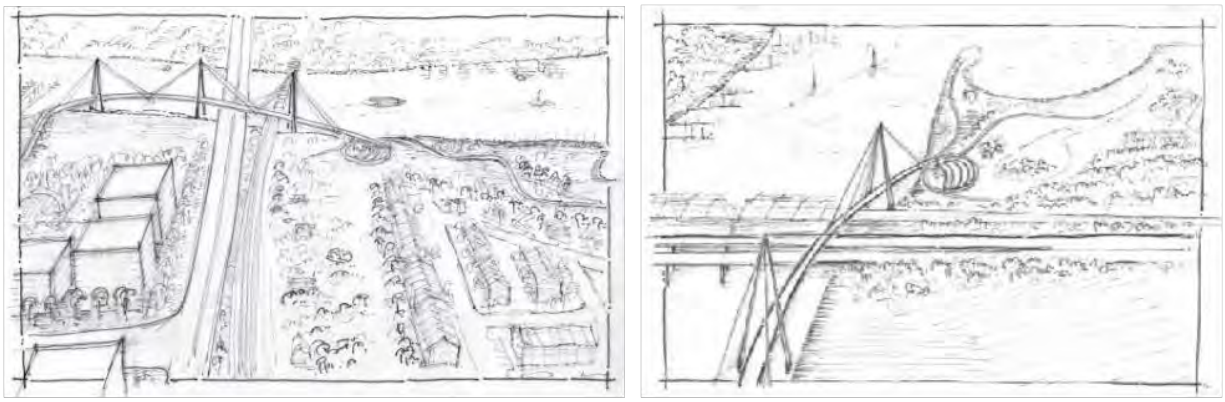


Figure 52: Concept Sketches of the Proposed Potomac Heritage National Scenic Trail Bridge Across U.S. Route 1

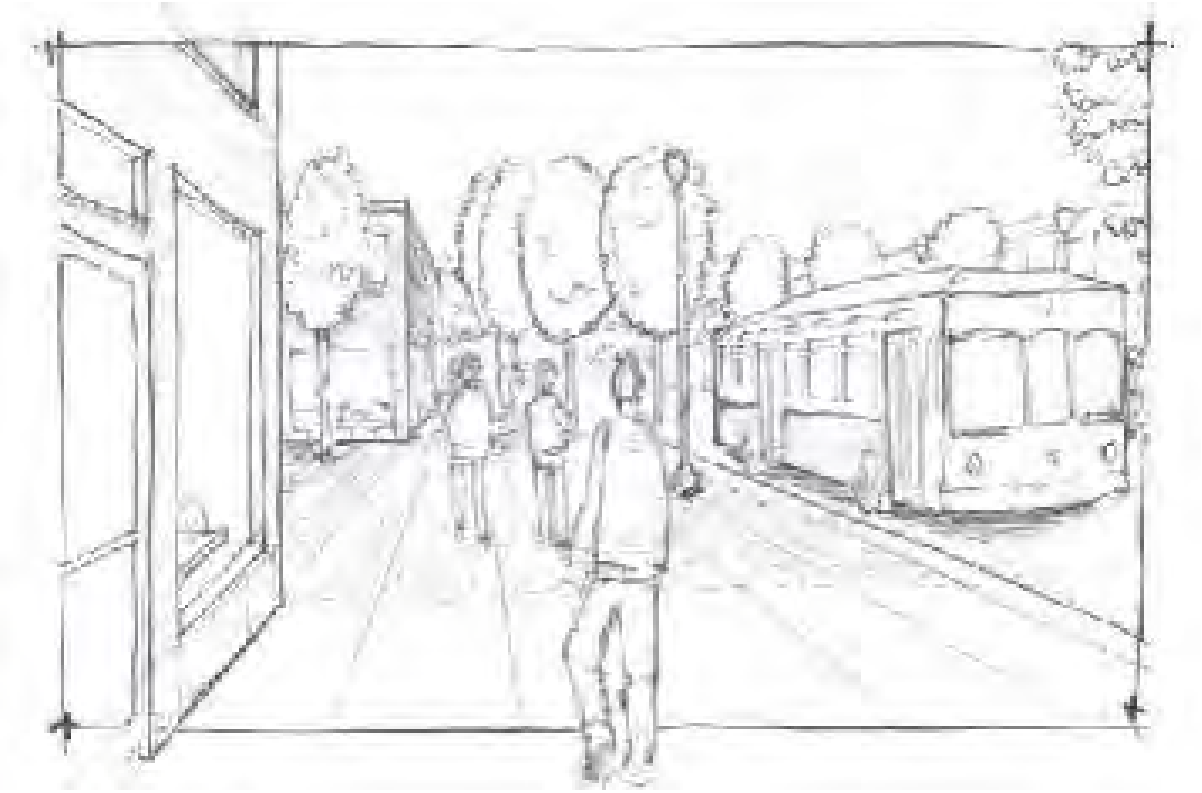


Figure 53: Concept Sketch of a Trolley Bus Providing Connectivity in the North Woodbridge Town Center Between the VRE Station and the Proposed Fast Ferry Terminal

Figure 54: North Woodbridge Town Center – Illustrative Plan

Belmont Bay

Belmont Bay is a planned mixed-use community that has leveraged its waterfront location near the mouth of the Occoquan River to create a mix of high-quality residences and an emerging commercial and retail component, anchored by the George Mason University Potomac Science Center and the Belmont Bay Marina.

The Belmont Bay Illustrative Plan (Figure 52) demonstrates the following development and redevelopment opportunities:

- Plan for the remaining elements of the planned mixed-use community including office, commercial, and medium-density residential in the Harborside community, a resort and conference center along the Occoquan River and a mix of residential unit types in the remaining developable area at the south end of Belmont Bay Drive.
- Establish an alignment for the Potomac Heritage National Scenic Trail to follow the Occoquan River shoreline providing access to a greenbelt of natural resources including the Occoquan River and the Occoquan Bay National Wildlife Refuge and connecting to the North Woodbridge Town Center to the north and Marumsco to the south.
- Explore the potential for temporary easements for properties that create gaps in the planned waterfront access.
- The 2015 closure of the golf course represents an opportunity to rethink both active and passive recreation resources.
    - Initiate park programming through acquisition of portions of the golf course into the County park system.
    - Consider active/programmed activities to meet Countywide objectives including traditional playing fields, a disc golf course, and passive recreation via a trail network providing connectivity throughout the community.
    - A community center with an outdoor amphitheater.
    - Restore portions of the golf course to a natural state.
    - Redevelop some areas of the golf course with low-density residential that is integrated into the landscape to preserve environmental features.
    - Maintain a variable 75’ – 100’ buffer along the southern boundary adjacent to the Occoquan Bay National Wildlife Refuge.

Figure 55: Belmont Bay – Illustrative Plan

Marumsco

The focus of the Marumsco Subarea is on facilitating redevelopment of the commercial properties along U.S. Route 1 into a vibrant mixed-use, walkable, community. Much of the Marumsco Subarea is within walking distance from the Woodbridge VRE Station and adjacent to the North Woodbridge Town Center redevelopment. While the plan study area boundaries incorporate adjacent residential properties to provide a comprehensive view of community opportunities, constraints, and connectivity, the Marumsco Subarea is limited to the redevelopment of commercial properties along U.S. Route 1.

The Marumsco Illustrative Plan (Figure 53) demonstrates the following redevelopment opportunities:

- Create a vertical mixed-use node of office, retail, and residential with the potential for commercial and civic spaces along U.S. Route 1, with the primary focus from the Prince William Parkway to Marys Way.
- Create a technology/flex focus area along Dawson Beach Road, expanding from the existing light industrial uses to the south.
- Create a more walkable, human scale, streetscape centered along U.S. Route 1.
- Facilitate transit accessibility at a potential bus rapid transit station as well as from the existing Woodbridge VRE station.
- Maximize the ability to redevelop existing properties by considering structured parking in key locations.
- Facilitate pedestrian connectivity from the adjacent established residential communities to the mixed-use core of the Marumsco Subarea.
- Consider aesthetic improvements to the existing pedestrian rail crossing providing access to Veterans Memorial Park.
- Encourage local and regional trail connectivity via the Potomac Heritage National Scenic Trail.
- Consider improvements and upgrades to the Veterans Memorial Park as a local and regional park.

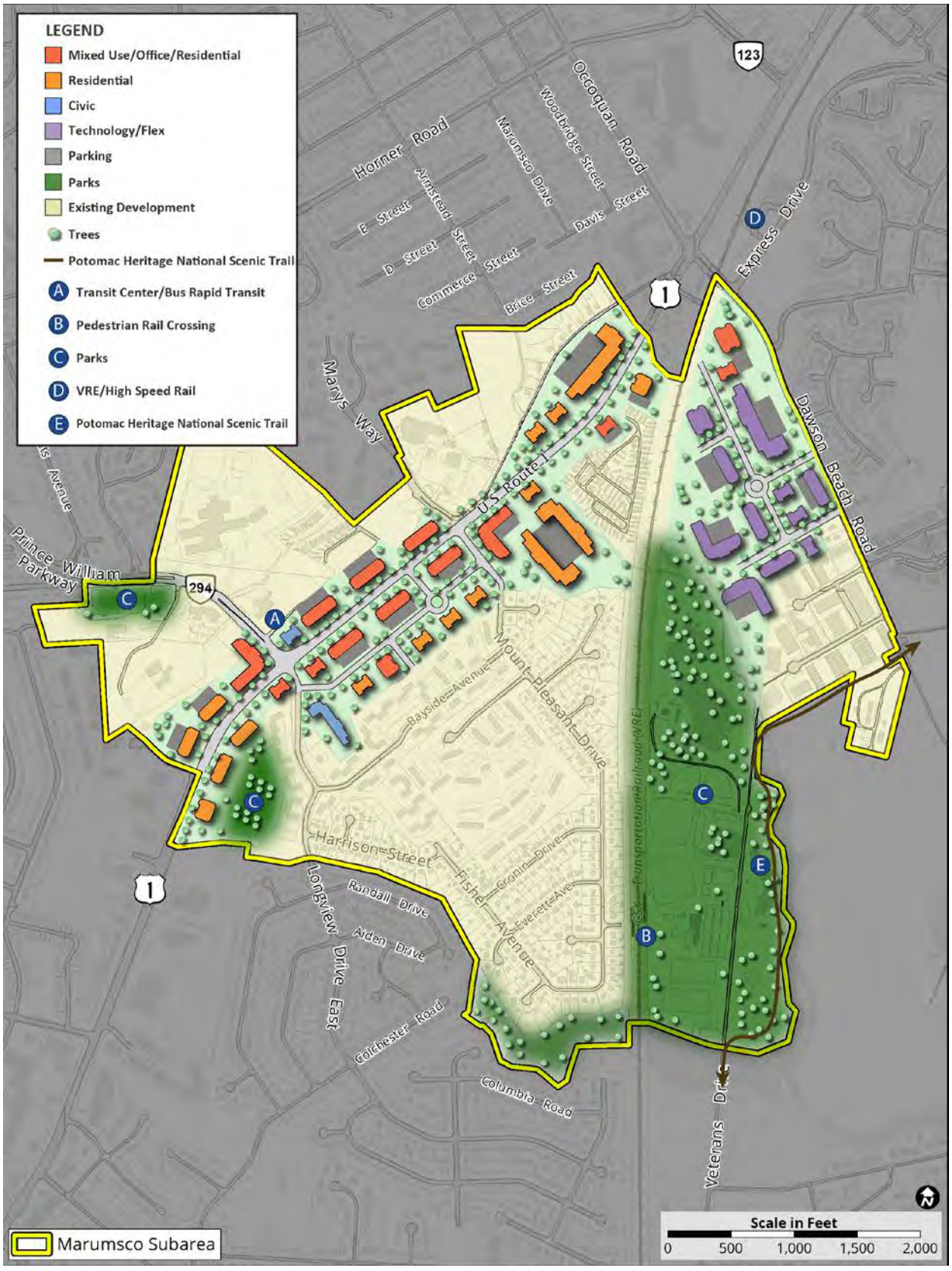


Figure 56: Marumsco – Illustrative Plan

Land Use Plan Implementation

Implementation efforts will focus on the establishment of a new Mixed-Use Zoning District (MUZD) to foster redevelopment of underutilized commercial parcels, create pedestrian-scaled design parameters, and create a transportation framework that respects the regional functionality of U.S. Route 1 and Route 123 while providing inter-parcel connectivity for all modes within the Town Center. Establishment of the Potomac Heritage National Scenic Trail to provide access along the Occoquan River waterfront will enhance multi-purpose connectivity.

The implementation of the MUZD will also entail complementary changes to the County's Design and Construction Standards Manual to address barriers to integrated mixed use developments, notably reduction or elimination of required buffers separating discrete uses that may be appropriate for single-use districts, but often run counter to the objectives of mixed-use communities. Street design criteria will also be aligned with the County's Urban Street Standards and ultimately with DRPT Multimodal System Design Guidelines recommendations to consider changes appropriate for streets serving higher density place types with modal emphases for walking, bicycling, and transit. The effect of dense urban design standards and guidelines will be considered through review of the County's Level of Service standards.

MOBILITY

Goal: Create a multimodal network that leverages, connects, and expands the community's mobility hubs.

Prince William County is implementing multimodal planning in the North Woodbridge Small Area Plan area using the current Urban Street sections in the Design and Construction Standards Manual (DCSM), Section 600. Streets identified for modal emphases in the Small Area Plan must prioritize adequate infrastructure for emphasized modes.

The North Woodbridge Small Area Plan has 3 distinct cores, North Woodbridge Town Center, Belmont Bay and Marumsco. The densest development will occur at these cores, with a transition to lower density transect zones as one moves away from the center of each core.

The overarching theme of the mobility plan is to frame multimodal access around the three key multimodal hubs, together referred to as the "Transit Triangle": the VRE station; the I-95 interchange and OmniRide stop/commuter lot; and the Occoquan Harbour Marina; and a future Fast Ferry Terminal. Key elements of the transportation plan include:

- Establishing multimodal hubs providing three distinct modes of transit: rail (VRE), bus/road accessible from commuter lot (I-95), and water (a future Fast Ferry), with connectivity throughout the small area plan.
- Creating a grid of streets to improve mobility throughout the small area plan.
- Enhancing transit service and last mile connections to transit.
- Creating safe bicycle and pedestrian connections across U.S. Route 1.

Road and Highway Network

The study area for the North Woodbridge Small Area Plan has two primary urban areas where a denser future road network is anticipated.

- The North Woodbridge Town Center area, including the commercial area across U.S. Route 1 from the Woodbridge VRE station to the Occoquan River, is planned for a road network that results in block lengths in the Town Center of 200' – 660'. This range of block length creates the urban transportation environment that facilitates a balance in mode share along roadways.
- The North Woodbridge Town Center should include a grid of streets that will include the extension of Annapolis Way as currently planned and an extension of Horner Road across Route 123 to intersect Annapolis Way and provide access to the Occoquan Harbour Marina.
- To create a sense of place in the North Woodbridge Town Center, roadways cannot be evaluated through traditional capacity measures, such as Level of Service for intersections and road segments.
- The U.S. Route 1/Route 123 interchange is an important element to connect Route 123 to Belmont Bay Drive as well as improve mobility in the study area. The current interchange design will impose some limitations on pedestrian and local street connectivity but is the most straightforward means to achieve key mobility objectives. Should a joint public/private proposal for a Town Center street grid achieve the same level of multimodal quality of service as achieved by the interchange, such a proposal could be considered in lieu of the interchange in coordination with VDOT.
- U.S. Route 1, Route 123, and the Prince William Parkway are multimodal through corridors that are instrumental in carrying traffic by all modes to, from, and throughout the plan area. The extension of this designation along Belmont Bay Drive to the Belmont Bay activity center emphasizes the value of connecting Belmont Bay to the rest of the plan area and the rest of the region.
- The Marumsco commercial area at the south end of the study area is planned for a similar grid network road development.

Street Functional Classification

The proposed Functional Classification Map identifies preferred street sections for roads within the North Woodbridge Small Area Plan study area. Development of identified streets should conform with the preferred street section.

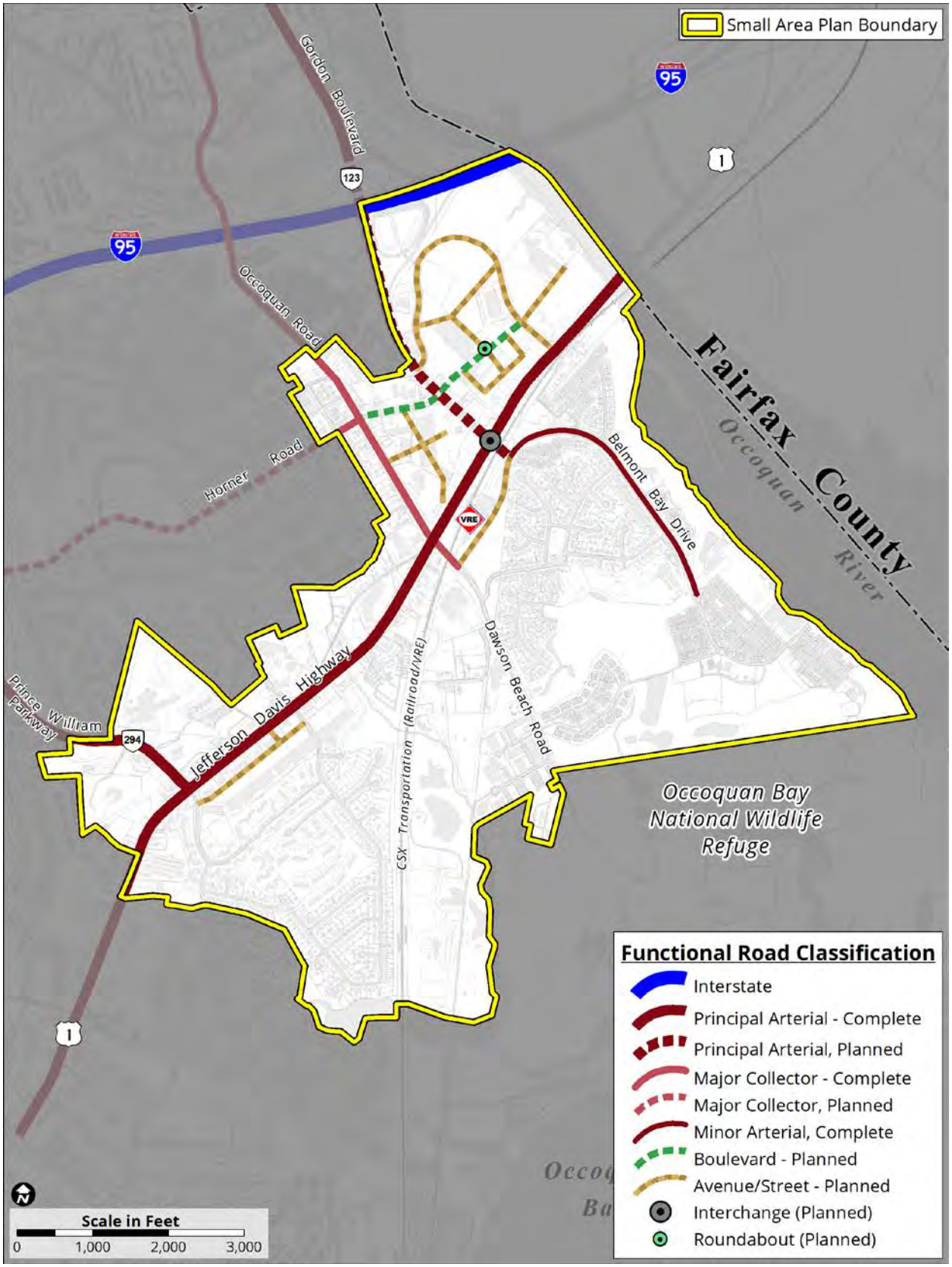


Figure 57: Proposed Functional Classification Map

Proposed Transit Network

- Bus Rapid Transit (BRT) service is planned along U.S. Route 1 from the Huntington Metrorail station to Woodbridge. Fairfax County has endorsed the first two implementation phase concepts: Phase I, from Hybla Valley is planned for completion by 2026 and Phase II, from Hybla Valley to Fort Belvoir is planned for completion in 2028. The U.S. Route 1 Multimodal Alternatives Analysis also recommended that Phase III, from Fort Belvoir to Woodbridge, be completed in 2032.
- The VRE station is planned as the southern terminus of the three-phased Richmond Highway BRT between Alexandria and Woodbridge developed as part of the DRPT Alternatives Analysis.
- High speed rail is planned along the existing route that serves the Woodbridge VRE station, adding a third rail line for capacity. The Department of Rail and Public Transit (DRPT) estimates that the planned DC to Richmond Southeast High-Speed Rail (DC2RVA) project could be completed by 2025, although implementation is dependent on future state and federal funding.
- Potential extension of the Metro line into Prince William County. According to the existing Washington Metropolitan Area Transit Authority metric for constructing metro stations, this would entail any two of the following criteria: a density of at least 12 to 18 households per acre and 19 to 26 employed residents per acre; a ridership of at least 3,500 to 7,000 per mile; and an environment that is 50 percent to 65 percent developed.
- A shuttle service that can be branded as a trolley to provide frequent service connecting the three key nodes of development (the North Woodbridge Town Center, Marumsco, and Belmont Bay) and provide frequent service to the "Transit Triangle" (VRE, fast ferry, and commuter bus lots).
- Opportunities for improved transit services in the form of a Metrorail Blue Line extension, a Potomac River Fast Ferry, high-speed rail serving the VRE station and a continuation of bus transit south of the VRE station along U.S. Route 1 should be preserved through right-of-way preservation and interagency coordination.
- Continue development of Fast Ferry service as a transit option.
- Improve access to the Route 123/I-95 commuter lot.
- Multimodal Hubs, as shown in Figure 57, are locations that facilitate transitions between different modes of travel. An example location might include a VRE station next to a commuter lot that is also served by local bus service.

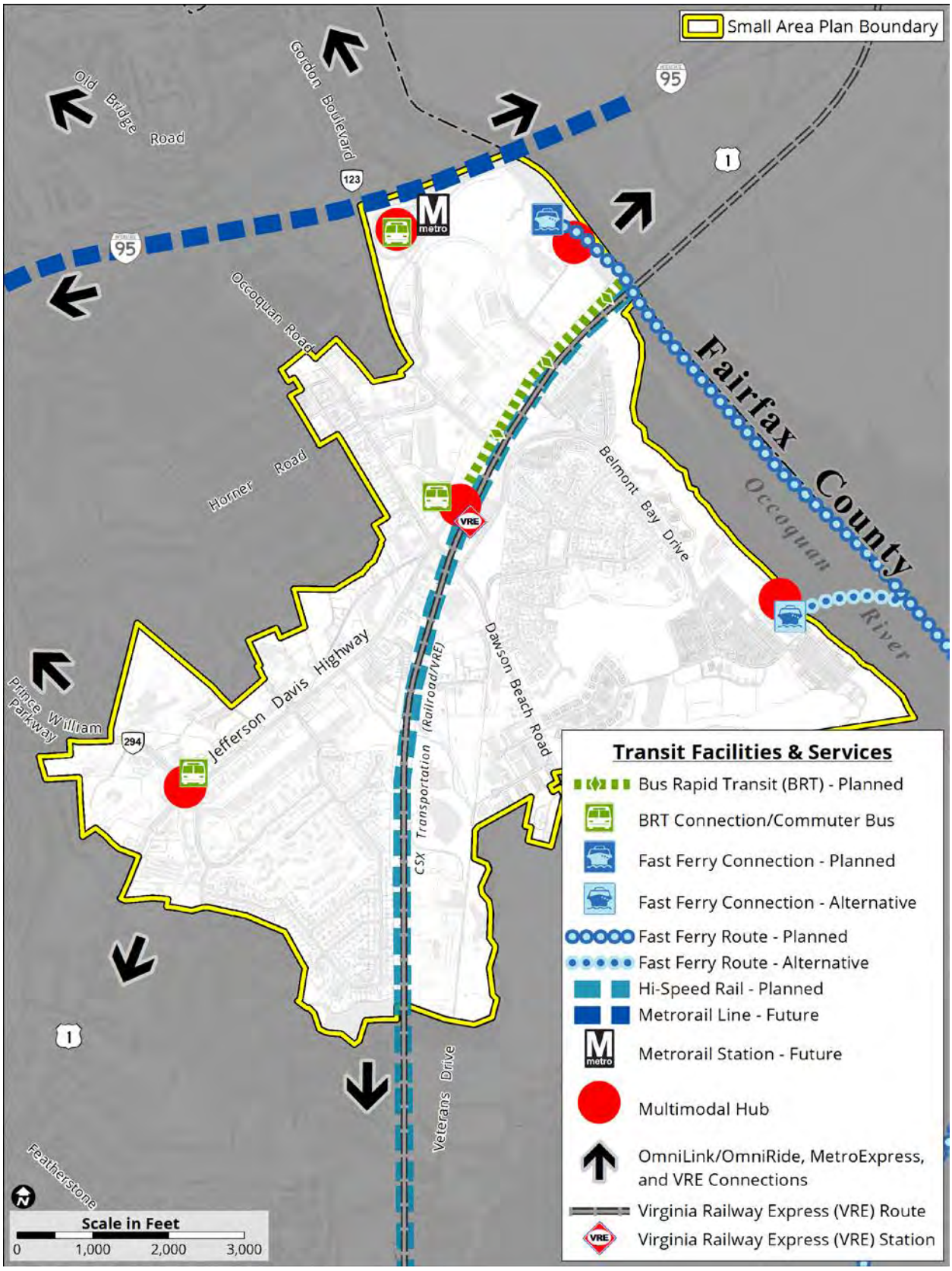


Figure 58: OmniRide & Metro Express Connections

Proposed Regional Trail and Blueways Connections

Two regional trail systems are proposed and planned in the North Woodbridge Small Area Plan.

The Potomac Heritage National Scenic Trail (PHNST): ±800-mile network of locally managed trails along the Potomac River from the mouth of the Chesapeake Bay to the upper Ohio River basin in Pennsylvania. The trail system was designated by Congress in 1983 with the goal of linking trail users to the history, culture, and natural beauty of the Potomac River. This trail, partially constructed, is proposed to run the entire length of this Small Area Plan. Within Prince William County, the trail is planned to link several parks, communities and other destinations, including the historic Towns of Occoquan and Dumfries, Occoquan Bay and Featherstone National Wildlife Refuges, Julie Metz Wetlands, Leesylvania State Park, Prince William Forest Park, and the National Museum of the Marine Corps. This is an opportunity to leverage the full tourism potential of current historic property holdings, accelerate natural resource management, accelerate cultural land acquisition and preservation, and expand educational programming.

The route of this trail is significant for this Small Area Plan as it traverses all three subareas. The establishment of a trail route that is both safe and scenic with views of the Occoquan and Potomac Rivers will provide a catalyst for new businesses and aid in creating a sense of place and defining North Woodbridge as a destination. Reference the Proposed Regional Trail Connections Map.

Preferred PHNST Route: Within the North Woodbridge Town Center area, the preferred trail connection of the PHNST is to be located within the area shown as a Waterfront within the Urban Neighborhood land use designation. If the trail is not located directly along the waterfront of the Occoquan River, then a spur or multiple spurs of the trail should be established to provide public waterfront accessibility. The existing trail segment along the Rivergate property should be incorporated into the trail as a trail spur.

Woodbridge Pedestrian & Bicycle Loop: The plan reflects the goal to establish a Woodbridge Pedestrian and Bicycle Loop. This network of trails and sidewalks will offer approximately 50 miles of connected living, inviting residents and visitors to explore the area's diverse cultural and recreational offerings by foot and bike. The northern portion of the loop is located within the boundary of the North Woodbridge Small Area Plan. The loop is designed to incorporate existing networks, planned networks, (i.e. PHNST) and proposes additional linkages to complete the loop. The loop is designed to provide connectivity to:

- Featherstone National Wildlife Refuge
- Grubbs Environmental Center
- Leesylvania State Park
- Occoquan Bay National Wildlife Refuge

- Potomac Heritage National Scenic Trail
- Rippon Lodge Historic Site
- Stonebridge at Potomac Town Center
- Veterans Memorial Park
- Businesses along the Route 1 Corridor
- Neabsco Regional Park & Boardwalk

Reference the Proposed Regional Trail Connections Map.

Occoquan River Blueways:

Blueways are rivers, lakes, or streams with public access for recreation that includes fishing, nature observation, and opportunities for both motorized and non-motorized boating, subject to appropriate regulations.

The Occoquan River and Reservoir Water Trail, a valuable resource and important asset to the local community, runs 40 miles from Bull Run Regional Park in Centreville, where the narrow Bull Run waters run fast, through the flat waters of the Occoquan near Fountainhead Regional Park, to the tidal waters of Pohick Bay and Mason Neck. In the North Woodbridge Small Area Plan, the Occoquan River and Reservoir Water Trail is a 7.6 mile moderately trafficked out and back trail located near Lorton, Virginia. A paddle on the Occoquan River, departing from Occoquan Regional Park, offers a serene trip and scenic views of the historic Town of Occoquan. The water here is generally very calm. This trail connects to a larger National Water Trail, The Captain John Smith Chesapeake National Historic Trail. This area has been identified for a lack of “put ins”. Reference the Proposed Regional Trail Connections Map. A goal of the plan is to facilitate better access for hand-carried boat launches and amenity areas, such as rest structures, to better serve the community.

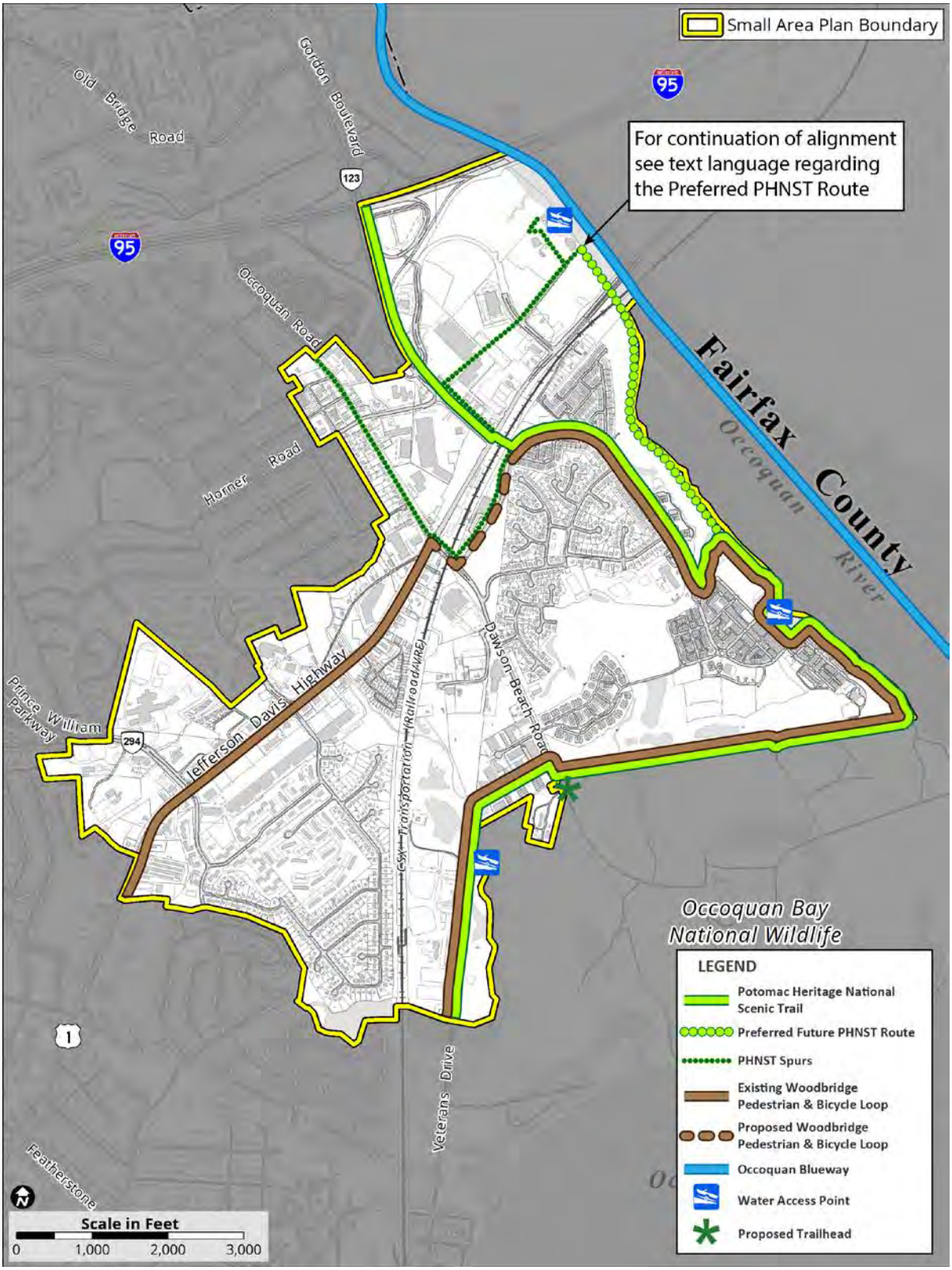


Figure 59: Proposed Regional Trail Connections

Proposed Bicycle Network

The proposed bicycle network in the North Woodbridge Small Area Plan reflects feedback from the public that they desire better connectivity in the bicycle network. A shared use path is an appealing facility, but if one must bike in traffic on a 35-mph street to reach this path, they may not do so.

To this end, the proposed bicycle network recognizes that a functional bicycle network must provide seamless connectivity and comfortable separation on high-volume and high-speed roadways that allows people to get from their neighborhood to other destinations. Starting from the roads with the highest volumes and speeds, bicycle facilities will transition from shared use paths to cycle tracks to bike lanes to sharrows, matching the facility to the roadway conditions.

In some cases, the existing curb-to-curb distance will not need to be altered and bicycle facilities may be achieved through relatively low-cost re-striping efforts. In other cases, the optimal bicycle facility may require additional right-of-way and/or road widening to accommodate new bicycle facilities.

Although the focus of this document is to guide how roadways are designed and built, the proposed bicycle network also includes off-road pathways such as the Potomac Heritage National Scenic Trail that will provide both recreation and transportation connectivity.

The proposed bicycle network incorporates the proposed improvements included in the Woodbridge Pedestrian and Bicycle Loop formulated by Woodbridge District Supervisor Frank Principi and published on NewWoodbridge.org.

Occoquan Road, Dawson Beach Road and Veterans Drive, with a bicycle path extension to Highams Court, are bicycle emphasis routes providing parallel connections to U.S. Route 1 and Route 123 but with a lower level of traffic stress. The Potomac Heritage National Scenic Trail also provides bicycle connectivity within and beyond the plan area.

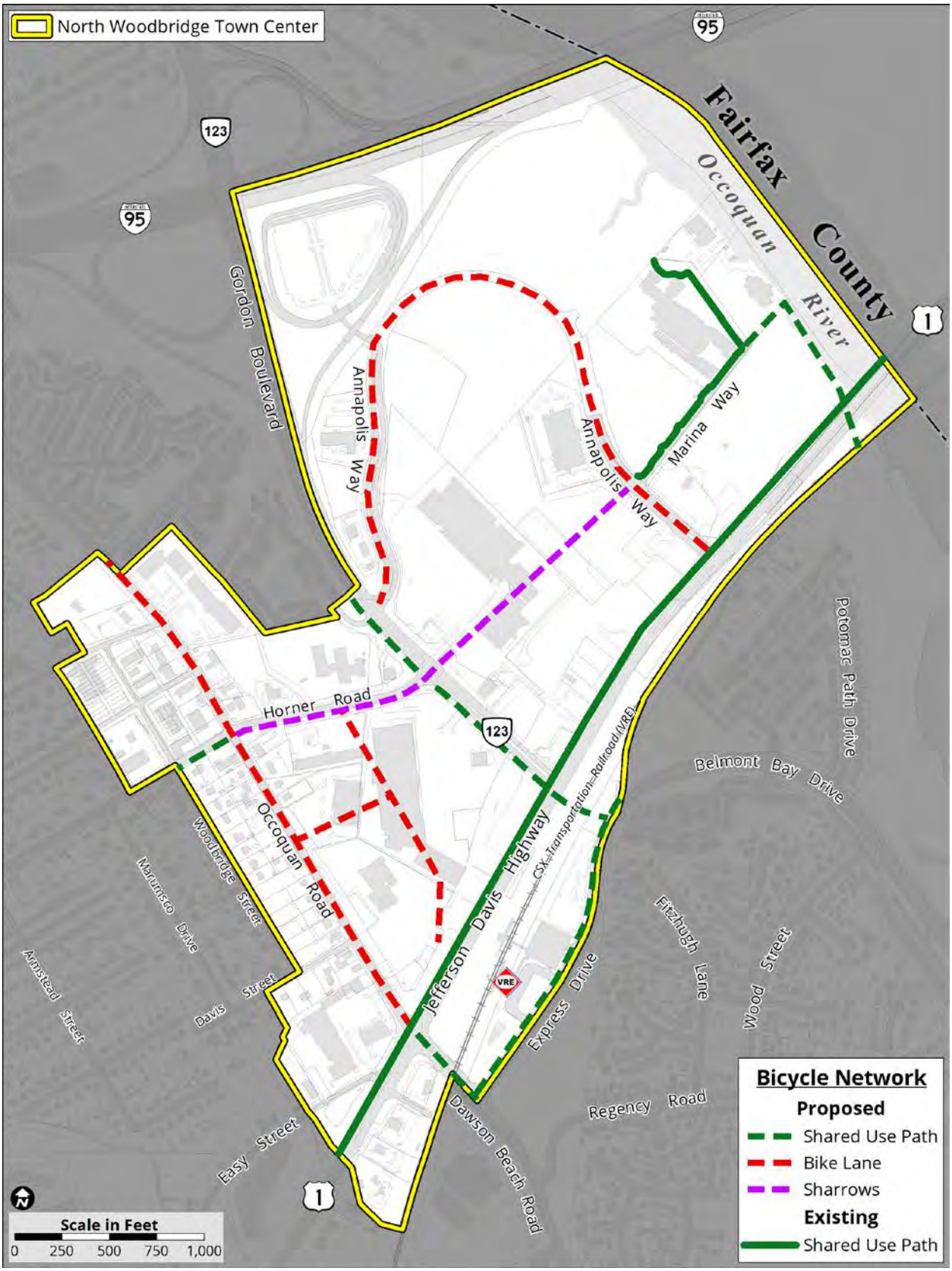


Figure 60: North Woodbridge Town Center - Proposed Bicycle Network

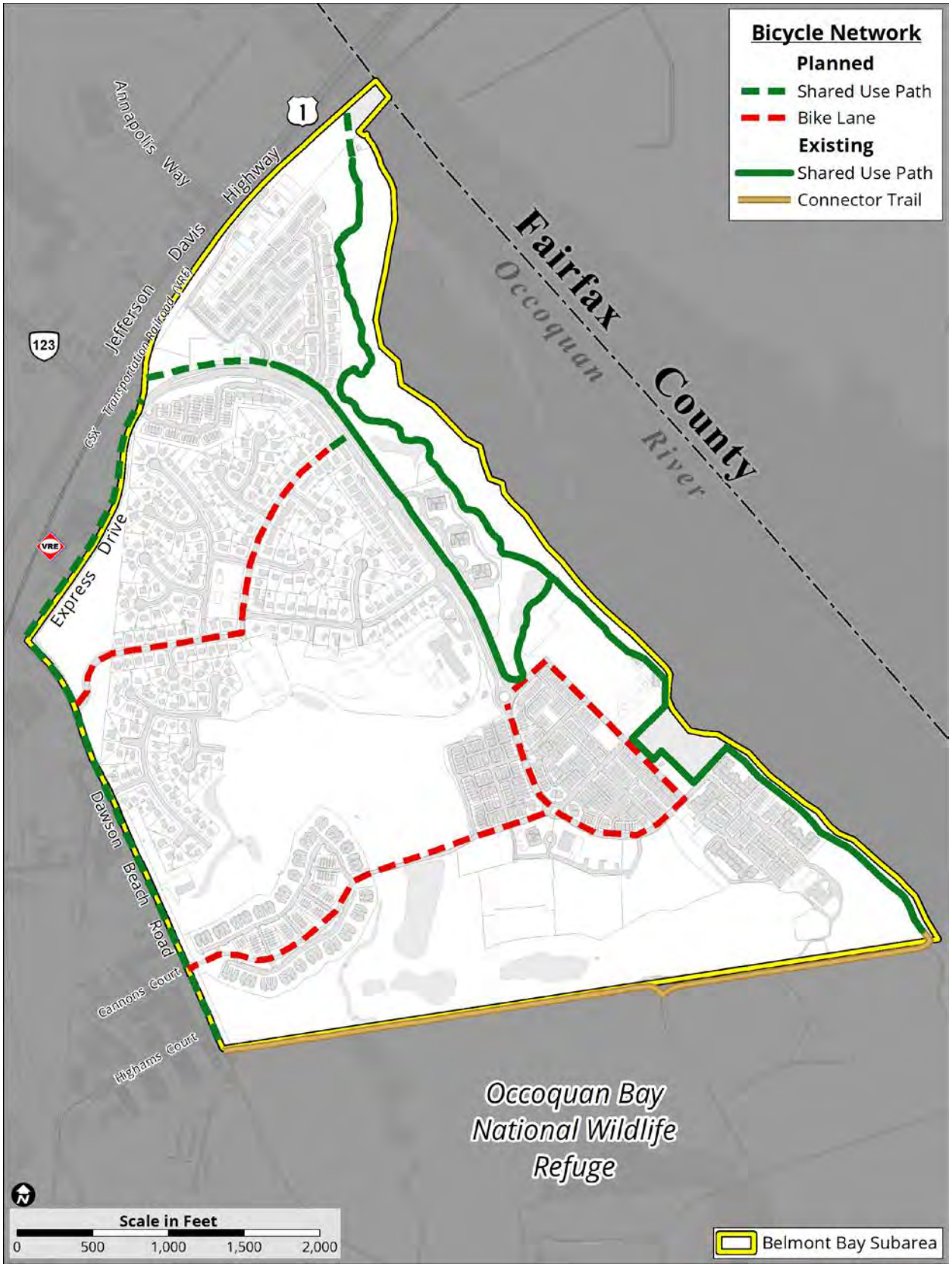


Figure 61: Belmont Bay - Proposed Bicycle Network

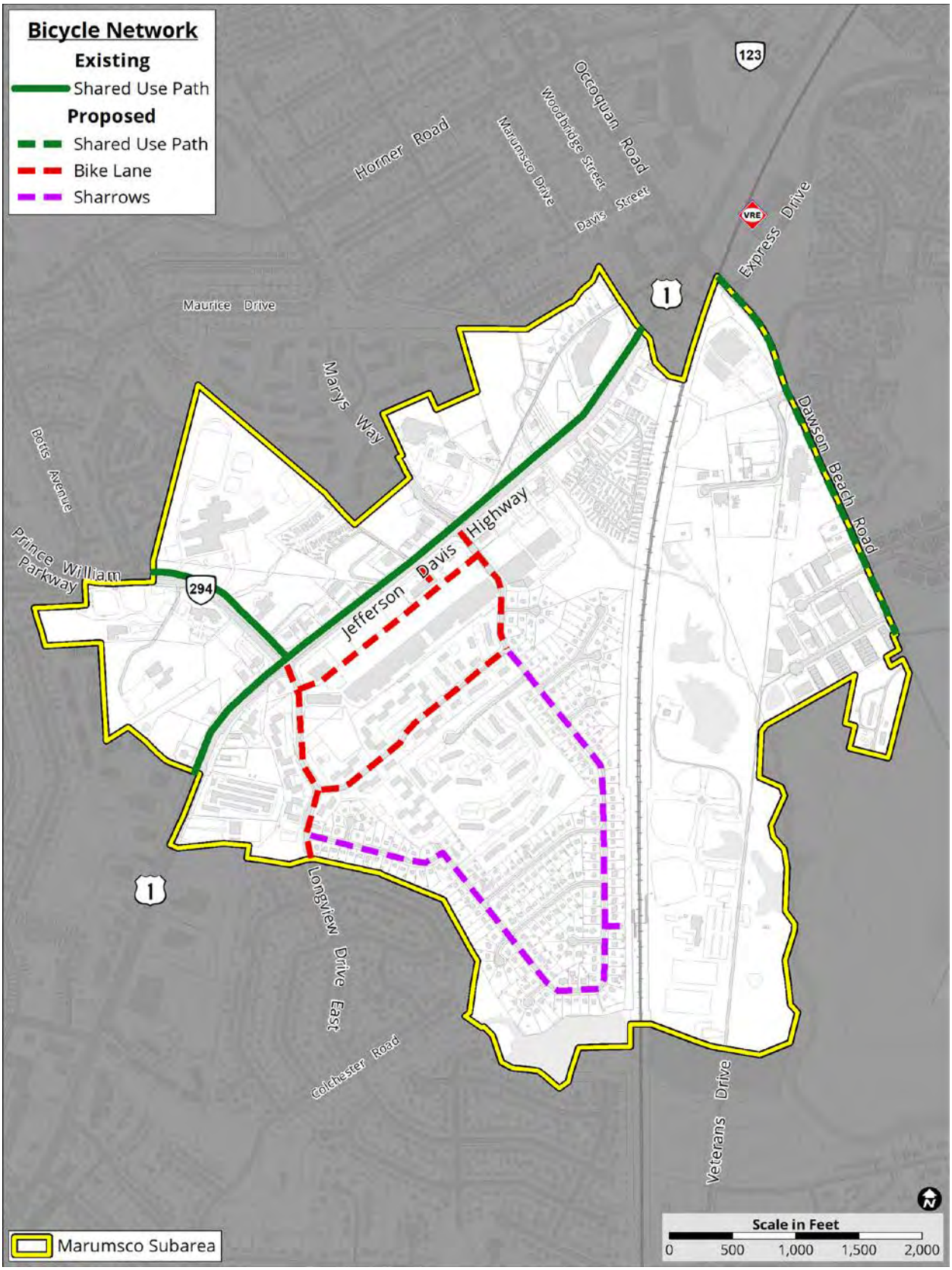


Figure 62: Marumsco - Proposed Bicycle Network

Example Bicycle Facility Images

Shared Use Paths are 8'-10' wide trails designed for walking, jogging, and bicycling. They are often constructed with asphalt, but may also be concrete, boardwalk, or crushed stone. Shared use paths may be located adjacent to a roadway or separated, near a stream, wetland, or other natural area. Shared use paths are considered one of the most comfortable bicycle facilities, suitable for riders of all skill levels.

Figure 63: Shared Use Path

Source: https://ravallirepublic.com/news/local/article_0be0f1a4-2125-11e5-a87d-631998d2a3d5.html

Source: https://bicycles.stackexchange.com/questions/43698/wrong-way-on-a-bike-lane

Bike Lanes are exclusive on-road bicycle facilities, most suitable for roads with less than 3,000 vehicles per day and speed limits 30 mph or less. Bicycle lanes increase bicyclist comfort and confidence on busy streets, and the separated lane provides defined road space for bicyclists. Lanes increase the predictability of bicyclist and motorist positioning and interaction and visually reminds motorists of bicyclists' legal right to the street. Buffered bike lanes are exclusive on-road bicycle facilities, with a striped designated buffer space between the motor vehicle lane and the bike lane. This type of bike lane provides increased comfort for cyclists

Figure 64: Bike Lanes

Source: http://www.infrastructure.sa.gov.au/infrastructure_projects/greenways_project/greenways_project/marino_rocks

Sharrows, also called Shared Lane Markings, indicate a shared lane environment for bicycles and motor vehicles. Sharrows reinforce the legitimacy of bicycle traffic on the street and recommend proper bicyclist positioning within the travel lane.

Figure 65: Sharrows

Source: http://iamtraffic.org/engineering/behaviors-and-risk/

Source: http://blog.tstc.org/2017/03/15/uber-sharrow-transportation-options/

For more examples of bicycle facility images, visit https://nacto.org/publication/urban-bikeway-design-guide/

Proposed Pedestrian Network

- The proposed pedestrian network includes constructing sidewalk on both sides of all streets and including high-visibility crosswalks at appropriate intersections in North Woodbridge.
- In addition, a proposed pedestrian bridge crossing from the Woodbridge VRE to the west side of U.S. Route 1 will create a more comfortable pedestrian path between the planned town center and the transit station.
- Promenade streets within the North Woodbridge Town Center are designated as pedestrian emphasis routes where the volumes of pedestrian traffic and value of design elements at a walkable scale are the highest.

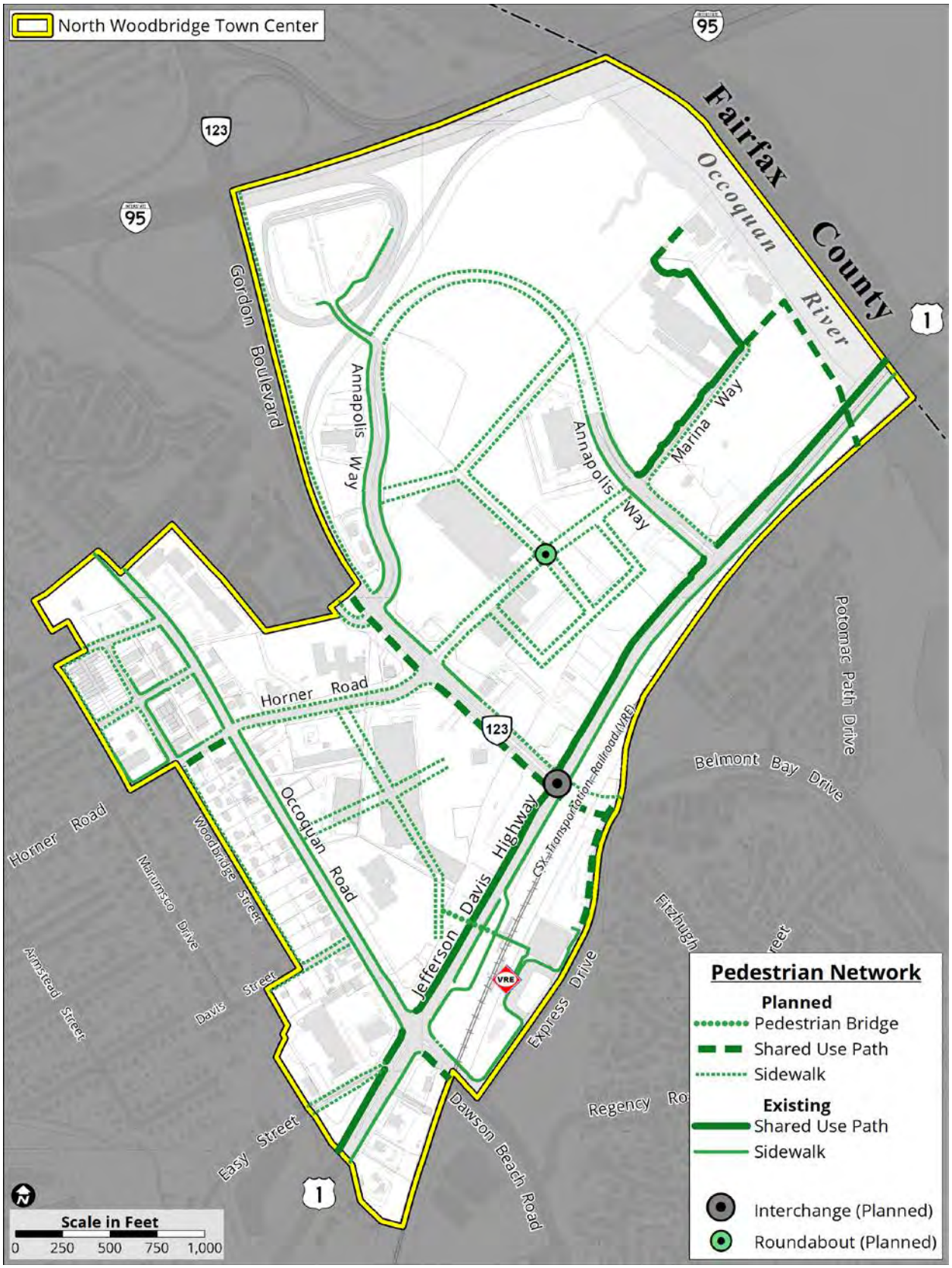


Figure 66: North Woodbridge Town Center - Proposed Pedestrian Network

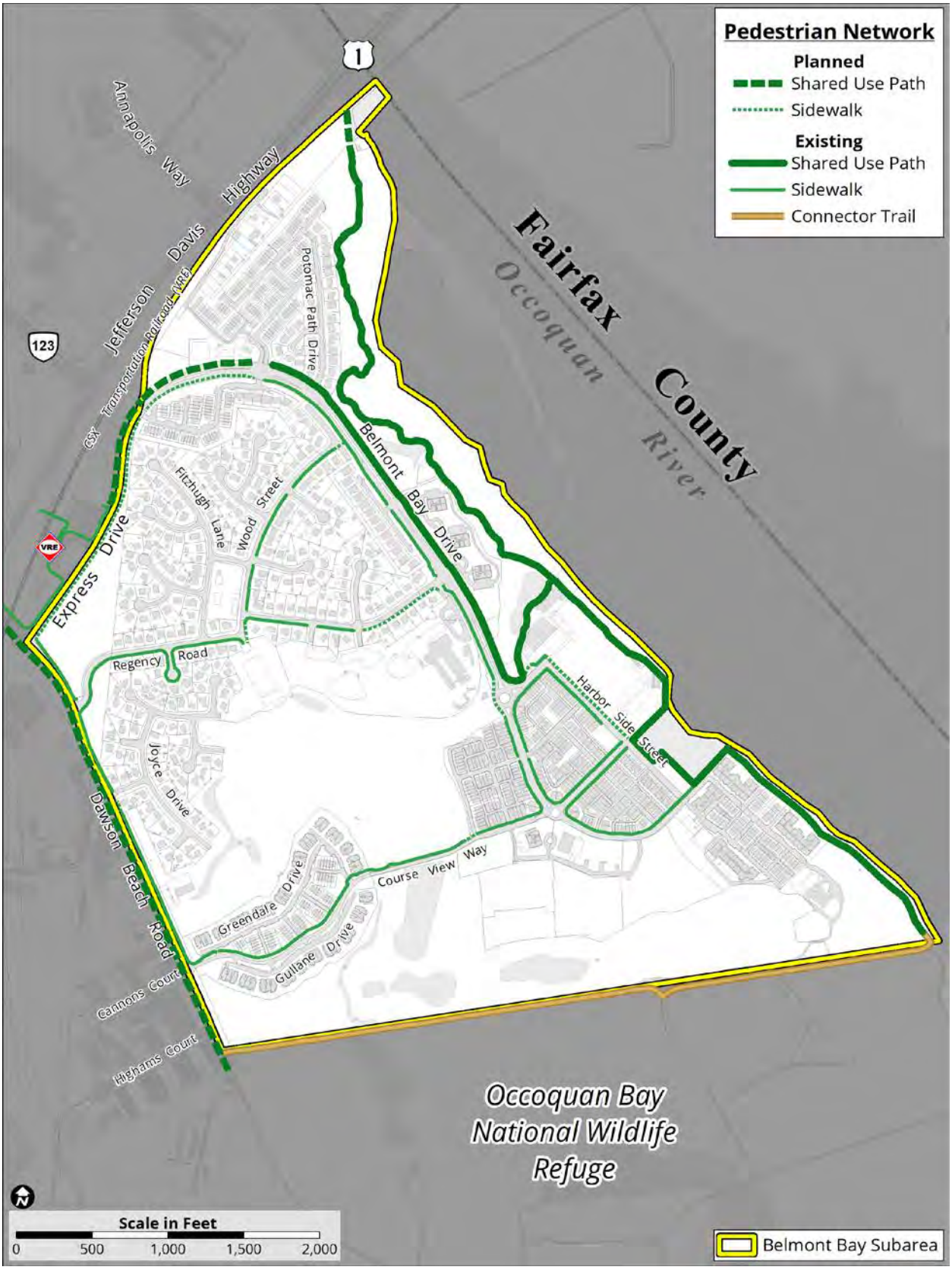


Figure 67: Belmont Bay - Proposed Pedestrian Network

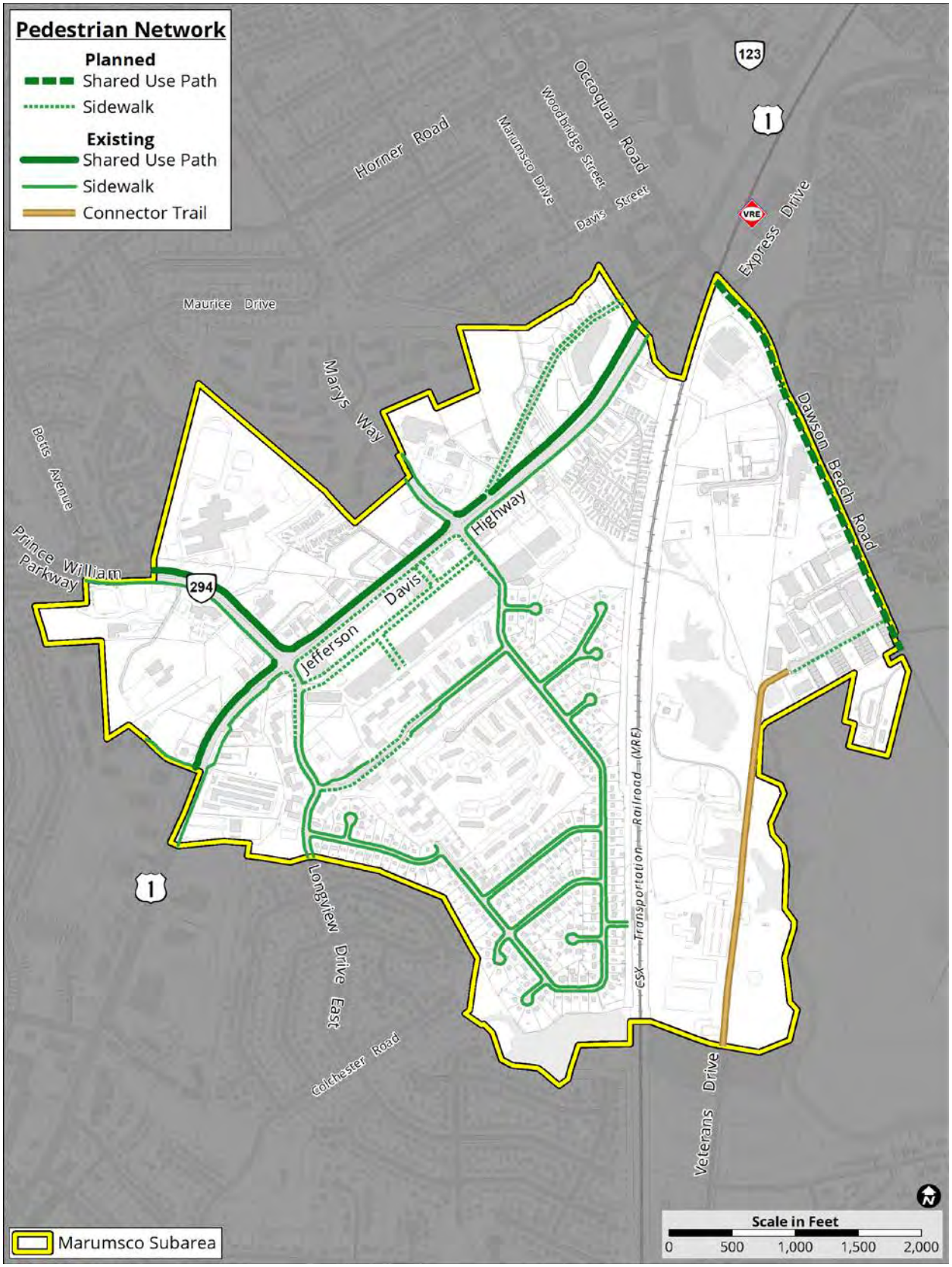


Figure 68: Marumsco - Proposed Pedestrian Network

Mobility Plan Summary

The Prince William County Thoroughfare Plan highlights the major roadways (interstates, parkways, arterials, and collectors) and provides information concerning their typical sections, right-of-way requirements, lane requirements, termini points, and functional classifications. The following table provides specific information about each roadway included in the North Woodbridge Small Area Plan. The following graphics depict urban street sections. No changes are planned for existing roads that are not classified as Urban Streets.

Proposed Mobility Plan							
Facility	**Route #**	**Termini/Location**	**Functional Class**	**Typical Section**	**Number of Lanes**	**Bike Facility**	**Pedestrian Facility**
Road Network							
Jefferson Davis Highway	1	Fairfax CL to Wigglesworth Way	Principal Arterial	PA-1	6	Shared use path / West	Shared use path / East
Gordon Blvd	123	Jefferson Davis Hwy to Annapolis Way	Principal Arterial	PA-1	6	Shared use path / West	Sidewalk/ East
Prince William Pkwy	294	Jefferson Davis Hwy to Church Hill Dr	Principal Arterial	PA-1	6	Shared use path / North	Shared use path / North
Marina Way	TBD	Annapolis Way to terminus	Avenue/Street	UAS-1	4	Shared Use path	Shared Use path
Marina Way	TBD	Annapolis Way to Gordon Blvd	Boulevard	UB-1	4	Sharrow	Sidewalk both sides
Annapolis Way	673	Gordon Blvd to Commuter lot	Avenue/Street	UAS-1	4	Bike Lane	Sidewalk
Annapolis Way	673	Commuter lot to Marina Way	Avenue/Street	UAS-1	2	Bike Lane	Planned path or sidewalk

Proposed Mobility Plan							
Facility	**Route #**	**Termini/Location**	**Functional Class**	**Typical Section**	**Number of Lanes**	**Bike Facility**	**Pedestrian Facility**
Road Network							
Annapolis Way	673	Marina Way to Jefferson Davis	Avenue/Street	UAS-1	4	Shared Use Path/West	Sidewalk East
Horner Rd	639	Gordon Blvd to Occoquan Rd	Boulevard	UB-1	4*	Sharrow	Planned Sidewalk both sides
Horner Rd	639	Occoquan Rd to Rawls Street	Major Collector	MC	4	Planned Shared Use path/South	Sidewalk
Occoquan Rd	906	Jefferson Davis Hwy to Corbett Pl	Major Collector	MC	4	Sharrow	Sidewalk both sides
Dawson Beach Rd	687	Jefferson Davis Hwy to Express Way	Major Collector	MC	4	Shared use path	Shared use path
Dawson Beach Rd	687	Express Way to Regency Road	Local	RM-2	4	Shared use path	Sidewalk

Proposed Mobility Plan							
Facility	**Route #**	**Termini/Location**	**Functional Class**	**Typical Section**	**Number of Lanes**	**Bike Facility**	**Pedestrian Facility**
Road Network							
Dawson Beach Rd	687	Regency Road to Dawson Beach Terminus	Local	RM-2	2	Shared use path	Shared use path
Express Dr	1306	Dawson Beach Rd to Heron's Run Lane	Avenue/Street	UAS-1	4	Shared use path/North	Shared use path
Express Dr	1306	Heron's Run Lane to Potomac Path Drive	Avenue/Street	UAS-1	4	Shared use path/North	Shared use path
Belmont Bay Dr		Potomac Path Drive to Palisades Street	Minor Arterial	MA	4	Existing Shared use path	Existing Shared use path
Belmont Bay Dr		Palisades St to Harbor Side Street	Avenue/Street	UAS-1	2	Bike path	Existing sidewalk
Course View Way		Fleet Street to Vestal Street	Local		2		Existing sidewalk

Proposed Mobility Plan							
Facility	**Route #**	**Termini/Location**	**Functional Class**	**Typical Section**	**Number of Lanes**	**Bike Facility**	**Pedestrian Facility**
Road Network							
Course View Way		Vestal Street to Greendale Drive	Local		2		Existing Sidewalk
Course View Way		Greendale Drive to Dawson Beach Road	Local		2		Existing sidewalk

Note: See Figure 70 for guidance on proposed type of street

Transit Network		
Commuter Bus & Rapid Bus Transit Center	VRE Station	
Fast Ferry Connection Center	Terminus of Marina Way	
Potential Metro Rail Extension Center	Commuter lot accessed from Annapolis Way and adjacent to I-95	
High Speed Rail	Along Existing VRE	
Infrastructure Improvements		
Pedestrian Bridge	Across Route 1 to connect transit center to VRE Station	
Interchange at Route 1 & Route 123	Interchange with shared use paths	

Boulevard (UB-1): A Boulevard has the highest density of destinations, activity, and mix of modes. Because of the proximity of destinations, pedestrians and street activity are common. It is intended to have on-road bicyclists and pedestrian crossings; therefore, traffic should move at a lower speed than on a Through Boulevard.

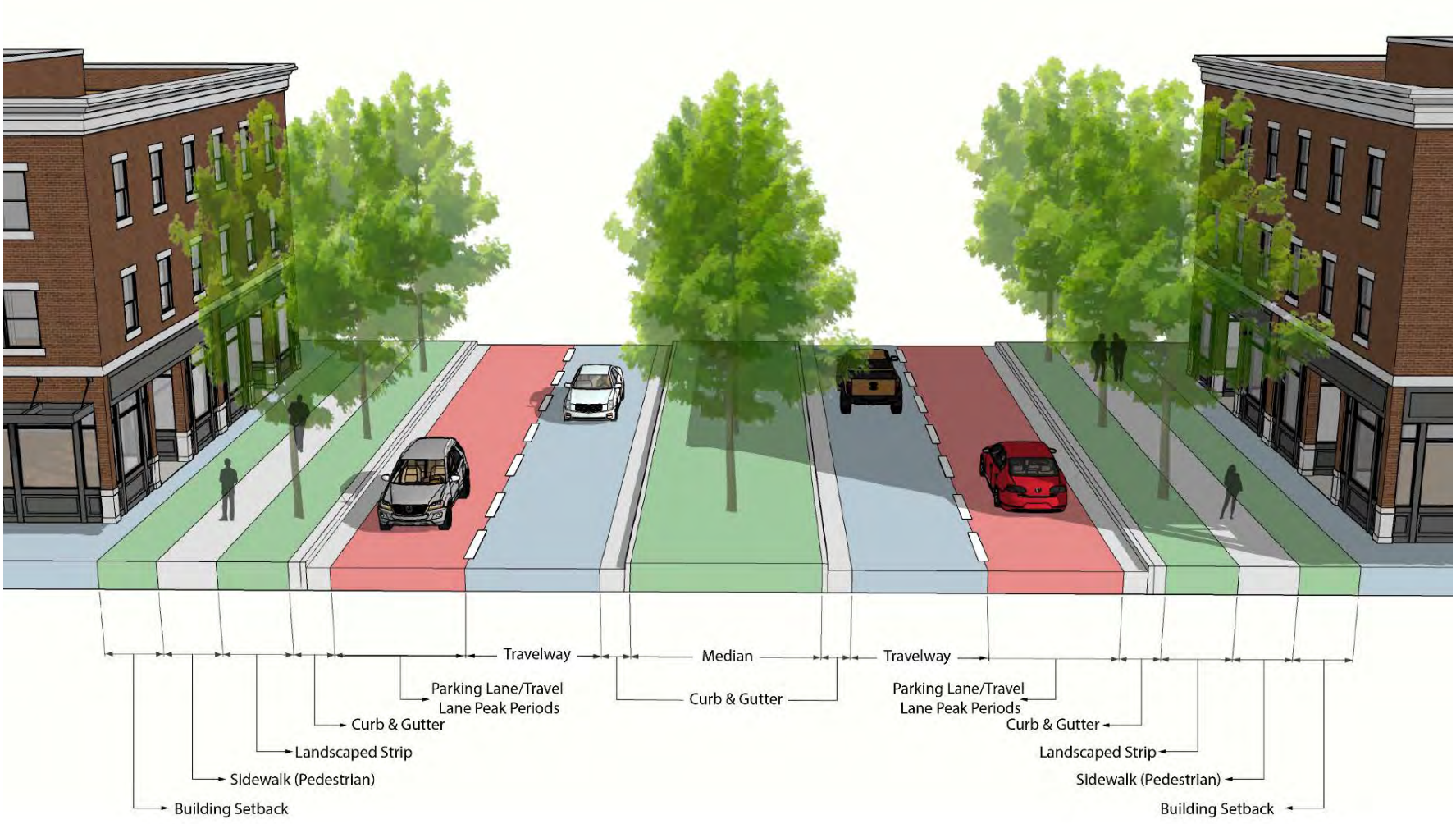


Figure 69: Boulevard (UB-1)

Avenue (UAS-1): An Avenue serves to connect Boulevards and Streets to Through Boulevards. It provides access to businesses and residential areas as a primary function.

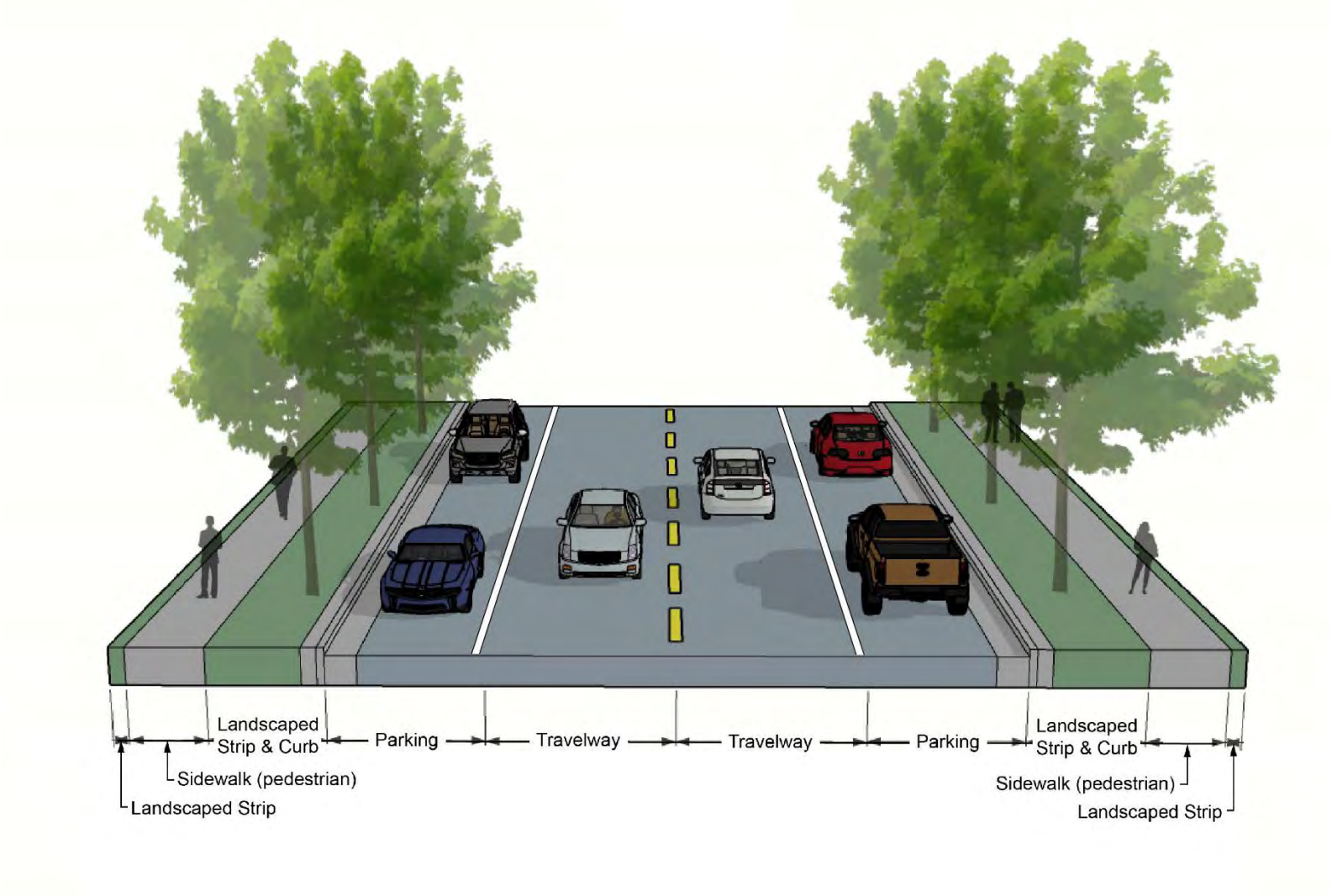


Figure 70: Avenue (UAS-1)

Street (UAS-1): A Street connects to Avenues, Boulevards, or Through Boulevards and is intended for more residential urban areas with lower traffic volumes than the Avenue.

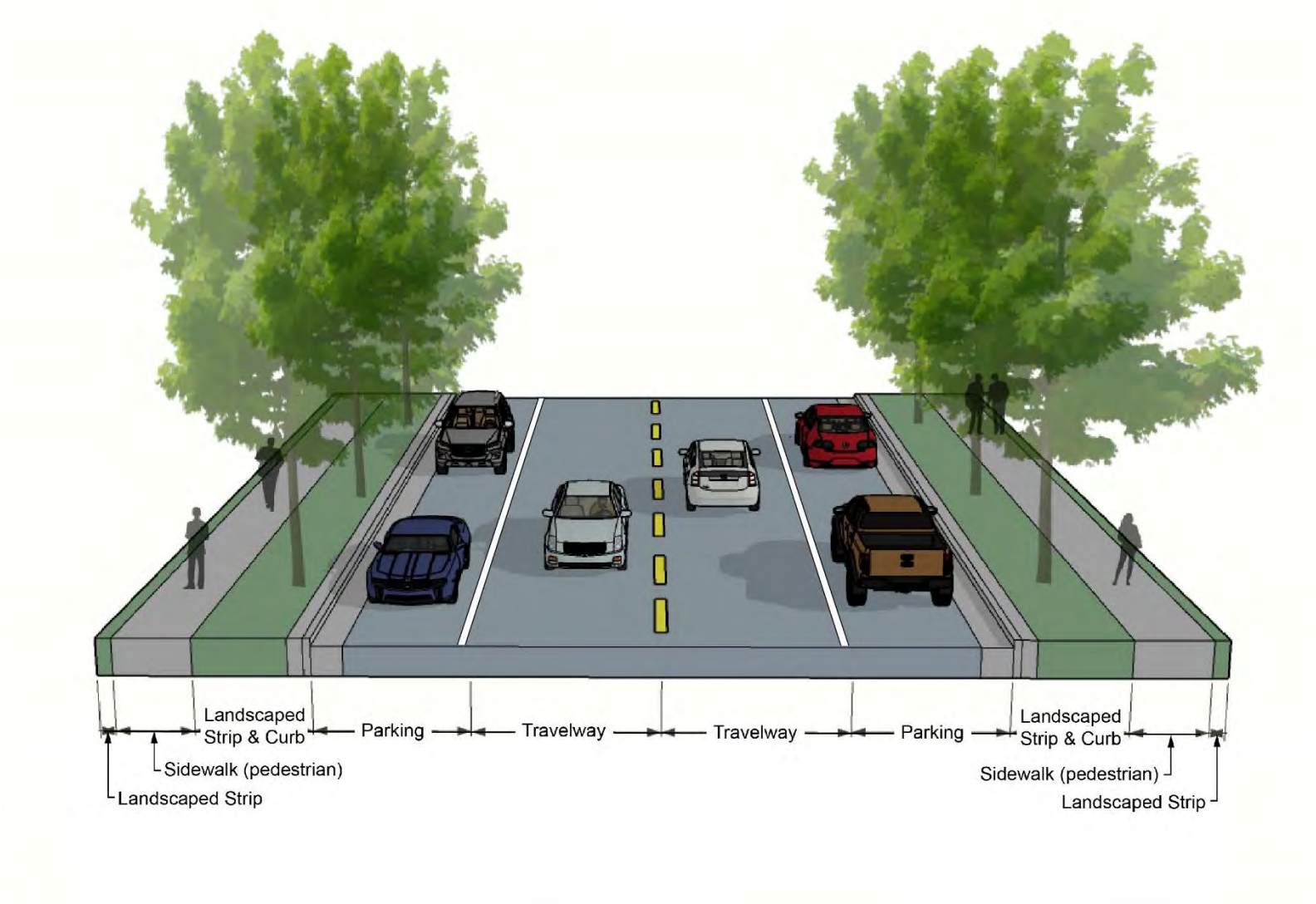


Figure 71: Street (UAS-1)

Private Side Street (UPS-1): A Private Side Street is intended for urban residential areas with on street parking and choker islands for landscaping. These streets will not be maintained by VDOT.

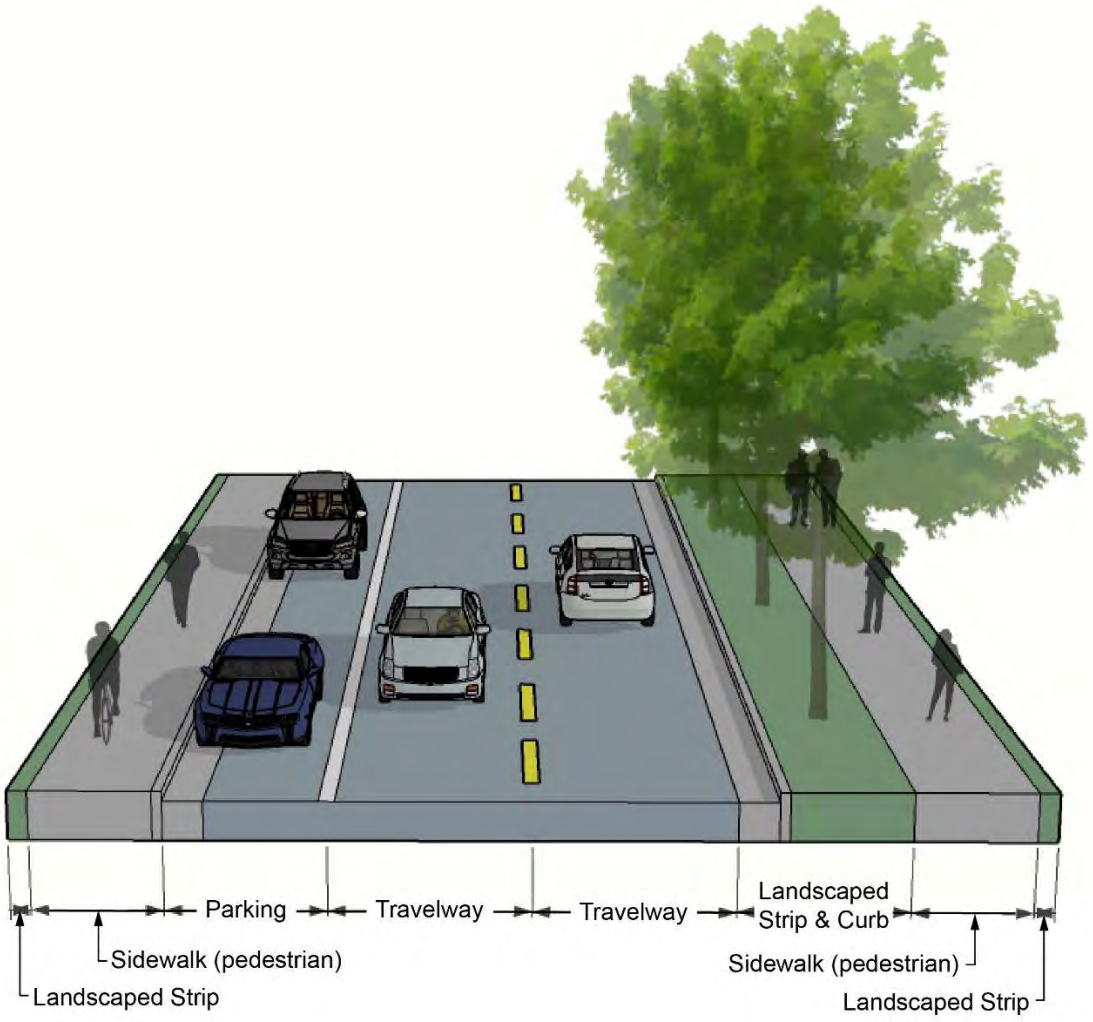


Figure 72: Private Side Street – Optimal Street Section

Private Alley (UA-1): A Private Alley is intended to serve the rear of properties providing access to parking and service areas as well as providing an easement for utilities. Private Alleys will not be maintained by VDOT.

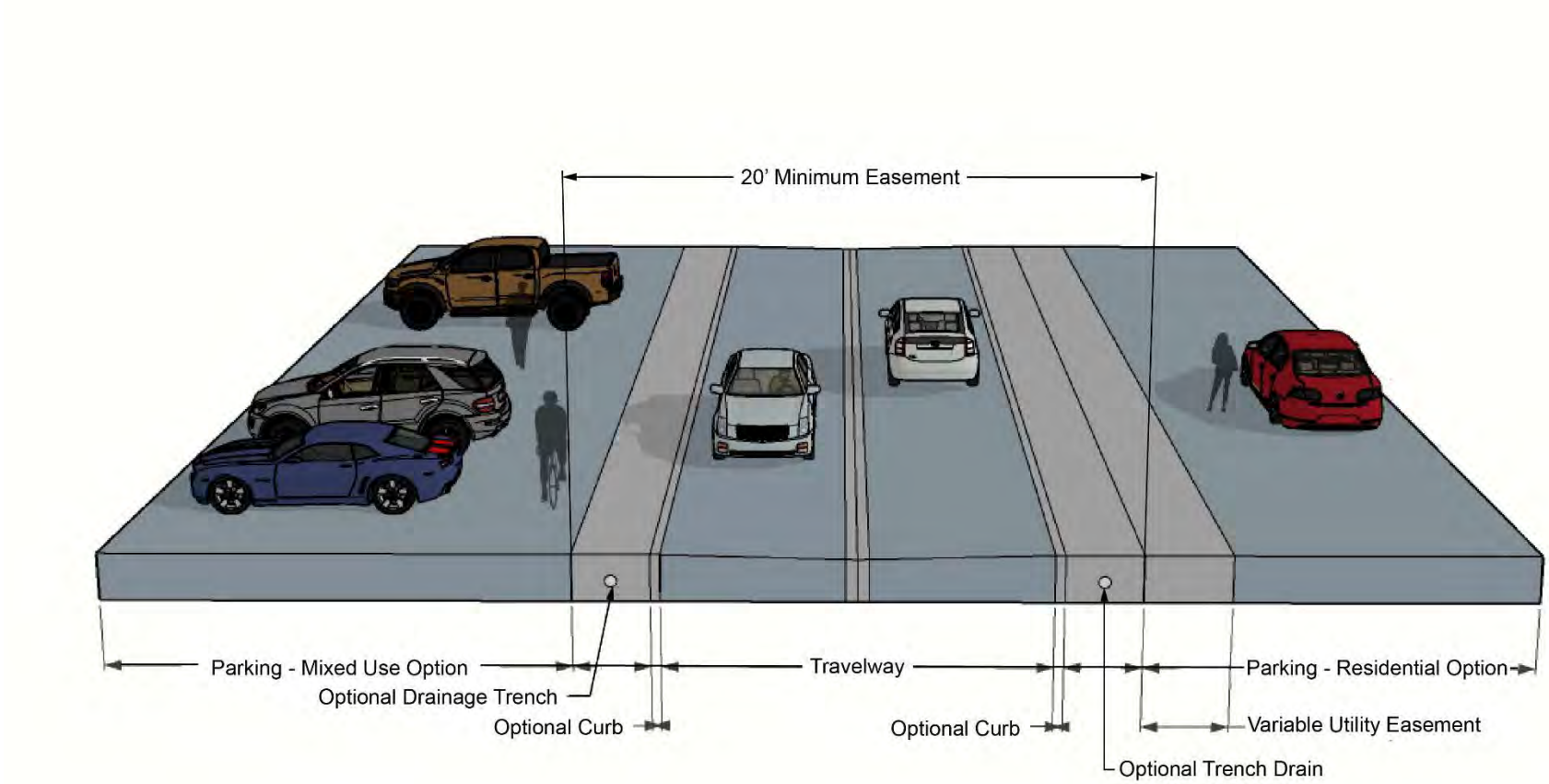


Figure 73: Private Alley (UA-1)

DESIGN GUIDELINES

The Design Goal is to create and implement high-quality design standards for pedestrian-scaled private and public development and to integrate facility design and public safety programs to enhance safety and personal security.

The North Woodbridge plan area general design objectives will be implemented through the use of the established Potomac Communities Design Guidelines. The Design Guidelines were developed in 2014 to be used as tools to convey ideas, design approaches, and practices that should be applied in the design and development of projects in the U.S. Route 1 Corridor of Prince William County. The referenced Design Guidelines create a baseline of minimum expectations for both new development and modifications to existing land uses in the North Woodbridge plan area. The use of the guidelines in the North Woodbridge Small Area Plan will guide design decisions toward creating a vibrant and sustainable urban environment that ensures impacts of growth are positive and creates benefits for the local economy, community, and environment.

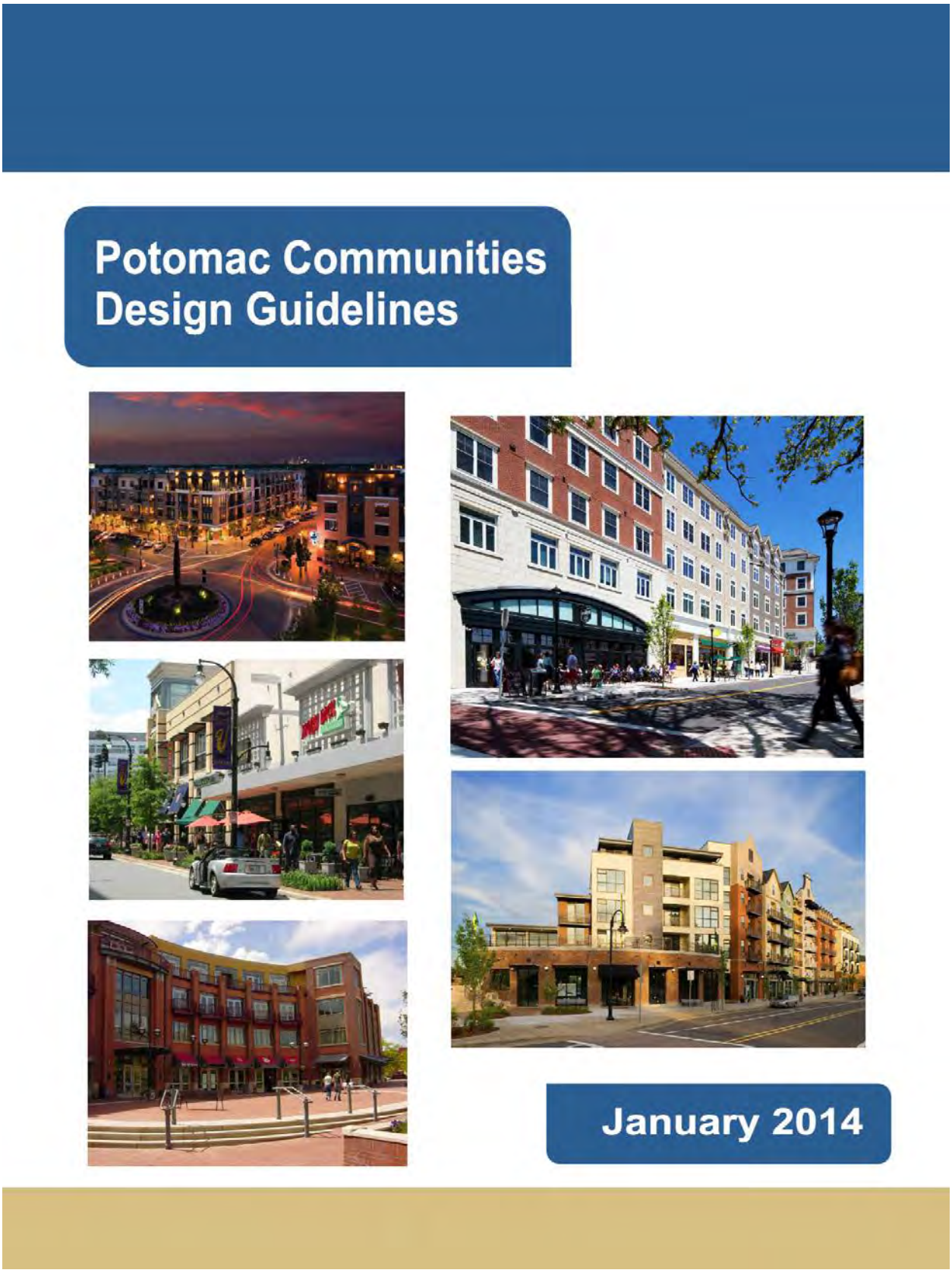


Figure 74: Potomac Communities Design Guidelines

Buildings

Character

1. Buildings should be designed to provide human scale, interest, and variety while maintaining an overall sense of relationship with adjoining or nearby buildings and the surrounding neighborhood.

1.1. Encourage a combination of architectural elements that lend the building a human scale. Examples include arcades, balconies, bay windows, roof decks, trellises, landscaping, awnings, cornices, friezes, art concepts, and courtyards.

1.2. Incorporate tighter, more frequent rhythm of spacing of columns, bays or other vertical articulation, subdividing the building façade into smaller, more human scaled elements.

1.3. Incorporate fenestration techniques that indicate the scale of the building (e.g., size, location, and number of windows in an urban setting create a sense of interest that relies on a subtle mixture of correct ratios, proportions, and patterns).

2. Buildings should possess an architectural character that respects traditional design principles, such as:

2.1. Variation in the building form such as recessed or projecting bays or other architectural elements.

2.2. Expression of architectural or structural modulations and details. Encourage vertical modulation on multi-story buildings to add variety and to make large buildings appear to be an aggregation of smaller buildings. Encourage a variety of horizontal modulation techniques to reduce the architectural scale of the building and add visual interest.

2.3. Avoidance of repetitive modulation techniques which may not be effective when viewed from a distance.

2.4. Diversity of window size, shape or patterns that relate to interior functions.

2.5. Emphasis of building entries through projecting or recessed forms, detail, color or materials.

2.6. Variations of material, modulation techniques, expressed joints and details, surface relief, color, and texture to scale.

Building character refers to the overall architectural style, look and feel of the building.

Human scale refers to the degree to which the size, texture, and articulation of physical elements match the size and proportions of the human body and correspond to the speed at which humans walk.

Horizontal modulation is the horizontal articulation or division of an imposing building façade through setbacks, awnings, balconies, roof decks, eaves, and banding of contrasting materials.

Human scale is a term generally used to indicate a building's size relative to a person, but the actual size of a building or room is often not as important as its perceived size.

Use of fenestration techniques that help indicate the scale of the building.

Use of vertical and horizontal modulations in buildings.

3. All buildings should be designed specifically for the context and character of the corridor and the neighborhood in which they are located.

3.1. Individual buildings should contribute to the overall character and imageability of the street and neighborhood in which they are located.

3.2. Iconic building design is encouraged at identified gateway and landmark locations.

3.3. Art integrated into building façades or forms, and/or specially designed architectural ornament is encouraged.

4. Corner buildings at primary project entrances or high traffic internal nodes, whether free-standing or developed as part of a block, should be designed to visually accentuate the vehicular and pedestrian experience. These elements should be designed to support the overall architectural character and theme of the development and are not intended to be developed as signage or to promote retail brand architectural elements that are retail tenant specific.

5. Buildings for different uses should utilize different architectural techniques to highlight their function, while maintaining visual interest within the context of surrounding character of the built environment.

5.1. A variety of techniques should be used for multi-tenant retail buildings to emphasize individual storefronts.

5.2. Buildings for residential uses should provide horizontal modulations based on individual unit size. Larger residential buildings will require greater horizontal modulation techniques to provide appropriate architectural scale.

5.3. Mixed-used buildings should be designed to express the individual uses internal to the building. For example, the architectural façade should clearly define the retail portion of the building through architectural embellishments such as awnings. If the upper floors are residential, they should be defined through differences in architectural features and color.

5.4. Office buildings should apply design techniques to break up long continuous walls. A combination of horizontal building modulation, change in fenestration, and/or change in building materials should be used to accomplish this.

Design to the context and character of the existing built and natural environment does not mean that new buildings must look like existing buildings, but rather that new buildings should be creative and within a visually comfortable and familiar environment, responding to, but not necessarily mimicking, their surroundings.

Iconic building and corner treatment.

Use of horizontal modulation to emphasize size of units in residential buildings.

Definition of retail portion of a mixed-use building through use of architectural embellishments such as awnings

Form

1. At prominent intersections, new development should create occasional special building forms that terminate views, create a unique roofline, and aid in wayfinding of landmarks.

2. Building form should emphasize important components of a building, such as an entry, or a special internal space.

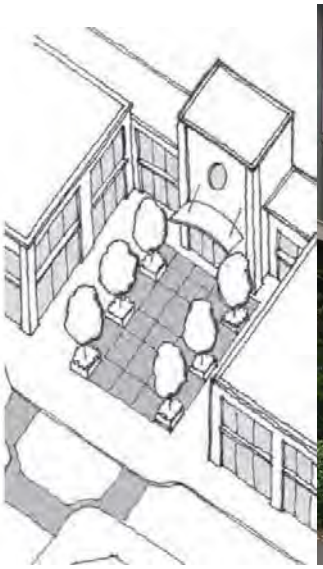
3. Building form should take advantage of site conditions to maximize energy efficiency and take advantage of local microclimate conditions.

3.1. Lower building heights or upper level step backs are encouraged on the south or east side of the street or public open space in order to provide greater sun penetration to the ground level.

4. Taller buildings adjacent to lower buildings should establish scale relationships with lower, neighboring buildings through methods such as: compatible horizontal alignment of architectural features and fenestration, and height and form transitions from one building to another.

5. Employ 360-degree architecture. Building form should employ a uniform level of quality on all sides of the building.

Building form refers to the massing or height, volume, and general shape of a building, including setbacks.



Building forms that terminate views.

360-degree architecture providing equal consideration of all sides of building(s).

Example of upper-level step back.

Façade

Façade refers to the architectural articulation of the building as it faces the street or other exterior realm.

1. Multi-story buildings should generally have three vertical divisions: bases, middles, and tops (NW, MC; applicable to a lesser degree to TR).

1.1. Each base should be composed of the first floor or first two floors of the building and should be designed to give the appearance of greater height than any floor of the middle.

1.2. The design of the middle should be distinguishable from the base and top.

1.3. The top of buildings above four stories may have a cap set back above the lower stories, which is distinctive in shape and smaller than the previous floor.

2. Building design should create varied roof parapet and cornice lines in order to create interesting and human scale rooflines. (Note: this applies to all roofline types.)

2.1. The design of roofscape elements of buildings over three stories should relate directly to the building walls.

3. Building façades should be designed to provide human scale, detail, and articulation to avoid large areas (i.e., no more than 30 percent) of undifferentiated or blank façades. Typical techniques include:

3.1. Articulation of the building base should be scaled appropriately to the pedestrian (e.g., every 25').

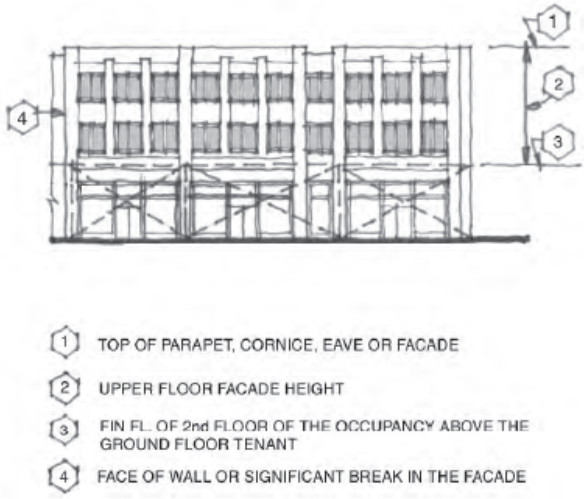
3.2. Avoid blank walls near sidewalks, major internal walkways, parks, and pedestrian areas.

3.3. Provide architectural techniques, including horizontal modulation and different building materials and/or color, that add visual interest at a pedestrian scale.

3.4. Install trellises with climbing vines or other plant materials to cover the surface of the wall. For long walls, a trellis or trellises should be combined with other design treatments to avoid monotony.

3.5. Provide artwork on the wall surface.

3.6. Other treatments may be proposed that meet the intent of the guidelines.



Typical components of a building façade.

Example of treatments to distinguish base, middle, and top of building.

Vertical articulation of buildings.

Façade cont.

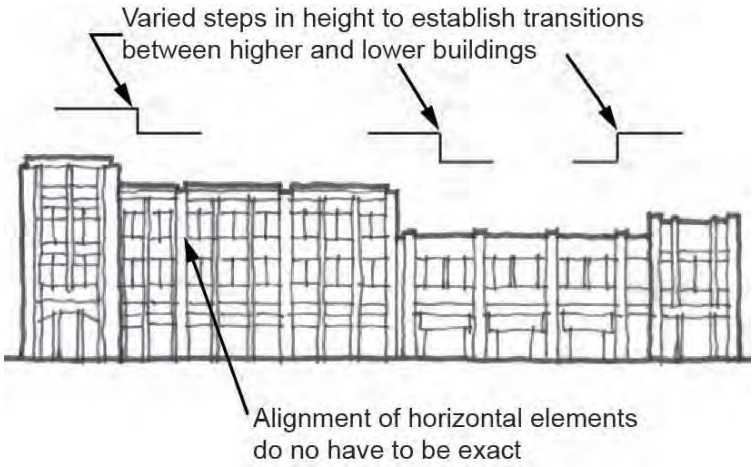
4. Building façade(s) oriented to the street or public space should provide architectural variety and scale. This can be achieved through the use of such elements as: expressions of building structure; patterns of window, door or other openings that provide surface variation through change of plane, change in color; change in texture; change in material module or pattern; art or ornament integral with the building.

4.1. Primary building façades should provide vertical expression of architectural or structural bays through a change in plane that create interest through the interplay of light and shadow. Change in plane should be at a minimum of 18 inches in width for single story structures and a minimum of 24 inches in width for all structures exceeding two stories.

4.2. Distinctive corner, entry treatments and other architectural features designed to interact with contextual features may be designed differently than the base, middle, and top of the building. This difference would allow the addition of vertical emphasis at significant architectural points along the building façade.

4.3. The architectural treatment of the building top should be designed to create a sense of distinctly completing the dominant architectural theme of the middle of the building. This architectural completion may be accomplished by such strategies as: change in the window rhythm, change in apparent floor height, setback, use of other materials, or a combination of these elements. (NW, MC; applicable to a lesser degree to TR).

Changes in plane can be accomplished through the use of recessed windows, recessed entries and doors, projecting sills, recessed or projecting balconies, projecting pilasters (relief columns), columns, bays, projecting cornices, roofs, reveals, projecting ribs and/or offsets in the building façades.



Varied steps in height.

Primary façade that provides change in plane that creates interest through the interplay of light and shadow.

Example façade of a one-story building that includes vertical and horizontal modulation.

Rooftop Design

1. Rooftop design should retain integrity of architecturally designed building tops and help create interesting and varied skylines.

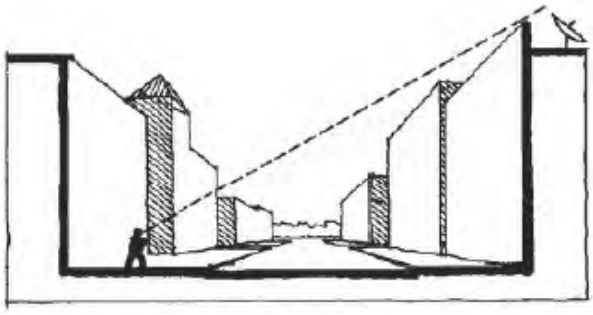
2. Encourage a variety of roofline modulation techniques (e.g., hipped or gabled rooflines and modulated flat rooflines). As a general rule, the larger the building or unbroken roofline, the bigger the modulation should be.

3. In mixed-use development, if residential uses are located near mechanical equipment, care should be taken to mitigate the impacts of noise and odors.

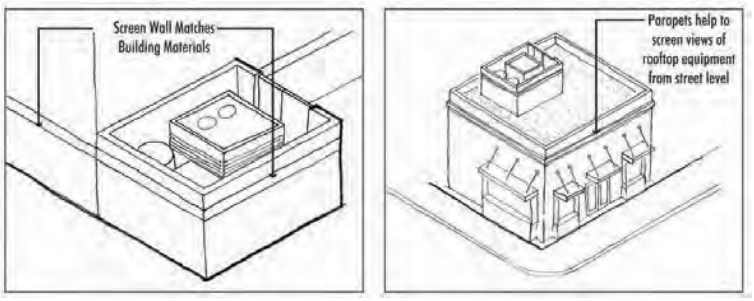
4. All roof-mounted mechanical and electrical equipment, communication antennae or dishes should be enclosed, screened, organized, designed, and/or located as part of the architectural expression and should not be visible from the public right-of-way. Any equipment should be covered or screened to its full height.

4.1. Antennae that extend over five feet above the roof line are encouraged to have screening techniques applied such as color and material to minimize visibility.

Variations in rooftop design help create interesting skylines.



Rooftop mechanical devices should be screened from view from the street or public sidewalk.



Screening of rooftop mechanical equipment.

Transparency

1. The façade of the building base (ground level of the building) should provide a high level of transparency. Transparency refers to the degree to which people can view activities inside the buildings, retail goods for sale, or display lighted windows related to these activities. Physical elements that influence transparency include walls, windows, doors, fences, landscaping and openings into midblock spaces.

1.1. Where functionally appropriate, the ground floor, street-facing façade should be made of transparent materials. Generally, buildings at grade should have anywhere from 70-90 percent glazing to include doors/windows. People are reluctant to walk due to the lack of transparency in places with 10 percent or less glazing.

1.2. When transparency is not functionally appropriate, other means should be used to provide activity along the street-facing façade such as public art; architectural ornament or detailing; or material, texture, or color patterns.

1.3. For non-retail glazing, reflective glass should be used sparingly, if at all, to reduce glare, reduce the opacity or blankness of the façade. Coated or tinted glass may be considered to reduce heat gain, particularly on west and south façades. In no case should highly reflective glass be used.

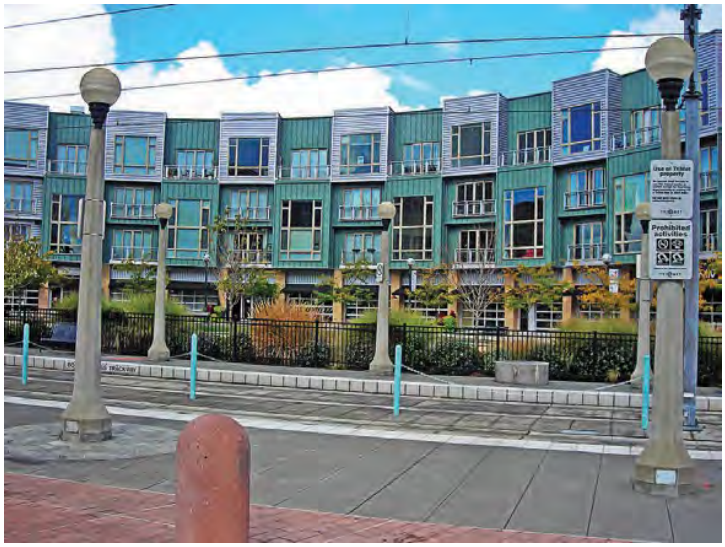
1.4. Glass without coatings or tints should be used for all retail glazing.

1.5. The base should have a greater level of transparency than the middle or top along the building's primary façade. (NW, MC; applicable to a lesser degree to TR).

1.6. Windows or glazing on upper levels should be sufficiently transparent to provide an awareness of internal activities when viewed from the street or public spaces.

Building that exhibits a high degree of transparency.

Base should have greater level of transparency than the middle or top.



Upper level transparency should vary from transparency in base and middle.

Sense of Enclosure

Sense of enclosure is the degree of which streets and other public spaces are visually defined by buildings, walls, trees and other elements.

Streets that foster social interaction, walking, and a strong sense of identity exhibit a strong sense of enclosure for users. Generally, the two façades or walls facing a street define the space. When the walls are too low in relation to the street width (i.e., low height to width ratio), too much of the sky will be in the field of vision, falling short in creating a sense of enclosure. For example, a height to width ratio of 1:4 typically means that a pedestrian view will contain about three times more of the open sky than the street wall or built environment, which works against the objective of creating a sense of enclosure in the public space.

In general, a height to width ratio of 1:2 to 1:2.5 provides the minimum desirable balance between views of the wall and the sky, helping to create an improved sense of enclosure of the public space. When the height of the street walls equals the width of the street (i.e., a ratio of 1:1), the view of the sky is well-framed by the built environment, creating a strong sense of enclosure. When the wall heights exceed the street width, pedestrians will not be able to see the top of the surrounding building without looking up. Ratios lower than 1:1 may significantly limit the amount of sun light that can reach the street and may create a sense that the street is too enclosed.

1. Building façades should contribute to the creation of a sense of enclosure on the adjacent sidewalk, plaza or other public realm.

- **1.1.** Enclosure should be fostered by façade elements and articulation including lamps, awnings, canopies, etc.
- **1.2.** Continuous edges/street walls should be used to help create a strong sense of enclosure.
- **1.3.** The building height to street width (façade to façade) ratio should be at least 1:1.
- **1.4.** Public places should be enclosed on three sides with a proportional height to area ratio.
- **1.5.** Alternatively, similar sense of enclosure can be attained through the use of large street trees. The trees should be located 25 feet on center to ensure a continuous canopy. (MC, TR)

Bringing building forward to the public right-of-way line helps activate streets and creates a strong sense of enclosure.

Building height to street width ratio of at least 1:1.

Public plaza enclosed on three sides with proportional height to area ratio.

Exterior Materials

1. Buildings should use materials and colors that possess and convey a sense of quality and attention to detail and are compatible with materials of adjacent buildings and the surrounding built and natural environment.

2. Development should use lasting materials that weather well, need little maintenance, and resist vandalism.

3. All façades space (not including windows, doors and their framing systems), should be composed of highly durable materials (e.g., brick, stone, cast stone, specially treated concrete masonry units, terra-cotta, and/or glass). Building materials should maintain a uniform level of quality on all sides of the building.

4. Materials and/or detailing at retail frontages should distinguish between the structural parts of a building (columns, walls and beams) and the infill parts of a building (wall panels, frames, windows and doors). Infill materials should have a non-structural appearance.

5. In no instance should exterior insulation and finish systems (EIFS), corrugated or channeled metal, pre-engineered or exposed metal wall systems, unfinished concrete block, or simulated masonry be used as primary materials on a façade.

Exterior materials are what the shell of a building is made.

Building materials and colors should be compatible with materials of the surrounding built and natural environment.

Lasting materials that weather well, need little maintenance, and resist vandalism.

High-quality materials should be used to distinguish between structural and infill parts of a building.

Entry

1. Primary building entrances should be oriented toward streets, parks or pedestrian plazas. In general, ground floor uses with exterior exposure should each have an individual public entry directly located on a public sidewalk along a street, or on a sidewalk or plaza leading directly to a street.

2. Weather protection should be provided along the primary entrance of all businesses, residential units, and other buildings.

2.1. Covering treatments include covered porches, overhangs, awnings, canopies, marquees, recessed entries, or other similar features.

3. Pedestrian entries to buildings should promote security on a street or public open space through frequent points of access and sources of activity.

4. Building entrances should be highly visible and clearly articulated in the building architecture.

4.1. Each multi-story building should have one clearly identifiable front door that addresses the street. In addition to this front door, a building facing multiple streets should include a highly visible entrance along each block face.

4.2. Primary building entries should be oversized, and generally break the storefront/ground floor façade pattern, particularly for commercial and mixed-use buildings.

4.3. Detailed and elaborate entries should be used as another way to create street level interest and architectural variety.

4.4. Major building entries should be emphasized through such design devices as changes in plane, differentiation in material and/or color, greater level of detail, enhanced lighting, ornament, art, and/or building graphics.

5. Each block face in a development should have multiple entries.

5.1. Mixed-use buildings with residential units should provide at least one separate entrance to access the residential units.

5.2. All secondary building entries should be well lit and directly connected to the street.

As a general rule, the more traffic an entry is expected to accommodate, the larger the covered area for pedestrians should be at the entry.

Covered entries invite pedestrian activity. For example, a 5'x5' covered area allows two adults to talk sheltered from unfavorable weather conditions.

A 3' to 4' wide canopy will provide cover area for those window-shopping, a 5' wide or greater canopy will provide shelter for a street vendor, and a 7' to 8' wide canopy will provide room for both window shoppers and other pedestrians.

6. For individual residential units or town homes, the building entrance should express a sense of activity and place, as well as a semi-private nature of the space adjacent to the entrance through the architectural articulation of the entrance, the use of setbacks, the creation of a stoop or porch, or other treatment.

Detailed and elaborate building entry.

Primary building entry oriented towards street.

Emphasis on building entry visible from parking area.

Parking Structures

(applicable to a lesser degree to TR)

1. The exterior of parking structures should be wrapped with mixed-use space in order to minimize the visual impact of parking on the pedestrian experience and the street environment, and to increase pedestrian activity and interest along the street by locating active uses at the street level of parking garages.

2. Garage façades visible from public streets and open spaces should be compatible in character and quality with adjoining buildings.

2.1. The façade of a parking structure facing a street should exhibit the same high level of quality in design, detailing, and materials as is provided in the adjoining buildings.

3. Parking structures should create visually interesting façades that provide human scale and detail while avoiding large areas of undifferentiated or blank façades.

4. Street-oriented façades should conceal or effectively reduce the impact of parked cars and light sources from the exterior view for the full height of the structure.

5. Multi-story parking structures (three levels or more) with façades facing public streets should provide commercial, live-work, residential and/or institutional space for not less than 50% of the garage's ground level street facing frontage, or the design and structure of the ground floor street frontage should be able to accommodate, in the future, one of the above listed uses. (NW, MC)

6. Sloping ramps should not be visible within the street façade of any parking structure.

Opening of parking structures should be vertically and horizontally aligned with surrounding structures.

Ground level retail use wrap and compatible façade on upper stories of parking structure.

Garage façades create visually interesting façades compatible in character and quality with adjoining buildings, while concealing the impact of parked cars.

Lighting

1. Building lighting should accentuate important architectural components of the building, such as entries, towers or roof elements, or repetitive columns or bays, and include decorative lighting.

2. Building lighting should provide indirect or direct lighting for adjoining sidewalks and open spaces.

2.1. Building façades in pedestrian areas should provide lighting to walkways and sidewalks through building mounted lights, canopy- or awning-mounted lights, and display window lights.

3. Primary building entries should be externally lit to promote a more secure environment at the door, emphasize the primary point of entry into the building, and provide sufficient lighting for efficient access into the building.

4. Steps and/or ramps at or leading to a primary building entry should be illuminated sufficiently for safe access.

5. Entry lighting should complement the building's architecture. Standard security lighting such as wallpacks should not be allowed.

A variety in the use of building-mounted light fixtures to give visual variety from one façade to the next is encouraged.

Lighting accentuating architectural features of the building.

Building lighting providing indirect lighting for pedestrian areas.

Building Orientation

1. The front façades and main entries of buildings should be oriented toward streets and plazas. When multiple streets are available, orientation should be toward the street with the highest potential pedestrian volumes and lowest vehicular traffic speeds.
2. Buildings should be sited to create active outdoor spaces where possible, such as plazas or seating where appropriate.
3. Building orientation should provide views of adjoining publicly accessible streets and open spaces in order to provide passive viewing for safety.
4. Building façades should define the street or public open space to which they are oriented and create a sense of enclosure.
5. Buildings should be located to promote sun and sky exposure to public streets and plazas and take advantage of local microclimatic conditions.
6. Buildings should use the full width of the lot for the primary structure and/or active outdoor space.
7. Buildings should line a street at the public right-of-way line or build-to line to the greatest extent possible. Exceptions include entry-plazas, forecourts, and side yard parking strips.
8. Property owners should have the option to create a new perpendicular street/access drive to achieve adequate building orientation objectives.
9. All buildings located at or near street corners should incorporate special architectural elements that add visual interest and provide a sense of human proportion and scale. This could include a raised roofline, corner balconies, bay windows, special awning or canopy design, and/or distinctive use of building materials.

The organization and scale of buildings on any site is typically the most important site design standard. The placement and orientation of a building generally dictates all other functional use design such as vehicular circulation, parking, pedestrian design, and to a large extent, the physical environment of the streetscape.

Street corners can be an excellent location for plazas, particularly where adjacent storefronts and building entries are provided.

Façades and entries oriented towards the street.

Façades and entries oriented towards plaza.

Creation of new perpendicular street/access drive to achieve adequate building orientation objectives.

Vehicular Access

1. Uninterrupted pedestrian-ways should be maximized in order to improve walkability.
2. Access points, including alleys and driveways, should be located to promote the safe and efficient movement of vehicles, pedestrians and bicyclists.
3. The number and width of driveways and curb cuts should be minimized to reduce the overall impact of vehicular access across sidewalks and other pedestrian facilities.
4. Driveways and ramps should be perpendicular or generally perpendicular to the street.
5. Block frontages should have as few curb cuts as possible.
6. Sharing of driveways between adjacent lots or among clustered buildings or developments is strongly encouraged.
7. Access for service vehicles should be provided via alleys or rear parking areas.

Driveway across sidewalk identified by material change.

Access for service vehicles provided via alleys or rear parking areas

Service lane should be treated with equal consideration as front of building

Parking

1. Buildings should be located to minimize the visual impact of parked vehicles within lots and structures.

2. Parking lot location should minimize the impact of (1) parked vehicles along active commercial, mixed use, and/or residential frontages; (2) the visual impact of parked vehicles; and (3) vehicle noise and headlights from within parking areas onto adjacent residential neighborhoods.

- **2.1.** Surface parking areas should be located at the side or rear of buildings fronting active street corridors. In no instance should more than one single-loaded row of parking be placed in the front of the building.
- **2.2.** Parking lots and structures should be sited internally to the block so that parking lot or structure street frontages are avoided. If internal siting is not feasible, then the parking lot or structure should be oriented so that the shortest dimension fronts the street.
- **2.3.** A landscaped buffer or architectural screening should be provided between parking lots or structures and residential buildings.
- **2.4.** Parking structures with exposed street frontage should not be oriented toward residential uses.

3. Surface parking lots should provide tree-lined and/or landscaped pedestrian facilities of sufficient frequency and quality to allow for safe and comfortable navigation to and from vehicles to adjacent buildings.

- **3.1.** One walkway should be provided for every three parking aisles.
- **3.2.** Pedestrian access routes through parking areas should also be separated from vehicular parking and travel lanes by use of contrasting paving material which may be raised above the vehicular pavement and by landscaping.

On-street parallel parking.

On-street diagonal parking.

Surface parking areas located at rear of buildings fronting active street corridors.

Parking cont.

4. Landscaped medians should be limited to break large parking lots into smaller pods, with a maximum of 100 spaces in any one pod.

5. Parking lot designs should utilize green infrastructure and low impact development techniques to the extent possible to reduce surface water runoff and the heat island effect.

5.1. Canopy trees should be provided throughout the lot at regular intervals. The rate of tree provision per surface area of surface parking should exceed the minimum requirement set by the DCSM.

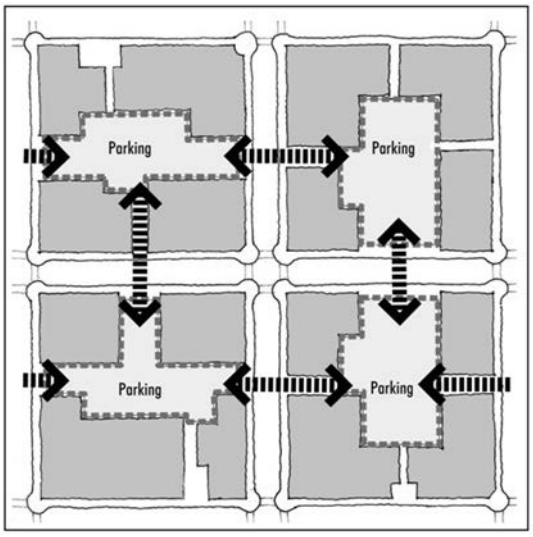
5.2. Vegetated, pervious surfaces that allow for the infiltration of water should be provided at regular intervals throughout the lot and the lot should be graded such that water flows to these locations. The rate of provision of pervious area per area of impervious surface parking area should exceed the minimum set by the DCSM.

5.3. Design should create meaningful open spaces not just grass strips and/or stormwater facilities.

6. The scale and overall amount of surface parking should be minimized.

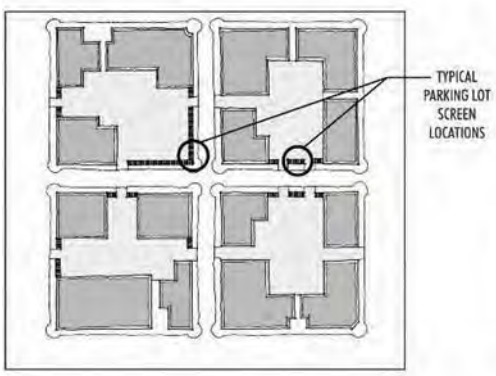
6.1. Parking should be shared between adjacent lots or among clustered buildings or developments wherever possible.

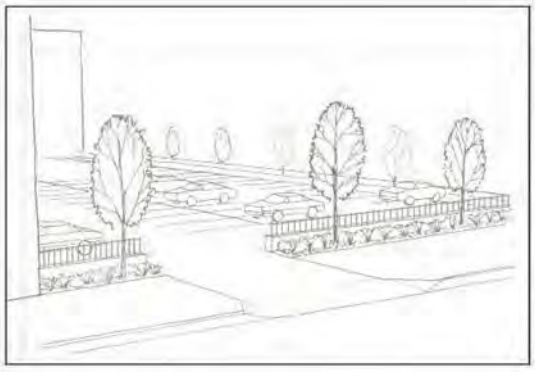
6.2. Developers should pursue options such as shared parking, satellite parking for big shopping days, transit-oriented development, and other strategies that would allow for reductions in overall parking spaces.



Parking shared between adjacent lots or clustered developments.

Walkway design to access parking facilities.





Parking lot screen.

Landscape, Streetscape, Public Space

Plazas, Parks, and Open Space

1. Quality publicly accessible places to rest, meet, and gather for residents and employees should be provided as a part of the planned development.

2. Public open space should front onto or be connected to public streets with entrances that are clear, legible, and accessible.

2.1. Public open spaces and plazas should be located on major internal circulation routes, close to bus stops or strong pedestrian flows on neighboring sidewalks.

2.2. Public open spaces and plazas should be no more than three feet above or below the adjacent sidewalk or internal pathway to enhance visibility and accessibility.

3. Transitional zones along building edges should be used to allow for outdoor eating areas and a planted buffer.

4. Building organization and placement should be designed to create internal pedestrian courtyards, green spaces, plazas or other functional gathering spaces. For large sites, development should be configured to create a focal plaza or plazas.

4.1. Open spaces should be designed to support the pedestrian environment.

4.2. Storefronts, street vendors, or other pedestrian-oriented uses, to the extent possible, should front on at least three sides around the perimeter of the plaza.

5. Design should incorporate plenty of permanent and/or movable seating areas using benches, steps, and ledges. All open spaces accessible to the general public should be open a minimum of 12 hours per day.

6. Private open space may be fenced with wrought iron, masonry, or comparable decorative fencing and/or controlled for security.

7. All public and private open space not used for recreation should be attractively landscaped with three-level planting and hard surfaces.

7.1. Landscaping elements that add color and seasonal interest should be used. This can include trees, shrubs, planting beds, potted plants, trellises, and hanging plants.

8. The solar orientation and the wind patterns in the design of the open space and choice of landscaping should be considered.

Open spaces suitable for passive recreational activities such as informal play, reading, and sitting in the sun or shade.

Seating areas should be provided with views of amenities, landscaping elements, or people watching.

Public space suitable for passive recreation by multiple user groups.

Open space accessible to the general public.

Three-level planting (ground cover, shrub, and trees).

Hardscape

1. Hardscape design, including surface parking lots, should provide a quality of paving materials and patterns consistent with the quality of the surrounding architecture and open spaces and provide safe and accessible paving conditions for all persons.
2. Hardscape design should create interest and variation within paved surfaces that includes, but is not limited to, public art, coloring, or materials.
3. Special paving should be carefully chosen for structural capability and durability in the Northern Virginia climate. Uncolored concrete, colored concrete, brick, hydraulically-pressed concrete unit pavers or stone is recommended.
4. Special paving patterns and materials should be used to emphasize important building entries, provide interest and variation, and differentiate between sidewalks, plazas, medians, driveways, parking access, and crosswalks.
5. Sidewalks should be separated or buffered from vehicle travel lanes by street/pedestrian lights and street trees in grates or in a tree lawn.

Variety in sidewalk paving materials.

Hardscape consistent with quality of surrounding architecture and open spaces.

Special paving material and pattern used for sidewalk and crosswalk paving.

Trees and Other Plant Materials

1. Planting should create a strong identity for each street and use quality plant materials that are located, sized, and provided in quantities sufficient to emphasize important streets (e.g. U.S. Route 1 and key parallel and perpendicular streets).

2. Planting and plant materials should be appropriate to the site context and conditions.

- **2.1.** Plant material should be tolerant of urban conditions.
- **2.2.** Plant materials should be selected that are appropriate to and tolerant of site-specific drainage and microclimate conditions including but not limited to salt exposure, drought, standing water, poorly drained or excessively drained soils, heavy sun or heavy shade.
- **2.3.** Native plant materials should be used if possible.

3. To the maximum extent feasible, topsoil that is removed during construction activity should be conserved for later use on areas requiring revegetation and landscaping.

4. Street trees are an integral part of the streetscape; conditions should be created that allow them to thrive.

- **4.1.** Large tree pits or landscaped buffer (curbside planting strip) that allow for broader canopy trees are preferred over typical street trees. Ornamental trees should not be used in a street right-of-way.
- **4.2.** Tree grates or curbside planting strips should be used in paved areas to prevent excessive soil compaction. Curbside planting strips should be a minimum of 6 feet in width, measured from the back of curb to the edge of the sidewalk and street trees should be centered within the planting strip.
- **4.3.** Street trees in tree grates should be at least 2 feet 6 inches from the face of the curb. Tree grates should be at least 24 sq. ft. with openings no more than 1/4 inch to 3/8 inch in width and should be designed to allow for tree trunk growth.
- **4.4.** Drought tolerant turf or low, continuous ground covers should be used as the primary ground cover for continuous tree lawns.
- **4.5.** Street trees should align parallel and perpendicularly across the street with each other whenever possible.

Trees and landscaping creating a strong sense of identity.

Planting appropriate to the site context and conditions.

Low impact development (LID) curbside planting strips creating a buffer between the roadway and the sidewalk.

Street Furniture and Sidewalk Amenities

1. Ample comfortable seating that encourages lingering and social interaction should be provided on active streets and in all public spaces.

1.1. Seating should be durable, comfortable, attractive, securely anchored, and easy to maintain. Seating surfaces should be 16 to 18 inches high with a minimum depth of 16 inches for seats without backs and 14 inches for seats with backs.

1.2. Where bus stops occur within landscaped buffer (curbside planting strip), a minimum of one 6-foot long bench should be placed on a concrete pad. Where a bus stop occurs on a wide attached sidewalk, a 6-foot long bench should be provided within the sidewalk's amenity zone.

2. Seating, trash receptacles, and other amenities should be located to be accessible and convenient to active uses, but not interfere with pedestrian movement along sidewalks and through plazas or other open space.

2.1. Newspaper racks and trash receptacles should be located at areas where high pedestrian activity is anticipated.

2.2. Newspaper boxes should be clustered together and screened by specially designed railings. They should be located adjacent to pedestrian activity, but not so as to obstruct drivers' views at intersections, or car overhang/door swings at the curb.

3. Trash receptacles should relate in appearance and color to other street furniture. They should be firmly attached to paving to avoid vandalism. Covered tops and sealed bottoms should be included to keep the contents dry and out of sight at all times.

4. Bicycle parking facilities such as bike racks should be placed near entrances or gathering places, but out of pedestrian and bicycle traffic areas where they may create tripping or other safety hazards. If possible, locate racks where parked bicycles are visible from the inside of adjacent buildings.

Durable and comfortable seating.

Amenities that encourage social interaction.

Bicycle parking facilities placed near entrances or gathering places.

Lighting

1. Lighting should provide a safe a secure environment for motorists, bicyclists, and pedestrians.
2. Lighting should create an identity for the development and/or special streets.
3. Lighting should enhance the quality of streets in the commercial core through the design of the light poles, bases, fixtures, and attachments.
4. Street and/or pedestrian light poles should be aligned with and centered between street trees.
5. Where the light source is directly visible, the luminaries should be designed to incorporate elements to reduce glare, such as translucent, internal refracting surfaces to direct light down and away from adjoining private property; lower height poles; lower wattage or pole location.

Lighting directed down and away from adjoining private property.

Pedestrian lighting that enhances quality of street through design.

Lighting that creates an identity.

Public Art

1. Public art should engage the community and express community identity. Developers are encouraged to integrate public art.
2. Art should create experiences for the senses and opportunities for surprise, wonder, interest, contemplation, reflection, humor, interaction, and play.
3. Art should provide shade structures at appropriate locations, particularly on the north side of the street.
4. Commissioned works should exhibit superior craftsmanship and design and be fabricated of durable, low maintenance materials using proven technologies. A range of signature pieces should include integrated urban design elements, architectural detailing, and interactive features.
5. Art should be sited to create areas of emphasis within the urban fabric while supporting the social function of each space.
6. Selected artworks should include interactive elements allowing residents and visitors to walk through, play, sit on, and otherwise physically interact with the finished work.
7. Artwork, where appropriate, should be integrated into infrastructure and site furnishings (i.e., hardscape/landscape elements, building façades, tree grates, wayfinding devices, seating, etc.).
8. All plaza areas should include public art.
9. Artwork should be designed and sited to correlate with surrounding activity patterns.

Artwork exhibiting superior craftsmanship and design, creating experience for humor and play.

Artwork integrated into infrastructure and site furnishing.

Public art as focal point of plaza area.

Signage

1. Signs should be located, sized, and designed for single or multiple uses so as to eliminate conflicts, predict the impact and effects of the signs on adjoining properties, avoid clutter, and achieve the desired character of their application.

2. The size of signs should be related to the location and speed of movement of a pedestrian viewing the sign.

3. Signs should not be located within the residential portion of the façade of any mixed-use building (except on ground floor entry).

4. Window, awning, and projecting signs should not be allowed above ground floor.

5. Wall signs:

- **5.1.** Should not be located at the top of building's façade if the façade is higher than two stories. (NW, MC)
- **5.2.** Signs located on the side wall of a building that faces a side property line, alley, or parking area (including a side property line along a street) should not be lighted above the ground floor.

6. Projecting signs:

- **6.1.** Each use by right should be limited to one projecting sign for each of the use's street frontage.
- **6.2.** All projecting sign structures on a building should be located at the same height as the other sign structures.
- **6.3.** Should be located above or below non-signed awnings, but not in line with the awnings.

7. Window signs should not be larger than 10 percent of each window or door area.

8. Awning signs:

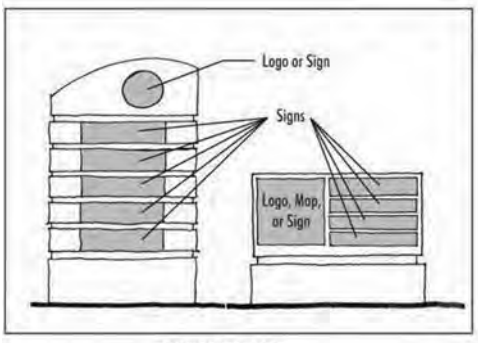
- **8.1.** Should not extend beyond a building's or storefront's individual bay.
- **8.2.** Should be located primarily on the awning valance that faces the street, not on a valance that is generally perpendicular to the street.

9. Free-standing signs:

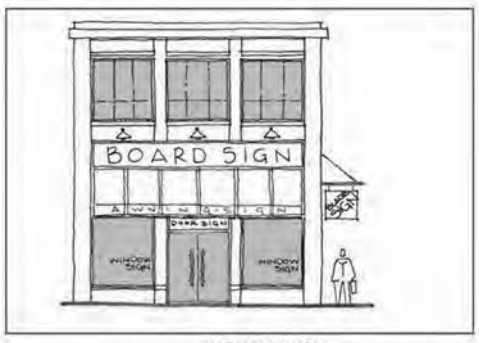
- **9.1.** Only one monument or street frontage sign should be allowed per building.
- **9.2.** Should have no more than one sign cabinet or backing panel.

Wall sign.

Projecting sign.



MONUMENT SIGNAGE



BUILDING SIGNAGE

Signage examples.

GREEN INFRASTRUCTURE PLAN

The North Woodbridge Small Area Plan lies at the confluence of the Potomac and Occoquan Rivers and provides the setting for an extensive series of natural resources. While the North Woodbridge Small Area Plan will be home to a dense mix of future development, the protection of the County's environment and the provision of recreational opportunities for residents are strategic goals for the entire community. North Woodbridge's green infrastructure is made up of the area's existing and future trails, public and private open spaces, stream corridors, and trees and represents both sensitive areas that must be avoided by development and green assets that can be integrated into future developments to enhance the look and function of new residential and commercial places.

The purpose of this section of the Small Area Plan for North Woodbridge is to identify the environmental features of this area and develop policies to address how these environmental areas will be protected, enhanced, and integrated into the study area once it is fully implemented. Existing greenway connections extend from the Occoquan Bay National Wildlife Refuge into the developed areas along a system of stream valleys, parks, and environmental features. This plan has been broken down to provide direction for the three subareas, the Town Center, Belmont Bay and Marumsco to help ensure a robust and connected system of green infrastructure with a commitment to planning healthy, sustainable, and inclusive communities for all.

Uniquely located, this Small Area Plan shares some of its boundaries with the Potomac River National Wildlife Refuge Complex. From an environmental perspective this is very significant. This complex contains a total of ±3,194 protected acres and includes the Occoquan Bay National Wildlife Refuge (NWR), the nearby Featherstone NWR and the Elizabeth Hartwell Mason Neck NWR. The ±642 acres of the Occoquan Bay NWR with a primary focus on habitat preservation for eagles and riverine waterfowl, and with ancillary benefits for a wide range of biodiversity, also serves as a unique recreational resource for area residents and visitors to celebrate the pristine natural setting. Sensitivity to this tremendous resource and gem of Prince William County is a priority of this Small Area Plan. The intent of this plan is to ensure the Small Area Plan connects with and enhances this environmental resource for both the benefit of local wildlife and of the community.

Existing Park Inventory in the North Woodbridge Small Area Plan

Name	Type	Acreage	Subarea
Riverbend Park	Neighborhood	1.73 acres	Belmont
Belmont Park	Neighborhood	3.61 acres	Belmont
Belmont Elementary School Park	Community	9.19 acres	Belmont
Jefferson Park	Undeveloped	9.5 acres	Marumsco
Hylbrook Park	Community	4.16 acres	Marumsco
Veterans Memorial Park	Regional	107.38 acres	Marumsco
Marumsco Acres Lake Park	Neighborhood	16.7 acres	Marumsco
Fred M. Lynn Middle School Park	Community	18.21 acres	Marumsco

Green Infrastructure Goal: Ensure a robust and connected system of greenways, blueways, trails, open space and corridors that provide a benefit to the environment, community and local wildlife.

North Woodbridge Town Center Green Infrastructure Plan centers on identifying the existing environmental features along the Occoquan River and connecting residents to these features.

- Acquire land along the Occoquan River shoreline for passive and active recreation that will protect and preserve the Occoquan River and local wildlife.
- Ensure the parks developed within the town center are connected by utilizing urban street design standards that focus on the use of street trees and other landscaping and streetscaping design features to provide an integrated, connected network to the surrounding greenways.
- Explore the feasibility of a pedestrian boardwalk along the Occoquan River from Marina Way to I-95 to create a waterfront pedestrian experience linking the marina, waterfront park and proposed Fast Ferry Terminal.
- The preferred trail connection of the PHNST is to be located within the area shown as a Waterfront within the Urban Neighborhood land use designation. If the trail is not located directly along the waterfront of the Occoquan River, then a spur or multiple spurs of the trail should be established to provide public waterfront accessibility. The existing trail segment along the Rivergate property should be incorporated into the trail as a trail spur. The additional trail connection from the waterfront extending the Rivergate trail may be constructed as a natural surface, stonedust or woodchip trail.
- Coordinate the crossing of the PHNST Bridge across U.S. Route 1.

- Integrate three small pocket parks within new developments to serve as centers for community gatherings.
- Provide for a pedestrian bridge across U.S. Route 1 to serve the VRE/High Speed Rail station to provide further green infrastructure connections.
- Acquire land identified as steep slopes surrounding the VRE station as parks and open space.
- Provide street trees along Dawson Beach Road to visually enhance the connection to the North Woodbridge Town Center for the residents of the community.
- Explore the feasibility of a waterfront park as part of the Fast Ferry Terminal.
- Corridors, trails, and blueways generally shown on the trails map may take place on public property, within the public right-of-way, or on private property through voluntary donations by citizens, and through negotiating proffers from landowners and/or the development community as development occurs. Private property owners are not obligated to participate in the trails program.

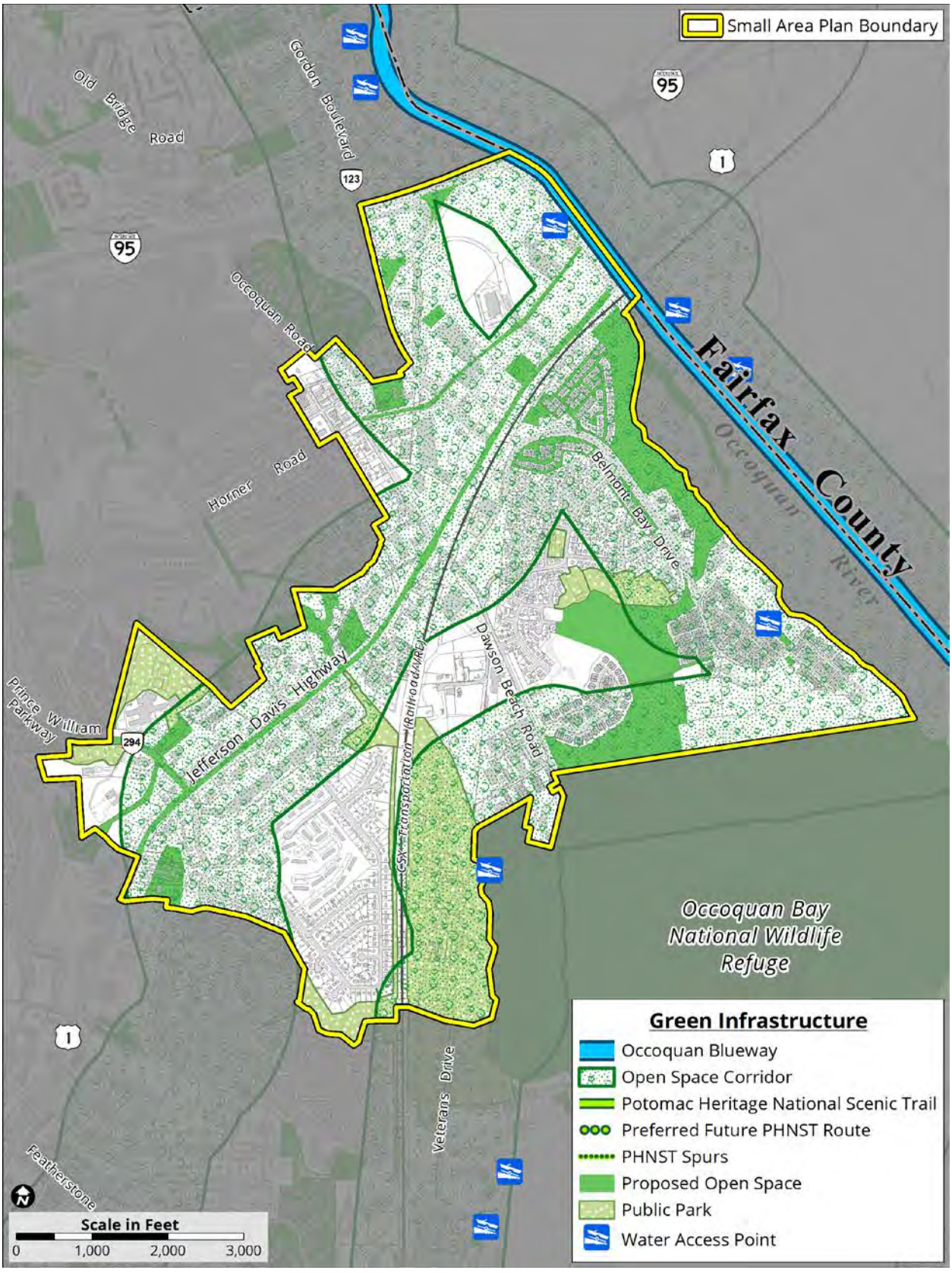


Figure 75: North Woodbridge Green Infrastructure

Belmont Bay Green Infrastructure Plan focuses on preserving the existing environmental features along the Occoquan River and capitalizing on the unique opportunity represented by the 2015 closure of The Osprey's Golf Club at Belmont Bay.

The Osprey's Golf Club at Belmont Bay Concept Plan

Although The Osprey's Golf Course ceased operations in 2015, the grounds have been kept open to Belmont Bay residents as passive recreation area, using the existing cart paths as walking and biking trails. Through the North Woodbridge Small Area Plan, Prince William County can consider the future use of the former golf course and significantly improve the quality, accessibility, and equitable distribution of outdoor recreation opportunities. Through the small area plan process, as well as the Department of Parks, Recreation and Tourism's Community Needs Assessment and Comprehensive Plan Update, the community has clearly expressed a desire for increased passive recreation opportunities and unprogrammed open space, more trails, and better access to public waterways in the county. If re-purposed as a dedicated regional park, The Osprey's Golf Course is uniquely positioned to address many of these needs as well as contribute additional acreage toward the projected need for park land.

Northern/Waterfront Portion: For the waterfront portion of the former golf course, the Department of Parks, Recreation and Tourism (DPRT) envisions a linear riverfront park landscaped with native plants and wildflowers, incorporating picnic areas, benches, wildlife observation points, reforestation projects, and interpretive signage as well as trail and water access infrastructure. This will serve as a critical segment of the Potomac Heritage National Scenic Trail and provide opportunities for hiking, biking, birding, paddling, fishing, and operating as a community green for North Woodbridge. Ultimately, the trail would connect this park through the Rivergate development and on to the Town of Occoquan. The southernmost portion of this section, nearest the Potomac Science Center, is appropriate for active recreational amenities, such as a bicycle skills park, naturalistic playground, or community garden. This area, along with the Community Green area south of the Science Center, may serve as event space for community gatherings and accommodate public private partnerships for concessions such as beer gardens, food trucks, or outdoor equipment rentals. This riverfront park presents an opportunity for development of an amphitheater, preferably visible from I-95, to help activate the waterfront and support retail and restaurants in the Belmont Bay town center. Programming of the amphitheater could be overseen by the Hylton Performing Arts Center.

Southern/Inland Portion: For the inland portion of the former golf course, DPRT envisions a multi-use trail network and the County's first disc golf course. This section of the former golf course is immediately adjacent to the Occoquan Bay National Wildlife Refuge and a soon-to-be constructed segment of the Potomac Heritage National Scenic Trail, providing multiple bicycle and pedestrian access points to a pre-existing trail network. In addition to the existing network of cart paths, new natural surface trails will

provide access to native plant meadows and expanded forested areas. Landscape features such as benches, pavilions, small piers on the existing ponds, improvements to the cart paths, and interpretive signs will enhance the user experience. This section of the potential park site could host trail-based events such as cyclo-cross races, 5ks, or fun runs, as well as educational programming and disc golf tournaments.

Marumsco Green Infrastructure Plan is designed to connect the existing park system, including the ±107-acre Veterans Memorial Park, to surrounding environmental features and create a green corridor for the benefit of the community and local wildlife.

- Acquire land identified as environmentally sensitive to the north of U.S. Route 1 to be preserved as open space to connect Jefferson Park with the Fred M. Lynn Middle School Park.
- Preserve land identified as environmentally sensitive to the south of Hylbrook Park.
- Preserve the pedestrian connections from Veterans Park to the neighboring communities to the north, west, and south.
- Provide street trees along U.S. Route 1 to connect to the overall green infrastructure and provide connectivity within the plan.
- Take measures to ensure the preservation of the existing 72-foot Champion Black Cherry Tree within Veterans Memorial Park.

Recognize the importance of the three developed parks and one undeveloped park for their role in establishing a green infrastructure that is connected. Utilize the undeveloped Jefferson Park acreage to provide a connection between this area and the Marumsco Acres Lake Park along the railroad right-of way. Further connections can be established between this park, Veterans Park and the Occoquan Bay National Wildlife Refuge.

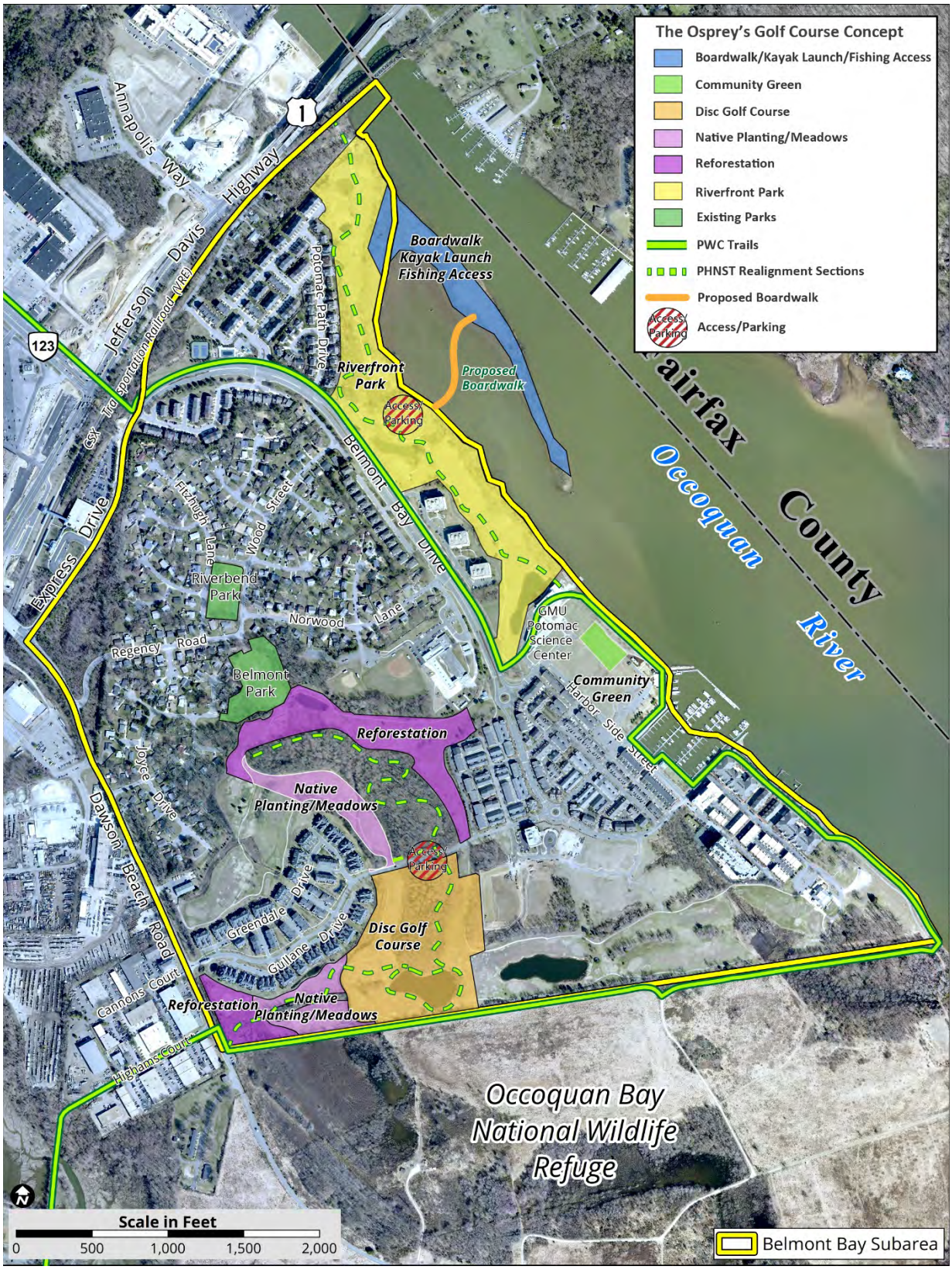


Figure 76: The Osprey's Golf Course Concept

Figure 77: Aerial View of Veterans Park

Figure 78: Aerial View of Belmont Bay

CULTURAL RESOURCES

Introduction and Background

Cultural Resources are those tangible elements of our shared history left behind by previous inhabitants. They are found in individual architectural and archaeological sites, historic districts, cemeteries, battlefields, cultural landscapes, museum objects, and archival materials. The intent of this section is to facilitate the identification, research, preservation or documentation, and interpretation of the history of this Small Area Plan.

Like other areas of Prince William County, North Woodbridge has a long history of pre-contact land use and historical land use. Cultural resource surveys in the area found abundant evidence of Native American campsites and temporary procurement areas. Most of these surveys focused on Belmont Bay development. Other developed areas in the Small Area Plan preceded policies necessitating survey and preservation and interpretation of our past. Due to this Small Area Plan's geographic location at the confluence of the Occoquan and the Potomac rivers, pre-contact and contact sites may span a long range from 10,000 B.P. to the 1600s. In fact, this area has high potential for finding pre-contact village sites and contact period sites as the Dogue Indians were documented as living in the Woodbridge area upon the arrival of Captain John Smith in 1608. The most likely location for these sites is on bluffs overlooking the Occoquan River, the Potomac River, their confluence and their tributaries. Pre-contact sites may be found on submerged fluvial terraces, beneath the current water surface, as a result of inundation by the Potomac River, Occoquan Bay, and Occoquan River.

Historic period sites from the 1700s through the twentieth century can be found throughout the Small Area Plan. These sites can be found in proximity to historic transportation modes (i.e., roads, ferries, rivers, and creeks). Taking into account the general history of the area these could exist archaeologically as remnants of plantation main houses, dependences, slave quarters, agricultural farm complexes or farmsteads, remnants of the town of Woodbridge; and architecturally, as residences and associated outbuildings, commercial structures and suburban development. The surviving architectural resources, except the railroad houses, represent post-World War II suburban growth centered on the automobile as the primary transportation mode.

Three resources, known as the railroad houses, are classified as County Registered Historic Sites. These houses were once occupied by railroad workers (Figure 78). They can be found on Railroad Avenue, east of the tracks and close to the bluff overlooking the Occoquan River.

Other designations in the comprehensive plan include the mapping of a prehistoric sensitivity area (Figure 78). This area exhibits high potential for finding pre-contact and contact period Native American sites.

Behind these railroad houses, on private land, remains a portion of the King's Highway-Washington Rochambeau route. This route was used by General George Washington

and General Rochambeau to ferry troops from New York to Yorktown, Virginia where they defeated Cornwallis. This body of troops also camped just east of present day U.S. Route 1 during the march south. Even though most of this area is presently developed, it retains a moderate potential for finding evidence of this camp. Other military sites such as civil war entrenchments, pickets, and encampments may be found within the area.

The name of the Woodbridge area dates back more than 200 years. Thomas Mason inherited 534 acres from his father on the south bank of the Occoquan River. In 1796, he built a wooden toll bridge over the Occoquan River and eventually named his plantation Woodbridge after the wooden toll bridge. The farm stayed in the Mason family until 1853.

Efforts to link and interpret cultural resources within this area have already started. The Prince William County Historical Commission erected four historical markers interpreting the County; early land patents, Occoquan , Prince William County/Fairfax County and the first Prince William County Courthouse. At the Federal and State level, the National Park Service leads a coalition of partners creating the Potomac Heritage National Scenic Trail that links cultural resources in Prince William County to the greater region.

Goal: Identify and protect Prince William County's significant historical, archaeological, architectural, and other cultural resources, including those significant to the County's minority communities, for the benefit of all the County's citizens and visitors (goal from Potomac Communities Sector Plan).

Policies and Action Strategies - Identify, document or preserve, and interpret pre-contact and contact period Native American archaeology sites.

- Require, on undeveloped land in the Small Area Plan including portions of the extant The Osprey's Golf Club at Belmont Bay, Phase I Cultural Resource Surveys to search for evidence of pre-contact and contact period sites. Due to the rarity of these site types, Phase II evaluation should strongly be considered on all sites found. Sites recommended as significant should be subject to Phase III data recovery.
- Preserve human burials in-situ in accord with section 32-250.110 Preservation of Existing Cemeteries, or, if proposed for exhumation and reburial, secure a burial permit from the Virginia Department of Historic Resources.
- Identify funding sources such as grants (matching or fully funded) to fund archaeological surveys. Cultivate private and public partnerships to conduct archaeological research.

Policy - Consider graduate internships to complete cultural resource action strategies in this plan.

- Cultivate partnerships with graduate colleges and universities.

- Partner with the Department of Parks, Recreation & Tourism's Historic Preservation Division, on internship programs and projects.

Policy – Identify, document or preserve, and interpret historic cultural resources in the Small Area Plan.

- For planned infrastructure in the water or on the shore, conduct archaeological testing for submerged or deeply buried archaeology sites (pre-contact, contact, and historic). If identified, conduct data recovery.
- Conduct archival and archaeological research for the location of the county's first courthouse (note this area also contained a brick manufacturing plant). If identified, conduct data recovery.
- Conduct archival and archaeological research for the revolutionary war encampment associated with Washington and Rochambeau's march. If identified, conduct data recovery.
- Conduct archival and archaeological research for the remains of the Thomas Mason house and the ferry. If possible, preserve in place. If it cannot be preserved, conduct data recovery excavations. Interpret the Thomas Mason history to the public.
- Develop a preservation and resource management plan for the railroad houses. Consider adaptive reuse of the railroad houses (possibly as worker housing, house museum or interpretive site or other use).
- Where appropriate and applicable consider and mitigate impacts to viewsheds from Fairfax Arms and Arch Hall (architectural resources in Fairfax County).

Policy - Interpret the Small Area Plan's history to the citizens and visitors.

- Continue to conduct research and install historical markers and interpretive kiosks.
- Where appropriate, developers should install historical markers and interpretive kiosks in consultation with the Historical Commission, the Planning Office and the Department of Parks, Recreation & Tourism's Historic Preservation Division.
- Include interpretation of the Small Area Plan's history in planned open spaces.
- Prepare and distribute, through various interpretive media, the Small Area Plan's history.
- Where technology reduces cost and increases efficiency, employ technology to bring historical interpretation to the public.
- Require developers to use the plan area's history in placemaking.
- Prepare a history of Woodbridge.

- Conduct historical research on agriculture and twentieth century suburban development in the Small Area Plan.

Policy - Use the Potomac Heritage National Scenic Trail (PHNST) as a tourist attraction.

- Set an alignment and complete the section of the PHNST within the study area through Belmont Bay to a trail on the Occoquan Bay National Wildlife Refuge and Veterans Memorial Park (Prince William County).
- Set an alignment and complete the section of trail linking Fairfax County and the Town of Occoquan to the section of trail within the study area.
- Where applicable, use the PHNST to link subareas within the Small Area Plan, especially to future publicly accessible historic sites.
- Explore the realignment of the PHNST from a sidewalk along Route 123 to a more scenic location such as the Waterfront within the Urban Neighborhood land use designation. If a realignment is not feasible, a spur line to the Occoquan River should be explored.
- As development occurs build access points and multimodal parking areas. Identify, research, prepare and install interpretive markers, wayfinding, and kiosks along the trail.
- Build connector trails to PHNST as development and re-development occurs.
- Use the PHNST as the focal point of a revitalized, publicly-accessible Occoquan waterfront park and riverwalk.
- Create access points to the river for non-motorized boats to facilitate the water trail route of the PHNST and the Captain John Smith Chesapeake National Historic Trail.
- Consider realigning or creating a spur line off the PHNST through the railroad houses along Railroad Avenue.

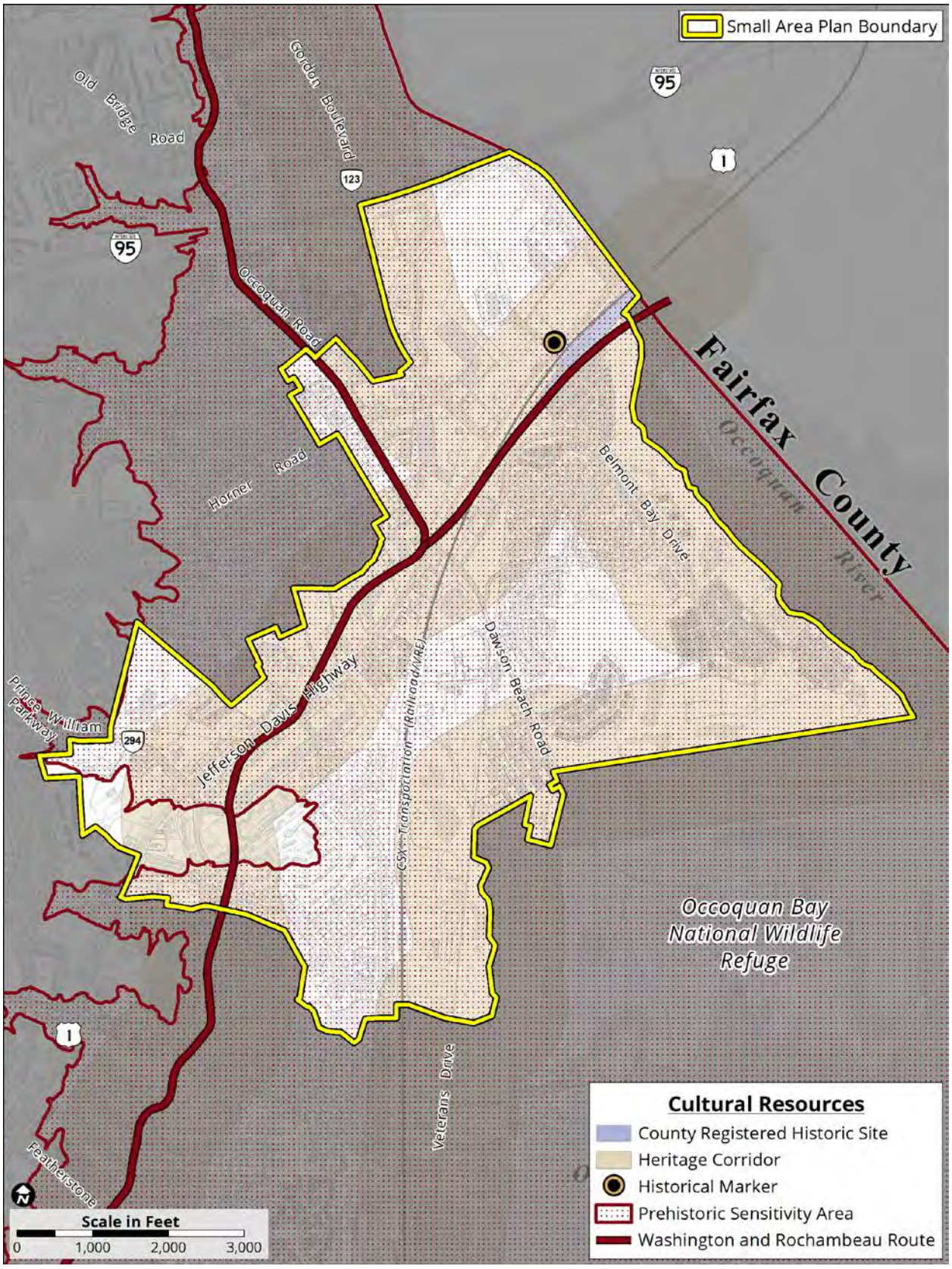


Figure 79: Map Showing Comprehensive Plan Cultural Resource Designations

ECONOMIC DEVELOPMENT

Goal: The North Woodbridge Small Area Plan area will encourage economic development to attract and retain high quality businesses and services.

The North Woodbridge Small Area Plan captures the elements necessary for transforming the area into a vibrant, transit-oriented town center that celebrates and protects cultural resources and natural features while leveraging assets for economic growth and a high quality of life. A primary focus of the North Woodbridge Small Area Plan is to continue to support existing assets within the study boundary, including existing businesses and retail spaces, and to identify vacant parcels with development potential.

North Woodbridge established a solid foundation for increased economic growth due to its availability of commercially zoned areas and tracks of undeveloped parcels, its relationship with George Mason University's Potomac Science Center, and its geographic proximity to Washington, D.C.

The North Woodbridge area is one of six designated regional activity centers in the county and is an area targeted to accommodate desired economic development. As indicated in the table below, the Round 9.1 forecasts for economic development, maintained by the Metropolitan Washington Council of Governments (MWCOG), indicate that the region will experience substantial growth during the next two decades with population growing by about one-fourth and employment growing by about one-third.

	Regional (Round 9.1)	**Countywide (Round 9.1)**	**North Woodbridge and Vicinity (buildout)**
2015 Population	5,387,300	441,600	14,000
2040 Population	6,712,600	569,500	58,200
Growth 2015-2040	1,325,300	127.900	44,200
Percent Increase	24.6%	29.0%	315.7%
2015 Employment	3,160,900	143,100	3,700
2040 Employment	4,116,000	240,900	19,000
Growth 2015-2040	955,100	97,800	15,300
Percent Increase	30.2%	68.3%	413.5%

The Small Area Plan builds on existing economic development assests, including:

- Transit Hub: With proximity to I-95, VRE and waterways, North Woodbridge is the best-positioned area in the County from which to access employment centers throughout the Metro area, and to accommodate “reverse commutes”.
- The Small Area Plan is expected to be a regional housing resource with appropriate connections to regional employment centers via the Virginia Railway Express (VRE) and OmniRide, the nearby Small Area Plan named The Landing at Prince William, and nearby military installations Fort Belvoir Army Base and Marine Corps Base Quantico.
- A well-trained and educated workforce.
- Opportunity Zone designations to spur investment in redevelopment.
- Proximity to existing town centers and entertainment.
- Natural amenties including the Occoquan River, Potomac Heritage National Scenic Trail, and Occoquan Bay National Wildlife Refuge.
- Existing businesses; businesses who are candidates for expansion; businesses who could relocate or open a second location in the study area.
- Inventory of ideal retail and commercial/industrial spaces.
- Vacant parcels with development potential.

Opportunities for targeted industries within the study area include – targeted industry profile:

- Advanced Manufacturing: The water/sewer capacity in North Woodbridge and access to transportation is well aligned to the cluster. Retaining industrially zoned parcels in the Small Area Plan provides opportunities for this targeted industry.
- Federal Government Contracting: North Woodbridge has access to military infrastructure and commercial zoning making it a potential location for companies involved with federal government contracting. By integrating public facility uses into the town center, County leases could attract developers of Class A office space that would then be readily available to federal government contractors.
- Healthcare: Without a clear connection to major institutions, North Woodbridge may not be a prime location for those in the healthcare industry, but future population growth in the area could create demand for local serving medical services.
- Information Communications Technology (ICT): Although North Woodbridge does not currently have a strong connection with educational or entrepreneurship assets, the telecommunications infrastructure, capacity, and

commercial zoning could make it an attractive location for a company in the ICT cluster.

- Life Sciences: Without existing companies in the cluster, proximity to related institutions, or available space it is unlikely that North Woodbridge would be a good location for a Life Sciences business in the near term. Collocation of businesses that might be anchored by research at the George Mason University Potomac Science Center may be possible in the mid to long term.
- Logistics: Although there is good access to transportation infrastructure and upgraded arterial roads, without large parcels of affordable land it would be difficult to attract a company in the logistics cluster to North Woodbridge.

Opportunities to expand surrounding industries in technology and research and development are optimal if parcels are properly zoned for mixed, commercial, and light industrial uses. Growth in existing industries can continue if North Woodbridge expands concentrated areas of retail services and office space. Target industries such as healthcare, information communications technology, and life sciences can flourish, particularly considering STEM fields that can take advantage of the area's natural environmental resources both on land and in adjacent waterways. Utilizing separate or vertical mixed-use patterns can promote consistency across a variety of uses and create a sense of place and community. Allowing flexible land-use mixes can further aid in creating vibrant technology and employment centers within the North Woodbridge Small Area Plan. In addition, by integrating public services into mixed-use buildings the Small Area Plan would attract developers of Class A office space, which in turn could attract high-wage jobs.

The North Woodbridge area has an opportunity to leverage environmental resources and green infrastructure in establishing a cultural hub to provide related civic and economic benefits. The Belmont Bay community is home to the George Mason University Potomac Science Center. The continued interest in bringing economic development to both existing retail spaces and future land use bays in the Belmont Bay community could be targeted toward riverine science to attract new patrons to the area for both regular visits and special events, perhaps including nature walks or festivals centered on the Belmont Bay golf course property.

Economic Development as a Guiding Principle

Action Strategies:

- Each legislative application (such as a rezoning, proffer amendment or special use permit), should consider and address the extent to which the application contributes to furthering the economic development goal of the North Woodbridge Small Area Plan.

- Applications should include a diversity of housing types and include affordable housing components to attract a wide range of potential employees to meet the needs of new employers.
- Focus on the importance of supporting existing businesses and develop a robust Business Retention & Expansion (BR&E) program.
- Consider rezoning to increase the amount of commercially zoned property to be more attractive to federal government contracting, Information Communications Technology, and healthcare cluster companies.
- Support needs for Federal Government Contracting, Information Communications Technology, and Healthcare cluster companies – increase Class A office space within the plan area.
- Within the Technology/Flex area of the Small Area Plan, support efforts to consolidate properties to better attract companies in the logistics cluster in order to capitalize on the proximity and good access to transportation infrastructure.
- Identify opportunities for public private partnerships and entertain a wide range of proposals from the development community for public private partnership ideas.

Economic Development Tools & Incentives

Prince William County already offers competitive incentives to attract target industries and businesses to the county. They include competitive tax rates, the Prince William County Economic Development Opportunity Fund and Low Business Tangible Personal Property Tax Rates. North Woodbridge is part of the county's Opportunity Zone and can leverage other powerful tools and incentives to encourage and shape redevelopment in the Small Area Plan. The focus will be on public intervention and capital improvements to encourage more intensive mixed-use and walkable development, support existing uses, attract complementary uses, and strengthen accessibility. Assistance in sharing the costs of new and upgraded public infrastructure, such as open space and structured parking, are examples of improvements that can facilitate increment financing, business improvement districts, partnerships, and other programming. If necessary, proposals for development within the Small Area Plan should include a plan for use of economic development tools, including, but not limited to, the tools and incentives discussed below. Use of these tools may require additional staff, perhaps from the Department of Economic Development, to guide the implementation of the Small Area Plan, including locating a satellite Economic Development office in Eastern Prince William.

Opportunity Zones

An Opportunity Zone is an economically-distressed community where new investments, under certain conditions, may be eligible for preferential tax treatment. Localities

qualify as Opportunity Zones if they have been nominated for that designation by the state and that nomination has been certified by the Secretary of the U.S. Treasury via his delegation of authority to the Internal Revenue Service. Opportunity Zones are designed to spur economic development by providing tax benefits to investors. First, investors can defer tax on any prior gains invested in a Qualified Opportunity Fund (QOF) until the earlier of the date on which the investment in a QOF is sold or exchanged, or December 31, 2026. If the QOF investment is held for longer than 5 years, there is a 10% exclusion of the deferred gain. If held for more than 7 years, the 10% becomes 15%. Second, if the investor holds the investment in the Opportunity Fund for at least ten years, the investor is eligible for an increase in basis of the QOF investment equal to its fair market value on the date that the QOF investment is sold or exchanged. See Figure 79 for a map of designated Opportunity Zones impacting the North Woodbridge Small Area Plan.

Tax Increment Financing

Tax increment financing (TIF) is a way to set aside, for a limited period, all or part of the presumed increment of new taxes generated by new development, to invest in public improvements. New and improved roads, expanded sewer and water systems, undergrounding of utilities, streetscapes, as well as public parking structures and park space, are some of the potential uses of TIF revenue. Projects can be accomplished on a pay-as-you-go basis or through the issuance of general obligation bonds. Another approach is to create a 'virtual TIF' where the County would participate on a case-by-case basis through diversion or abatement of incremental taxes via a development agreement with private sector partners.

Business Improvement Districts

The County can establish by ordinance a business improvement district (BID) in a defined area within which property owners pay an additional tax on real estate in order to fund improvements or services within the district's boundaries. Taxes generated by BIDs can be used for district maintenance, security, capital improvements, marketing and promotion, facilities operation and staffing, and more. The services provided by a BID would be supplemental to those already provided by the County. Establishing a BID would be crucial to maintaining streetscape, street furniture and the appearance of civic spaces that should be incorporated into the design of the town center. Establishment and guidance of BIDs would require dedicated staff resources, perhaps in the Department of Economic Development.

Industrial Revenue Bonds

The County can issue tax-exempt or taxable industrial revenue bonds (IRBs) on behalf of qualified companies to finance the construction of buildings and related infrastructure (including parking). Examples of qualifying projects are construction of corporate headquarters and facilities for nonprofit corporations, such as trade associations.

Strategic Rezoning

Zoning tools play a critical role in accommodating and encouraging development and in facilitating desired land use mix and densities. Having appropriate zoning is particularly important to the success of transit stations, such as the VRE, OmniRide and Fast Ferry. The new mixed-use zoning district being developed is intended to encourage mixed-use development with a set of rules that are predictable, fair and cost-effective.

Public/Private Partnerships

The Prince William County Department of Economic Development Department already maintains a host of state and local partnerships to promote cooperative economic development in the County[24].

For example, at Innovation Park, the county maintains a partnership with George Mason University. In particular, the two organizations will collaborate to develop joint marketing opportunities to enhance the reputation of Innovation, not only as a technology center, but also as a desirable area for town center development. County investment and visionary planning has enabled Innovation to develop into a thriving life sciences center. Similarly, County investment in North Woodbridge would allow the area to leverage assets such as its educated work force and its central location to major employment centers. With George Mason University already having a strong presence within the North Woodbridge Small Area Plan with the Potomac Science Center, the County could pursue a similar partnership approach as is being taken with Innovation Park. The property adjacent to the Science Center building is vacant which provides an opportunity for science and technology companies to collocate with the existing use.

GoVirginia Support and Grant Programs

Prince William County is part of the *GoVirginia* Region 7. *GoVirginia* supports programs to create more high-paying jobs through incentivized collaboration between business, education, and government to diversify and strengthen the economy in every region of the Commonwealth. The organization maintains a database of grants programs and administers grants regionally.

State-Level Grant Programs and Incentives

The Commonwealth of Virginia, through the Virginia Economic Development Partnership (VEDP), offers a catalogue of incentives to promote economic development throughout the commonwealth. These incentives include grants for localities, direct financial assistance to businesses, tax incentives for businesses, infrastructure support and training programs. The most applicable programs are listed below[25].

Discretionary Incentives

The Commonwealth of Virginia offers an array of discretionary incentives for

[24] More information can be found here: http://www.pwcecondev.org/state-local-partners
[25] A full list of incentives is located here: https://www.vedp.org/incentives.

competitive projects evaluating a Virginia location, providing financial inducements that make good fiscal sense for all parties. Performance-based incentives target the needs of companies as well as the development plans of localities and the Commonwealth.

Commonwealth's Development Opportunity Fund (COF)

A discretionary financial incentive established to support projects that create new jobs and investment in accordance with certain criteria established by state legislation. Grants are made to the community and may be used for such things as site acquisition and development; transportation access; public or private utility extension or capacity development; construction or build-out of publicly or privately-owned buildings or training.

Infrastructure Assistance

The Virginia Department of Transportation (VDOT) and the Virginia Department of Rail and Public Transportation (DRPT) offer several programs to assist localities in providing adequate infrastructure access for industrial and commercial projects. These programs are designed to assist Virginia localities in attracting companies that will create jobs and generate tax revenues within the locality.

Economic Development Access Program (EDA)

A state-funded incentive to assist localities in providing adequate road access to new and expanding manufacturing and processing companies, research and development facilities, distribution centers, regional service centers, corporate headquarters, government installations, and other basic employers with at least 51% of the company's revenue generated from outside the Commonwealth. EDA is administered by the Virginia Department of Transportation (VDOT).

Transportation Partnership Opportunity Fund (TPOF)

Awarded at the discretion of the Governor in the form of grants, revolving loans, or other financial assistance to an agency or local government of the Commonwealth for activities associated with eligible transportation projects. The Virginia Department of Transportation (VDOT) administers TPOF. Projects developed with monies from TPOF do not become private property but become or remain public property following completion. The transportation improvements must be accomplished according to VDOT standards and specifications and must be maintained by the appropriate public entity pursuant to relevant agreements.

Capital Improvement Plan

The Prince William County financial and program planning ordinance requires that the County Executive prepare a capital plan annually. The development of the Capital Improvement Program (CIP) is guided by the Board of County Supervisors' (BOCS) adopted Strategic Plan, Comprehensive Plan, and Principles of Sound Financial Management. The following projects are programmed in the North Woodbridge Small Area Plan:

- **U.S. Route 1/Route 123 Underground Utilities** – In BOCS Resolution 13-706, approved December 3, 2013, the BOCS approved the use of $12.1 million from the capital reserve and recordation tax revenue fund balance to support the undergrounding of utilities in conjunction with the Virginia Department of Transportation's (VDOT) roadway improvement project at the U.S. Route1/Route 123 intersection. The funds are provided to VDOT on a reimbursement basis. As of January 31, 2017, $10.5 million has been transferred.
- **Potomac Heritage National Scenic Trail** – This project constructs trail segments of the Potomac Heritage National Scenic Trail (PHNST). The PHNST is designed to be a multi-use trail through the County and is part of the national trail that links the Potomac and upper Ohio River basins. The total cost of completing all segments will be developed as the final alignment of the trail is determined.
- **U.S. Route 1 Improvements (Featherstone Road to Marys Way)** – The widening of U.S. Route 1 from Featherstone Road to Marys Way, spanning 1.3 miles, improves this section of roadway from a four-lane undivided highway to a six-lane divided highway. The project includes improvements at all intersections within the project limits including modification to signals, access management improvements, pedestrian improvements at signalized intersections, and a multi-use trail and sidewalk.

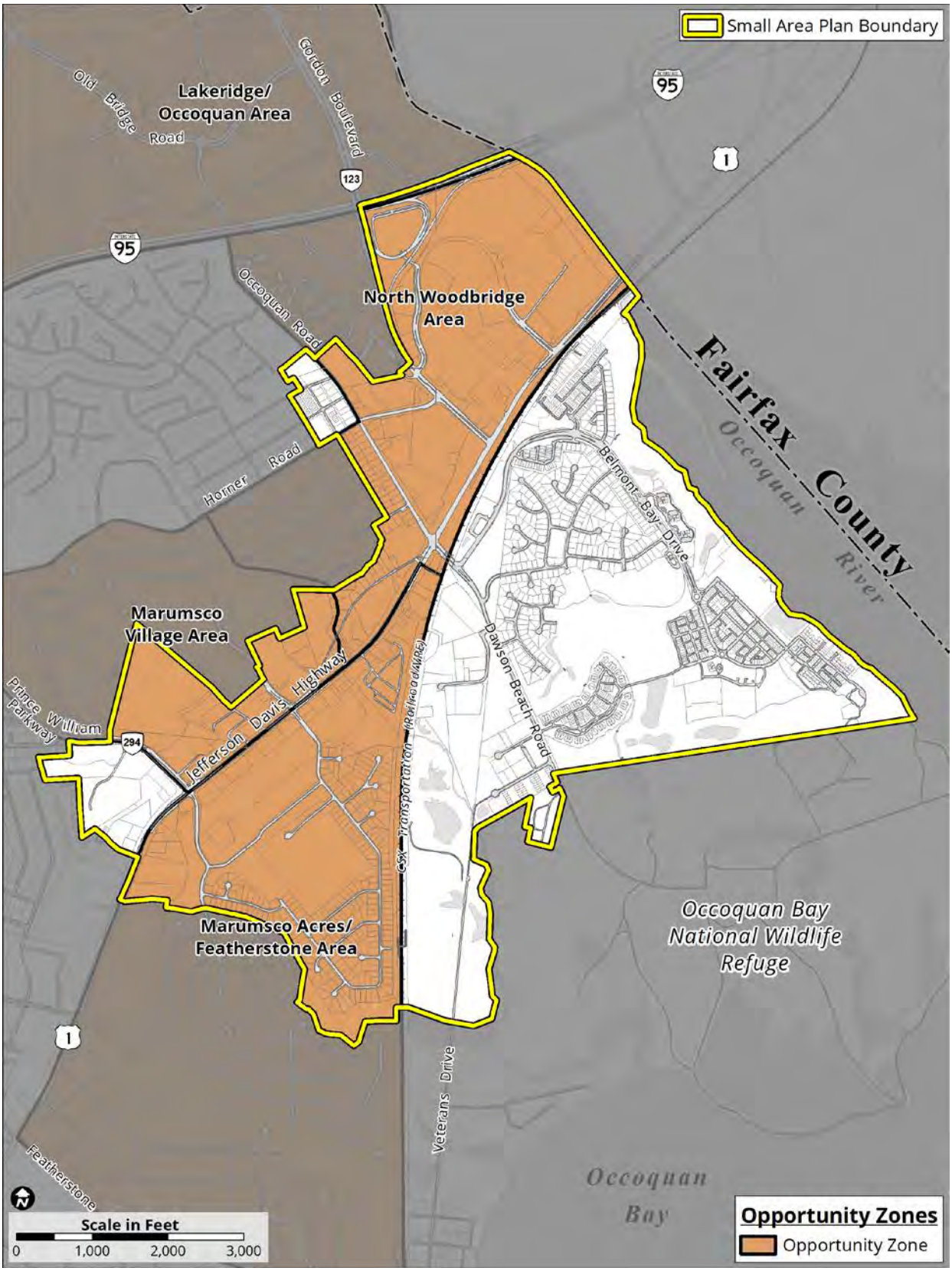


Figure 80: Opportunity Zones

Figure 81: Belmont Bay
Belmont Bay - Economic Development can Build Upon Natural and Cultural Amenities

Source: Renaissance Planning

LEVEL OF SERVICE PLAN

Goal: Ensure an adequacy of public facilities including high-quality schools, fire stations, police facilities, libraries, and other government buildings.

This section of the Small Area Plan provides an assessment of public facility needs to address the anticipated buildout proposed in the Plan. Each of these level of service needs is addressed from a high-level approach, considering the changes in development anticipated through the year 2040, based on the projected densities in the Land Use Plan. The level of service standards for the County are currently undergoing review and may be updated after adoption of the Plan. The standards used to project facility needs in this section will be updated as the level of service standards are adopted.

The North Woodbridge Small Area Plan seeks innovative approaches to accommodate the County's needs for new community service facilities over time. Public services such as schools, police stations, libraries, and parks should be incorporated within the North Woodbridge Small Area Plan to provide the greatest proximity to residential density. Incorporating these services into the mixed-use areas also helps create "third places" for community activities and passive congregation (i.e. not work or home but places such as churches, cafes, clubs, public libraries, or parks). The Plan objective would be to integrate public facility uses into projects as redevelopment occurs.

Safe and Secure Community

Fire and Rescue

The level of service standards for fire and rescue services are measured as travel times and workload capacity. This Small Area Plan is primarily serviced by Fire Station 2 which provides substantial conformance to both the four-minute travel time for fire suppression and basic life support (BLS) and the eight-minute travel time for advanced life support (ALS) standards. Travel times may be adversely impacted when tactical units serve more than 2000 incidents per year. The estimated growth suggests the need for an additional fire and rescue station in the Marumsco area to meet the projected capacity increase, potentially collocated with new needed police facilities.

Projected Fire and Rescue Facility by Existing and Projected Population		
	Existing (2017)	Additional Need by 2040
Fire and Rescue Stations	1	1
Incidents (per year)	3017	714

Police

The primary need for police force expansion and the facilities to house them relates to population growth. The Small Area Plan population growth would translate to a need for about 25,000 GSF of new police station facilities in the area including a smaller ±17,000 sq. ft. police station design, a police sub-station designed to accommodate 50 officers and administrative support facility needs, in the Marumsco mixed use district, potentially collocated with new needed fire and rescue facilities, and a Police/Sheriff satellite field office in the North Woodbridge Town Center, as a ground floor use in a vertically mixed-use building. Animal Control and training facility needs projected within the Small Area Plan will be incorporated into expansion of existing countywide facilities.

Projected Police Facility Needs by Existing and Projected Population		
Facility Type	Existing (2019)	Additional Need by 2040
Police Station	1	0.15
Satellite Field Offices	0	1
Administrative Support Facilities	0	4,722 sq. ft.
Animal Control	0	732 sq. ft.
Public Safety Training Center	0	4,649 sq. ft.

Education

Schools

The primary need for new or improved schools relates to the number of students generated by new residential development. The number of projected students varies between different housing unit types. For example, single-family houses typically generate more students than multi-family units. Each housing type has a Student Generation Factor that can be applied to predict the number of students that will be generated. The growth in residential population through 2040 indicates an increase in student generation that would equate to one and a half new elementary schools, about two-fifths of a new middle school, and about three-tenths of a new high school. A potential elementary school site in the Marumsco area could be incorporated within mixed uses in the Mixed-Use Zoning District (MUZD) and would be a preferable solution to reduce travel times.

Projected School Facility Needs by Existing and Projected Population		
Type of School	Existing (2019)	Additional Need by 2040
Elementary	3	155%
Middle	1	42%
High	1	27%

Libraries

The need for library space is based on several operating criteria related to materials circulation, as well as a planning criterion related to facility size per capita. The North Woodbridge forecast Small Area Plan growth would suggest the need for an additional library facility. Collocating a community library with a compatible use, such as a senior center, could meet the anticipated buildout proposed by 2040 as well as provide a community space for active and passive recreation.

Projected Library Facility Needs by Existing and Projected Population		
Library Needs	Existing (2019)	Additional Need by 2040
Sq. Ft. per Capita	0	21,964
Books per Capita	0	45,757

Parks and Recreation

The need for parks and recreation facilities incorporates both needs for active uses, such as playing fields, and passive uses that benefit both recreation and habitat protection. The North Woodbridge area is currently served by both active parkland, such as the ±107-acre Veterans Memorial Park, and passive parkland such as the ±642-acre Occoquan Bay National Wildlife Refuge, located just to the east of the Small Area Plan. The forecasted population suggests the need for a total of ±262 acres of parkland. The former The Osprey's Golf Course at Belmont Bay site provides potential additional acreage to incorporate into the County's park system. The development of new urban centers in the North Woodbridge Town Center and Marumsco will create the need for walkable urban parks and open space resources, such as pocket parks and linear promenades. These will be incorporated into and refined through rezoning and site plan applications.

Projected Park Facility Needs by Existing and Projected Population		
Park Type	Existing (2019)	Additional Need by 2040
Neighborhood	22 acres	6.8 acres
Community	31.5 acres	83.7 acres
Regional	107.3 acres	65.5 acres
Linear/Resource	9.5 acres	105.7 acres
Total	170.5 acres	261.7 acres

Broadband Needs and Wireless Communications Gaps

The contemplated redevelopment of existing infrastructure provides opportunities to facilitate improved broadband and wireless communications services from both physical and administrative perspectives. Redevelopment opportunities within the Small Area Plan are focused within the North Woodbridge Town Center, but also exist in the remaining areas contemplated for the study area. Throughout the study area, the development of the new zone provides an opportunity to ensure that wireless communication infrastructure implementation follows Section 15.2 of the Code of Virginia as amended by Chapter 835 of the 2018 Virginia Acts of Assembly.

Transportation

Implementation of the Small Area Plan transportation recommendations will require a combination of public and private sector participation. The public sector participation will occur through the County Capital Improvement Program, a variety of state funding sources, and the opportunity for federal and institutional grants. The private sector participation will occur through development approvals identifying and accommodating multimodal transportation demands of each new development. Together, the public and private sectors implement the planned transportation system incrementally and in a phased process linked to changing customer needs. The Implementation Matrix identifies the need for the most significant transportation projects associated with an assessment of near-term or longer-term needs and practical implementation schedules.

IMPLEMENTATION MATRIX

Implementation Matrix				
Timeframe	**Goal**	**Action Item**	**Coordinating Agencies**	**Implementation Strategies**
Short Term	Design	Adopt Design Guidelines	PWC	Confirm boundaries between Comprehensive Plan and Design Guidelines and between Potomac Communities Design Guidelines and North Woodbridge Design Guidelines.
Short Term	Economic Development	Develop a robust Business Retention & Expansion program.	PWC	
Short Term	Green Infrastructure	Establish an alignment for the Potomac Heritage National Scenic Trail (PHNST) to follow the Occoquan River Shoreline.	PWC	Consider acquisition or dedication of land through development.
Short Term	Green Infrastructure	Explore temporary easements for properties that create gaps in the planned waterfront access.	PWC and Private Partners	
Short Term	Cultural	Identify funding sources such as grants (matching or fully funded) to fund archaeological surveys. Cultivate private and public partnerships to conduct archaeological research.	PWC and Private Partners	

Implementation Matrix				
Timeframe	**Goal**	**Action Item**	**Coordinating Agencies**	**Implementation Strategies**
Short Term	Cultural	For planned infrastructure in the water or on the shore, conduct archaeological testing for submerged or deeply buried archaeology sites (pre-contact, contact, and historic). If identified, conduct data recovery.	PWC	Cultivate partnership, possible grant project
Short Term	Cultural	Create access points to the river for non-motorized boats to facilitate the water trail route of the PHNST and Captain John Smith Chesapeake National Historic Trail.	PWC and Private Partners	
Short Term	Cultural	Set an alignment and complete the section of the PHNST within the study area through Belmont Bay to a trail on the Occoquan Bay National Wildlife Refuge and Veterans Memorial Park (Prince William County).	PWC and Private Partners	
Short Term	Cultural	Prepare a history of Woodbridge	PWC	

Implementation Matrix				
Timeframe	**Goal**	**Action Item**	**Coordinating Agencies**	**Implementation Strategies**
Short Term	Green Infrastructure	Acquire land along Occoquan River Shoreline.	PWC	Consider acquisition or dedication of land through development.
Short Term	Green Infrastructure	Acquire land identified as steep slopes surrounding the VRE station as parks and open space.	PWC	Consider acquisition or dedication of land through development.
Short Term	Green Infrastructure	Work with owners of the former golf course to develop it as a new recreational asset to the community.	PWC	
Short Term	Green Infrastructure	Acquire land identified as environmentally sensitive to the north of U.S. Route 1 to be preserved as open space.	PWC	Consider acquisition or dedication of land through development.
Short Term	Green Infrastructure	Preserve land identified as environmentally sensitive to the south of Hylbrook Park.	PWC	Consider acquisition or dedication of land through development.
Short Term	Green Infrastructure	Incorporate appropriate elements of The Osprey's at Belmont Bay Golf Course into the Parks, Recreation & Tourism Plan and into the Open Space Plan.	PWC	Consider active and passive recreation needs from a subregional perspective, including alternative acquisition, ownership, stewardship, and operating structures.

Implementation Matrix				
Timeframe	**Goal**	**Action Item**	**Coordinating Agencies**	**Implementation Strategies**
Short Term	Land Use	Establish a Mixed-Use Zoning District (MUZD).	PWC	
Short Term	Land Use	Implement changes to the County's Design and Construction Standards Manual to address barriers to integrated mixed-use developments and street design criteria for higher density place types.	PWC	
Short Term	Mobility	The PWC BOCS must consider policy or text changes to the DCSM to accept a Level of Service less than "D" on roadways and intersections in the Town Center.	PWC	Examine opportunities for consolidated rezoning applications, including potential actions by the County on behalf of property owners, to leverage mixed-use travel demand efficiencies associated with internal capture and mode share.
Ongoing	Cultural	Continue to conduct research and install historical markers and interpretive kiosks.	PWC and Private Partners	Implemented as new information is available and funding is available.
Ongoing	Cultural	Cultivate partnerships with graduate colleges and universities.	PWC, Colleges and Universities	

Implementation Matrix				
Timeframe	**Goal**	**Action Item**	**Coordinating Agencies**	**Implementation Strategies**
Ongoing	Cultural	Partner with the Parks, Recreation and Tourism's Historic Preservation Division on internship programs and projects.	PWC	
Ongoing	Cultural	Require, on undeveloped land in the Small Area Plan including portions of the extant The Osprey's at Belmont Bay Golf Course, Phase I cultural resource surveys to search for evidence of pre-contact and contact period sites. Due to the rarity of these site types, Phase II evaluation should strongly be considered on all sites found. Sites recommended as significant should be subject to Phase III Data Recovery.	PWC	
Ongoing	Cultural	Preserve human burials in-situ in accord with Section 32-250.110 Preservation of Existing Cemeteries, or, if proposed for exhumation and reburial, secure a Burial Permit from the Virginia Department of Historic Resources.	PWC	

Implementation Matrix				
Timeframe	**Goal**	**Action Item**	**Coordinating Agencies**	**Implementation Strategies**
Ongoing	Cultural	Require developers to use the Plan Area's history in placemaking.	PWC	
Ongoing	Cultural	Where appropriate, developers should install historical markers and interpretive kiosks in consultation with the Historical Commission, the Planning Office and the Department of Parks, Recreation and Tourism's Historic Preservation Division.	PWC and Private Partners	
Ongoing	Cultural	As development occurs, build access points and multimodal parking areas. Identify, research, prepare and install interpretive markers, wayfinding, and kiosks along the trail.	PWC and Private Partners	
Ongoing	Design	Focus building entrances along walkable pedestrian focused streets.	PWC and Private Partners	Evaluate applications through the development review process.
Ongoing	Design	Create walkable, human scale, streetscape centered along U.S. Route 1 in the Marumsco area.	PWC and Private Partners	Evaluate applications through the development review process.

Implementation Matrix				
Timeframe	**Goal**	**Action Item**	**Coordinating Agencies**	**Implementation Strategies**
Ongoing	Economic Development	Require legislative applications to address the extent to which the application contributes to furthering the economic development goal of the North Woodbridge Small Area Plan.	PWC and Private Partners	
Ongoing	Economic Development	Consider rezoning to increase the amount of commercially zoned property to be more attractive to federal government contracting, information communications technology, and healthcare cluster companies.	PWC	
Ongoing	Economic Development	Support needs for federal government contracting, information communications technology, and healthcare cluster companies.	PWC	
Ongoing	Economic Development	Consider opportunities for public private partnerships and entertain a wide range of proposals from the development community for public private partnership ideas.	PWC and Private Partners	

Implementation Matrix				
Timeframe	**Goal**	**Action Item**	**Coordinating Agencies**	**Implementation Strategies**
Ongoing	Green Infrastructure	Utilize pocket parks to provide civic and green space to residents of the town center.	PWC and Private Partners	Consider acquisition or dedication of land through development.
Ongoing	Green Infrastructure	Integrate three small pocket parks within new developments to serve as centers for community gatherings.	PWC	Consider acquisition or dedication of land through development.
Ongoing	Green Infrastructure	Preserve pedestrian connections from Veterans Memorial Park to the neighboring communities.	PWC	
Ongoing	Green Infrastructure	Ensure the preservation of the existing 72-foot Champion Black Cherry Tree in Veterans Memorial Park.	PWC	
Ongoing	Land Use	Ensure greatest intensity of mixed use occurs across U.S. Route 1 from the VRE Station.	PWC and Private Partners	Evaluate applications through the development review process.
Ongoing	Land Use	Ensure development along the south of Occoquan Road provides a transition zone from areas of greatest intensity to the lower density, single-family homes just outside of the study area.	PWC and Private Partners	Evaluate applications through the development review process.

Implementation Matrix				
Timeframe	**Goal**	**Action Item**	**Coordinating Agencies**	**Implementation Strategies**
Ongoing	Land Use	Create a vertical mixed-use node of office, retail, and residential with the potential for commercial and civic spaces along U.S. Route 1, with the primary focus from the Prince William Parkway to Marys Way.	PWC and Private Partners	
Ongoing	Land Use	Create a technology/flex focus area along Dawson Beach Road, expanding from the existing light industrial uses to the south.	PWC and Private Partners	Evaluate applications through the development review process.
Ongoing	Level of Service	Insure wireless communication infrastructure are implemented throughout the MUZD.	PWC	Evaluate applications through the development review process.
Ongoing	Level of Service	Acquire additional parkland throughout the Small Area Plan to meet the projected 180 acres needed.	PWC	Consider acquisition or dedication of land through development.
Ongoing	Level of Service	Update Level of Service projections as Level of Service CPAs are approved.	PWC	

Implementation Matrix				
Timeframe	**Goal**	**Action Item**	**Coordinating Agencies**	**Implementation Strategies**
Ongoing	Level of Service	Monitor adequacy of public facilities.	PWC	Synchronize annual evaluation with development of recommendations for the County CIP, state funding programs, and federal grant opportunities.
Ongoing	Community Development	Encourage promenade streets within the North Woodbridge Town Center.	PWC	
Medium Term	Cultural	Use the PHNST as the focal point of a revitalized, publicly-accessible Occoquan waterfront park and Riverwalk.	PWC and Private Partners	
Medium Term	Cultural	Where applicable, use the PHNST to link subareas within the Small Area Plan, especially to future publicly accessible historic sites.	PWC	
Medium Term	Cultural	Set an alignment and complete the section of PHNST trail linking Fairfax County and the Town of Occoquan to the section of trail within the study area.	PWC, Occoquan and Fairfax County	Cultivate partnership, possible grant project.

Implementation Matrix				
Timeframe	**Goal**	**Action Item**	**Coordinating Agencies**	**Implementation Strategies**
Medium Term	Cultural	Conduct historical research on agriculture and twentieth century suburban development in the Small Area Plan.	PWC	Cultivate partnership, possible grant project.
Medium Term	Cultural	Where technology reduces cost and increases efficiency, employ technology to bring historical interpretation to the public.	PWC	
Medium Term	Cultural	Conduct archival and archaeological research for the remains of the Thomas Mason house and the ferry. If possible preserve in place. If it cannot be preserved, conduct data recovery excavations. Interpret the Thomas Mason history to the public.	PWC	Cultivate partnership, possible grant project.
Medium Term	Cultural	Consider realigning, or creating a spur line off, the PHNST through the railroad houses along Railroad Avenue.	PWC	

Implementation Matrix				
Timeframe	**Goal**	**Action Item**	**Coordinating Agencies**	**Implementation Strategies**
Medium Term	Cultural	Develop a preservation and resource management plan for the Railroad Houses. Consider adaptive reuse of the Railroad Houses (possibly as worker housing, house museum or interpretive site or other use).	PWC	
Medium Term	Economic Development	Establish a North Woodbridge Town Center Business Improvement District.	PWC and Private Partners	Provide marketing, innovative funding pursuit, and operations services specific to the North Woodbridge Town Center.
Medium Term	Economic Development	Support consolidation of properties to better attract companies in the logistics cluster.	PWC and Private Partners	
Medium Term	Green Infrastructure	Encourage local and regional trail connectivity via the PHNST.	PWC	
Medium Term	Green Infrastructure	Ensure parks within the town center are connected utilizing urban street design standards that focus on the use of street trees.	PWC	Evaluate applications through the development review process.
Medium Term	Green Infrastructure	Provide street trees along Dawson Beach Road.	PWC	

Implementation Matrix				
Timeframe	**Goal**	**Action Item**	**Coordinating Agencies**	**Implementation Strategies**
Medium Term	Green Infrastructure	Provide street trees along U.S. Route 1.	PWC	
Medium Term	Land Use	Consider connecting Woodbridge VRE station to a potential public private partnership project consisting of office, retail, commuter parking, and a bus rapid transit center.	PWC and Private Partners	
Medium Term	Mobility	Consider aesthetic improvements to the existing pedestrian rail crossing providing access to Veterans Memorial Park.	PWC	
Medium Term	Mobility	Consider the alternative of a public/private proposal for Innovative Intersection Alternative for the U.S. Route 1 / Route 123 interchange.	PWCDOT, VDOT and Private Partners	
Medium Term	Mobility	Conduct BRT feasibility studies for Potomac Communities.	Virginia Department of Rail and Public Transportation (DRPT), PWCDOT	Establish timing and prerequisites for DRPT Phase 3 (Fort Belvoir-Woodbridge) and conduct feasibility study for concepts on U.S. Route 1 and Route 294 south of Woodbridge.

Implementation Matrix				
Timeframe	**Goal**	**Action Item**	**Coordinating Agencies**	**Implementation Strategies**
Medium Term	Mobility	Operate trolley/shuttle system within the North Woodbridge Town Center VRE/waterfront.	PWC and Private Partners	Requires critical mass of the North Woodbridge Town Center development.
Long Term	Cultural	Conduct archival and archaeological research for the revolutionary war encampment associated with Washington and Rochambeau's march. If identified, conduct data recovery.	PWC	Cultivate partnership, possible grant project.
Long Term	Cultural	Conduct archival and archaeological research for the location of the County's first courthouse (note this area also contained a brick manufacturing plant). If identified, conduct data recovery.	PWC	Cultivate partnership, possible grant project.
Long Term	Cultural	Include interpretation of the Small Area Plan's history in planned open spaces.	PWC	
Long Term	Cultural	Prepare and distribute, through various interpretive media, the Small Area Plan's history.	PWC	

Implementation Matrix				
Timeframe	**Goal**	**Action Item**	**Coordinating Agencies**	**Implementation Strategies**
Long Term	Cultural	Explore the realignment of the PHNST from a sidewalk along Route 123 to a more scenic location such as the Waterfront within the Urban Neighborhood land use designation. If a realignment is not feasible, a spur line to the Occoquan River should be explored.	PWC and Private Partners	
Long Term	Land Use	Consider transition of existing VDOT Park and Ride to mixed-use transit center.	PWC	
Long Term	Mobility	Construct U.S. Route 1 / Route 123 interchange.	PWC and Private Partners	Establish timeframe for evaluating possible at-grade option.
Long Term	Land Use	Leverage scale and intensity of town center to encourage a high-speed rail stop on the Richmond - Washington, D.C. Amtrak line.	Virginia Department of Rail and Public Mobility, PWC	
Long Term	Level of Service	Consider improvements and upgrades to the Veterans Memorial Park as a local and regional park.	PWC	

Implementation Matrix				
Timeframe	**Goal**	**Action Item**	**Coordinating Agencies**	**Implementation Strategies**
Long Term	Mobility	Operate trolley/shuttle system within the North Woodbridge Town Center VRE/waterfront.	PRTC, PWC and Private Partners	Requires critical mass of the North Woodbridge Town Center Development.
Long Term	Mobility	Facilitate transit accessibility in the Marumsco area with a bus service to/from the Woodbridge VRE station.	PRTC, PWC	
Long Term	Mobility	Plan for improved transit services past the 2040 horizon year through right-of-way preservation and interagency coordination.	PRTC, PWC	
Long Term	Mobility	Maximize ability to redevelop existing properties by considering structured parking in key locations.	PWC and Private Partners	

INFRASTRUCTURE AND FACILITIES

Infrastructure and Facilities			
Facility	**Description**	**Coordinating Agency**	**Timeframe**
U.S. Route 1 / Route 123 Interchange	Proposed interchange to connect Route 123 to Belmont Bay Drive. Alternative plans could include an Innovative Intersection Alternative.	VDOT/PWCDOT	Long
Annapolis Way Expansion	Extension of Annapolis Way as currently planned.	PWCDOT	Short
Horner Road Expansion	Extension of Horner Road across Route 123 to/past Annapolis Way.	PWCDOT	Medium
Belmont Bay Widening	Extend the Avenue/Street designation along Belmont Bay Drive to the Belmont Bay activity center.	PWCDOT/Private Partners	Medium
Bus Rapid Transit (BRT) Service	Extension of BRT service along U.S. Route 1 from Huntington Metrorail station to Woodbridge. Coordinate Phase 3 of the 2015 DRPT study with Fairfax County.	DRPT/PRTC	Long
VRE - High Speed Rail	Expansion of the existing rail line serving the Woodbridge VRE station to add a third rail.	DRPT	Medium
Metro Blue Line Extension	Potential extension of the Metro Blue Line into Prince William County.	Metro Rail	Long
Trolley Service	Potential shuttle service as a trolley connecting the North Woodbridge Town Center, Marumsco, and Belmont Bay subareas.	PRTC/Private Partners	Medium

Infrastructure and Facilities			
Facility	**Description**	**Coordinating Agency**	**Timeframe**
Bicycle Network	Bicycle Network along Occoquan Road, Dawson Beach Road, and Veterans Drive with an extension to Highams Court.	PWCDOT/Private Partners	Medium
Pedestrian Bridge	Pedestrian bridge over U.S. Route 1 connecting the Woodbridge VRE station to the North Woodbridge Town Center.	PWC/Private Partners	Long
PHNST Bridge	Proposed Potomac Heritage National Scenic Trail bridge across U.S. Route 1.	PWC/DPRT	Medium
Pocket Parks	Three pocket parks integrated into new development within the North Woodbridge Town Center.	PWC	Medium
Osprey Northern/Waterfront Park	Linear riverfront park landscaped with native plants and wildflowers, incorporating picnic areas, benches, wildlife observation points, reforestation projects, and interpretive signage as well as trail and water access infrastructure.	PWC	Short
Osprey Southern/Inland Park	Multi-use trail network and disc golf course.	PWC/DPRT	Short
Street Tree Expansion	Provide street trees along Dawson Beach Road, U.S. Route 1, and Horner Road to connect the overall green infrastructure and provide connectivity within the plan.	PWC	Medium
Fire Station	Proposed fire and rescue station in the Marumsco area, potential colocation with other public safety facilities.	Public Safety	Medium
Police Sub-station	Proposed police sub-station, accommodating 50 officers, in the Marumsco area, potentially collocated with other public safety facilities.	Public Safety	Medium

Infrastructure and Facilities			
Facility	**Description**	**Coordinating Agency**	**Timeframe**
Satellite Field Office	Proposed police satellite field office, as a ground floor use in a vertically mixed-use building, in the North Woodbridge Town Center.	Public Safety	Medium
Elementary School	Proposed elementary school incorporated within mixed uses in the North Woodbridge Town Center.	PWCS	Long
Community Library	Proposed Community Library, as a ground floor use in a vertically mixed-use building, in the North Woodbridge Town Center.	PWC	Medium
Prince William Museum	Museum focused on the history of Prince William County at the Rippon Lodge Historic Site.	PWC	Short
U.S. Route 1/Route 123 Utilities	Relocating utilities underground concurrent with the U.S. Route 1/Route 123 intersection improvements.	PWC/VDOT/Utility Companies	Short
Potomac Heritage National Scenic Trail (PHNST)	Proposed segment of Potomac Heritage National Scenic Trail connecting Veterans Memorial Park to Fairfax County across I-95.	PWC	Short
PHNST Connectors/Spur	Proposed connections/spurs to the Potomac Heritage National Scenic Trail as new development occurs.	PWC/DPRT	Medium
Potomac Ferry Marina	Locate and construct the Potomac Ferry Marina.	PWC/PRTC/ Private Partners	Medium
Woodbridge Pedestrian and Bicycle Loop	Complete the proposed bicycle and pedestrian connections to complete the Woodbridge Pedestrian and Bicycle Loop.	PWC	Short