



PRINCE WILLIAM COUNTY

Triangle Small Area Plan



Draft: August 6, 2021

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INTRODUCTION AND BACKGROUND

In 2001, the Prince William Board of County Supervisors (Board) reviewed the 34-square mile corridor surrounding US Route 1 and found that the area had multiple underutilized assets, and that there were unrealized opportunities for community benefits, leaving the corridor behind as development and redevelopment progressed elsewhere in the County. Regardless, the private market was beginning to recognize the potential of the area, evidenced by an increase in purchases of remaining vacant land up and down the corridor by private developers. At the same time, the Virginia Department of Transportation (VDOT) was moving ahead with their proposal to widen US Route 1 to improve traffic flow along the corridor, significantly impacting the existing development pattern.

In 2002, the Potomac Communities Revitalization Plan was conceived as an alliance of individuals, neighborhoods, businesses and community organizations, partnering with state and local government in order to leverage the many opportunities the region offered – rich historical ambiance, increasing diversity, a strong military presence, unparalleled waterfront and natural assets, excellent transportation access, and varied, numerous civic assets – so that the community could evolve into a premier destination for residents, businesses, and visitors. Several plans since, either related to the Potomac Communities or the Triangle area specifically, have identified Triangle as an “opportunity area” for increased density and more mixed-use development that activates the streetscape, increases identity/placemaking, and connects Triangle with surrounding communities. Triangle has also been identified as an ideal location for office development oriented around defense contractors, due to its proximity to Marine Corps Base Quantico.

As a part of the Potomac Communities, and as the southern gateway to Prince William County, the Triangle area is well-positioned for revitalization through new approaches to mixed use, particularly along Fuller Heights Road, and in pockets throughout the community, to support MCBQ contractor needs, to provide new residential housing types, and to foster stronger community connections. As part of the Potomac Communities and as the southern gateway to Prince William County, Triangle is already well-positioned for growth. To achieve these goals, however, existing community assets may need to be re-positioned as “destinations,” and should be readily identifiable and accessible, creating the sense that Triangle is a place where people want to live, work, and play, and not just a “pass through.”. The overarching intent of the Triangle Small Area Plan (the Plan) is to provide the framework for the entire community to work together to achieve the vision – a community of choice for residents, businesses, and visitors that serves as a welcoming entrance to Prince William County.

An analysis of existing conditions highlights opportunities to grow. The plan also outlines potential challenges to growth, identifies potential roadblocks to

implementation, and states the relationship of each section to the larger goal of the Small Area Plan. By aligning these sections, this plan will guide the County in building upon existing development while also creating new opportunities for both the area and the county overall. By understanding and reevaluating the existing conditions, the plan will assist the County in helping Triangle transition into a live/work/play mixed-use community. The Plan is designed to support and strengthen ongoing efforts to enhance the Triangle area's desirability as an attractive place to live, as well as an ideal location for the development of new businesses that align with the needs for contractors of adjacent Marine Corps Base Quantico. The Triangle Small Area Plan recommends strategies to streamline the layers of the development process within the Triangle study area to facilitate development of a wider range of uses, incorporating retail, office, residential, entertainment, and other use types to create a cohesive sense of place.

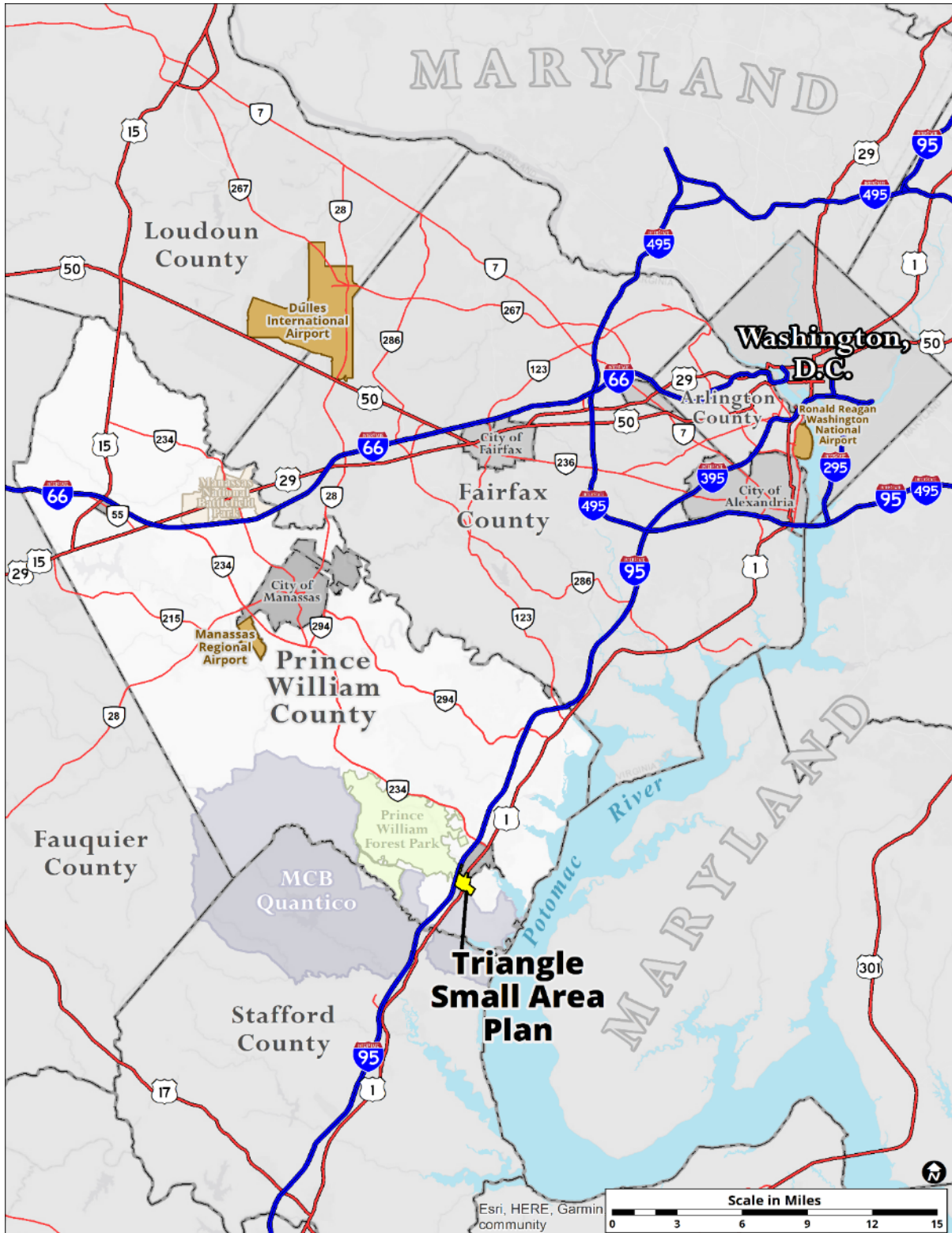


Figure 1: The Triangle Small Area Plan in the Region

PURPOSE AND USE OF SMALL AREA PLAN

The intent of this Triangle Small Area Plan (the Plan) is to serve as the basis for the long-term vision for future development of the Triangle planning area, as shown in Figure 1. The Plan will replace portions of other plans that include the Triangle area, such as the Prince William County Comprehensive Plan (2008) and incorporate portions of the Potomac Communities Plan Prince William County (2002), among others as set out in Section 1.3. This Plan builds on the relevant elements of those existing plans and seeks to update or refine the development proposals and guidelines therein, ideas, such as promoting defense-oriented office development and highlighting the path for Triangle to become a Community of Choice within the County with higher-density mixed-use development, public parks, public facilities, high-quality public realm and streetscape, and strong connections with adjacent communities.

The purpose of this Plan is to create a cohesive guide for Triangle that drives the creation of a community with a clear sense of place, that is economically viable, and that is sustainable for current and future generations. The vision and goals of the Plan will be realized through the implementation of the action items established herein. The preparation of the Small Area Plan has involved research, stakeholder and public engagement, visioning, and formulation and refinement of development proposals and guidelines.

The Plan serves as an extension of the Comprehensive Plan and defines a vision for future development within the Triangle planning area. While the Plan does not grant or ensure subsequent rezonings, special use permits, or other development applications, it serves as the basis for determining the consistency of future rezoning or special use permit requests for the properties which are located within the plan area. The vision and goals of this Plan are realized through the completion of the action items which are established in the implementation section of this document. The Triangle Small Area Plan will provide a guide to developing a mixed-use environment supplemented by a multimodal system with transit that creates a place in which people will live, learn, work and play.

Areas of Transformational Change

This Small Area Plan calls for progressive transformation over time of selected areas of Triangle from auto-dominated, single-use development to pedestrian-friendly, mixed-use development. There are three new mixed-use activity centers located near the intersection of Route 1 and Quantico Gateway Drive, along the northwest of Joplin Road between Route 1 and I-95, and along Fuller Heights Road between Route 1 and the entrance to Fuller Heights Park. Fuller Heights Rd is imagined to be a horizontal mixed-

use destination that creates a focal point for the community to attract visitors. New mixed-use areas along Quantico Gateway Drive and north of Joplin Road are envisioned to cater to contractor uses as related to Marine Corps Base Quantico through the provision of offices, higher density residential typologies, and supporting commercial services and amenities. The planning of these areas will be coordinated with the Town of Dumfries with respect to their Main Street plans as well as the economic opportunities and security needs of the Marine Corps Base Quantico.



Figure 2: Conceptual Base Map

Organization of the Small Area Plan

The Plan consists of eight major components (see below). The analysis of existing conditions, organized according to the same eight themes, precedes the presentation of the policies and guidelines.

1. **Vision and Thematic Principles** – Establishes the long-term vision and supporting goals for the creation and guidance of the Triangle Small Area Plan.
2. **Placetypes** – 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. **Design Guidelines** - Outlines design standards for pedestrian-scaled private and public development with graphic precedents to ensure high-quality design within the Small Area Plan.
4. **Mobility Plan** - Mobility has a close relationship with land use; this plan calls for multimodal mobility to include roads, transit, bicycle and pedestrian facilities.
5. **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 Triangle, there will be a demand for outdoor spaces and a requirement for environmental protection.
6. **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.
7. **Economic Development Plan** – Encourages the attraction and retention of diverse high-quality businesses and services that strengthen the economic vitality of this area.
8. **Level of Service Plan** – As Triangle changes and grows over the next 20 years, it is necessary to ensure that level-of-service infrastructure improvements are programmed into the Plan.

The action strategies and infrastructure projects recommended by the Plan are summarized in the **Implementation Plan**. This plan is a matrix that identifies the action strategies and establishes how and when they will be implemented in the short, mid, long term, and ongoing time frames to ensure the plan is actualized by 2040. Additionally, a summary of the proposed infrastructure and facilities are outlined at the end of the plan.

1



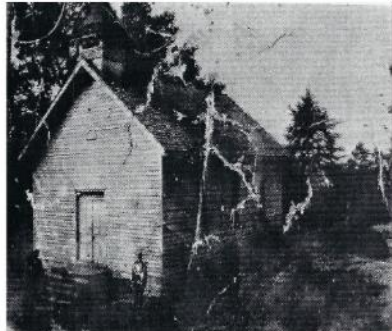
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8



Figure 3: Framework Graphic of Organization of Plan

Overview of Study Area Today

Triangle today is a small, mostly residential community of approximately 1,400 people, located in the southeastern corner of Prince William County consisting of 376 acres. It is the southern gateway to the County. Triangle's southern boundary, Fuller Road, separates Triangle from Marine Corps Base (MCB) Quantico, a 55-acre military installation with more than 28,000 military, civilian, and contractor personnel that supports thirty-plus federal agencies.¹ The area is well-positioned to benefit from and contribute to the development associated with the proposed "defense corridor," which will stretch along Route 1. The entrance to Prince William Forest Park, a 15,000-acre park with over 37 miles of trails, is also less than a mile from Triangle.² Despite its prominent location, stakeholders noted that Triangle has struggled to brand itself as a destination.

While being one of the most affordable communities in Prince William County, some stakeholders noted that it lacks a "sense of place"³ and distinct identity. MWCOG Transportation Analysis Zone (TAZ) data projects that Triangle's population will grow at a low rate of nearly three percent annually over the next twenty years, setting the baseline for this plan to build on.

Prior Planning Efforts

As previously noted, the Triangle planning area has been included in several background studies and County plans. Relevant findings from these studies and plans are summarized below.

Previous General Plans

Dumfries Comprehensive Plan Update – Main Street Small Area Plan (2020)

- In January 2021, the Dumfries Town Council passed an amendment to its Comprehensive Plan to include a new Small Area Plan (SAP) to guide the redevelopment of Main Street.
- The Council also approved two new zoning districts to support and regulate development within the SAP boundary. The Planned Main Street District (PMSD) regulates development along Main Street, from Fraley Boulevard south to Quantico Creek. The Residential, Off Main Street (R-OMS) district regulates

¹ <https://www.quantico.marines.mil/About/>

² <https://www.nps.gov/prwi/planyourvisit/hiking.htm>

³ Sense of place is often defined as a characteristic, or set of characteristics, that make a place special or unique, as well as to those that foster a sense of authentic human attachment and belonging.

development of the residential neighborhood north of Main Street and is intended to introduce new forms of housing as a complement to Main Street.

- The Main Street plan puts into place the elements necessary to transform the area into a vibrant, walkable district. Dumfries Main Street will welcome new businesses, a new mix of land uses, and new forms of multi-family housing.

Marine Corps Base Quantico Special Study Area (2019)

- The study seeks to ensure future land development adjacent MCB Quantico is compatible with the mission of the base.
- Located within the MCB Quantico Special Planning Area, the study identified key issues for the planning area, including traffic congestion; growth and land use development on and off base; air and range operations affecting citizens; shared infrastructure services; protection of environmental resources; and coordinated contracting opportunities.
- The study recommends maintaining the rural character of natural areas immediately surrounding Triangle.
- The study recommends coordinating with Triangle and Prince William County on transportation and infrastructure issues of mutual concern.

Marine Corps Base Quantico Joint Land Use Study (JLUS) (2014)

- The study identifies eight priorities for MCB Quantico and the surrounding jurisdictions with the goal of alleviating incompatibilities between entities as MCB Quantico grows.
- The study's recommendations include increasing coordination and collaboration on transportation, stormwater management, and new development.

Potomac Communities Design Guidelines (2014)

- Identifies Triangle as an "opportunity area" for increased density and more mixed-use development that activates the streetscape, increases identity/placemaking, and connects Triangle with surrounding communities.
- Provides design guidelines for future development.

Prince William County Comprehensive Plan (2008): Triangle Study Area

- The Long Range Land Use Plan, included as part of the overall Comprehensive Plan identified the part of Triangle immediately south of Dumfries, and the western part of the study area south of Anderson Road, as potential locations for defense-oriented office development.
- The Long Range Land Use Plan also identified multiple areas within Triangle for additional residential density.

- The Community Design Plan recommended incorporating the Iwo Jima Memorial into Triangle's gateway element.
- The Transportation Plan recommended improving connections within Triangle along key corridors, such as Fuller Road and Old Triangle Road.

Potomac Communities Revitalization Plan (2008)

- The plan promotes strategies for infill, redevelopment, and revitalization within the study area.
- The land use plan calls for more regional commercial and office space.
- Action strategies important for Triangle include:
 - Exploring more opportunities for Public Private Partnerships (PPPs)
 - Finalizing a coordinated streetscape design that ties the community together
 - Add more wayfinding signage directing residents and visitors to Fuller Heights Park and the Marine Corps Heritage Museum
 - Explore opportunities to leverage proximity to the Potomac Heritage National Scenic Trail
 - Explore opportunities for innovative stormwater management

Potomac Communities Prince William County (2002)

- This plan promotes the idea that Triangle and Dumfries are ideal locations for federal office development and should serve as principal gateway to Prince William County from the south and from MCB Quantico.
- Much of the focus of the recommendations relevant to Triangle is on integrating MCB Quantico and Triangle as a denser, mixed-use area, particularly along Route 1.

Previous Economic Development Plans

Target Industry Study of PWC (2018)

- Several small area plans are evaluated for their ability to host targeted industry clusters, and were categorized as "Good Location," "Needs Work," or "Poor Location." Triangle was categorized as a "Needs Work" for clustering:
 - Advanced Manufacturing: infrastructure and transportation access, but a lack of industrial zoning and small parcels.
 - Federal Government Contracting: proximity to military and industrial infrastructure, but lack of class A office space.
 - Information Communications Technology: good location except for the lack of education and entrepreneurship assets.

PWC Strategic Plan 2017-2020 (2017)

- Although this plan does not make any specific recommendations for Triangle, it recommends a number of strategies for Prince William County to become a “Community of Choice,” with a stronger, diversified economy, a streamlined development process, multiple mobility options, safety/security for all residents, and workforce development opportunities for residents who need them.

Other Transportation Plans and Projects

- The 2015 Route 1 Multi-Modal Study 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 is the Virginia Department of Transportation’s project to widen U.S. Route 1 from four to six lanes between Mary’s Way and Annapolis Way.
- The 2020 Prince William County Safe Routes to School (SRTS) Gap Analysis and Priority Recommendations.

Stakeholder and Public Engagement

The Triangle Small Area Plan has benefitted from stakeholder and community participation, including the following activities:

- Internal County stakeholder workshop on March 2, 2020. This workshop first asked participants to help identify existing and ongoing projects that may affect the project area or immediate surroundings, and to brainstorm opportunities and challenges by each of the planning elements.
- 12 virtual stakeholder interviews with Prince William County agencies, elected officials, property developers, and significant property developers held between April and May 2020. Key topics discussed with stakeholders centered around existing conditions, both within the project boundary and as part of the broader U.S. Route 1 context; key relationships to build on; and development potential and limitations.
- A virtual two-day community planning charrette on September 30 and October 1, 2020. After reviewing key findings of existing conditions, breakout sessions first focused on collectively developing a vision for Triangle and identifying opportunities and challenges. The focus of the second day was to review and refine the draft vision and develop potential land use scenarios.
- Planning Commission Small Area Plan work session and open house on May 5, 2021.
- VDOT review submitted on May 5, 2021, as part of review of the draft plan.

During the stakeholder and community workshops and interviews, growth and development challenges and opportunities for Triangle were discussed. Summarized below, these challenges and opportunities helped create the framework for next steps and plan implementation.

Opportunities

- The Triangle study area sits within a region that has experienced rapid growth over the last several decades. As previously mentioned, changes along the Route 1 corridor, and the emerging Potomac Defense Corridor, provide multiple opportunities for Triangle.
- Triangle's proximity to MCB Quantico, which employs approximately 8,000 civilian contractors every year, provides multiple opportunities for synergies with the base. MCB Quantico stakeholders have expressed support for a mix of hotel, convention center, and office facilities. They have expressed an acute need for off-site meeting facilities in particular.
- Triangle is located in a region that has a significantly high concentration of high-tech industries. Building on the opportunity to provide facilities to MCB Quantico contractors, Triangle could also specifically market office/flex space to high-tech sectors.
- Over 4,000 personnel and their families live on-base at MCB Quantico; however, on-base amenities are limited, giving Triangle an opportunity to provide more amenities in close proximity to the installation. MCB Quantico staff have indicated that they would like to see more family-oriented services and amenities along Fuller Heights Road, including new cafes/restaurants, open space, bike trails, and increased programming at Fuller Heights Park.
- Demand for more affordable housing at a broader range of price points in Prince William County and the greater region is sky-high; as an area with an already quiet, residential character, Triangle has the opportunity to attract a significant number of households looking for a greater variety including more affordable housing and a high quality of life.
- There is demand for small-scale neighborhood-serving facilities, such as parks and public gathering spaces, as well as retail and dining facilities, that would complement new and existing residential development in Triangle and help enhance Triangle's sense of community.
- There are multiple opportunities to retrofit the existing low-density residential development in Triangle into a higher density mixed-use development, however both horizontal and vertical mixed-use options should be explored.

Challenges

- Although there are opportunities to partner with MCB Quantico on providing more off-base amenities and office/conferencing spaces, there are some challenges associated with partnering with the base, including factoring in fluctuations in contractor demand, and the types of spaces needed.
- As previously noted, stakeholders are concerned that Triangle has become an area that people drive through, versus a destination, and that this may be difficult to change in the short term.
- Building higher-density, vertical mixed-use development in Triangle may be a cost-prohibitive for developers.
- Existing office development in Triangle has struggled; vacancy rates have been relatively high, and rents have not increased significantly over the last decade.
- The coronavirus pandemic may impact current and future demand for commercial space, at least in the short-to-mid-term.
- There are some challenges associated with the remaining developable land in Triangle, including parcel size, soil quality, uneven topography, and proffers connected to rezonings that restrict development.
- Safe crossings for pedestrians and bicyclists across Route 1 are a challenge, but necessary to create strong connections between the west and east neighborhoods of the Triangle area.
- The Quantico Corporate Center in Stafford, and other existing similar developments in the region, are strong competitors for contractor office space in Triangle.

Despite some of Triangle's current challenges, there are many more opportunities for growth, new development, and placemaking in the study area. With strategy, focus, cooperation, and collaboration, Prince William County is more than equipped to overcome the challenges stated above. The County will continue to coordinate with its partners at OmniRide and VRE to look at transit opportunities.

Comprehensive planning efforts going forward will focus on leveraging Triangle's many strengths and assets to provide a springboard for development and redevelopment and create a stronger identity and sense of place. The map series found under the existing conditions sections illustrate the current situation of land use with the study area as of February 2020.

EXISTING CONDITIONS AND DATA ANALYSIS

Land Use

Historical Context

Historic contexts are used in preservation to evaluate a resource's significance. The County uses the following historic context as a base on which to develop policies and action strategies. This historic context is not intended to be a history, which is beyond the scope of a comprehensive plan.

Pre-Contact Period

In Virginia, pre-contact history is subdivided into three major periods: Paleo-Indian, Archaic and Woodland (earliest to latest). The Archaic and Woodland periods are in-turn subdivided into early, middle, and late sub-periods. Most recorded pre-contact activity was recorded along Broad Run and its tributaries (VCRIS last accessed February 10, 2020)⁴. Evidence of pre-contact occupation is abundant in the plan area. However, agricultural activity, particularly sod farming, during the middle to late twentieth century severely damaged the pre-contact archaeology sites found to date.

Identified pre-contact archaeology sites, fall into two categories: possible short-term occupation camps and stone tool manufacture or re-sharpening sites. Archaeologists have been able to discern two specific periods, the Middle Archaic from 8500 – 5000 years before present, and the Late Archaic, from 5000 to 3200 years before present.^{5,6} These date ranges were based on the few dateable artifacts, including projectile points, recovered during excavations. Archaic peoples in the region were generally hunter-gatherers taking advantage of the climatic change that started 10,000 years ago, at the end of the last ice age and the beginning of the Holocene. Warmer, drier air and climate led to greater diversity in plants and animals. Evidence suggests these archaic societies morphed into larger bands of around 30 persons during hunting season, dispersing into "micro-bands" of a single family or two during other seasons.⁷

⁴ Virginia Cultural Resource Information System (VCRIS), 2020 Virginia Department of Historic Resources, 2801 Kensington Avenue, Richmond, VA 23221

⁵ Friedman, Janet L.; Heather Cowl, David Rotenstein, Susan Travis, Richard Vidutis, 2002 Prince William Innovation Phase I Archaeological Survey, Architectural History Reconnaissance Survey, of the PWC Innovation Business Park. Prepared for Prince William County Planning, James McCoart Building, 1 County Complex Court, Woodbridge, VA 22192. Prepared by URS Corporation, 7101 Wisconsin Avenue, Suite 700, Bethesda, MD 20814.

⁶ Dutton, David, Cara Metz, Arthur Striker, 2016 Phase I Cultural Resources Survey of the 42 Hectare (106 acre) Wellington Road (Innovation Town Center) Property. Prepared for Miller and Smith, 8401 Greensboro Drive, Suite 450, McLean, Virginia 22102. Prepared by Dutton + Associates, LLC 1115 Crowder Drive, Midlothian, Virginia 23113.

⁷ Ibid

Although no evidence has been found of sites dating to the Woodland period, it is highly likely Woodland and Late Woodland people traversed and camped within the plan area. Large settlements, such as those found along the Dan, Rappahannock and James River drainages, are unlikely but cannot be ruled out. Many native Americans were driven out of Virginia's Piedmont, which includes the plan area (if they were there at the time), by the Albany Treaty of 1722. The remainder were driven out by force "either by relocation or the extermination of groups."

The planning area's pre-contact (Native American) history is consistent with what has been documented for eastern Prince William County. Multiple archaeological surveys and studies have been conducted of the Triangle area over the last several decades, mostly along Route 1. According to those studies, no significant new archaeological or architectural resources not already recorded were found in Triangle specifically, but the surveys recorded approximately 59 architectural resources in the surrounding vicinity along Route 1, including one National Trust-registered property in the Town of Dumfries, just to the north of Triangle.⁸

Along the corridor extending 100 feet from the edge of pavement on each side of U.S. Route 1 from the Stafford County line to Route 123, eight archaeological sites and 14 artifact locations were identified. Twelve of the artifact locations consisted of nondiagnostic Native American lithics.⁹ Three of the eight sites recorded were located on MCB Quantico. A Civil-War-era cemetery, the Amidon-Lunsford cemetery, has also been identified within the study area.

Historic Period

Settlement to Society 1650-1750

Prince William County was formed in 1730, with its boundaries reduced to its present size by 1759. Known maps drawn in the first half of the 1700s are large in scale, and do not contain sufficient detail to show smaller settlements in the County, except for Occoquan and Dumfries and taverns along Old Carolina Road. In the late-seventeenth and early eighteenth centuries, colonial settlement clustered primarily along the Potomac River and its major tributaries. Tobacco was the primary cash crop in Prince William County, as it was throughout much of Virginia during that time period. Leading up to the Revolutionary War, the town of Dumfries, just north of Triangle, grew and prospered.

⁸ Hatch, Brad and Marco Gonzalez, *Phase I Archaeological Survey of A 5-Acre Parcel (GPIN: 8188-677083) In the Town of Dumfries, Prince William County, Virginia*, (Dovetail Cultural Resource Group, 2009), 21-26.

⁹ Hall, Bill et al, *Cultural Resources Identification Survey (Phase I) Improvements to US 1 From Stafford County Line to Route 123, Prince William County, Virginia Project A*, (Coastal Carolina Research, Inc., 2001), 87.

Colony to Nation 1750 – 1789; Early National Period 1789-1830; Antebellum 1830 - 1860

Throughout the above time periods, there was a gradual and continuous transition from a tobacco-focused agrarian economy towards a diversified agricultural and livestock farming-based economy. As the region's population slowly increased, brokering farmland also became a component of the economy. The growth of smaller farmsteads and the increasing population necessitated expanding the roadway system. This growth connected farms in the plan area to larger towns and communities. Tobacco, grown on plantations dependent on slave labor, was the dominant agricultural crop during the 1700s in region, with subsistence farming as a secondary endeavor; tobacco was the primary cash crop grown for profit.¹⁰

However, unlike the Tidewater regions of Virginia, in Northern Virginia, diversified agriculture began to replace tobacco by the late 1700s. Crops such as wheat, corn, and other grains were grown in the region to fulfill England's quest for finished flour products. This economic change was evident in the building of Milford Mill on Broad Run. Agricultural row crop cultivation, along with livestock farming, continued through the Early National and Antebellum periods and up to the Civil War. Quaker migrants from New York and New Jersey purchased land in the plan area from earlier landholders. These new farmers brought new techniques and were not usually slave holders.

Civil War 1861 – 1865

The Civil War period saw troop movements on Kings Highway (Route 1), Union/Confederate (mostly) pickets at stream crossings, Wade Hampton's confederate cavalry raids, and large numbers of Texas camps that supported the Cockpit Point Battery.

Reconstruction & Growth (1865-1916)

The growth of post-Civil War farms in the region reflected the return to the County's agricultural heritage. It also reflected the subdivision and dissolution of large plantations based on slave labor. The region saw the growth of large farmsteads, some of which focused on dairy farming, in addition to small subsistence operations with lower outputs to commercial markets. The transplant of farmers from northern states such as New York and New Jersey that started before the Civil War continued, supporting these larger dairy operations. "Dairy farming was the center of 20th century agriculture in Prince William. It was the second largest industry in Prince William County

¹⁰ Reeves, Matthew B. and Jennifer L. Moran, 1998 An Archeological and Historical Investigation of Sudley Post Office (44PW294). Study submitted by the Center for Heritage Resource Studies to the National Park Service. College Park, MD: University of Maryland.

by 1971, with seventy-seven farms producing milk at a cumulative value of over one million dollars.” Prince William County formed part of the “Washington Milkshed,” the area that supplied milk to the Washington, D.C. region. Most suppliers were members of the Maryland and Virginia Milk Producers Association. Thirteen maps from 1901, 1904, and 1923 confirm the agrarian nature of the plan area. The refurbishment and upgrade of grain grinding equipment in Milford Mill, and its continued operation well into the twentieth century, was a result of the area’s diversified agriculture and dairy operations. The focus on dairy farming continued through both World Wars, and into the last quarter of the twentieth century. During the late twentieth century, a combination of factors caused many dairy farm operations to shutter, such as decreasing milk prices, increased competition, a shortage of farm laborers, and growing suburbanization.

After the Civil War, Prince William County’s growth slowed. The area that is now called Triangle remained relatively rural until after WWII.¹¹ Triangle did not have a name until the early twentieth century, when Jay Amidon erected the first commercial building at the junction of old US Route 1 (now Old Triangle Road) and Joplin Road.¹² The building, developed in such a way to fit the triangle-shaped parcel, originally served as an automobile garage, and its quasi-landmark status in the community led to the use of the name “Triangle” to describe the area.¹³

WWI – WWII (1917-1945)

Major occupations in the Triangle area during the early to mid-twentieth century mostly related to agriculture and timber. Within the Triangle area there was a grist mill to grind the wheat and corn into flour and also a lumber mill. A nearby mine, the Cabin Branch Mine, where Sulphur and nitrate ores were mined until about 1919, also offered some employment for residents.¹⁴ The U.S. Marine Corps bought the land across Fuller Road from Triangle in 1917.

The Marine Corps Base Quantico installation was constructed piecemeal over several decades but saw a significant increase in growth in the 1990s, when several new commands were moved there.¹⁵ Prince William Forest Park, located along Joplin Road

¹¹ Hall, Bill et al, *Cultural Resources Identification Survey (Phase I) Improvements to US 1 From Stafford County Line to Route 123, Prince William County, Virginia Project A*, (Coastal Carolina Research, Inc., 2001), 9 – 18.

¹² Brown, George B., *A History of Prince William County*, (Prince William County Historical Commission, 1994), 104-105.

¹³ Ibid

¹⁴ Ibid.

¹⁵ <https://www.quantico.marines.mil/About/History/>

(Route 619) just across I-95 from Triangle, was established during the 1930s on the site of the former mine and several farms, and is on the National Register.¹⁶



Figure 4: U.S. Army Corps map from 1927 showing the study area¹⁷

In the mid-1920s, US Route 1 was realigned to its current position, diverting traffic away from the commercial enterprises that were clustered around Old Triangle Road. Portions of US Route 1 were paved, the first in the County, but those portions provided access to Quantico Marine Corps Base.¹⁸ As a result, businesses moved to the new US Route 1, lining both sides of the highway in the section north of Joplin Road.

New Dominion to Present (1945 - to the present)

The advent of Interstate 95 in the late 1950s significantly reduced traffic flows along Route 1, and the corridor suffered from a major reduction in pass-through business.

¹⁶ Buchanan, Brian A et al, *Phase I Archeological Investigations Of The I-95/395 HOV/Bus/Hot Lanes Project Arlington, Fairfax, Prince William And Stafford Counties And The City Of Alexandria, Virginia*, (Thunderbird Archaeology, 2007), 160.

¹⁷ Prince William County

¹⁸ Hall, Bill et al, *Cultural Resources Identification Survey (Phase I) Improvements to US 1 From Stafford County Line to Route 123, Prince William County, Virginia Project A*, (Coastal Carolina Research, Inc., 2001), 18.



Figure 5: 1937 Aerial photograph of the study area's development¹⁹

Post-WWII was a time of major growth for Northern Virginia. Returning veterans bought homes near the capitol, and the suburbs expanded rapidly. Triangle was able to capture some of that residential development, which continued into the 1980s and 1990s. However, the area has not experienced the same development pressures as other parts of Prince William County.²⁰

When US Route 1 was widened in 2015, some of the existing commercial buildings had to be demolished to make way for the new roadway. With the new Potomac Defense Corridor taking shape along Route 1, the corridor is poised to make a comeback as a

¹⁹ Prince William County

²⁰ Ibid

commercial destination for both local residents and out-of-town motorists passing through. As I-95 becomes more and more congested, motorists are inclined to search out alternative route options, which creates an opportunity for Triangle and Prince William County to capture more business once again from visitors passing through.

Existing Land Uses

Although predominately residential, Triangle does have several key commercial, institutional, and recreational uses, as shown in Figure 6. Triangle is home to the headquarters of the United Mine Workers of America, located on Quantico Gateway Drive. Other commercial uses include a Ramada Hotel along Fuller Heights Road, and several autobody shops, a florist, and a barbecue restaurant, all of which are located along Route 1. There are no grocery stores in Triangle, but there are several small markets/convenience stores, including two 7-11s, one along Fuller Heights Road and the other just off of Route 1. There is also a Dollar General located along Route 1 in the northern part of the study area. The closest supermarket is a Wal-Mart Supercenter located approximately four miles away in Dumfries, north of Triangle. There are two Prince William County Public Schools adjacent to the study area, including Triangle Park Elementary and Graham Park Middle Schools. There is also a U.S. Post Office located along Fuller Heights Road. Triangle is also home to multiple places of worship, and Fuller Heights Park, which has three baseball diamonds, and serves as a regional recreational destination for families in the County, particularly in the summer months.

Despite being a small area of 376 acres, Triangle has several different land use types. As previously noted, the study area's most predominant land use type is residential, comprising 34 percent of its total land area. Undeveloped land makes up the next-largest share, followed by public right-of-way. Triangle has approximately 42 acres of recreational land, including Fuller Heights Park, making up 11 percent of total study area land. Only eight percent of Triangle's land is currently dedicated to commercial uses; institutional uses, make up only seven percent of land area, followed by industrial uses, which only cover 4.6 acres of land in Triangle, or around one percent of total land area.

Current Land Use	Land Area (± Acres)	Share of Use (± %)
Commercial	30.5	8%
Industrial	4.6	1%
Institutional	24.8	7%
Undeveloped	88.0	23%
Recreational	42.1	11%
Residential – High Density	35.1	10%
Residential – Medium Density	72.2	19%
Residential – Low Density	13.9	4%
Utility	1.2	0.3%
Public Right-of Way	63.6	17%
Total	376.0	100%

Source: Prince William County, December 2020

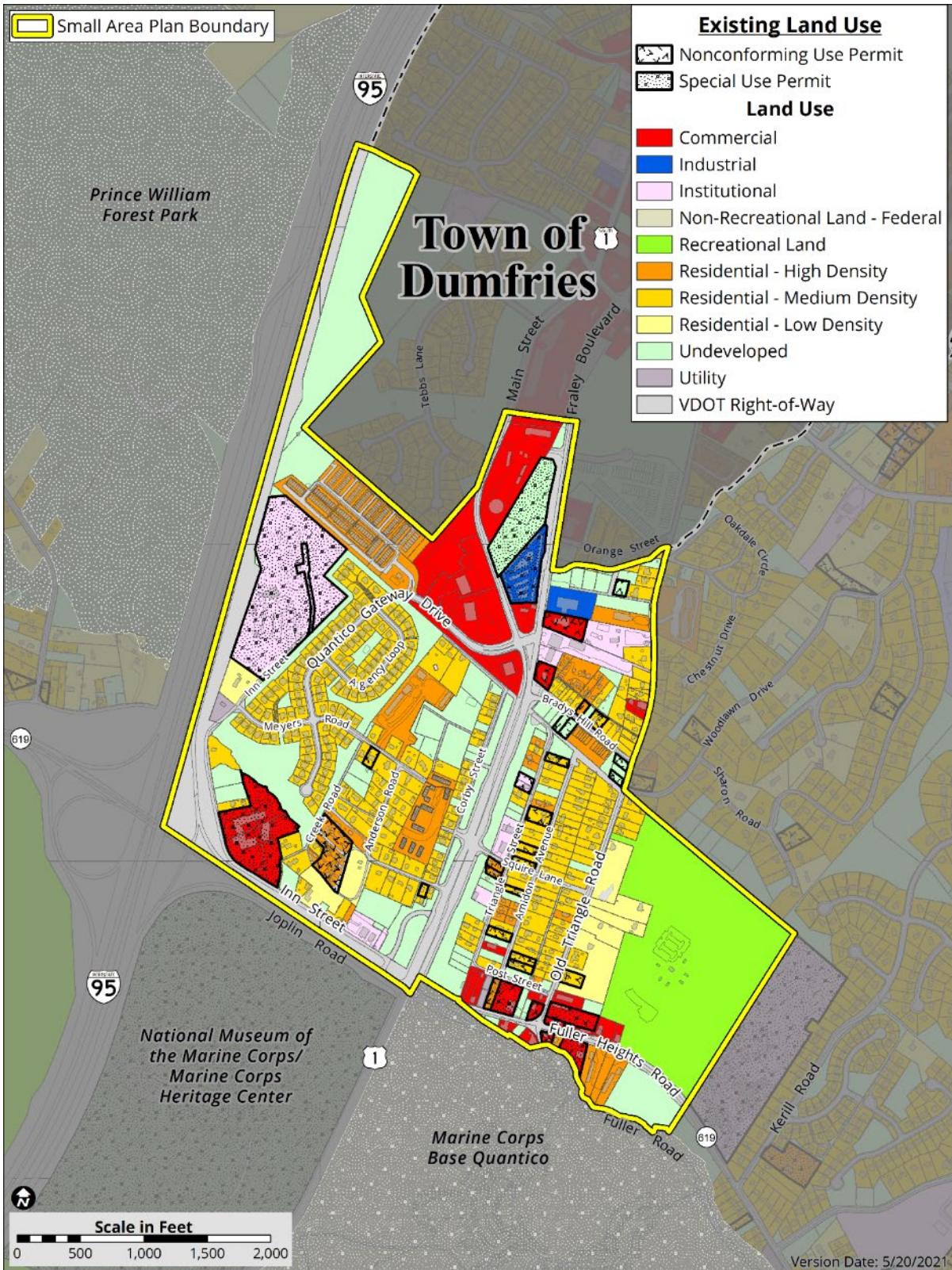


Figure 6: Existing Land Use

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 of the Board of County Supervisors.

The section of Triangle between Old Triangle Road/Woodlake Road and Route 1 is in an Historically Underutilized Business (HUB) Zone, which enables certain businesses within the Zone to receive priority for federal contract dollars. A number of parcels between Post Street and Fuller Heights Road along Triangle's southern boundary, and between Triangle and Corby Streets running down the middle of the study area, are under a Redevelopment Overlay, which qualifies properties for additional density above the underlying zoning, among other incentives. Triangle has two Historic Sensitivity Area overlays, which denote areas of potentially significant known but ill-defined or suspected historic sites, along its western edge. A significant percentage of the open space in Triangle is considered Protected Open Space by the County. Little Creek, which runs along Fuller Heights Road along Triangle's southern border, is in a Chesapeake Bay Resource Protection Area and the FEMA 100-Year Floodplain.

As of March 2021, there are currently seven major zoning cases under development in Triangle, five of which are residential, and two of which are commercial. There is a residential development of 81 townhomes currently under construction on the northwestern corner of Triangle, along Interstate 95. Nine single-family homes are also being constructed along Route 1. Just across Route 1 to the east, there are 25 multi-family and three single-family homes being constructed. The Brady's Hill development, which is also a Planned Mixed Residential District and will add an additional 59 multi-family units to Triangle, is located along the northeastern edge of the study area, just to the north and west of Fuller Heights Park. The commercial projects under development are located along Quantico Gateway Drive, along Triangle's border with Dumfries, and will be approximately 57,000 square feet of gross floor area (GFA) when complete.

During stakeholder discussions, two focus areas in Triangle were established:

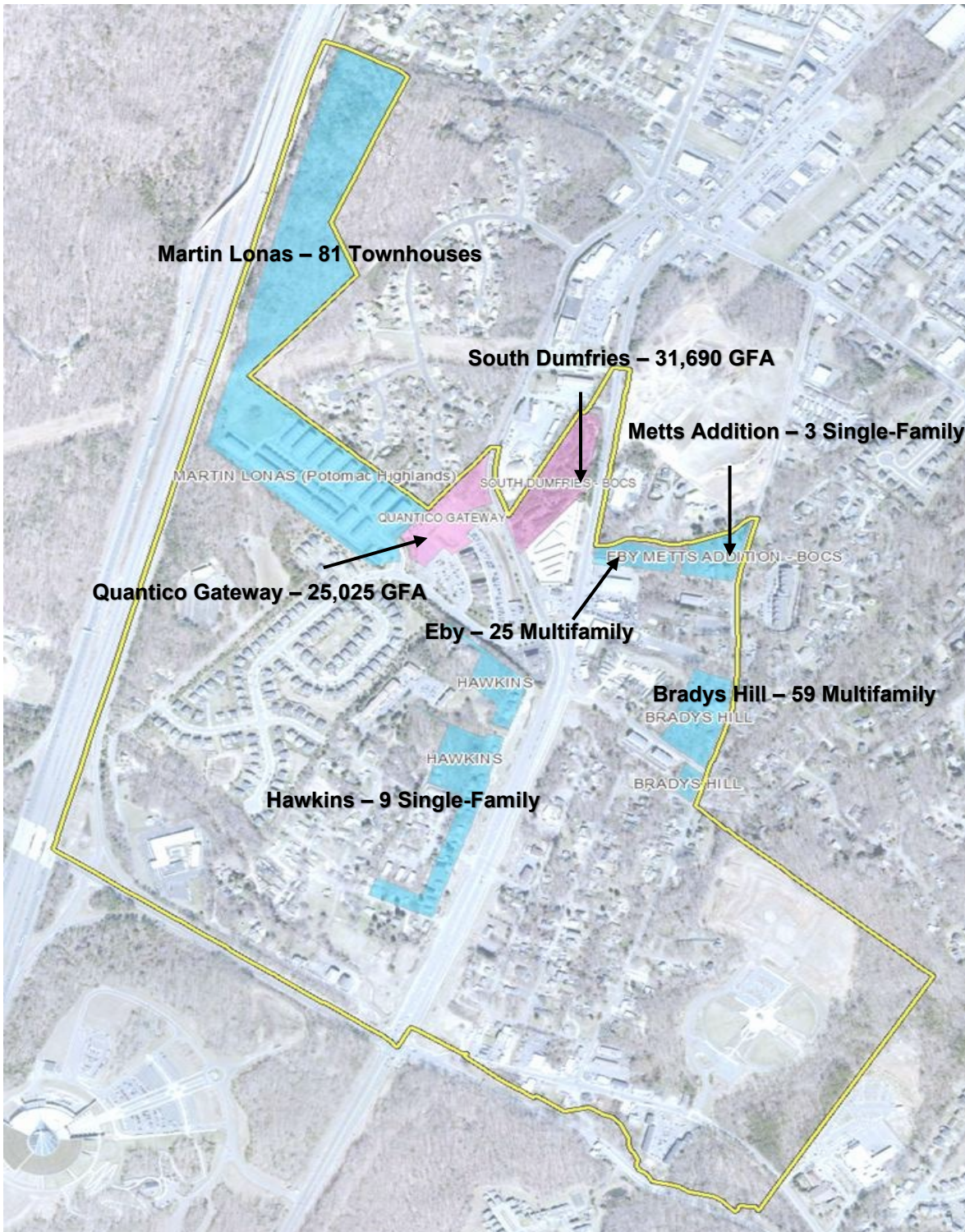
- East of U.S. Route 1 along Fuller Heights Road
- The portion of Quantico Gateway Dr. that abuts U.S. Route 1

Both areas are currently zoned B-1. A key SAP strategy will be to provide redevelopment incentives to spur desired development. One of Triangle's key challenges will be working within its current zoning limitations to promote a sense of place for each of its focus areas. Higher-density mixed-use zoning may be more appropriate for those focus areas. Additionally, although portions of those areas fall within the Redevelopment Overlay District, the District does not extend west of Corby Street or along Quantico Gateway Drive. It is recommended to re-examine the zoning in

Triangle, and consider extending the Redevelopment Overlay, to determine whether it is supporting the community's growth and development goals.

Major Zoning Case/Project Name	Approved Building Area	Remaining to be built
MARTIN LONAS (Potomac Highlands)		81 Townhouses
HAWKINS		9 Single-Family
EBY		25 Multi-Family
METTS ADDITION		3 Single-Family
BRADYS HILL		59 Multi-Family
QUANTICO GATEWAY	25,025 GFA	
SOUTH DUMFRIES - BOCS	31,690 GFA	

Source: Prince William County, December 2020



Source: Prince William County, December 2020

Figure 7: Major Projects

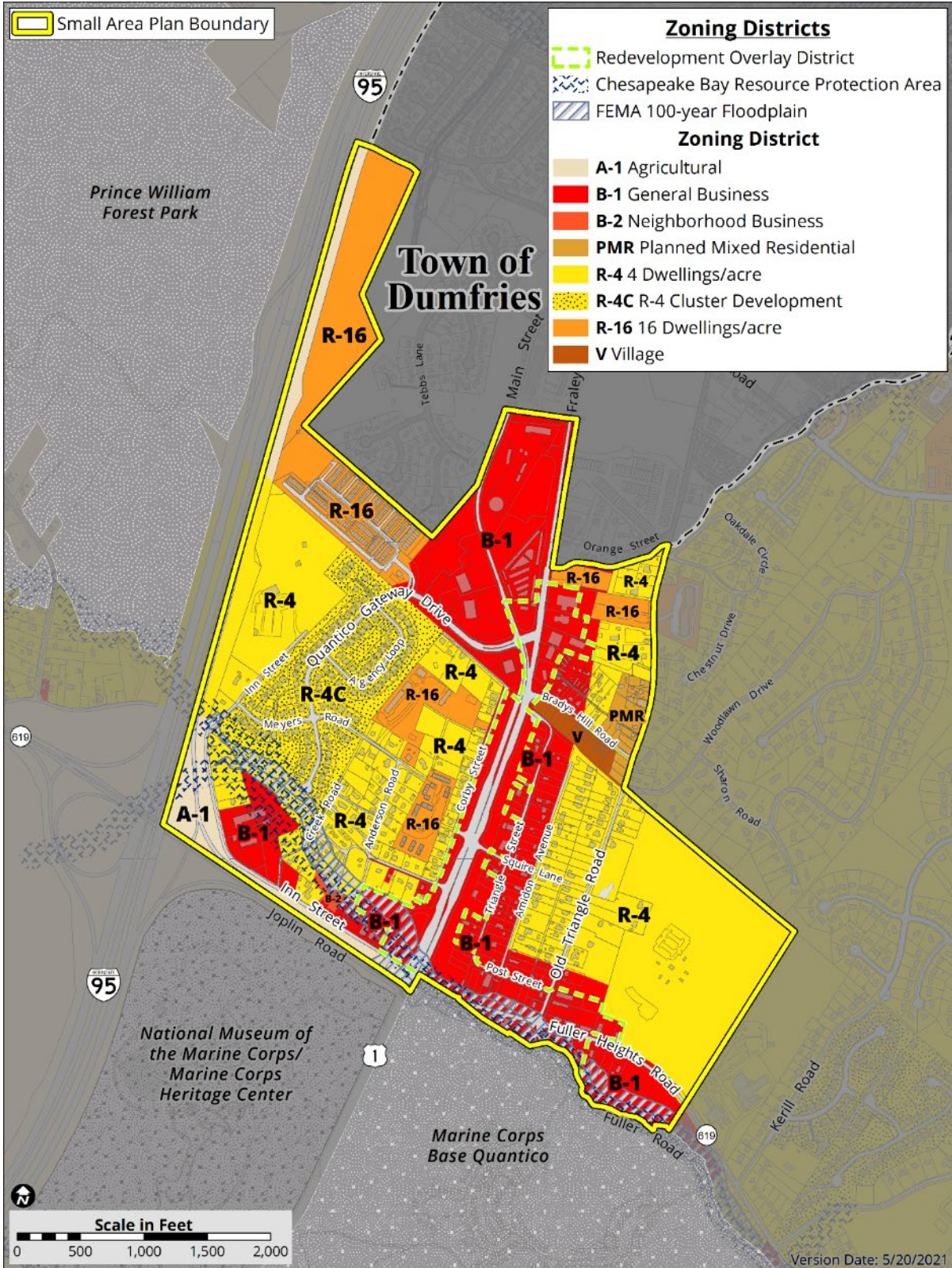


Figure 8: Existing Zoning

Existing Mobility

Road and Highway Network

Nearly all roads in the County are part of the state highway system, which is maintained by the Virginia Department of Transportation (VDOT). There are some private roads in the County, usually within townhouse and multi-family housing developments, and they are typically maintained by homeowner's associations.

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. Roadway minor arterial classification in part helps dictate vehicular throughput and speed. I-95 is a freeway facility located along the western border of the plan area. It allows for the highest throughput and speeds with limited access points in the form of on/off ramps. The local, major collector and minor arteria roads have the greatest potential to promote the local identity and reflect a sense of place through context sensitive design. In 2006, the County began issuing their most recent set of guidelines for roadway design and construction, so roadways designed prior to then may be designed to a different standard.

Principal arterials in the plan area include U.S. Route 1. As a result of the widening of U.S. Route 1, it is largely fronted by wide, grassy easement (which used to be commercial strip). Commercial reappears further north, after Brady's Hill Road. Major collectors include Old Triangle Road and Brady's Hill Road. The major collectors and minor arterials connect residential and commercial areas. According to VDOT, 2019 average daily traffic counts (AADT) along Route 1 going past Triangle are around 16,000 on an average day. Traffic counts begin to increase significantly further north of the study area.

The local roadway network of any given area has a significant impact on that area's "sense of place," for better or for worse. Local roads in the Triangle study area, particularly on the western side of Route 1, are not well-connected. Many of the roadways end in cul-de-sacs and/or dead ends. A "grid" system for local roads tends to promote better connectivity, walkability, and sense of place, particularly if the individual blocks are relatively small, and pedestrian infrastructure is adequate. Small blocks also tend to naturally decrease motorist speed, particularly if there is parking along the street as well. Improving roadway connectivity will be a consideration for the study area, particularly in areas targeted for new development.

The U.S. Census’s OntheMap tool provides commuter inflow and outflow information for the Triangle Census Designated Place (CDP). According to OntheMap, there were 456 people employed in the Triangle CDP in 2018, and 3,800 people living there, for net job outflow of 3,344. There were only 30 residents of Triangle who also worked there (taking up seven percent of the total jobs in Triangle); therefore, of the 456 jobs in Triangle, 426 (93 percent of jobs in Triangle) were filled by people living outside the CDP. This is not unexpected, given the study area’s small size and largely residential nature.

Road	Classification	2019 VDOT Annual Average Daily Traffic Counts
Route 1-Joplin Road to Quantico Gateway Drive	Principal Arterial	16,000
Joplin Road- Route 1 to Route I-95 east side ramp.	Major Collector	21,000
Fuller Heights Road- Route 1 to Old Traingle Road	Major Collector	8,700
Old Traingle Road- Brady Hills Road to Fuller Heights Road	Local Road	4,000

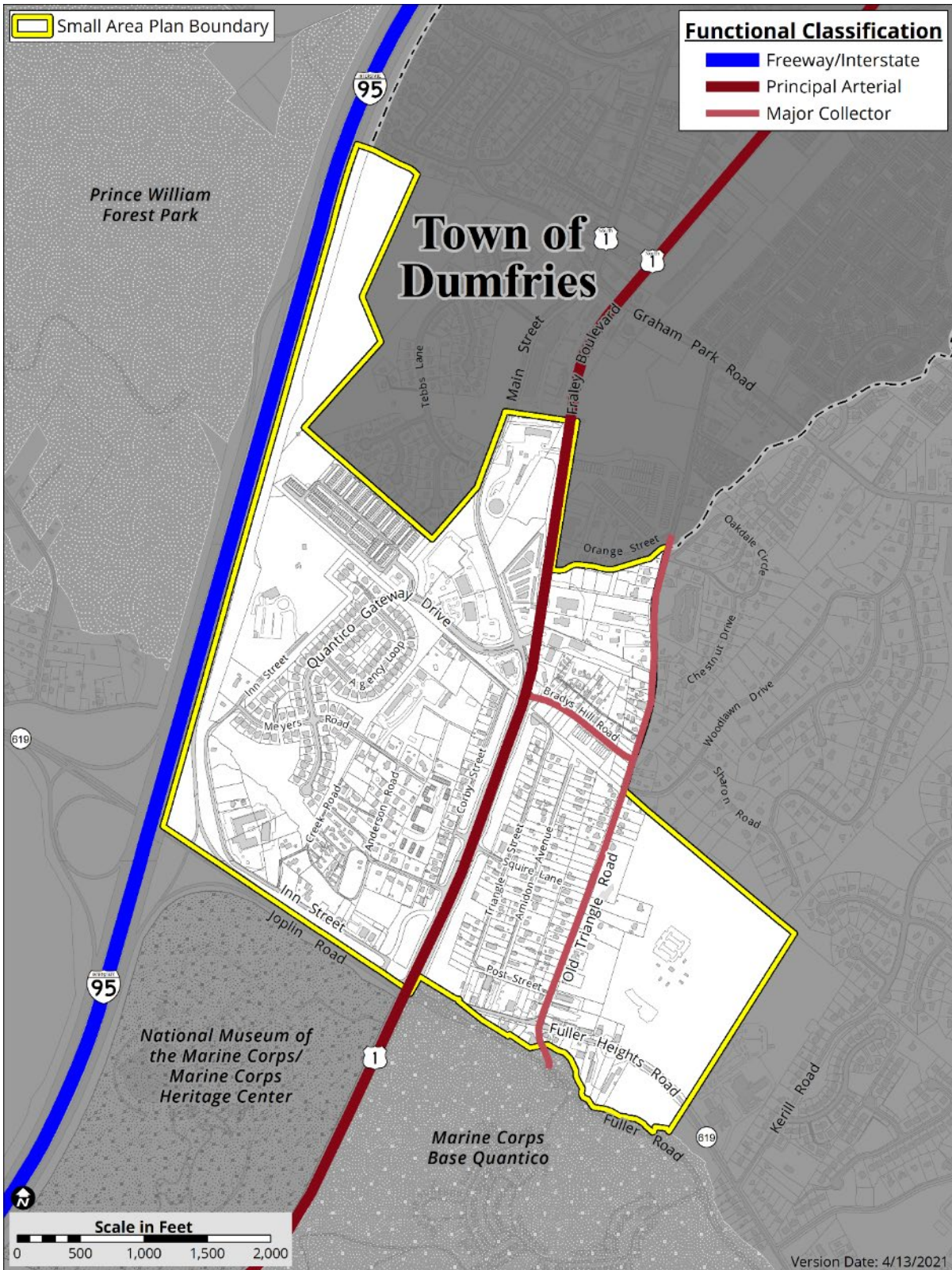


Figure 9: Existing Road and Highway Network

Existing Transit Network

Bus

The plan area is served by the County's Potomac and Rappahannock Transportation Commission (PRTC), which operates OmniRide. OmniRide offers express and local bus services in Northern Virginia neighborhoods along the I-95 and I-66 corridors and helps coordinate car and vanpool ride sharing opportunities. There are two OmniRide Local bus routes that directly serve Triangle, including R1-L, which provides service between Fuller Road and the Woodbridge Virginia Railway Express (VRE), and DF-L, which provides service between The Lofts at Little Creek and the OmniRide Transit Commuter Lot at Potomac Mills. The OmniRide Express also offers regional service along I-95 that starts in Stafford and takes riders to the Pentagon and Washington, D.C.

Rail

The nearest VRE stop is located at the terminus of Fuller Road. The Quantico VRE stop is located within the MCB Quantico installation, so unfortunately, civilians without clearance cannot access this stop. The closest VRE stops to Triangle serving the general public are the Rippon VRE station and the Woodbridge VRE Station, both of which are located north of Triangle. A new, closer VRE station is planned for 2022 at Potomac Shores Community in Prince William County, approximately five miles north of study area.

Transit options provide more alternatives for commuters that reduce gridlock and increase local economic productivity. As Triangle continues to develop, the County should seek to improve its transit connectivity, reliability and frequency. Based on the projected population growth for the area by the Metropolitan Washington Council of Governments (MWCOCG), ensuring that Triangle residents can get to and from jobs without having to use a personal vehicle will become increasingly more important.

Existing Commuter Lot

There is no existing commuter lot within Triangle. The closest commuter lot to the plan area is the Dumfries Commuter lot, located at the intersection of U.S. Routes 1 and 234. There is no recommendation for the inclusion of a commuter parking lot in the plan area.

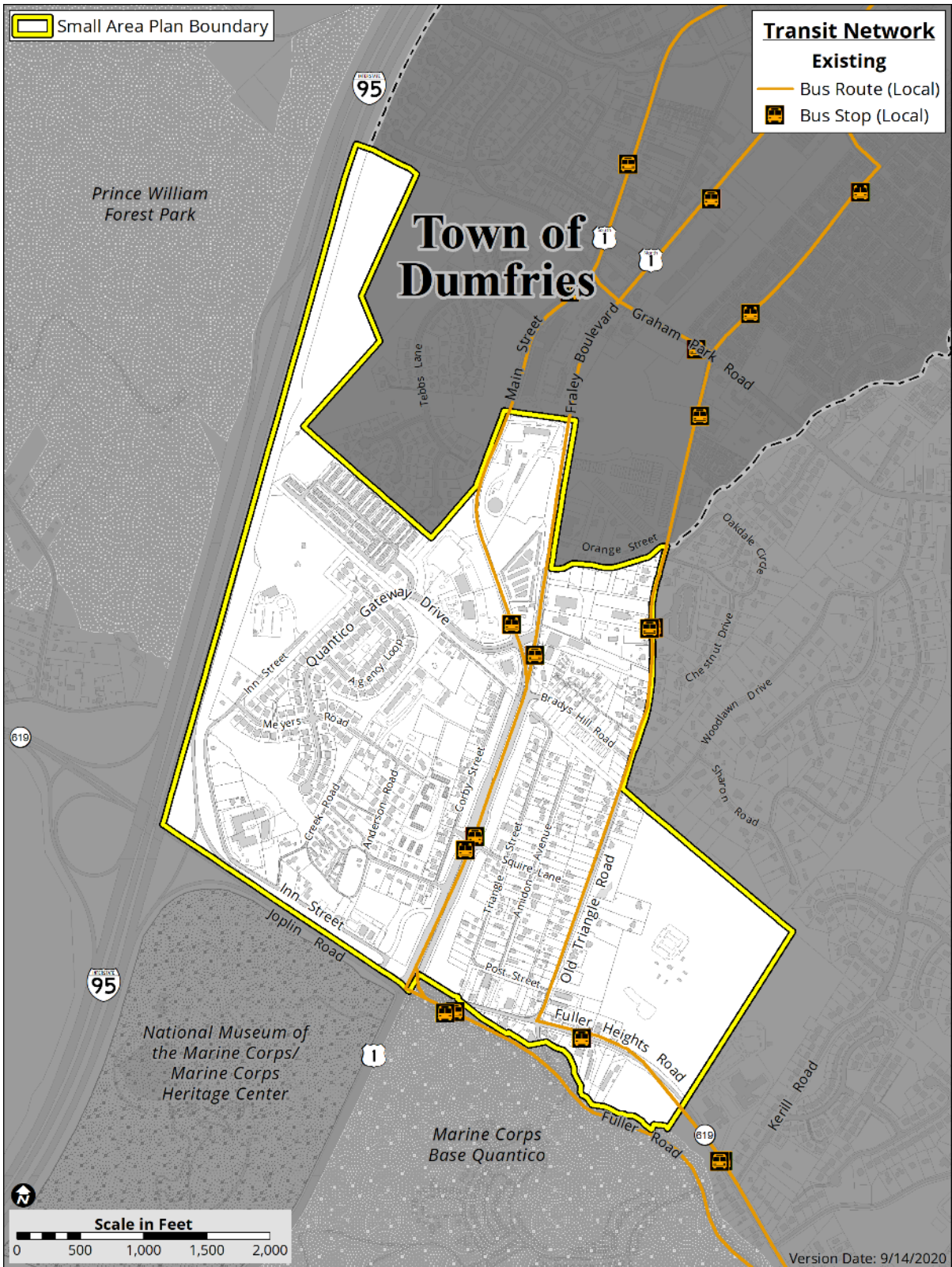


Figure 10: Existing Transit Network

Existing 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. The PHNST is aligned to U.S. Route 1 as it traverses north/south. Existing routes in Prince William Forest Park located to the west of Triangle are planned to connect with the trail on U.S. Route 1 via Joplin Rd, refer to Figures 7 and 8.

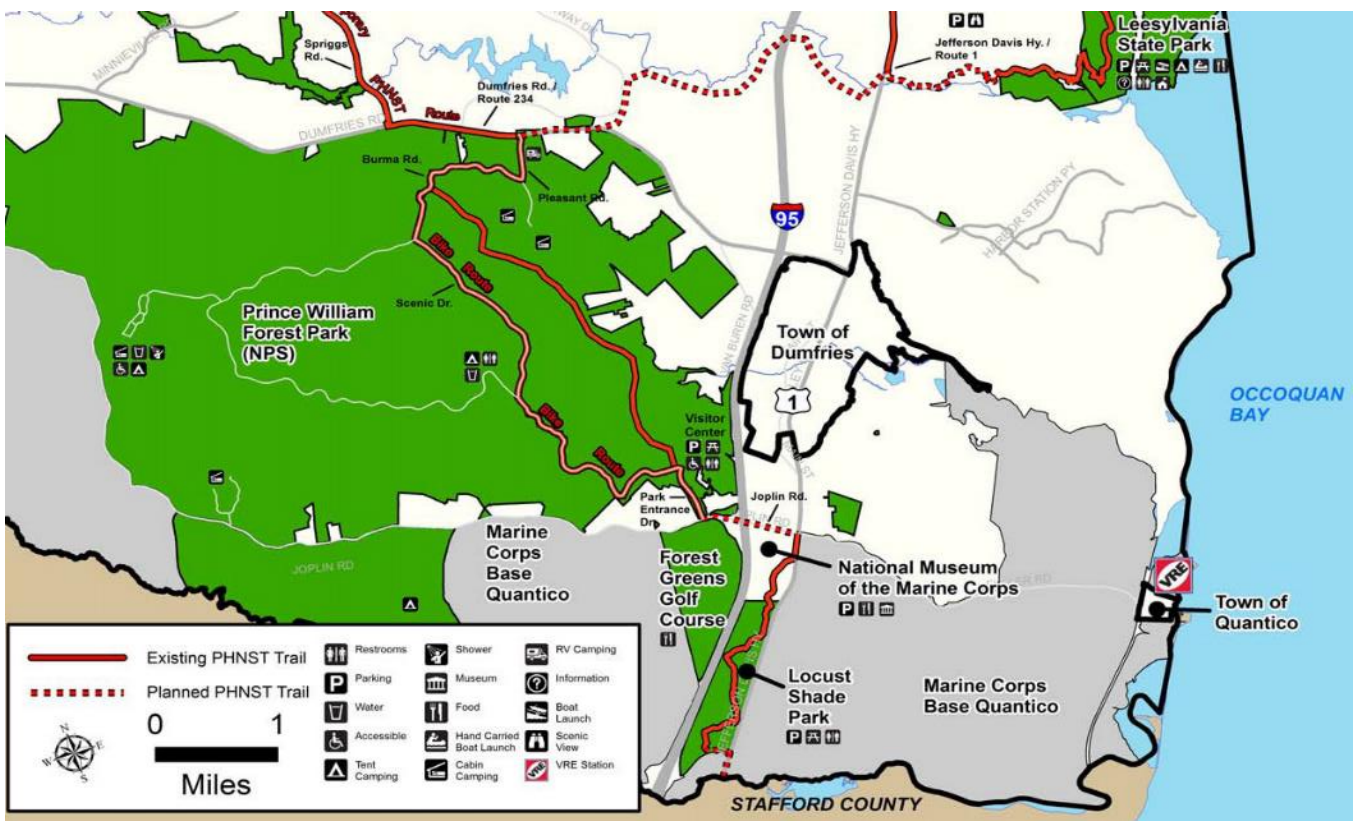


Figure 11: Potomac Heritage National Scenic Trail

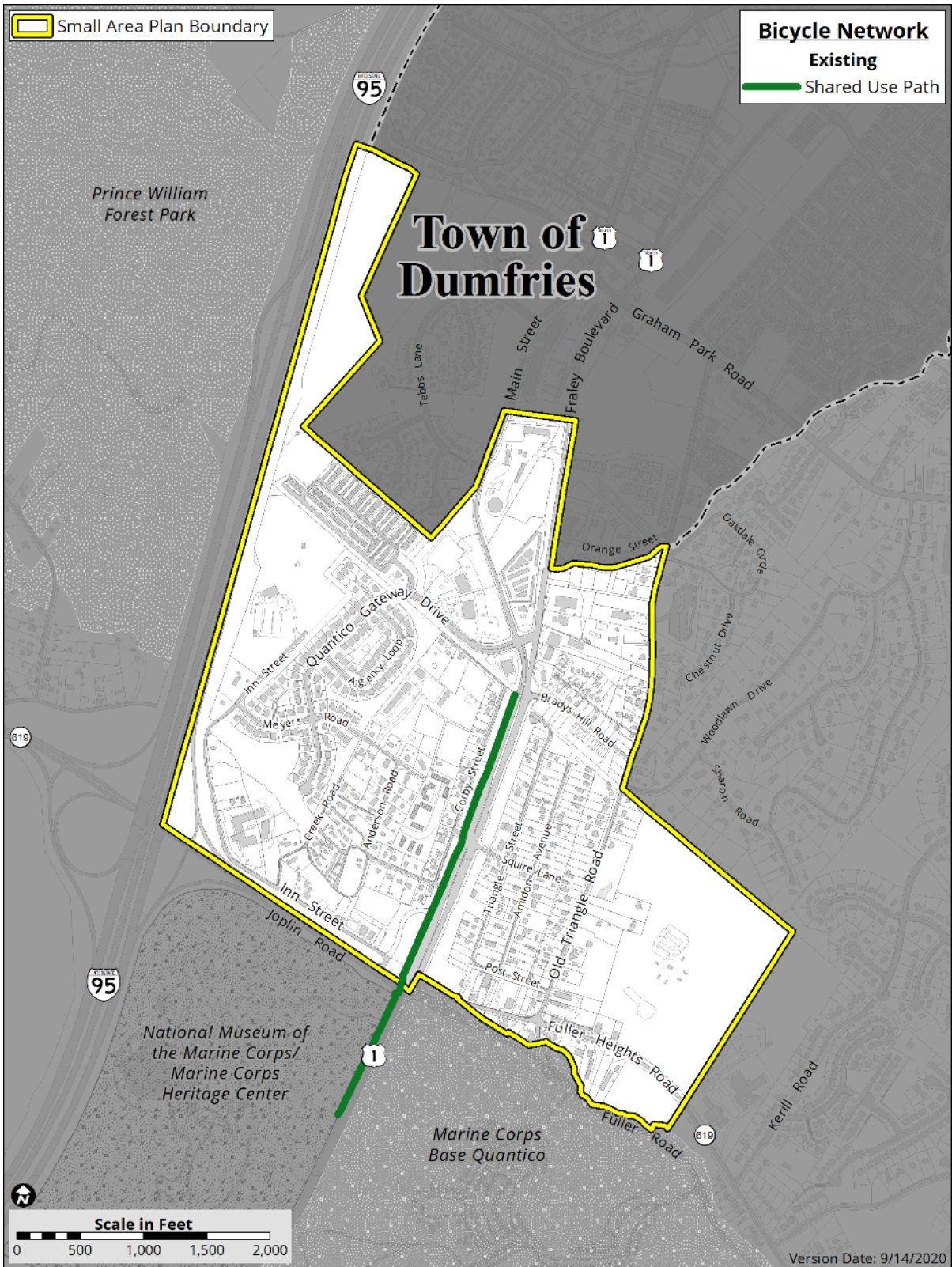


Figure 12: Bicycle Network - Existing

Existing Pedestrian Network

Most of Triangle's more recently built residential areas include pedestrian infrastructure along Quantico Gateway Drive and along major roads, including sidewalks located on portions of Fuller Heights Road, Brady's Hill Road, and along the length of U.S. Route 1 through Triangle. Pedestrian infrastructure is limited, and sometimes nonexistent, within the older residential developments.

Existing sidewalks in the neighborhood west of U.S. Route 1 are only found within the newer residential and commercial development located on Quantico Gateway Drive. Sidewalks are narrow, at four feet, but consistent and located on both sides of streets within the subdivision. Older parts of residential areas west of U.S. Route 1 lack any sidewalks, as does the residential neighborhood in the Catesby Howard Subdivision east of U.S. Route 1. While not all residential neighborhoods need sidewalks to serve as safe and attractive pedestrian thoroughfares, the road itself has to compensate through meeting certain criteria, including but not limited to slow vehicular speeds, wider pavement and low traffic volumes.

A significant challenge for enhancing pedestrian connectivity within Triangle is how to increase pedestrian connectivity across U.S. Route 1. Signalized pedestrian crossings are currently limited to intersections with traffic lights, which are located at the intersection of Joplin Road and U.S. Route 1 at the southern end of the plan area, and further north at the intersection of Squire Lane and U.S. Route 1. The distance between these two pedestrian crossings is more than 1,200 feet, which is more than the NACTO recommended distance. There are no other pedestrian crossings within the plan area.

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 lack of existing and connected infrastructure is one of the study area's challenges; and it is the responsibility of this plan to guide the development of a cohesive active transportation and transit network. Strengthening local pedestrian and bicycle infrastructure in Triangle will be key for promoting growth and development moving forward. Millennials and "Gen Z-ers" are increasingly demanding multimodal transportation options for both commuting and recreation.

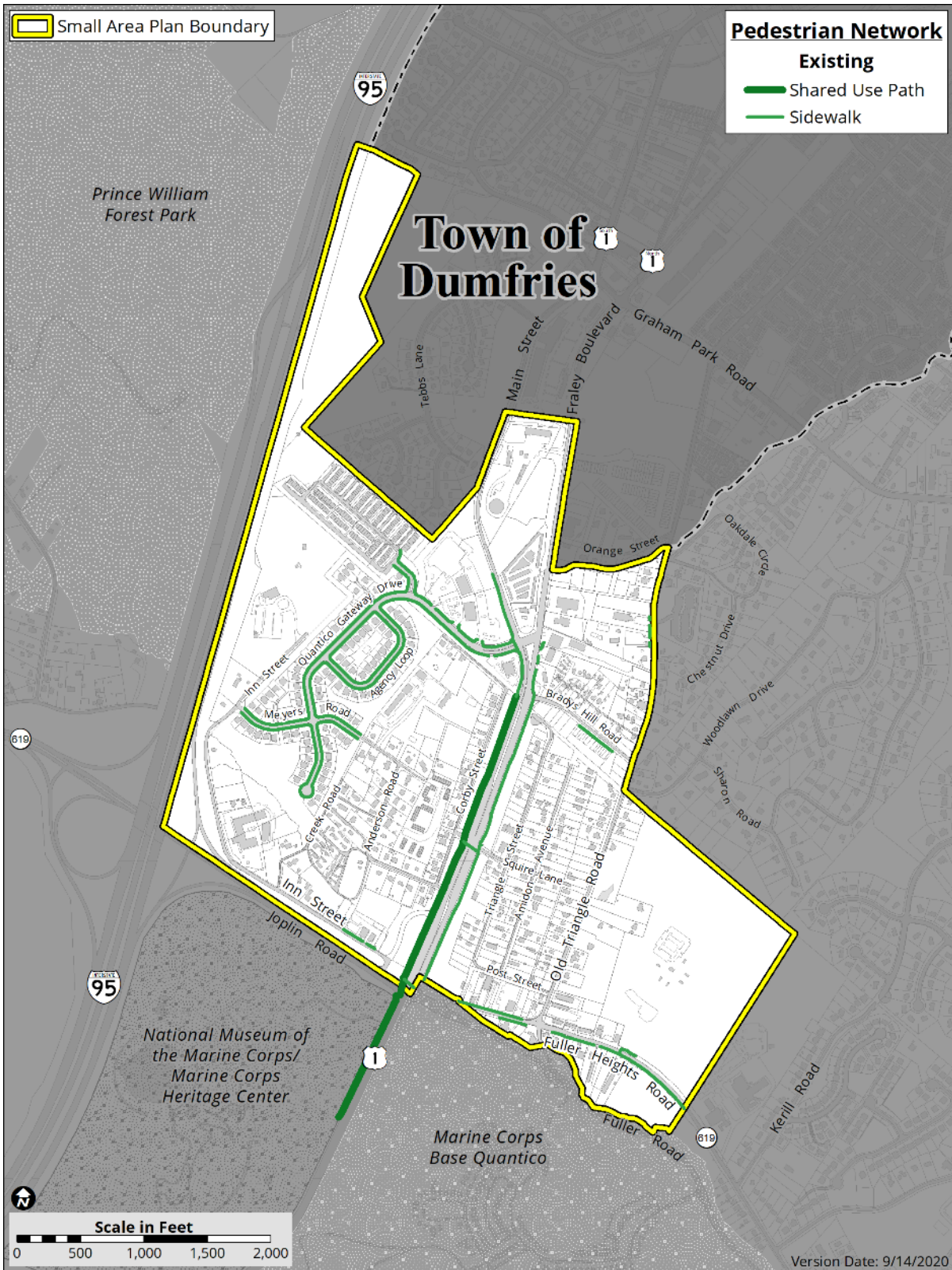


Figure 13: Pedestrian Network - Existing

Existing Utility Infrastructure

Utility infrastructure in Triangle provides electricity, telecommunications services, stormwater management, and public water and sewer services. There are electrical distribution lines throughout the plan area. Most of the electrical transmission lines within the study area are below 150kv, but there is one high-voltage line that crosses Triangle to the north. There is a telecommunications tower in the western part of the study area, adjacent to Interstate 95.

Within the small area plan boundary, water distribution is provided through the Prince William Service Authority facilities. County-wide, there are 22 water towers and 15 water booster stations. There are no water towers, water booster stations, or sewage lift stations in the plan area. Triangle is served by a comprehensive underground stormwater management system, most of which is operated and maintained by the County. Additionally, there are multiple best management practices (BMPs) throughout the study area to help manage on-site stormwater runoff, most of which are privately owned and managed; the largest serves the Garrison Woods subdivision.

Any larger-scale new development in the Triangle study area will require a comprehensive evaluation of the utilities that currently serve development sites, to ensure that there is sufficient capacity to serve the proposed development. The site developer may want to partner with the County, if it is determined that utility upgrades are needed, to provide the required infrastructure to the site.

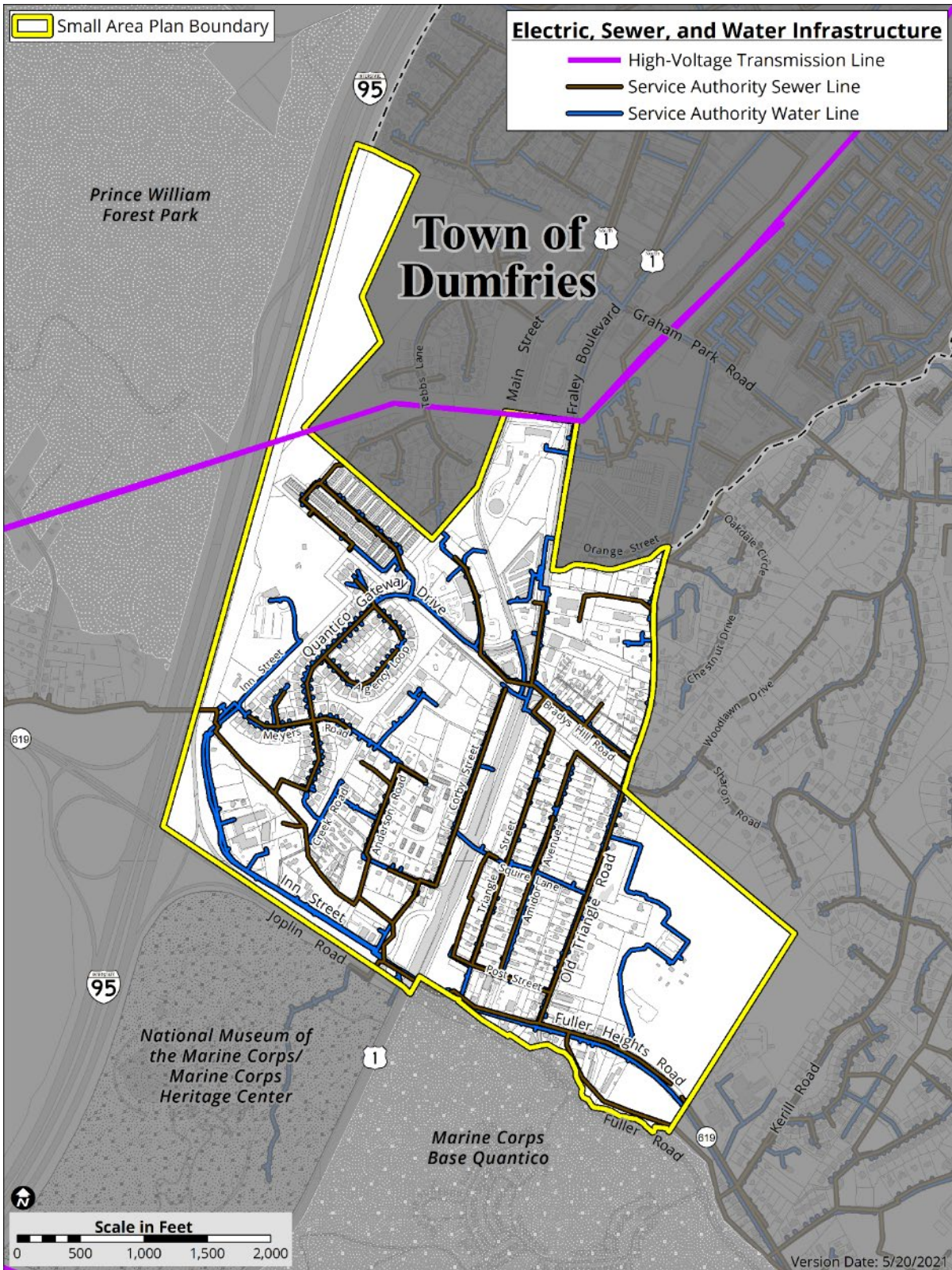


Figure 14: Existing Utility Infrastructure

Existing Environmental Conditions

The planning area is bounded on the west by Interstate 95, to the north by the Town of Dumfries, to the east by single family home subdivisions, and to the south and southeast by MCB Quantico. 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 376 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	% of Study Area
RPA	27.91	8%
FEMA 100-year floodplain	21.79	6%
Forested (tree canopy)	141.37	37.7%
Non-Forest	134.61	35.8%
Impervious Area	99.64	26.5%

The largest share of land area in the study area (~38 percent) is forested, with the next largest share (~36 percent) non-forested/cleared, followed by impervious area at (~27 percent) of the total study area acreage. Having a high percentage of tree cover helps keep the study area cooler and increases natural stormwater infiltration.

Soils and Topography

According to Prince William County's GIS mapping tool, soils within the study area are primarily sand, loam, or a sandy loam mix, typically falling within hydrologic groups A and B. Hydrologic group A and B soils tend to be highly permeable and absorb stormwater runoff quickly. Soils in the study area tend to have erodibility (K) factors between 0.2 and 0.4, meaning the soil is moderately erodible. In terms of topography, the highest points in the study area tend to be between Route 1 and I-95. The topography slopes down from there towards Route 1, and also slopes down towards Little Creek on the southern boundary of the study area. There are also some higher

areas between Route 1 and Fuller Heights Park on the eastern side of Route 1. Typical slopes in the study area range between zero and seven percent, but there are also areas of much steeper slopes.

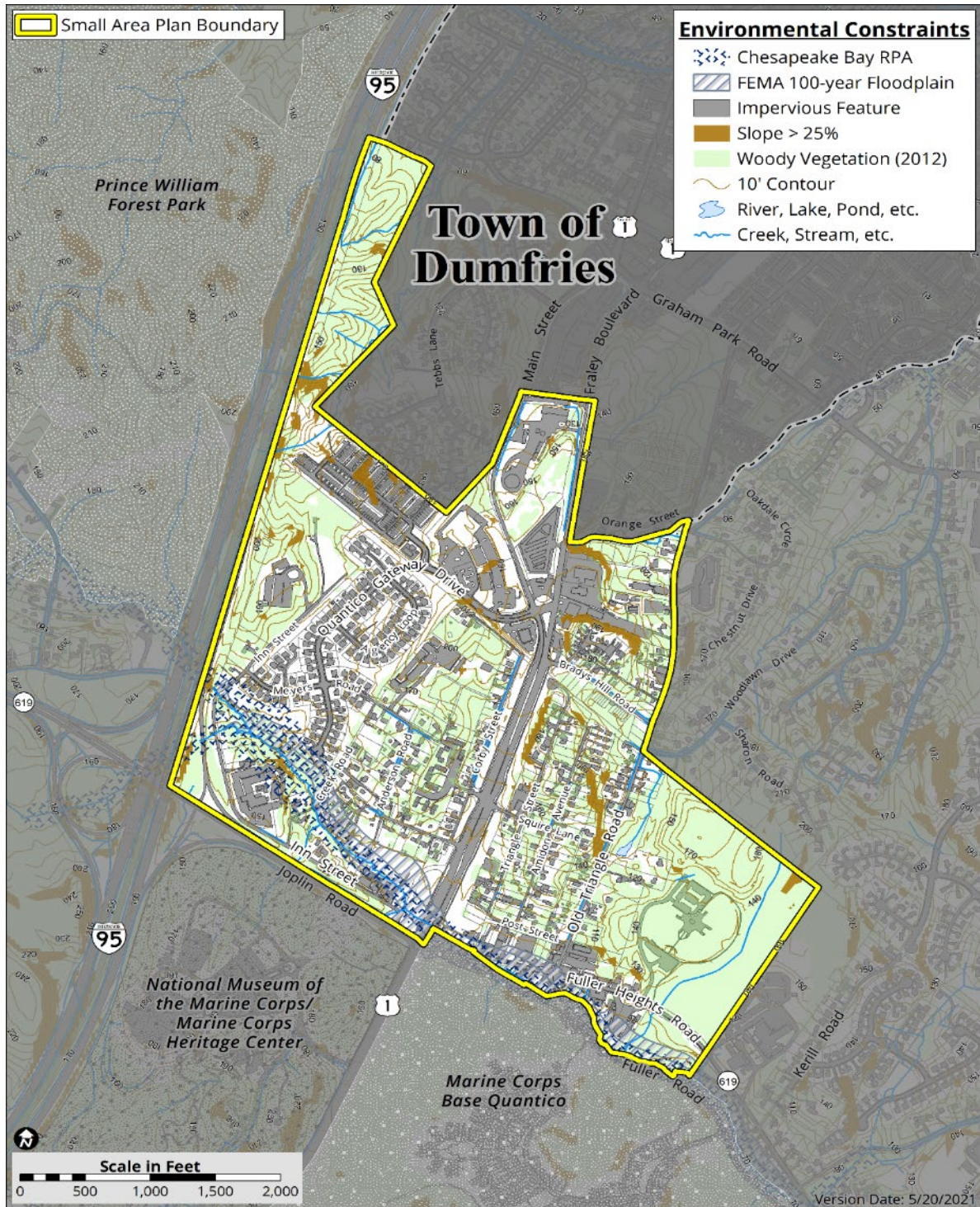


Figure 15: Environmental Constraints

Existing Green Infrastructure

An open space corridor crosses the plan area on the western side from north to south. Protected open space is integrated in the recent residential development on Quantico Gateway Drive. The eastern side of Route 1 within the study area has significantly more tree cover than the western side of the study area. Conserving the existing tree canopy will need to be a consideration as Triangle continues to grow and develop.

The Triangle Small Area Plan is located in Park Planning District 14 (PPD 14) which contains 338.1 acres of managed park land (see PPD14 map and associated report card below). This park planning district is served by Locust Shade, a regional park and Fuller Heights, a community park. Of these, only the Fuller Heights Park is physically located within the small area plan and comprises the entirety of public open space in the planning area. Accessible, especially from the Triangle study area, is Forest Green Golf Park, Locust Shade Park and the Prince William Forest Park.

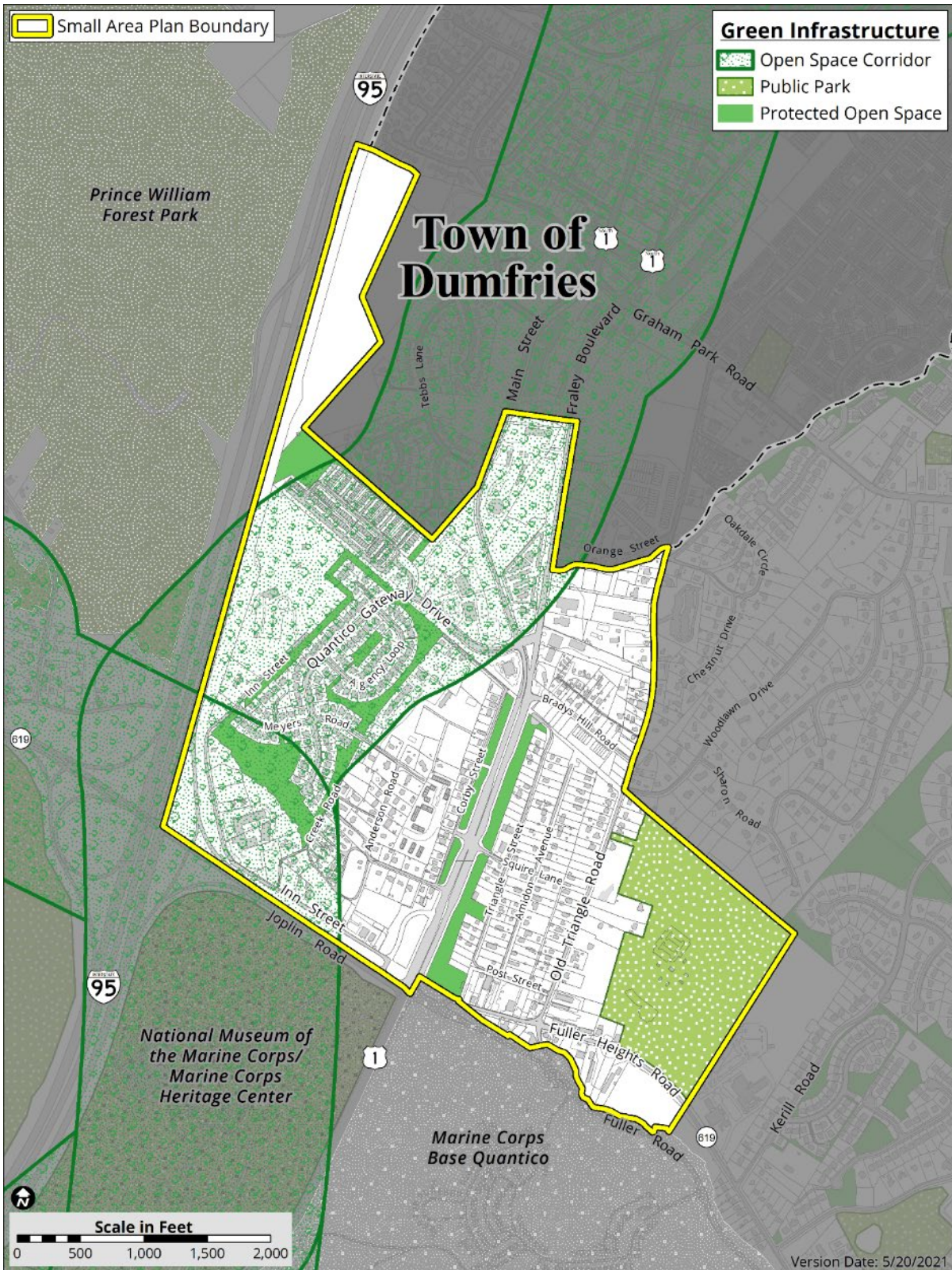
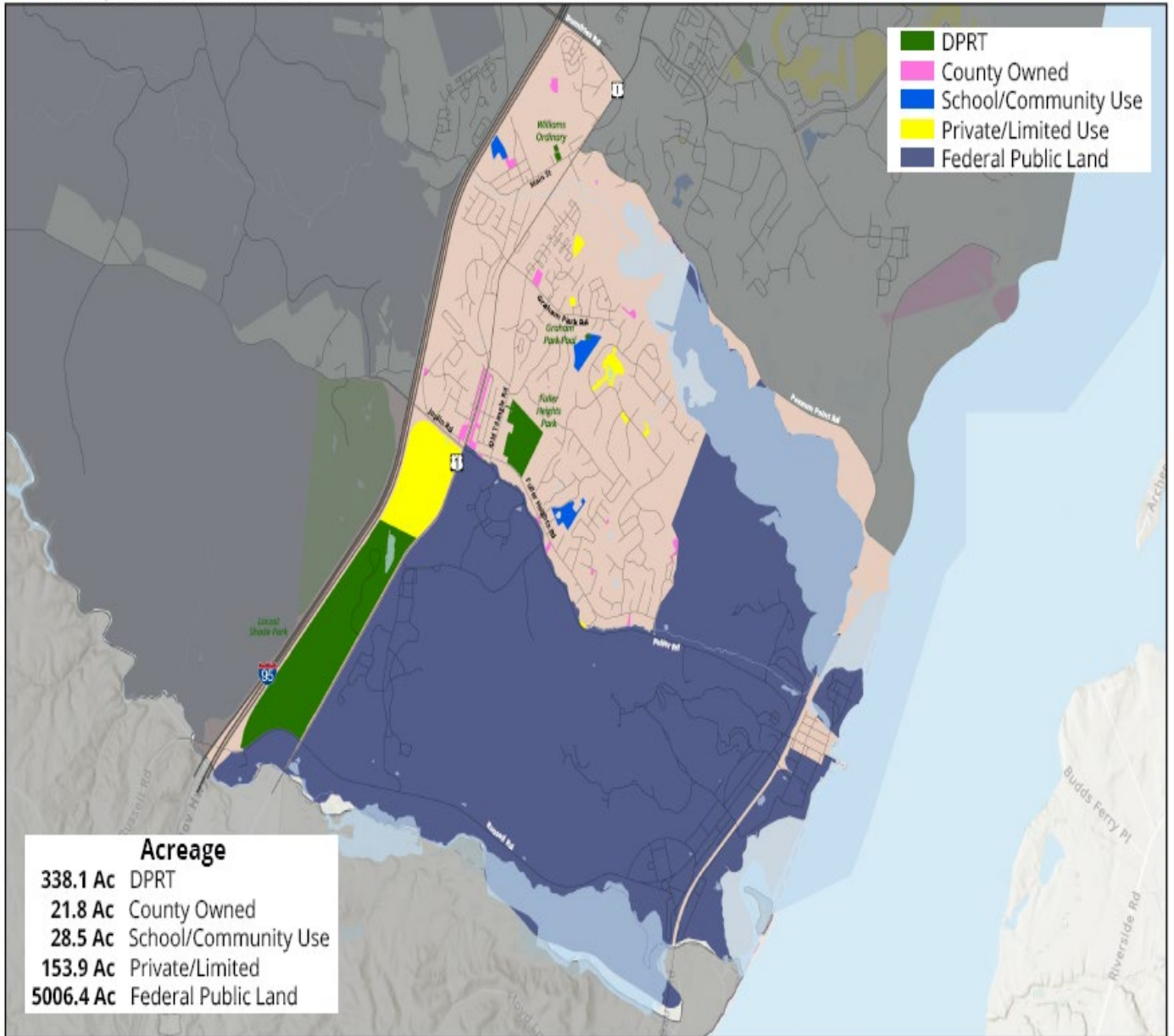


Figure 16: Existing Green Infrastructure



Prepared by the PRC, Department of Parks, Recreation, & Tourism
George Helwig Memorial Park Administrative Offices
14420 Driscoll Road
Manassas, VA 20112
Phone: 703-792-7060
Fax: 703-792-4278



1
Miles

Note: Any determination of topography or contours or any depiction of physical improvements, property lines, or boundaries is for general information only and shall not be used for design modification or construction of improvements to real property or for floodplain determination.



Figure 17: Park Planning District 14

Watersheds

Most of the study area falls within the Quantico Creek (645) watershed, with the northern portion on the western side of Triangle falling in the Quantico Creek (627) watershed, and the eastern side falling within the Quantico Creek (640) watershed. There are no major bodies of water in the study area; the largest is Little Creek, a narrow creek that falls within the FEMA 100-year floodplain (flood zones A and AE). The creek is also surrounded by an RPA.

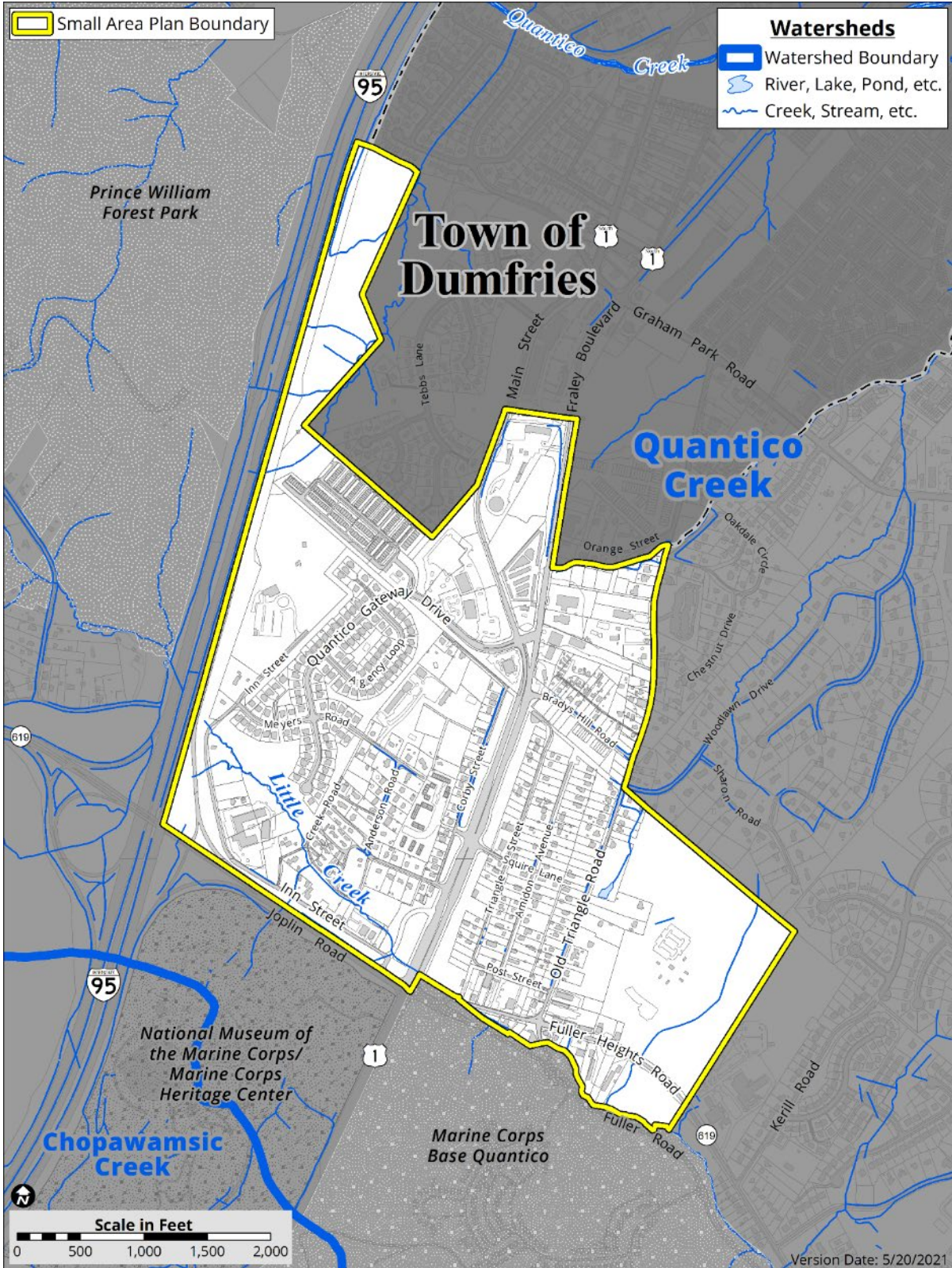


Figure 18: Watersheds

Existing Cultural Resources

Cultural resources are those tangible elements of our shared history left behind by previous inhabitants. Cultural resources include individual architectural and archaeological sites, historic districts, cemeteries, battlefields, cultural landscapes, museum objects, and archival materials. Multiple archaeological surveys and studies have been conducted of the Triangle area over the last several decades, mostly along Route 1, as mentioned earlier in the SAP. According to those studies, there are approximately 59 architectural resources in the surrounding vicinity along Route 1.²¹ Eight archaeological sites and 14 artifact locations have been identified.

As previously noted, prior to the post-WWII development boom, land in the study area was primarily under cultivation. Triangle has two Historic Sensitivity Area overlays, which denote areas of potentially significant known but ill-defined or suspected historic sites. Both are located along the area's western edge. A small portion along the area's northern border lies within Pre-Historic and Historic High-Sensitivity areas. The southeastern corner of the study area along Fuller Heights Road/Little Creek also falls within a Pre-Historic High-Sensitivity area. A Civil-War-era cemetery, the Amidon-Lunsford cemetery, has also been identified within the study area. There are also two Heritage Corridors running through Triangle: Potomac Heritage National Scenic Trail and the Washington-Rochambeau National Historic Trail.²²

Along the corridor extending 100 feet from the edge of pavement on each side of U.S. Route 1 from the Stafford County line to Route 123, eight archaeological sites and 14 artifact locations were identified. Twelve of the artifact locations consisted of nondiagnostic Native American lithics. Three of the eight sites recorded were located on MCB Quantico. Preserving and promoting Triangle's rich heritage will be key to better establishing a "sense of place" and identity for the community.

²¹ Hatch, Brad and Marco Gonzalez, *Phase I Archaeological Survey of A 5-Acre Parcel (GPIN: 8188-677083) In the Town of Dumfries, Prince William County, Virginia*, (Dovetail Cultural Resource Group, 2009), 21-26.

²² Prince William County GIS

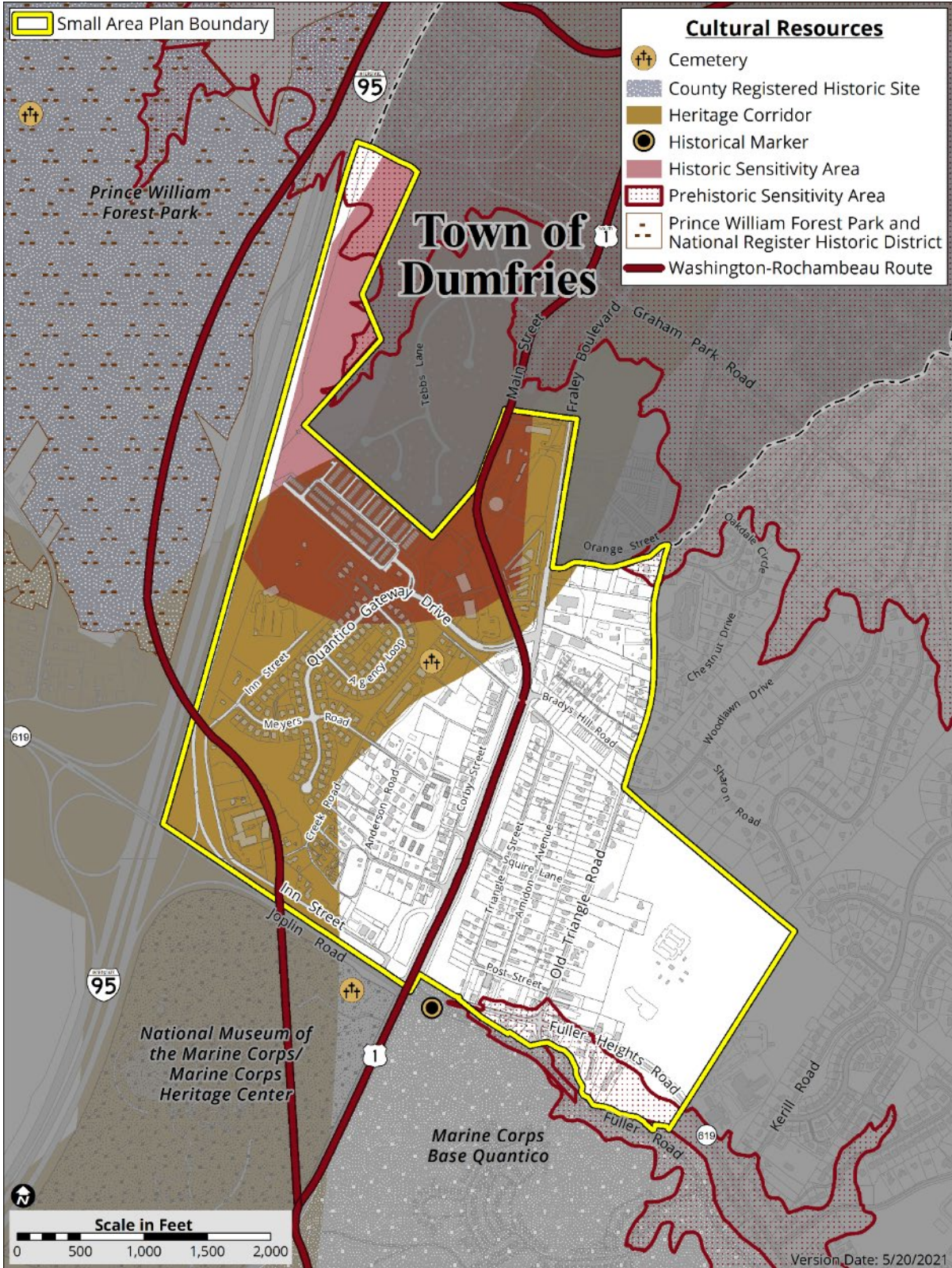


Figure 19: Cultural and Historic Resources

Community Indicators

Residential Community Indicators

Community indicators provide an important baseline for any Small Area Plan. They help governments, citizens or businesses understand a community's context, its relative health and vitality, and its relationship to the County as a whole. This section details key socioeconomic indicators in Triangle. According to the 2014 – 2018 American Community Survey (ACS) and ESRI estimates, the Triangle study area has an estimated population of 1,443 residents, with a median age of 37.4. Between 2000 and 2018, the study area population increased by 11 percent (around six percent annually). The MWCOG Round 9.1 Cooperative Forecast Transportation Analysis Zone (TAZ) data projects that the study area's population will grow at an annual rate of 2.8 percent annually between 2020 and 2040, and that household growth/formation will outpace population growth, growing at approximately 3.2 percent annually during the same time period. The largest share of Triangle residents, 77 percent, are between the ages of 18 and 64, which is significantly higher than the percentage of County residents (56 percent) who fall within that demographic – Triangle has fewer children, and fewer people of retirement age, than the County overall. The study area's average household size of 2.5 is lower than the County overall, which has more than three residents per household on average.

The median household income in Triangle approximately \$37,000 lower than the median income of the entire Prince William County. A significantly higher percentage of households in the study area fall below Federal poverty levels (eight percent). Twenty-two percent of Triangle households speak a language other than English at home. There were 93 military veterans living in the Study Area as of 2018 (approximately eight percent of the study area population), and 41,479 veterans in Prince William County (approximately 9 percent of the County population). The current estimated unemployment rate in the study area from 2019, 10.6 percent, is approximately one point higher than the County's estimated unemployment rate; the high unemployment rate is most likely due at least in part to the COVID -19 pandemic.

2020 Population by Race/Ethnicity	Triangle Study Area	Prince William County
Total	1,443	465,718
White Alone	43%	52%
Black Alone	35%	21%
Asian Alone	8%	10%
Other	15%	12%
Two or More Races	0%	6%
Hispanic Origin	11%	26%

Source: 2014 - 2018 ACS Estimates; 2020 ESRI Estimates; Prince William County, 2020

The study area is somewhat more diverse than the County overall; the largest share of Triangle residents (43 percent) identify as White; the next-largest share, 34 percent, identify as Black, followed by 15 percent of residents claiming another race not specifically identified. A smaller percentage of Triangle residents identify as being of Hispanic origin than in the County overall; only 11 percent, compared with 26 percent of Prince William County residents.

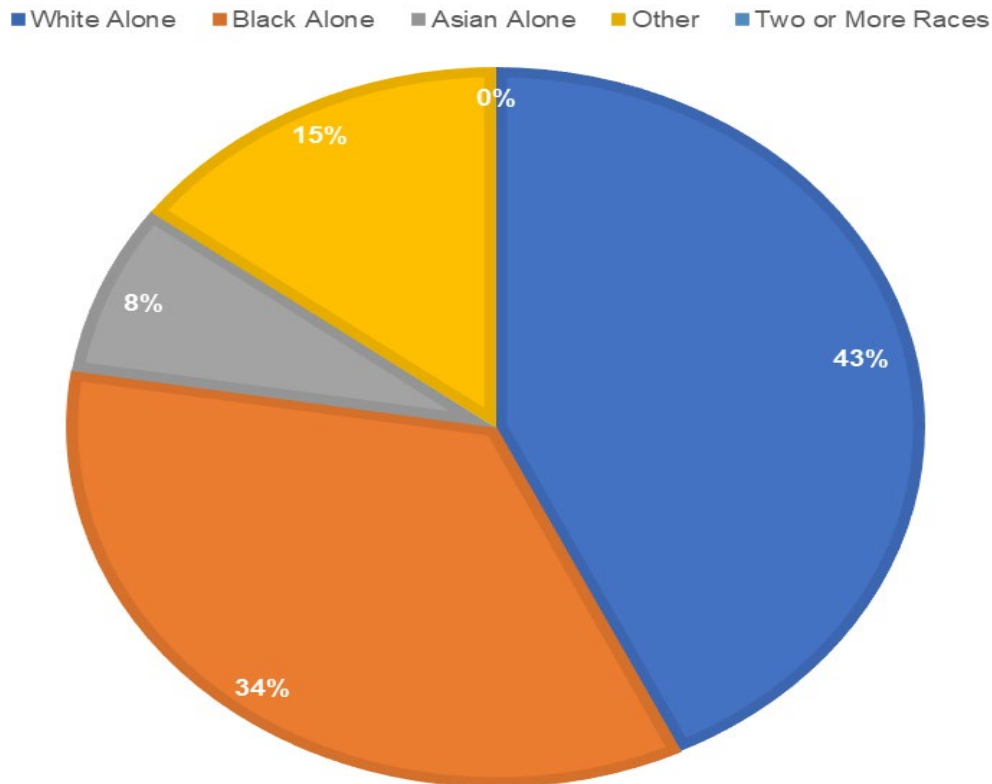


Figure 20: Population Demographic Breakdown, Triangle Study Area

Topic	Triangle Study Area	Prince William County
Housing Units	756	155,181
% Owner-Occupied	46.5%	71.4%
% Renter-Occupied	53.5%	25.5%
% Vacant	0.0%	3.1%
Median Home Value	\$356,024	\$385,032
Median Gross Rent	\$981	\$1,675

Source: 2014 - 2018 ACS Estimates; 2020 ESRI Estimates; Prince William County, 2020

ESRI estimates that there are approximately 756 housing units in the Triangle study area, and that nearly 46 percent are owner-occupied, 54 percent are renter-occupied. The homeownership rate in Triangle is significantly lower than for the County overall, where just over 71 percent of housing units are owner-occupied. Median home value is also lower in Triangle (by approximately \$29,000), compared with the rest of the County.

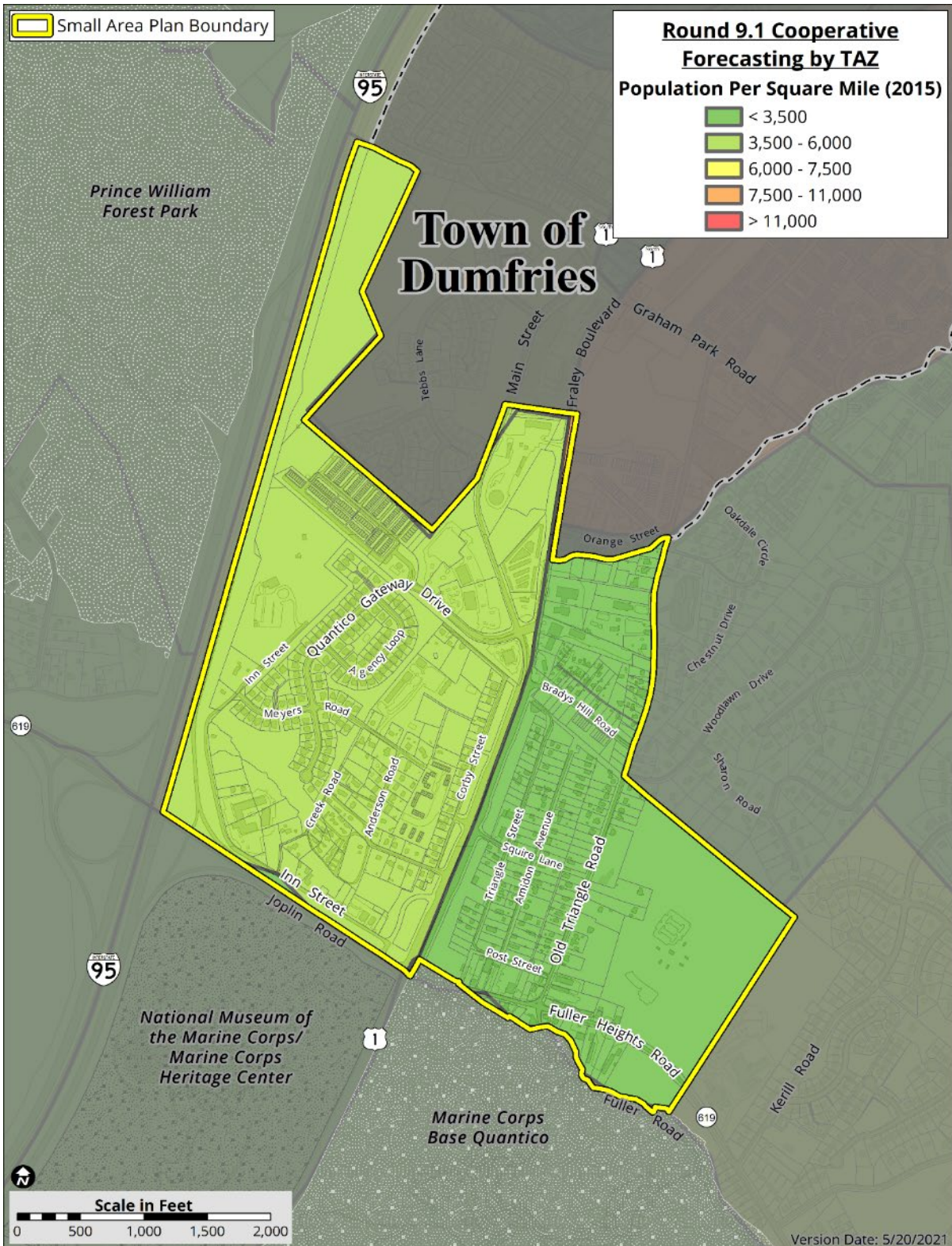


Figure 21: Population per Square Mile

Employment and Workforce Indicators

2020 Population 25+ by Educational Attainment	Triangle Study Area	Prince William County
Total	1,213	303,791
Less than 9th Grade	6%	5%
9th - 12th Grade, No Diploma	13%	5%
High School Graduate	26%	18%
GED/Alternative Credential	5%	2%
Some College, No Degree	25%	19%
Associate Degree	5%	8%
Bachelor's Degree	13%	25%
Graduate/Professional Degree	9%	18%

Source: 2014 - 2018 ACS Estimates; 2020 ESRI Estimates; Prince William County, 2020

As the table shows, although more than half of study area residents over the age of 25 have at least some college, there are fewer college graduates and residents with a graduate or professional degree when compared to Prince William County overall. The largest shares of residents have a high school diploma as their terminal degree (26 percent) or some college, but no degree (25 percent).

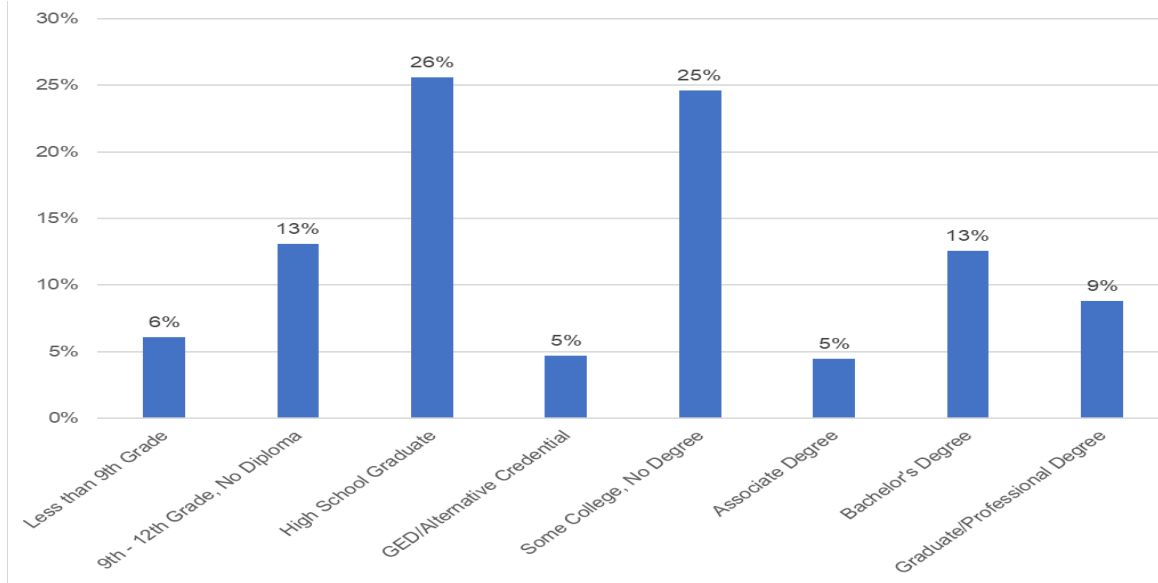


Figure 22: Educational Attainment, Triangle Study Area

2020 Employed Population 16+ by Industry	Triangle Study Area	Prince William County
Total	887	234,189
Agriculture/Mining	0%	0%
Construction	10%	10%
Manufacturing	4%	3%
Wholesale Trade	1%	1%
Retail Trade	14%	9%
Transportation/Utilities	10%	6%
Information	3%	2%
Finance/Insurance/Real Estate	8%	5%
Services	37%	51%
Public Administration	14%	13%

Source: 2014 - 2018 ACS Estimates; 2020 ESRI Estimates; Prince William County, 2020

The largest share of Triangle's employed population work in the services industry (37 percent), compared with more than half of the total County population (51 percent). Public administration and retail trade are the next-largest shares of employment by industry, with 14 percent of study area residents each. None of the residents work in the agriculture or mining industries. The percentage of residents working in retail trade, finance, insurance, or real estate are overrepresented when compared with the County overall.

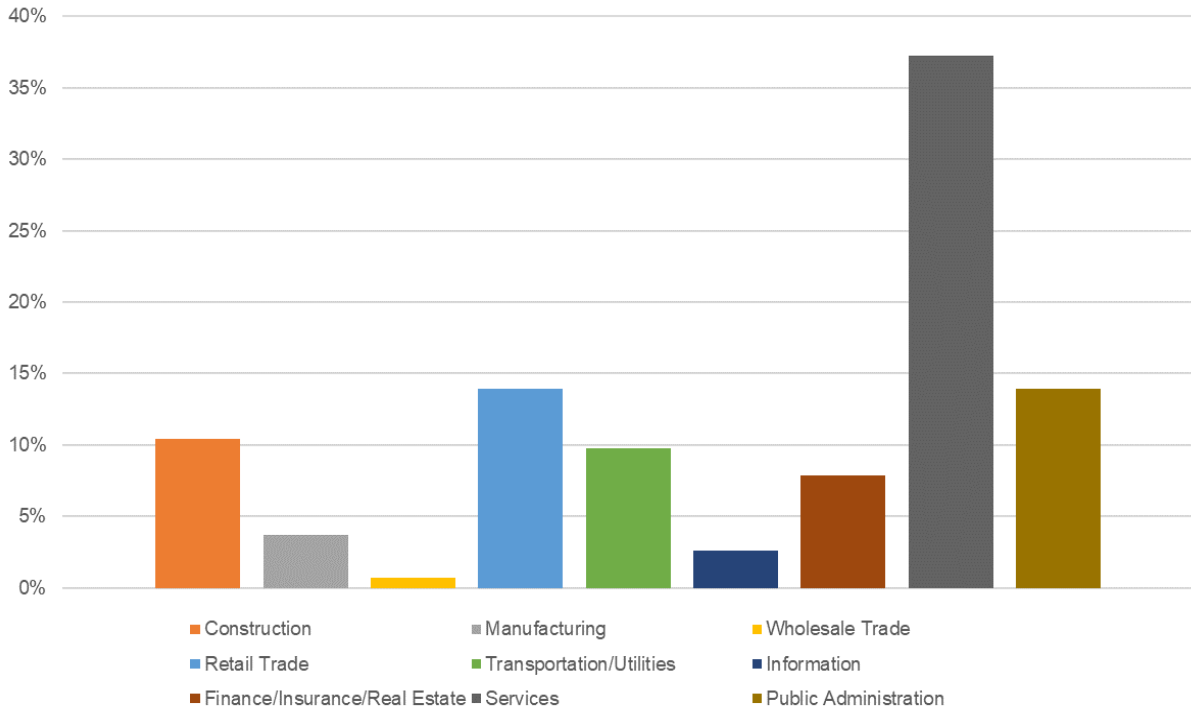


Figure 23: Employment by Industry, Triangle Study Area

Nearly 44 percent of Triangle residents, and 48 percent of Prince William County residents, also work in the County; 51 percent of Triangle residents work in Virginia but outside the County, a slightly larger share than the County overall. Approximately five percent of Triangle residents, and 10 percent of County residents overall, work in another state entirely. County residents’ mean travel time to work is 42 minutes (this data was not available for the study area specifically).

Journey to Work	Triangle Study Area	Prince William County
Drove alone	80.9%	76.5%
Carpooled	9.6%	11.1%
Worked at home	3.8%	3.3%
Public transit	3.9%	5.5%
Other means	0.4%	0.4%
Walked	1.4%	3.2%
Bicycle	0.0%	0.0%

Source: 2020 ESRI Estimates; Prince William County, 2020

The overwhelming majority of employed Triangle residents, 81 percent, drive alone to work, compared with a slightly smaller percentage of County residents (77 percent). Ten

percent of Triangle residents carpool to work, and 11 percent of County residents overall do. A slightly smaller share of Triangle residents than County residents, four percent versus six percent, take public transportation to work, most likely due to the lack of convenient public transportation options in and near Triangle.

Commuter Patterns	Triangle Study Area	Prince William County
Work in Prince William	43.6%	47.7%
Work in Virginia, outside of Prince William	51.4%	42.4%
Work in another state	5.0%	9.9%
Mean travel time (minutes)	N/A	41.8

Source: 2020 ESRI Estimates; Prince William County, 2020

TAZ data for 2020 estimates that there are currently approximately 350 jobs in the Triangle area (data note: TAZ boundaries do not align exactly with the study area boundaries and cover a slightly larger area). “Industrial jobs” refer to jobs in the manufacturing, wholesale, and transport sectors; “retail jobs” refer to jobs in the retail, food service, and hospitality sectors; “office jobs” refer to jobs in the office, health care, government, and education sectors; and “other jobs” refer to employment in agriculture, construction, and mining, as well as home-based businesses.

Office jobs make up the majority of employment in Triangle, accounting for approximately 59 percent of all jobs. The industry with the fewest jobs is industrial/manufacturing, which accounts for just five percent of all jobs in Triangle. TAZ projections estimate that the industrial sectors in Triangle will stay roughly the same over the next 20 years; that retail jobs will increase significantly (at approximately 16 percent annually), along with office jobs, which are projected to increase at approximately 11 percent annually. Other jobs are also projected to increase, albeit at a slower rate (four percent annually). Overall, the Triangle area is projected to see steady job growth over the next several decades, with an annual overall growth rate of approximately 11 percent.

Topic	2020	2030	2040	CAGR, 2020 - 2040
Industrial Jobs	16	14	14	-0.7%
Retail Jobs	67	568	1,229	15.7%
Office Jobs	207	920	1,585	10.7%
Other Jobs	60	122	139	4.3%
Total Jobs	350	1,624	2,967	11.3%

Source: 2020 Transportation Analysis Zone Data; Prince William County, 2020

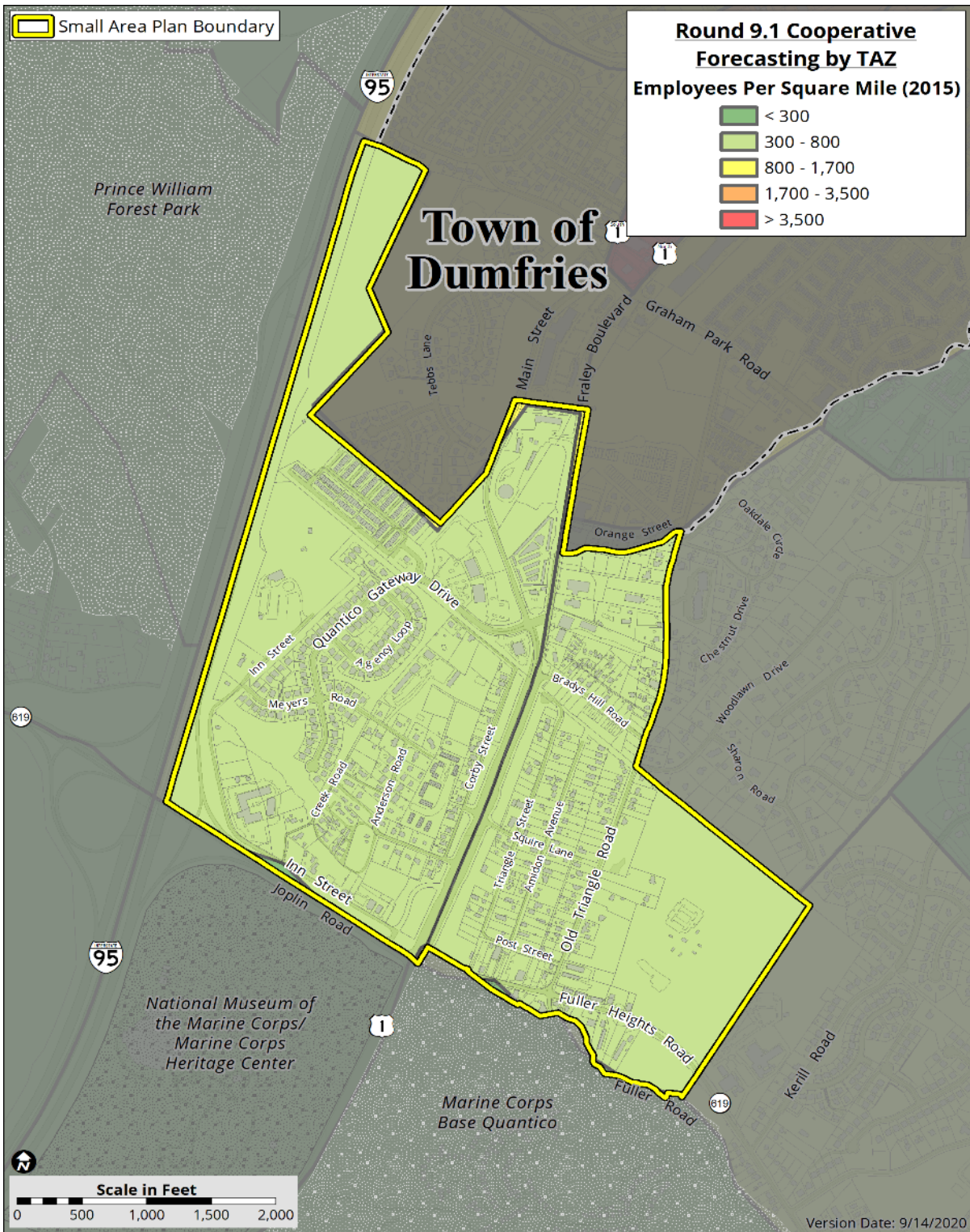


Figure 24: Employees per Square Mile

Commercial Community Indicators

As part of the current conditions' analysis, it is important to understand the health and vitality of the commercial and residential real estate markets in Triangle. Having a better sense of current and past real estate market trends in the study area will inform the recommendations made for strategies to shape Triangle's future growth and development.

Triangle Study Area Office Space Key Metrics, 2014-2019

According to CoStar, an online database that tracks commercial and multifamily real estate market trends, no new office buildings have been constructed in the study area over the last five years. Vacancy rates have also historically been high, averaging around 14 percent between 2014 and 2019. Rents have only increased at a rate of approximately 0.3 percent annually in the study area, despite the strong economy. Triangle has one "Class A" office property; the rest are class B and C.

Year	2014	2015	2016	2017	2018	2019	Average	CAGR, 2014 - 2019
Inventory Buildings	4	4	4	4	4	4	4	0.0%
Inventory SF	99,901	99,901	99,901	99,901	99,901	99,901	99,901	0.0%
% Vacant	18%	17%	12%	12%	12%	12%	14%	N/A
Net Absorption SF	-	666	5,170	-	-	-	2,918	N/A
Office Gross Rent	\$23.59	\$23.40	\$23.00	\$23.00	\$23.00	\$24.00	\$23.33	0.3%
Office Base Rent	\$23.59	\$23.40	\$23.00	\$23.00	\$23.00	\$24.00	\$23.33	0.3%

Source: CoStar, 2020

Triangle Study Area Retail/Service Space Key Metrics, 2014-2019

There has not been any new retail space constructed in Triangle over the last five years, based on available information. Vacancy rates have remained relatively low, and rents have averaged out to about \$15 per square foot between 2014 and 2019. CoStar does not have detailed information on the other types of commercial space in the study area, including industrial, flex, and hospitality space, due to the study area's small size and residential nature.

Year	2014	2015	2016	2017	2018	2019	Average	CAGR, 2014 - 2019
Inventory Buildings	10	10	10	10	10	10	10	0.0%
Inventory SF	34,822	34,822	34,822	34,822	34,822	34,822	34,822	0.0%
% Vacant	-	5%	1%	-	-	-	3%	N/A
Net Absorption SF	-	-1,800	1,300	500	-	-	N/A	N/A
All Service Type Rent	-	\$14.09	\$13.80	\$18.35	-	-	\$15.41	N/A

Source: CoStar, 2020

Triangle Study Area Multifamily Housing Key Metrics, 2014-2019

CoStar also tracks multifamily housing metrics. There are approximately 200 units of multifamily housing in the study area. Effective rents have increased approximately 2.6 percent annually since 2014, which is more in keeping with the surrounding areas; however, rents are still low when compared to Prince William County generally. Vacancy has remained relatively low as well, averaging out to about four percent over the five-year period.

According to Realtor.com, single family homes that have sold within the last six months in Triangle, VA have had a median listing price of \$342,500, a ratio of listing to sale price of 99.29 percent, and an average sales price per square foot of \$179. Homes in Triangle spend an average of 71 days on the market.

Multifamily rentals and home sales appear have been relatively strong in the study area in recent years. However, the office market has historically been weak, which could be due to the type of space available, how it is marketed, and what is available for rent in competing marketing. Retail performance appears to have been somewhat stronger, although there is not enough data available to draw more robust conclusions about retail market health. Based on historical vacancy rates, however, it does not appear to be over-supplied in Triangle, which is a common issue in suburban Northern Virginia.

Year	2014	2015	2016	2017	2018	2019	Average	CAGR, 2014 - 2019
Inventory Buildings	3	3	3	3	3	3	3	0.0%
Inventory Units	200	200	200	200	200	200	200	0.0%
Inventory Avg. SF	641	641	641	641	641	641	641	0.0%
Asking Rent Per Unit	\$876.00	\$878.00	\$905.00	\$944.00	\$963.00	\$992.00	\$926.33	2.5%
Effective Rent Per Unit	\$870.00	\$873.00	\$893.00	\$939.00	\$958.00	\$991.00	\$920.67	2.6%
% Vacant	7%	4%	3%	4%	3%	2%	4%	N/A
Net Absorption - Units	-2	6	2	-2	-	4	1.6	N/A

Source: CoStar, 2020

Existing Schools

Students in the Triangle area are served by Forest Park High School and Graham Park Middle School. Elementary-school-aged children on the western side of Route 1 in the planning area are served by Dumfries Elementary School, and students on the eastern side of Route 1 in the study area are served by Triangle Elementary School. The County also has two specialty schools not assigned to a specific geographic area, Independent Nontraditional School and Porter Traditional School.

Existing School Inventory				
2020-2021				
Elementary Schools				
School Name	Program Capacity	Portable Classrooms	Students	% Utilized
Triangle ES	752	0	710	94.4
Dumfries ES	379	4	418	110.3
Middle Schools				
School Name	Student Capacity	Portable Classrooms	Students	% Utilized
Graham Park MS	867	8	978	112.8
High Schools				
School Name	Student Capacity	Portable Classrooms	Students	% Utilized
Forest Park HS	2053	0	2226	108.4

Source: Prince William County Public Schools CIP, 2020

Dumfries Elementary is overutilized, and is at 110 percent of its capacity, as is Graham Park Middle, at 113 percent of its capacity, and Forest Park High School, at 108 percent. This presents a challenge when planning for new development in the study area. To the extent permitted by law, the County will need to work with developers to ensure that there are adequate public facilities, including schools, to serve new residential development.

VISION AND THEMATIC PRINCIPLES

Vision Statement

The vision for Triangle 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.

SAP Goals

Goals for each functional area of the Small Area Plan are set out below, providing thematic principles for achieving the Small Area Plan vision and guiding the Small Area Plan recommendations.

In the following sections, the goals are elaborated further and supported by specific Action Strategies. The Action Strategies are summarized in matrix form in the Implementation section of the Small Area Plan.

Triangle Thematic Principles

Vision: Triangle, the Southern Gateway to Prince William County, is a diverse, pedestrian-friendly and vibrant community that brings together three distinctive regional assets—Marine Corps Base Quantico, Prince William Forest Park, and the Town of Dumfries—to create robust employment opportunities, unique cultural experiences, and a welcoming place for residents to live, work, and play.

VISION: Triangle, the Southern Gateway to Prince William County, is a diverse, pedestrian-friendly and vibrant community that brings together three distinctive regional assets—Marine Corps Base Quantico, Prince William Forest Park, and the Town of Dumfries—to create robust employment opportunities, unique cultural experiences, and a welcoming place for residents to live, work, and play.



PLACETYPES: Create a thoughtfully designed, distinctive and interconnected community offering a balanced mix of residential and employment opportunities. Enhance the community’s role as Southern Gateway to Prince William County by creating a sense of place and improving connectivity of residents and visitors to local Triangle assets and broader regional destinations.



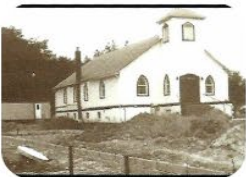
MOBILITY: Create a multimodal network that leverages, connects, and expands the community’s mobility hubs.



DESIGN: Create and implement flexible, appropriately detailed design standards for human-scale to ensure a well designed pedestrian-friendly community.



GREEN INFRASTRUCTURE: Ensure that Triangle’s ecosystem is both sustainable and resilient by building a connected network of greenways, trails, and open space throughout that provides connectivity to local destinations and helps create a healthy and welcoming environment for all.



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: Incentivize economic development to attract targeted industries to become part of the Potomac Defense Corridor, and capitalize on the significant impact of MCB Quantico and other regional assets to build an interconnected, innovative and welcoming community that has the distinction of being the southern gateway into Prince William County.



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

Figure 25: Triangle SAP Thematic Principles

PLACETYPES

Goal: Create a thoughtfully designed, distinctive and interconnected community offering a balanced mix of residential and employment opportunities. Enhance the community's role as Southern Gateway to Prince William County by creating a sense of place and improving connectivity of residents and visitors to local Triangle assets and broader regional destinations.

1. Create attractive and green mixed-use areas (lower-density clusters of different types of single use spaces), where residents and visitors can shop, dine, and spend time with friends and family.
2. Create places that provide features, services, and amenities to attract a substantial share of MCB Quantico contractors, mixing uses whenever feasible.
3. Create safe places for people to gather, play, and socialize that are easily accessible by foot and by bicycle.
4. Build on the Potomac Defense Corridor along Route 1 to maintain a focus on establishing provisions to support MCB Quantico by developing supplemental residential, retail, and office space, and connecting each element to create a series of cohesive, pedestrian-friendly neighborhoods.
5. Enhance existing neighborhoods with a balanced range of housing types, at different levels of affordability.
6. Emphasize Triangle's role as the Southern Gateway to Prince William County along the Route 1 corridor by encouraging better placemaking, incorporating more distinctive architecture and public art, and creating a richer streetscape with plantings, street furniture, and other attractive amenities.

Transect and Activity Density Framework

The framework of the Plan utilizes the core concepts of the 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 20). Each Transect Zone defines a consistent scale of density and intensity of development²³ and the entire complement of streets, buildings, and open spaces that support and enhance that level of intensity. Figure 21 is a standard table of Transect Zone densities defined for all of Virginia using Activity Densities. This

²³ "Density" refers to the total or average number of people or households in a given unit of two-dimensional area (such as an acre), while "intensity" describes the amount of constructed building volume in a given unit of two-dimensional area. Density focuses on people, while intensity focuses on built form.

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 22 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 simply 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.

The Plan identifies specific Transect densities for Triangle. 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.

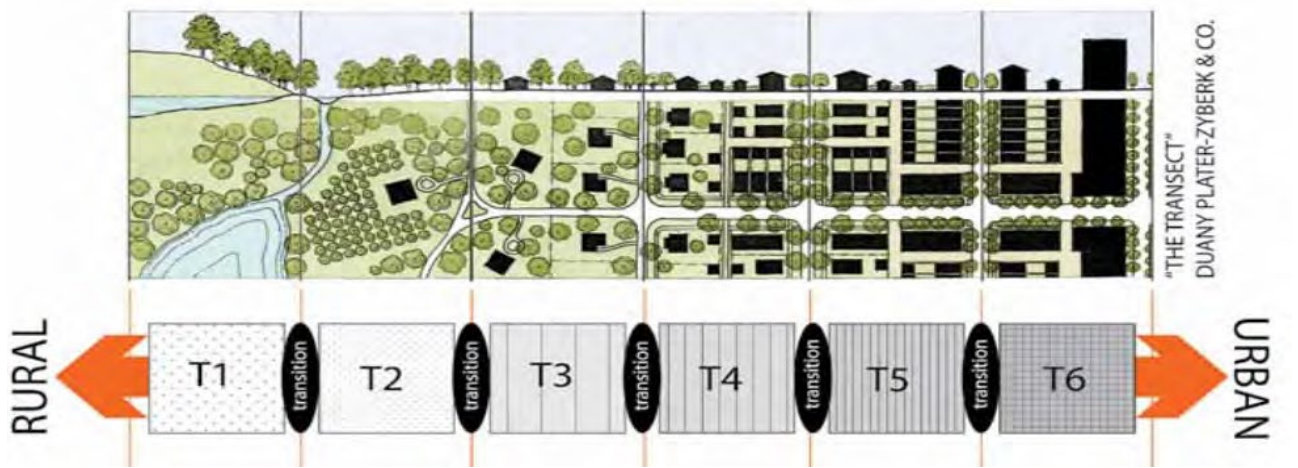


Figure 26: Transect Zones

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	2.3 or more

Source: Virginia Department of Rail and Public Transportation Multimodal System Design Guidelines, March 2020.

Figure 27: Transect Zone Intensity Measures

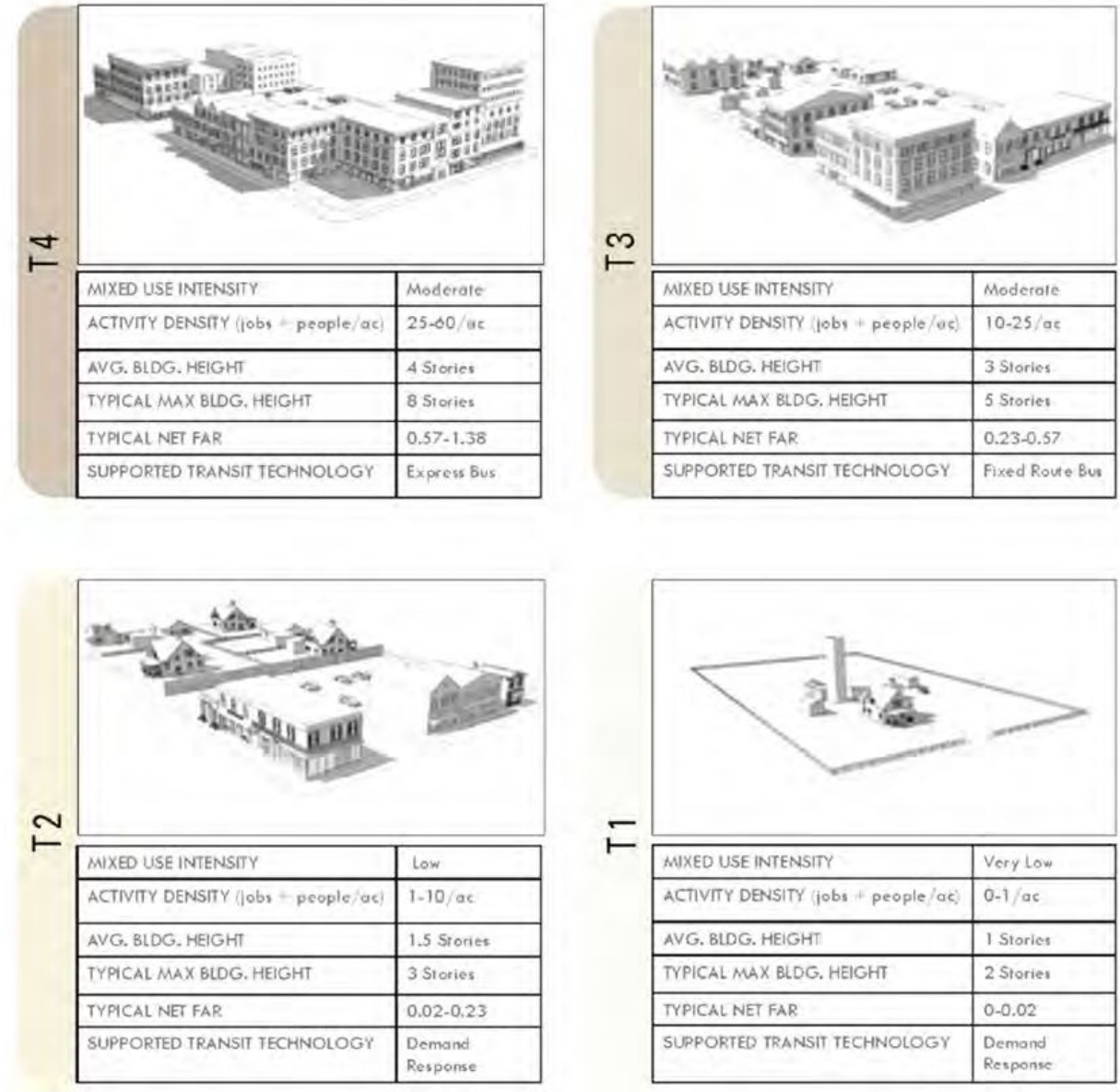


Figure 28: Transects for Future Planned Land Uses

Currently, much of the study area is located in the T-2 or T-3 transects (lower density, low mixed-use intensity). As previously noted, the predominant land use type in Triangle is residential. In the T-2 transect, most of the buildings are between one and three stories, which is not a level of density that can typically support fixed-rail transit, and is usually better served by bus routes, bike lanes, good pedestrian infrastructure, and shared transportation options. The borders of the study area on the west, south, and east sides tend to fall in either the T-2 or T-1 transect (low-intensity) zones. The T-1 Transect, located in various pocket locations of the Small Area Plan, provides areas for the lowest level of development such as parks and open space passive areas.

Figure 28 identifies the transects for the future planned land uses and densities for Triangle. Walkshed radii of one-quarter mile and one-half mile are used in the development of the transect to ensure the relationship between land use, density, and access to transit is considered.

For the Triangle Small Area Plan, the transects are designed to enhance the area to ensure that redevelopment can occur and be fully supported by multimodal opportunities.

The T-4 transect is located along the west side of U.S. Route 1 and the north side of Joplin Road. This area will be higher density residential with commercial occurring along the Inn Street near Joplin Road. This area will have access to the planned BRT along the Route 1 corridor and will be supported by a shuttle service to either the Quantico VRE or the Potomac VRE scheduled for 2022.

The T-3 transect is located in three areas; along the east side of U.S. Route 1 between Fuller Road to the Town of Dumfries, along Fuller Heights Road from Route 1 to Fuller Heights Park, and north of Quantico Gateway and west of Inn Street except for a small area that borders I-95 which provides a buffer for any development that occurs along Inn Street. The T-3 transect will provide opportunities for commercial and office mixed use and some residential development.

The T-2 transect is located along Quantico Gateway Drive and portions of Moyers Road as well as the Old Triangle Road corridor. These areas will have low density residential uses associate with the transect.

The T-1 transect is located in the areas that borders I-95 on the west side of the plan where there is very little development directly adjacent to the interstate, along the Little Creek stream corridor and at Fuller Heights Park.

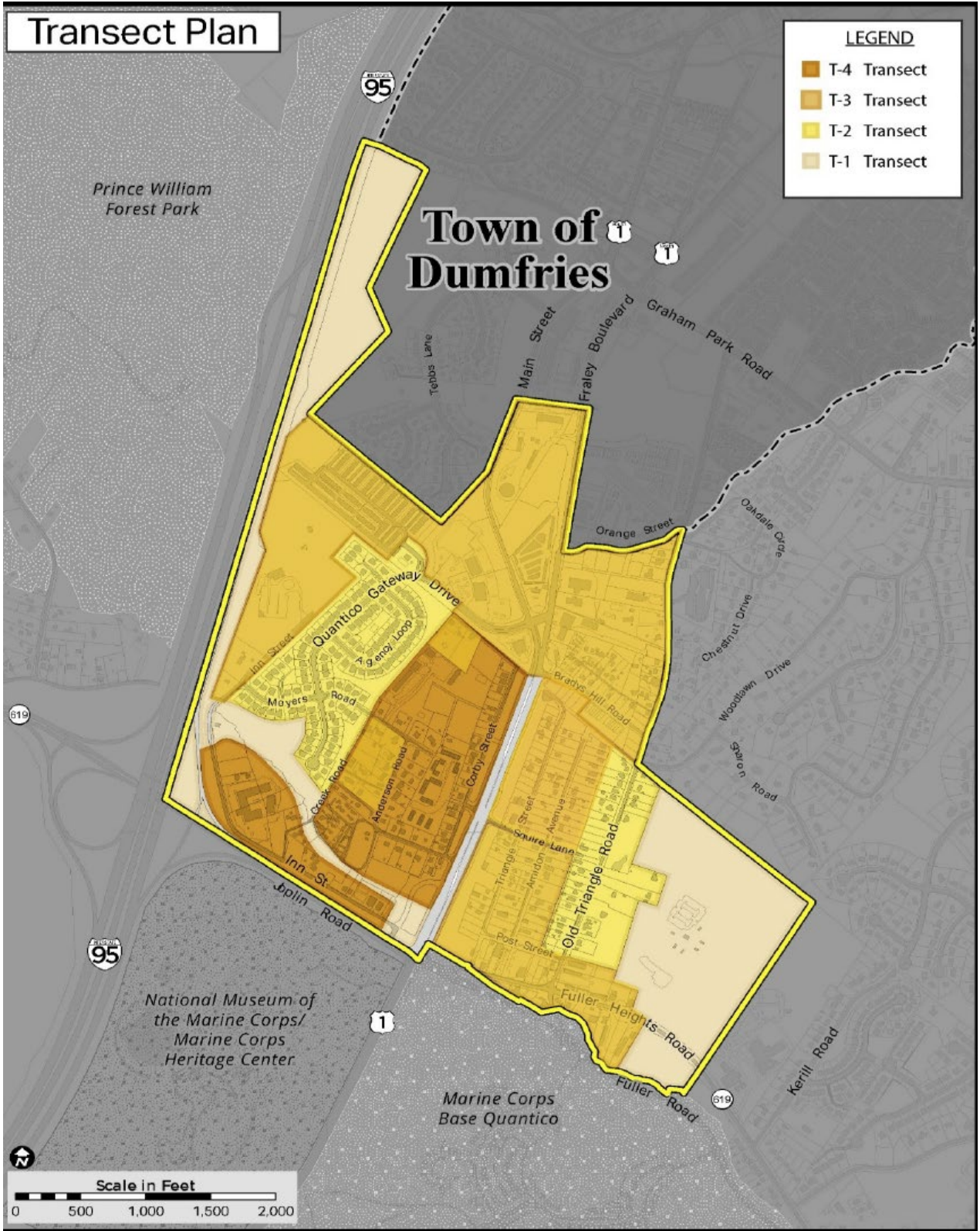


Figure 29: Triangle Transect Plan

Future Land Use

The Triangle Small Area Plan aims to build on Triangle's existing development pattern to establish a more vibrant, interconnected, mixed-use/mixed-density community, where residents and visitors can live, work, and play, and where both employers and employees can grow and thrive. The proposed future land uses for Triangle are designed to incentivize new, higher-density, mixed-use development where appropriate, while retaining and enhancing the area's existing character. They aim to strengthen Triangle's identity and sense of place, while also emphasizing its connections to major nearby assets like MCB Quantico and Prince William Forest Park, and the greater region.

It is important that Triangle retain as many of its natural and open space areas as possible, as previously noted in the Plan. However, this means that some development within the study area will need to be higher density, to accommodate growth and a broader mix of uses and housing typologies. This Small Area Plan proposes retaining Triangle's current active and passive open spaces and adding narrow corridors of open space along Little Creek and Route 1, to allow for more public space for play, socialization, and recreation.

Along the southwestern border of the study area, between Joplin Road and Little Creek, a Community Mixed Use (CMU) area is recommended, that would accommodate lower-to-medium density mixed-use development that includes dining, community-serving retail, and other amenities. Just to the east, an Office Mixed Use (OMU) district is proposed, which would create synergies with the CMU area and allow office workers to take advantage of retail and dining options.

Just to the north, between Inn Street and the undeveloped area bordering I-95, an Urban Residential Medium (URM) district is proposed, which includes attached residential development at a density up to 20 dwellings per acre, and attendant community facilities such as schools, churches, and public safety stations. Between Inn Street and Creek Road, just to the east of the URM district, the long-range land use plan proposes an Urban Residential Low (URL) district, which is characterized by attached or detached residential development at a density up to eight dwellings per acre, and, like the URM district, includes community facilities such as schools, churches, and public safety stations. Directly adjacent to this district on the east, between Creek Road and Route 1, a High-Density Neighborhood (HDN) district is proposed, which would be primarily residential in nature, but would allow for a mix of housing typologies at higher densities.

Directly to the north of the HDN District, another OMU district is proposed, between Quantico Gateway Drive and Main Street/Route 1. This would be an ideal location for a smaller convention center/mixed-use office complex targeted towards MCB Quantico

contractors. Just to the north of the OMU district, between Main Street and Fraley Boulevard, a Community Mixed-Use (CMU) district is proposed, which would allow for a mix of uses and densities at a walkable, “human” scale, and would interface with the Town of Dumfries. The CMU area would extend across Route 1, bordered on the south by public land (PL) and a Village Mixed-Use (VMU) area, which provides for mixed-use development where residential and neighborhood commercial uses are intermingled on smaller lots, laid out in a traditional street grid.

A pocket of Suburban Neighborhood (SN) land use type along Route 1 within this area would allow for the development of single family detached or attached. Fuller Heights Park is directly adjacent to the VMU area on the east and would remain Parks and Open Space (Active) (POSA). Between Post Street and Fuller Heights Road, directly to the south of the proposed VMU district, a Neighborhood Mixed Use (NMU) district is proposed, which would provide a mix of neighborhood-serving retail and commercial uses, and housing at varying densities.

Figure 24 illustrates the proposed Long-Range Land Use classifications for the Triangle Small Area Plan. The proposed land use designations aligned with the designated transects provide a complete picture for future development. The Zoning Ordinance will require a review and a likely update to ensure that these proposed land uses can be realized.

In terms of the correlation between these development proposals and the Transect discussed above, portions of Fuller Heights Road, along Route 1 and the north side of Quantico Gateway drive correspond to a higher mixed-use intensity, as described by T-3 and T-4, with mixed-use buildings between three and eight stories. T-4 transects are proposed for the northwest portion of the study area bordering Dumfries and along Joplin Road between I-95 and Route 1. A T3 transect is proposed along Fuller Heights Road in the southern part of the study area. It is proposed that the remainder of the study area remain T-1 or T-2, which will allow for a variety of densities and intensities and give residents more options as to the type of neighborhoods where they want to live, work, and play.

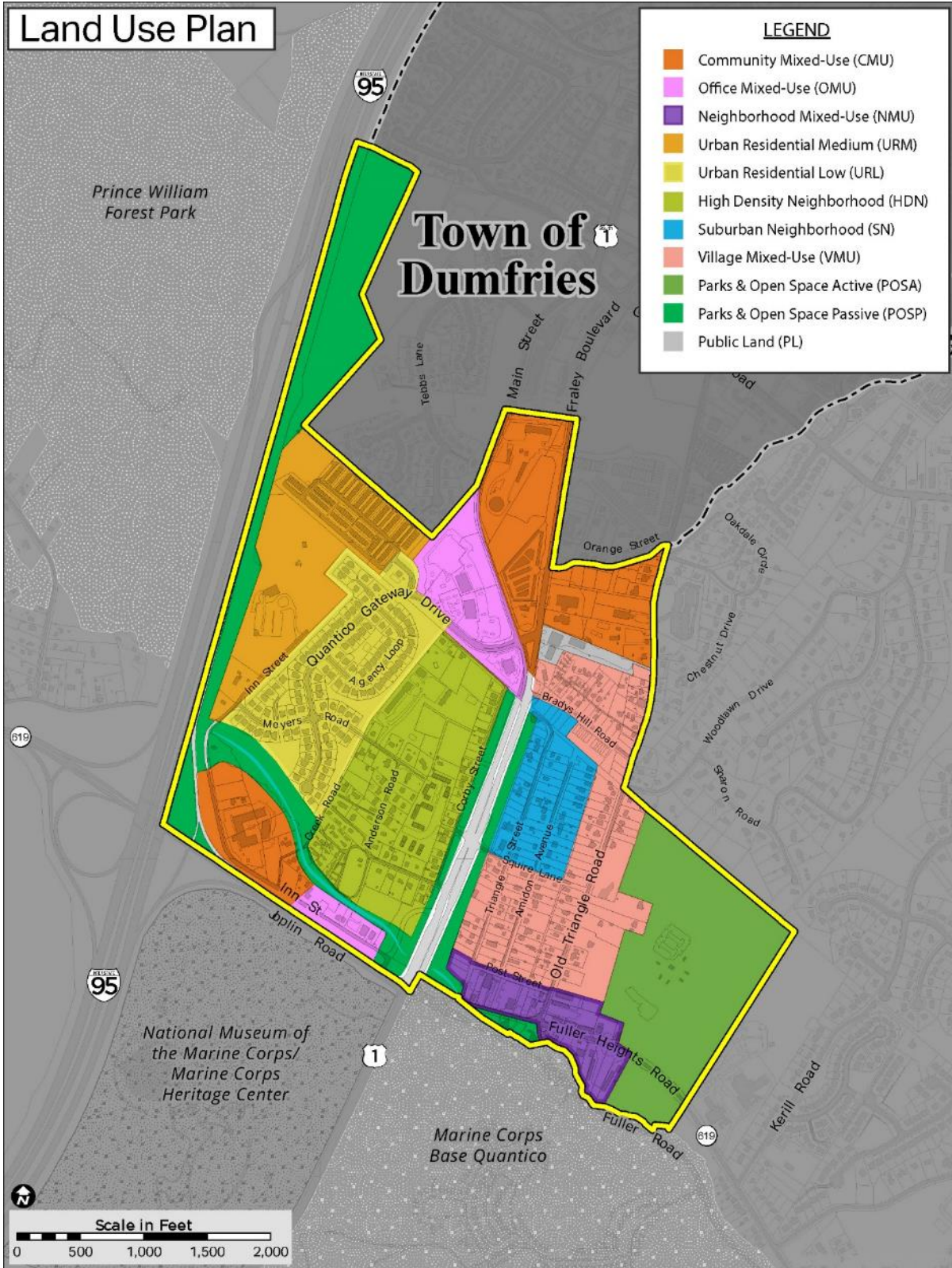


Figure 30: Long Range Land Use Plan

High-Density Neighborhoods

Community Mixed Use

Office Mixed Use

Neighborhood Mixed-Use



DESCRIPTION

High-Density Neighborhoods provide opportunities to develop compact neighborhoods that can act as transitions between mixed use centers and lower density residential areas. These are high-density, walkable neighborhoods focusing on connections to mixed-use centers and transit. These areas can accommodate attached and multi-family housing types and may include small scale retail or office uses integrated into the neighborhood.

Neighborhood design focuses on interconnected streets with short blocks and shallow setbacks. Parking is accommodated on-street or behind buildings. Development's visibility from Route 1 is limited by substantial buffers, berms, and landscaping

Mixed-Use live work centers include both residential and commercial uses arranged in a pedestrian-friendly form. These centers are locations for community commercial, entertainment destinations, and public facilities directly accessible to surrounding neighborhoods. Streets are interconnected and serve cars, cyclists, and pedestrians. These mixed-use centers should be connected by bus transit to nearby destinations and to nearest rail transit.

Development is arranged in short blocks with shallow setbacks and both on-street parking or parking lots are appropriate.

The purpose of this classification is to provide for areas of low-to high-rise, offices or research and development activities. Projects developed in this classification shall be for office use, with retail and retail service uses discouraged as a stand-alone structure . Office development areas is encouraged to be in accordance with the Illustrative Guidelines for Office Development, provided as a supplement to the Community Design Plan chapter of the Comprehensive Plan and available from the Planning Office.

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.

Triangle Small Area Plan

Primary Uses	<ul style="list-style-type: none"> High-Density Townhouses Multi-Family Residential 	<ul style="list-style-type: none"> Multi-Family Residential Retail & Service Commercial Healthcare Life Science Government Contracting Civic, Cultural, Institutional 	<ul style="list-style-type: none"> Offices Business Schools, Colleges Computer and Network Services Hotel Medical or Dental Office Package or Courier Services Research & Development Government Contracting 	<ul style="list-style-type: none"> Multi-Family Residential Retail & Service Commercial Civic, Cultural, Community Institutional
Secondary Uses	<ul style="list-style-type: none"> Retail & Service Commercial Office Retirement Communities Accessory Residential Units Civic, Cultural, Community Institutional 	<ul style="list-style-type: none"> Active Adult Retirement Communities Office Hotel Institutional Parking 	<ul style="list-style-type: none"> Adult Daycare Recreational Facility Restaurant Parking 	<ul style="list-style-type: none"> Office Institutional Hotel Healthcare Local Government Contracting
Use Pattern	Based on Street Typology	Based on Street Typology	Based on Street Typology	Based on Street Typology
Target Residential Density	T-4: 8-24 du/acre T-3: 4-12 du/acre	T-4: 8-24 du/acre T-3: 4-12 du/acre	N/A	T-3: 4-12 du/acre
Target Non-Residential FAR	T-4: 0.57-1.38 FAR T-3: Up to 0.57 FAR	T-4: 0.57-1.38 FAR T-3: Up to 0.57 FAR	T-4: 0.57-1.38 FAR T-3: Up to 0.57 FAR	T-3: up to 0.57 FAR
Target Land Use Mix	Residential: 90-100% Non-Residential: 0-10%	Residential: 30-60% Non-Residential: 30-60% Civic: 10%+	Non-Residential: 95-100% Residential: 0% Civic: 5%	Residential: 80 -90% Non-Residential: 10-50% Civic: 5%+
Target Building Height	T-4: 4-8 stories	T-4: 4-8 stories T-3 : 3-5 Stories	T-4: 4-8 stories T-3 : 3-5 Stories	T-3: 3-5 stories
Minimum Open Space	20% of site	20% of site	10% of site	10% of site

Triangle Small Area Plan

Implementing Zoning District	PMR R-6 R-16 MXD	PMD PMR R-16 MXD O(L)	PBD PMD O(M) O(H)	PMD PMR PBD V MXD
General Block Dimensions	200' – 660' in length	200' – 660' in length	Flexible dimensions, based on circulation patterns and access to buildings and parking areas.	200' – 660' in length
General Building Placement	A build-to line should be established from the edge of the curb or right-of-way. Three distinct zones should be developed along the streetscape areas – Landscape Planting Area/Amenity Zone (minimum 8'), Sidewalk Through Zone (6'-8') and the Building Zone (ranges from zero to 6', depending on activity spaces along the street). Building placement guidelines should be based on overall Transect),	A build-to line should be established from the edge of the curb or right-of-way. Three distinct zones should be developed along the streetscape areas – Landscape Planting Area/Amenity Zone (minimum 8'), Sidewalk Through Zone (6'-8') and the Building Zone (ranges from zero to 6', depending on activity spaces along the street). Building placement guidelines should be based on overall Transect	At major street intersections and in areas with higher levels of activity, it is recommended that at least 50% of each building's frontage should occupy the street frontage along designated build-to lines. The main entrances of buildings should be located along primary streets or facing key intersections. As these uses are primarily located in suburban areas, appropriate green buffers are recommended along roadways. The placement of a building in relationship to streets should be consistent with that of adjacent existing buildings, in order to establish a cohesive street wall and visual character along the street. When existing buildings are set back further from the street, new buildings may establish a precedent for a new build-to line closer to the street, specifically at major intersections or in areas with higher levels of activity.	At major street intersections and in areas with higher levels of activity, it is recommended that at least 50% of each building's frontage should occupy the street frontage along designated build-to lines. The main entrances of buildings should be located along primary streets or facing key intersections. As these uses are primarily located in suburban areas, appropriate green buffers are recommended along roadways. The placement of a building in relationship to streets should be consistent with that of adjacent existing buildings, in order to establish a cohesive street wall and visual character along the street. When existing buildings are set back further from the street, new buildings may establish a precedent for a new build-to line closer to the street, specifically at major intersections or in areas with higher levels of activity.
Street Type	Urban Street sections	Urban Street sections	Urban Street sections	Urban Street sections
Pedestrian and Bicycle Circulation	8' minimum sidewalk width on all non-local street types. 5' minimum sidewalk width on local streets.	8' minimum sidewalk width on all non-local street types. 5' minimum sidewalk width on local streets.	5' minimum sidewalk width. 10' shared use paths and/or trails connecting to natural areas.	5' minimum sidewalk width. 10' shared use paths and/or trails connecting to natural areas.




	10' shared use paths and/or trails connecting to natural areas	10' shared use paths and/or trails connecting to natural areas.		
Parking	<p>Prioritize on-street parking; off-street parking (garage, lots) should be located within block interiors or in rear yards.</p> <p>Require appropriate screening for off-street parking areas fronting primary streets.</p> <p>Access to off-street parking areas is recommended from secondary streets only to limit interruptions along primary street building frontages.</p>	<p>Prioritize on-street parking; off-street parking (garage, lots) should be located within block interiors or in rear yards.</p> <p>Require appropriate screening for off-street parking areas fronting primary streets.</p> <p>Access to off-street parking areas is recommended from secondary streets only to limit interruptions along primary street building frontages.</p>	<p>Landscapes screening required for off-street parking areas that has frontage on primary or secondary roads.</p>	<p>Prioritize on-street parking; off-street parking (garage, lots) should be located within block interiors or in rear yards.</p> <p>Require appropriate screening for off-street parking areas fronting primary streets.</p> <p>Access to off-street parking areas is recommended from secondary streets only to limit interruptions along primary street building frontages.</p>
Access to Parking	<p>Consolidated vehicular access points are recommended to simplify traffic patterns, limit streetscape interruptions and minimize conflicts among pedestrians, bicyclists, and motorists.</p> <p>Residential driveways should be located behind the primary façade of the unit; rear alley access is preferred.</p>	<p>Limited vehicular access from primary streets. Consolidated vehicular access points are recommended to simplify traffic patterns, limit streetscape interruptions and minimize conflicts among pedestrians, bicyclists, and motorists.</p>	<p>Parking and service access from secondary streets is preferred; access from primary streets should be limited.</p> <p>Pedestrian connections to the sidewalk and/or trail network are recommended..</p>	<p>Parking and service access from secondary streets is preferred; access from primary streets should be limited.</p> <p>Pedestrian connections to the sidewalk and/or trail network are recommended.</p>

Village Mixed Use	Urban Residential Medium	Urban Residential Low	Suburban Neighborhood
			
			
<p style="writing-mode: vertical-rl; transform: rotate(180deg);">DESCRIPTION</p> <p>Village Mixed Use (VMU) provides for mixed use development where residential, and neighborhood commercial uses are intermingled on small lots laid out in a traditional street grid. Implementation of VMU will be through a Village Zoning District that provides density, design standards, setbacks, and use limitations to ensure compatibility between the residential and commercial uses. This designation is intended to be planned for Potomac Communities, and may be planned within centers of commerce and centers of community given the designation contributes to the overall vision of the Center Overlay as defined in this chapter.</p>	<p>Urban Residential Medium provides for attached residential development at a density of 8 to 20 units per acre, and attendant community facilities such as schools, churches, and public safety stations. This density is an effort to provide economically viable alternatives to strip retail development. This designation is intended to be planned for Potomac Communities, and may be planned within centers of commerce and centers of community given the designation contributes to the overall vision of the Center Overlay as defined in this chapter.</p>	<p>Urban Residential Low provides for attached or detached residential development at a density up to 8 units per acre, and attendant community facilities such as schools, churches, and public safety stations. This density is an effort to spur reinvestment and redevelopment of underutilized residential areas. This designation is intended to be planned for Potomac Communities, and may be planned within centers of commerce and centers of community given the designation contributes to the overall vision of the Center Overlay as defined in this chapter.</p>	<p>Suburban Neighborhoods primarily accommodate single-family homes arranged in small to medium lots. Connections and pedestrian amenities should still be a priority for development design. These areas should also include parks, trails and open space integrated into the development in appropriate locations. Small office or service uses may be appropriate. Neighborhood design includes longer blocks with homes set back from the street and parking accommodated in private driveways and garages.</p>

		Village Mixed Use	Urban Residential Medium	Urban Residential Low	Suburban Neighborhood
USES	Primary Uses	<ul style="list-style-type: none"> Single Family Attached Multi-Family Residential Retail & Services Commercial Civic, Cultural, Institutional 	<ul style="list-style-type: none"> Single Family Attached Multi-Family Residential 	<ul style="list-style-type: none"> Single Family Detached Single Family Attached Multi-Family Residential 	<ul style="list-style-type: none"> Single Family Detached Single Family Attached Civic, Cultural, Community Institutional
	Secondary Uses	<ul style="list-style-type: none"> Office Adult Day care Accessory Residential Units 	<ul style="list-style-type: none"> Civic or institutional 	<ul style="list-style-type: none"> Civic or institutional 	<ul style="list-style-type: none"> Service Commercial Office Retirement Communities Accessory Residential Units
FORM & CHARACTER	Use Pattern	Separate or Vertical Mixed Use	Separate	Separate	Separate or Vertical Mixed Use
	Target Residential Density	T-3 : 4-12 du/acre T-2 : 0.5-4 du/acre	T-3 : 4-12 du/acre	T-2 : 0.5-4 du/acre	T-3 : 4-12 du/acre
	Target Non-Residential FAR	T-3 : 0.23 -0.57 FAR T-2 : 0.02 -0.23 FAR	T-3 : 0.23-0.57 FAR	T-2 : 0.02- 0.23 FAR	T-3 : 0.23-0.57 FAR
	Target Land Use Mix	Residential: 70-100% Non-Residential: 0-20% Civic: 0-5%	Residential: 90-100% Civic: 0-10%	Residential: 90-100% Civic: 0-10%	Residential: 85-100% Non-Residential 0-10% Civic: 0- 5 %
	Target Building Height	T-3 : 3-5 stories T-2 : 1-3 stories	T-3 : 3-5 stories	T-2 : 1-3 stories	T-3 : 3-5 stories
	Minimum Open Space	20% of site	20% of site	20% of site	30% of site
	Implementing Zoning Districts	V MXD	PMR R-6 R-16	R-2 R-6	R-4 R-6 PMR MXD
	General Block Dimensions	200' – 660 in length	200' – 660 in length	200' – 660 in length	Flexible dimensions, based on circulation patterns and access to homes and parking areas.

		Village Mixed Use	Urban Residential Medium	Urban Residential Low	Suburban Neighborhood
	General Building Placement	A build-to line should be established from the edge of the curb or right-of-way. Three distinct zones should be developed along the streetscape areas – Landscape Planting Area/Amenity Zone (minimum 8'), Sidewalk Through Zone (6'-8') and the Building Zone (ranges from zero to 6', depending on activity spaces along the street). Building placement guidelines should be based on overall Transect.	A build-to line should be established from the edge of the curb or right-of-way. Building placement guidelines should be based on overall Transect.	A build-to line should be established from the edge of the curb or right-of-way. Building placement guidelines should be based on overall Transect.	Appropriate green buffers recommended along roadways. Homes built behind landscape buffers.
	Street Type	Urban Street sections	Urban Street sections	Urban Street sections	Urban Street sections
	Pedestrian and Bicycle Circulation	8' minimum sidewalk width on all non-local street types. 5' minimum sidewalk width on local streets. 10' shared use paths and /or trails connecting to natural areas	8' minimum sidewalk width on all non-local street types. 5' minimum sidewalk width on local streets. 10' shared use paths and /or trails connecting to natural areas	5' minimum sidewalk width on local streets. or 10' shared use paths and /or trails connecting to natural areas	5' minimum sidewalk width on local streets.
	Parking	Prioritize on-street parking; off-street parking (garage, lots) should be located within block interiors or in rear yards. Require appropriate screening for off-street parking areas fronting primary streets. Access to off-street parking areas is recommended from secondary streets only to limit interruptions along primary street building frontages.	Prioritize on-street parking; off-street parking (garage, lots) should be located within block interiors or in rear yards. Require appropriate screening for off-street parking areas fronting primary streets. Access to off-street parking areas is recommended from secondary streets only to limit interruptions along primary street building frontages.	Prioritize on-street parking; off-street parking (garage, lots) should be located within block interiors or in rear yards. Access to off-street parking areas is recommended from secondary streets only to limit interruptions along primary street building frontages.	Residential driveways should be located in front of a home except in urban areas where the driveways should be located behind the primary façade of the unit or on the side.

		Village Mixed Use	Urban Residential Medium	Urban Residential Low	Suburban Neighborhood
	Access to Parking	Consolidated vehicular access points are recommended to simplify traffic patterns, limit streetscape interruptions and minimize conflicts among pedestrians, bicyclists, and motorists.	Limited vehicular access from primary streets. Consolidated vehicular access points are recommended to simplify traffic patterns, limit streetscape interruptions and minimize conflicts among pedestrians, bicyclists, and motorists.	Limited vehicular access from primary streets. Consolidated vehicular access points are recommended to simplify traffic patterns, limit streetscape interruptions and minimize conflicts among pedestrians, bicyclists, and motorists.	Garages are usually located in front or side of a residence or in rear yard along alleyway within an urban area.

	Public Land	Parks & Open Space Passive	Parks & Open Space Active
DESCRIPTION			
			
	<p>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.</p>	<p>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.</p>	<p>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 active recreational activities.</p>
Primary Uses	<ul style="list-style-type: none"> • Public Facilities • Institutions • Government Center • Judicial Centers • Transit Centers • Commuter lots 	<ul style="list-style-type: none"> • Passive recreation • Trails, hiking, bicycles • Fishing • Canoeing, kayaking 	<ul style="list-style-type: none"> • Active Recreation • Sport fields • Courses • Swimming Pools

	Public Land	Parks & Open Space Passive	Parks & Open Space Active
Secondary Uses	N/A	N/A	N/A
Use Pattern	Based on Street Typology	N/A	Based on Street Typology
Target Residential Density	N/A	N/A	N/A
Target Non-Residential FAR	T-3 : up to- 0.57 FAR	N/A	T-1 : up to 0.02 FAR
Target Land Use Mix	Civic: 100%	Civic: 100%	Civic: 100%
Target Building Height	T-3 : 3 to 5 stories	N/A	T-1 : up to 3 stories
Minimum Open Space	20% of site	90-100%	30% of site
Implementing Zoning District	N/A	N/A	N/A
General Block Dimensions	Flexible dimensions, based on circulation patterns and access to buildings and parking areas.	Flexible dimensions based on circulation patterns and access to buildings and parking areas.	Flexible dimensions based on circulation patterns and access to buildings and parking areas.

	Public Land	Parks & Open Space Passive	Parks & Open Space Active
General Building Placement	Appropriate green buffers are recommended along roadways. Buildings should be placed behind the landscaped buffer areas. Main entrances of buildings should be located along primary streets or facing key intersections	Appropriate green buffers are recommended along roadways. Buildings should be placed behind the landscaped buffer areas. Additional setbacks are recommended for recreation uses located adjacent to existing and new residential communities.	Appropriate green buffers are recommended along roadways. Buildings should be placed behind the landscaped buffer areas. Additional setbacks are recommended for recreation uses located adjacent to existing and new residential communities.
Street Type	Standard street sections	Standard street sections	Standard street sections
Pedestrian and Bicycle Circulation	5' minimum sidewalk width. 10' shared use paths and/or trails connecting to natural areas	5' minimum sidewalk width. 10' shared use paths and/or trails connecting to natural areas.	5' minimum sidewalk width. 10' shared use paths and/or trails connecting to natural areas.
Parking	Off-street parking is allowed in front, side and rear yards on all street types. Landscaped buffers are recommended for front yard parking along primary streets. Drop-off zones are permitted at the rear, side or front of buildings	Prioritize on-street parking; off-street parking lots.	Prioritize on-street parking; off-street parking lots.
Access to Parking	Consolidated vehicular access along primary streets. Pedestrian connections to the sidewalk and/or trail network is recommended.	Consolidated vehicular access points are recommended to simplify traffic patterns, limit streetscape interruptions and minimize conflicts among pedestrians, bicyclists, and motorists.	Consolidated vehicular access points are recommended to simplify traffic patterns, limit streetscape interruptions and minimize conflicts among pedestrians, bicyclists, and motorists.

Figure 31: Land Use Form, Character, and Use

Activity Density

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. The DRPT Multimodal Design Guidelines define **Activity Density** as (jobs + people)/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 Triangle Small Area Plan (a multimodal district) consistent with the Transect Zones, Future Land Use map, and Design Guideline Zones/Clusters. These estimates use the methodology of the County Build-Out Analysis and are based on land area measured using the County's Geographic Information System (GIS) and not a field survey of individual parcels; therefore, these numbers should not be construed to be a cap or minimum density. Allowed number of units and densities should be based on field verified land survey and the transect. The planned activity density for the Triangle Small Area Plan is between P-2 and P-4 activity units per acre, which corresponds on the high end to a P-4 Large Town or Suburban Center type according to the DRPT Multimodal System Design Guidelines. These estimated figures include existing and zoned but not built non-residential gross floor area, jobs, dwelling units, and people.

District (Small Area Plan)	Triangle Small Area Plan Estimates		
	Low	Medium	High
Non-residential (Potential Gross Floor Area)	419,943	736,576	1,053,207
Jobs	1,248	2,188	3,127
Dwelling Units	491	943	1,397
People	1,289	2,465	3,646
Activity (Jobs + People)	2,537	4,653	6,773
Total Land Area (acres)	375.97 acres		
Activity Density (Jobs + People)/Acre	6.74	12.38	18.01
Density Classification	P-2	P-3	P-4

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

Source: Virginia Department of Rail and Public Transportation Multimodal System Design Guidelines, March 2020.

Figure 32: Multimodal Center Intensity



Figure 33: Illustrative - Fuller Heights Road

URBAN DESIGN GUIDELINES

Goal: The Design Goal is to create and implement flexible, appropriately detailed design standards for human-scale, pedestrian-friendly development.

The urban design guidelines for Triangle are derived from the “Potomac Communities Design Guidelines” (Prince William County, 2014). The overarching objective of those guidelines is consistent with the vision and requirements of Triangle, namely, “to manage change and growth in the Route 1 Corridor and to guide development and design decision making towards a creating a vibrant and sustainable urban environment along Route 1, ensuring that the impacts of growth are positive and create benefits for the local community, economy and the environment. The result should be that the Potomac Communities Corridor is a PLACE that people want to go TO, not just through.”²⁴

This Small Area Plan calls for progressive transformation over time of selected areas of Triangle from auto-dominated, single-use development to pedestrian-friendly, mixed-use development. As described in the Land Use section above, these three new mixed-use activity centers are located near the intersection of Route 1 and Quantico Gateway Dr., along the north side of Joplin Road. between Route 1 and I-95, and along Fuller Heights Road between Route 1 and the entrance to Fuller Heights Park. The urban design guidelines apply primarily to these new mixed-use activity areas, and not to all areas of the Small Area Plan. The guidelines apply primarily to the following land use categories: Office Mixed Use, Community Mixed Use, and Neighborhood Mixed Use. It is anticipated that the guidelines will be used by developers and organizations formulating development proposals to make the future urban environment in the mixed-use areas more compact, vibrant, and pedestrian and bike-friendly. There are also guidelines on bicycle and pedestrian facilities that relate to all new development in the Triangle planning area.

Consistent with the structure of the Potomac Communities guidelines, the following aspects of urban design are discussed below: building form; site design and access; and landscape, streetscape, public space.

²⁴“Potomac Communities Design Guidelines,” Prince William County, 2014, p. 1-2.

Building Form

In the mixed-use areas, building form should be compact in order (1) to frame the street and other public open spaces, thereby enhancing the equality of the public realm, and (2) to achieve a critical mass of activity at street level, which will contribute to vitality. Building heights should be a minimum of two stories. Three- to five-story development is encouraged in the activity centers such as along Fuller Heights Road. At other higher-intensity centers such as along Joplin Road and near the intersection of Route 1 and Quantico Gateway Drive four to eight stories is permitted and encouraged. All proposed general block dimension should be subject to the VDOT spacing and access management regulations.

1. Building's façades should be oriented to adjacent streets and/or public open spaces so as to create a sense of enclosure. This will help to create a sense of place for the pedestrian or cyclist passing through the public realm (street or plaza). Setback requirements will be defined in order to locate the facades of buildings close to or adjacent to public rights-of-way. Party-wall construction (zero side setbacks) will be permitted.
2. On key streets, "main streets" are encouraged to have active ground floor uses and office or residential uses above. Active ground floor uses can include retail, neighborhood commercial services, food and beverage, offices, and/or (private) community facilities of multifamily residential buildings, such as exercise rooms or common rooms. Since the economics of development do not always allow "vertical mixed use," the mixed use requirement in the activity centers can also be met through "horizontal mixed use," in which residential and commercial buildings are located side by side in a sufficiently fine-grained pattern so as to animate the street with different types of users at different times of day. Typically, parcel sizes for individual single-use buildings in such horizontal mixed-use areas should not exceed 15,000 square feet.
3. The building form guidelines also apply to franchise buildings, which should, through their massing and articulation, seek to animate the street, direct pedestrians, terminate view corridors, frame views, enclose space, provide visual relief and create or extend the street wall.

Site Design and Access

1. Part of the key to creating walkable neighborhoods is using a tight street network. No block faces should be longer than 400 feet.

2. Development should be oriented towards a network of existing and/or new internal main streets in order to establish the feel of an urban neighborhood. Internal streets should maximize number of intersections to provide internal route choice.
3. Use of a grid system of streets is encouraged but not required; other geometrical options to create small blocks can also be utilized provided that appropriate access management regulations and standards should be utilized to ensure the safety, integrity and operational characteristics of the grid.
4. The use of alleys or service lanes is encouraged. Service lanes may be treated with equal consideration as the front of a building.
5. 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.
6. The use of a variety of parking solutions in the mixed-use activity centers is encouraged. On-street parking (parallel or diagonal) is encouraged as “teaser parking” that helps attract customers to retail and food and beverage establishments. Perpendicular and angle parking may be allowed on low-speed (25 mph and less), low volume collector and local streets with ground floor commercial uses, primarily those serving as main streets and local streets in TND (Traditional Neighborhood Development) or similar higher-density developments.
7. 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 should be placed in the front of the building.
8. Parking lots and structures should be sited internally to the block so that parking lots 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.
9. The provision of a landscaped buffer or architectural screening between parking lots or structures and residential buildings is encouraged.
10. Parking structures with exposed street frontage should not be oriented toward residential uses.
11. The primary function of Route 1 is to serve regional traffic and should not be the primary orientation (or front door) for development.
12. Outside of the mixed-use activity centers, all new developments should provide a minimum level of pedestrian and bicycle facilities to allow residents to walk or bike to the nearby activity centers.

Landscape, Streetscape, Public Space

1. Open spaces, including streets, should be designed to support the pedestrian environment. The construction of sidewalks (minimum 5-foot width) along both sides of all streets in mixed-use areas is required.
2. Bicycle facilities will be developed within mixed-use areas and be connected to bike paths that connect to residential districts in Triangle and beyond.
3. Storefronts, street vendors, or other pedestrian-oriented uses should, to the extent possible, front on at least three sides around the perimeter of a plaza.
4. All public and private open space not used for recreation should be attractively landscaped. The use of three-level planting (ground cover, shrubs and trees) and hard surfaces is encouraged.
5. 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.
6. Hardscape design should create interest and variation within paved surfaces that includes but is not limited to public art, coloring, or materials.
7. 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. Special paving materials should be used for sidewalk and crosswalk paving.
8. Planting and plant materials should be appropriate to the site context and conditions. Plant material should be tolerant of urban conditions. 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. Native plant materials should be used if possible.
9. Street trees are an integral part of the streetscape; conditions should be created that allow them to thrive. Use large tree pits or landscaped buffers (curbside planting strips) that allow for a broader canopy trees are preferred over typical street trees.
10. Ample comfortable seating that encourages lingering and social interaction should be provided on active streets and in all public spaces.
11. Lighting should provide a safe and secure environment for motorists, bicyclists, and pedestrians; create an identity for the development and/or special streets; and

enhance the quality of streets in the commercial core through the design of the light poles, bases, fixtures, and attachments.

12. Public art should engage the community and express community identity. Developers are encouraged to integrate public art.
13. Signs should be located, sized, and designed for single or multiple uses so as to eliminate conflicts, minimize the impact of the signs on adjoining properties, avoid clutter, and achieve the desired character of their application. The size of signs should be related to the location and speed of movement of a pedestrian viewing the sign. Window, awning, and projecting signs should not be allowed above ground floor.

Mobility

Goal: Create a multimodal network that leverages, connects, and expands the existing pedestrian, bicycle, and trail infrastructure to develop a complete mobility network connecting to the area's commercial, recreational, and community amenities.

1. Design and build complete streets that accommodate vehicles, pedestrians and cyclists within mixed-use areas.
2. Create a network of walkable and bicycle routes throughout the SAP and to the adjacent amenities/destinations.
3. Make Route 1 more comfortable to bike and walk along through safer and more connected bike and pedestrian facilities and enhanced public realm/beautification.
4. Create more safe crossings across Route 1 and along the Joplin Road corridor.
5. Turn Old Triangle Rd into a lower-stress bike route that connects to Dumfries.
6. Make VRE station(s) more accessible to civilian residents and employees in Triangle.
7. Connect to the planned Bus Rapid Transit (BRT) along the Route 1 corridor.

This document provides information on the key transportation elements of the Plan, including the creation of a safe and inviting network of pedestrian and bicycle connections to allow connectivity to the amenities in the study area. The Plan calls for linking the east and west sides of the Small Area Plan utilizing connectivity from

multiple perpendicular roads and one parallel road to the Route 1 corridor. The Plan focuses on the provision of a street network that supports the businesses and industries of the area and provides for the safe and efficient movement of residents and visitors through the Triangle area along the Route 1 corridor, Fuller Heights Road and Triangle Road by any mode, motorized and non-motorized, that they choose.

Pedestrian and cycling linkages are identified around the study area. A network of paths should be created linking east-west from the Little Creek linear park across Route 1 to Fuller Road and Fuller Heights Road. Additional connections tie into the Marine Corps National Museum from Joplin Road to Locust Shade Park. These linkages are the highest priority of the mobility elements in the plan and will facilitate safe, inviting, and sustainable car-free access to the existing and emerging amenities and economic opportunities in the area. These linkages form the backbone of a system that will be further refined, improved, and added to with community input as Triangle develops.

Road and Highway Network

The Small Area Plan provides an opportunity to transform Triangle from a place that motorists drive through on their way to other locations into a multi-modal destination that will provide workers and visitors with alternate modes to get around without having to get in their car. By providing a grid of streets with short blocks that facilitate pedestrian activity and new streets providing parallel routes to Route 1 moving people in and around the study area can be accomplished without using Route 1.

Route 1 provides primary access for automobiles traversing the study area and is designated as a Principal Arterial in the Thoroughfare Plan. Route 1 is planned to be a 6-lane divided roadway that will carry high vehicular volumes at high speeds with limited access points and median breaks once the Fraley Boulevard Widening project is complete in Dumfries.

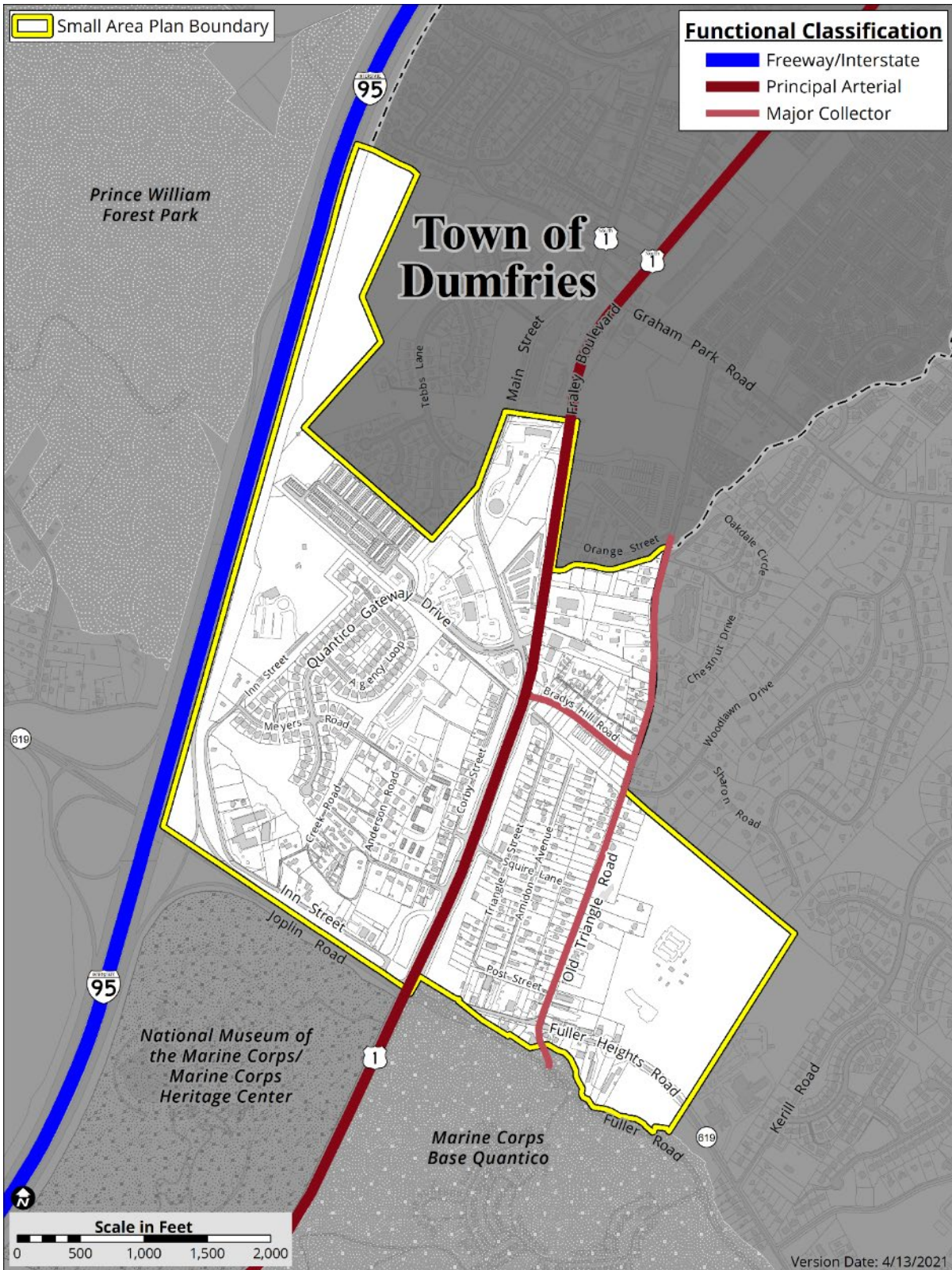


Figure 34: Functional Classification

Complete Streets

The introduction of complete streets which accommodate a range of transportation modes, including walking, cycling and transit will help to rebalance the transportation system in Triangle towards other modes in addition to the personal motor vehicle. The effort to transform existing streets into complete streets is primarily focused on the new mixed-use activity centers. The new local streets introduced in the mixed-use center near the intersection of Route 1 and Quantico Gateway Drive will be complete streets, incorporating pedestrian and bike facilities that are consistent with the alignment of the widening of Fraley Boulevard in Dumfries.

These new streets or redesigned streets will also accommodate cars however, they will be quite balanced in the way that they accommodate multiple modes of transportation within their rights-of-way.

Fuller Heights Road, as it passes through the planning area only, will also be redesigned into a complete street, with adequate bicycle and pedestrian facilities. A typical section is shown in the graphic below.

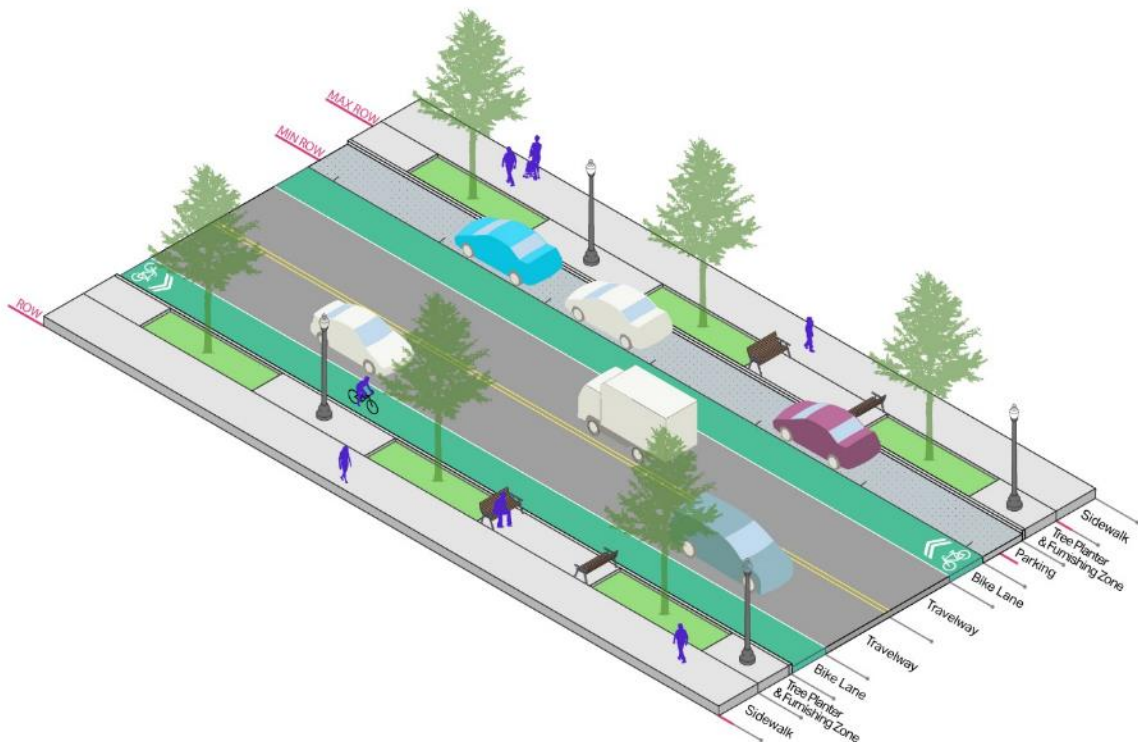


Figure 35: Fuller Heights Rd – Complete Street Approach

In addition, guidelines for the layout and design of sidewalks, bike paths and associated Green Infrastructure are presented in the Green Infrastructure section below and the Urban Design Guidelines section above.

The third new mixed-use area in the Small Area Plan is the Office Mixed-Use and Community Mixed-Use along Joplin Road between Route 1 and I-95. This segment of Joplin Road should be renovated into a complete street. However, vehicular traffic will continue to dominate the road, as this is an important connector from the highway to the Marine Corps base and to Route 1. Nonetheless, the north side of the street can be redeveloped to include better pedestrian facilities and the new shared use path that extends the Potomac Heritage National Scenic Trail in Prince William Park, just west of I-95 to Route 1. (This new segment of the regional trail is also referenced in the Green Infrastructure section below.) Part of the existing access road on the north side of Joplin Road could be used for the creation of the new bike/ped facilities on Joplin Road.

Finally, Route 1 within the planning area should become more of a complete street, with improved bicycle and pedestrian facilities. Clearly, the main function of the road will continue to be movement of motor vehicles north-south through the County and beyond. However, as part of the redesign of the road as the southern gateway entrance to Prince William County, this segment of Route 1 will become safer and more pleasant for pedestrians and cyclists. The illustrative view of a redesigned Route 1 is shown in the graphic below.

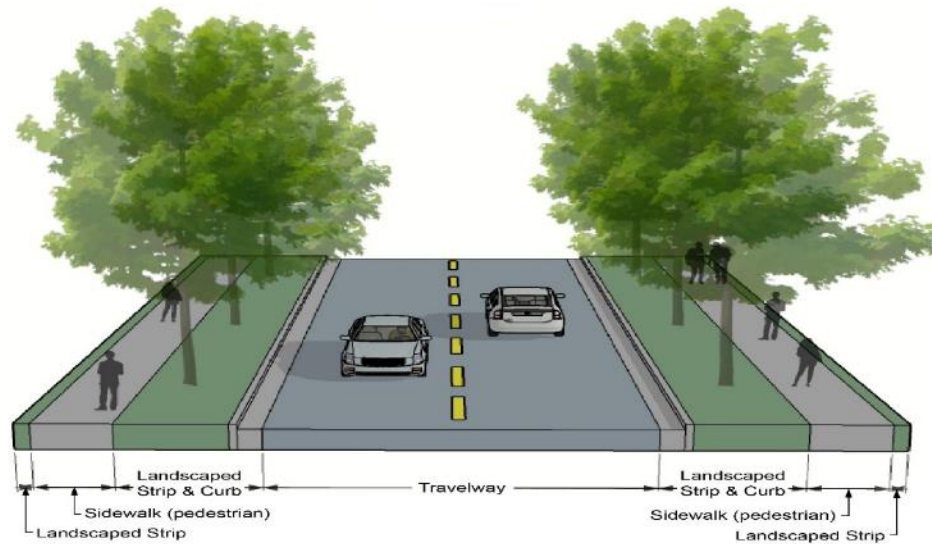


Figure 37: Old Triangle Road- Complete Streets Approach

Another important change to Route 1 to make it more pedestrian-friendly is to improve crossings. The key crossings are at Joplin Road, Quantico Gateway Drive, and Squire Lane – Southway Lane. These crossings should be made safer and more robust, with better signage, appropriate signalization and other measures as determined necessary during the design stage.

Facility	Route #	Termini/Section Location	Functional Class	Typical Section	Number of Lanes	Bike/Pedestrian Facility
Route 1	1	Joplin Road to Quantico Gateway Drive	Principal Arterial	PA-1	6	14B Shared use path/west Sidewalk/east
Joplin Road	619	Route 1 to Route I-95 east side ramp.	Major Collector	MC-1	30B4	Proposed shared use path/north
Fuller Heights Road	619	Route 1 to Old Triangle Road	Major Collector	MC-1	47B2	14B Proposed shared use path/north Proposed sidewalks south
Old Triangle Road	1107	Brady Hills Road to Fuller Heights Road	Local	RM-1	21B2	Proposed sidewalk east
Brady's Hill Road		Route 1 to Old Triangle Road	Local	RM-1	2 B2	Proposed sidewalk south
Inn Street		Route 1 to Old Triangle Road	Local	RM-1	2 B22	Proposed sidewalk north

Transit Network

Even with increases in density/intensity in the focus areas for development in Triangle, local-serving fixed-rail transit is not recommended for the area in the near future; instead, finding ways that existing and new bus routes and stations can better serve the community and provide access to the VRE, as well as other nearby commercial and employment hubs, is the future focus for public transit.

The VRE represents an underutilized resource for the residents of Triangle. Access to the Quantico VRE is complicated by the fact that the station is located within the military base; only individuals with a base pass can access the station. A new VRE station is planned to go into service in 2022 at Potomac Shores Town Center approximately five miles north of study area. The next-closest VRE stations to Triangle serving the general public are the Rippon VRE station and the Woodbridge VRE Station, both of which are located north of Triangle.

The County should explore the possibility of facilitating access to one or more of these VRE stations. The County is proposing to run a bus route between Triangle and a nearby VRE station/transit center to be determined. A rush-hour shuttle service could also be considered. Pre-clearance procedures could be developed for regular riders of the VRE that live or work in Triangle. Better access to this critical transit service would create a distinct advantage for Triangle as a node within the Potomac Defense Corridor.

As the plans to extend the Bus Rapid Transit system southwards along Route 1 are studied consideration should be given to a stop in Triangle. One option would be to locate the stop near the corner of Route 1 and Fuller Road. Joint service of such a stop to Triangle and MCB Quantico would underscore the community's important relationship with the base.

Transit Network	Location
(Interim) AM -PM shuttle to Quantico VRE Station (Long term) Shuttle to Future Potomac Shores VRE Station	Fuller Road through Quantico Base (Interim) Route 1 to River Heritage Boulevard (Long Term)
Bus Rapid Transit	Route 1 Corridor Stop near Fuller Road

Proposed Bicycle and Pedestrian Facilities

In addition to the new or improved pedestrian and bike facilities adjacent to the streets, it is proposed to extend the bike/ped network in other ways. A network of paths should be created linking east-west from the Little Creek nature corridor across Route 1 to Fuller Road and Fuller Heights Road. Additional shared use paths should be built to connect Triangle to the two public schools to the east. The existing easement south of and parallel to Brady's Hill Road can be used to connect from Route 1 to the northwest corner of Fuller Heights Park. From there a new trail can be developed on the northern edge of the park, connecting eastwards along the existing stream corridor to Triangle Elementary School. Similarly, a new shared use path could be developed from the northwest corner of Fuller Heights Park along Woodland Drive or through the adjacent stream corridor (west side of Woodland Drive) to connect to Graham Park Middle School. For continuity and safety, the bicycle and pedestrian facilities should align north of Quantico Gateway Drive with the widening of Fraley Boulevard in Dumfries.

Example Bicycle and Pedestrian Facility Images

Shared Use Path - Shared Use Paths are 10' wide asphalt trails designed for walking, jogging, and bicycling. 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 38: Examples of shared use paths

Sidewalks/Trails - These are paved walkways and trails exclusively for pedestrians adjacent to a street. Sidewalks are required to be a minimum of 5 feet in width though 6'-8' is preferred. Paved trails are 10 feet wide and can accommodate bicyclist as well.



Figure 39: Paved Walkways and Trails

Source: <http://www.pedbikeimages.org/> Dan Burden

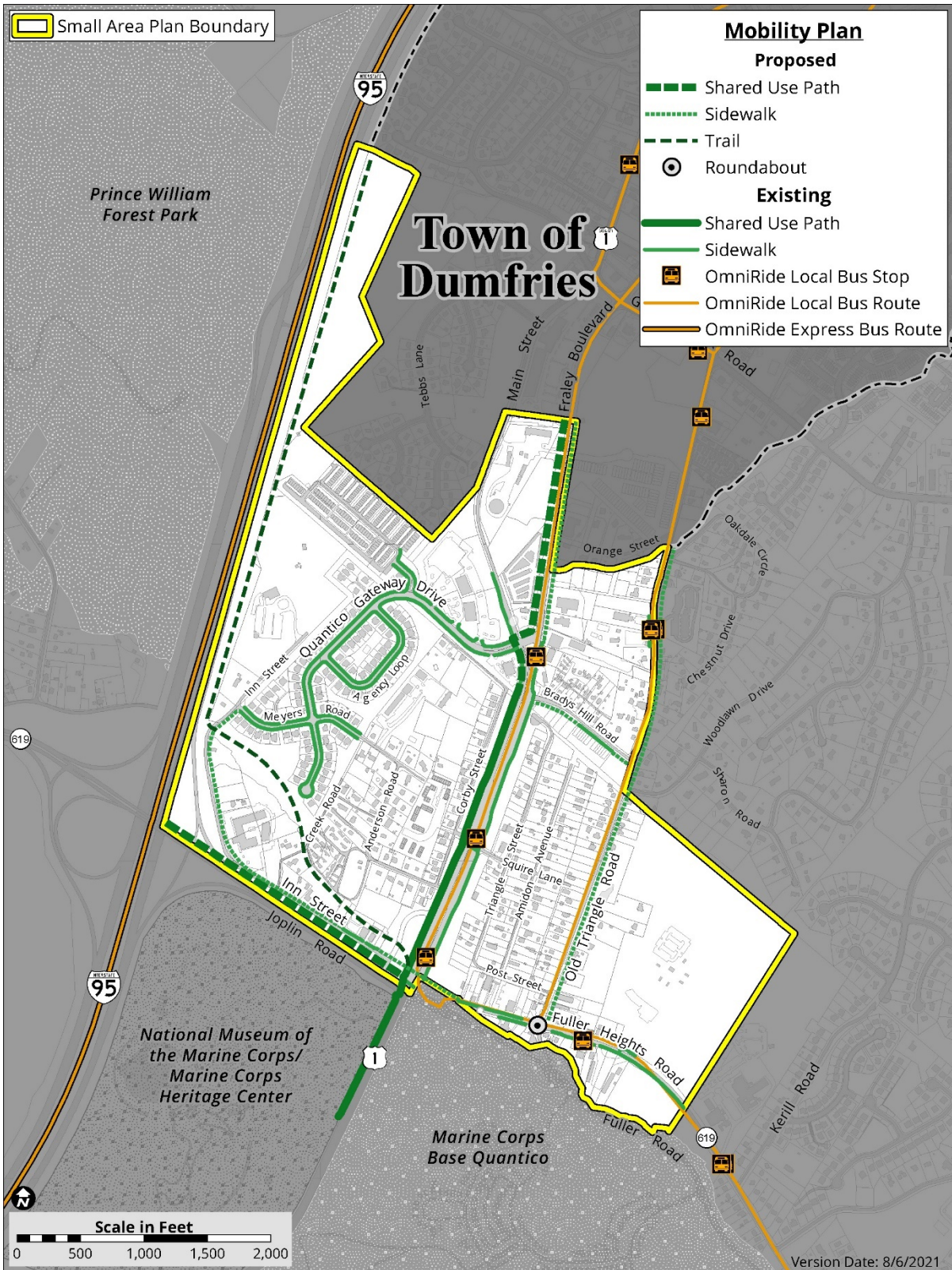


Figure 40: Mobility Plan Map

GREEN INFRASTRUCTURE

Goal: Work to ensure that Triangle’s ecosystem is both sustainable and resilient by building a connected network of greenways, trails, and open space throughout that provides connectivity to local destinations and helps create a healthy and welcoming environment for all.

1. Restore Little Creek on both sides of Route 1. Create a larger riparian buffer area along the stream for use as natural open space and/or parkland. Design these new open spaces in order to showcase Triangle as an “ecologically healthy community.”
2. Use green infrastructure tools to increase green/natural spaces and enhance aesthetics along Route 1. Use these tools, along with other streetscape improvements, public art/monuments, memorials, etc. to honor and highlight Triangle’s strong relationship with the Marine Corps.
3. Create an interconnected network of trails, walking routes, bicycle routes, and open space throughout Triangle that create attractive, safe, and connected options for people to recreate, and encourages residents to choose healthier and more active modes of transportation.
4. Create or enhance connections between the trail network in Triangle with surrounding networks and facilities, including the Potomac Heritage National Scenic Trail, Dumfries Main Street, and nearby public schools.
5. Create more public gathering places for people that are strongly tied to new mixed-use area services and amenities, that also provide a “sense of place”/identity for Triangle. These spaces should also provide as many ecosystem and stormwater management services as possible
6. As development occurs in the study area, the County will need to be mindful of preserving and enhancing existing open space, in addition to providing new functional gathering/recreation spaces for residents.

Green infrastructure planning is a vital part of any small area plan and should be integrated with plans for growth and development; green infrastructure not only protects and enhances the natural environment, but also provides valuable stormwater management services and enhances resident quality of life. Triangle’s green infrastructure network consists of its existing open space, including Fuller Heights Park, as well as smaller existing public and private green spaces within its neighborhoods, natural/undeveloped areas, existing and future trails, the Little Creek stream corridor, and trees. The County will need not only to plan to conserve and protect Triangle’s existing green infrastructure network, but also to consider ways to enhance and add to the network over the coming years.

The plan has been broken down to provide direction for four functional areas for consideration:

- Natural Resource Areas
- Parks, Plazas and Open Space Areas
- Streetscape Areas
- Recreation Field Areas

Natural Resource Areas

As previously noted, there is a Resource Protection Areas (RPA) buffer along Little Creek in the Triangle study area. These RPAs are the County's most sensitive environmental areas. In addition to areas surrounding waterbodies, some wooded /forested areas and areas with steep slopes are also considered RPAs by the County. It is critical that these areas not be disturbed or modified by future development, as protecting these areas is essential for ecosystem health. Protecting, maintaining, and enhancing these RPAs will not only enhance ecosystem health, but will allow for "smarter growth" in Triangle that encourages new connections to existing natural areas for passive recreation and enjoyment by residents. Prince William County will need to work to ensure that the health of the RPAs in the study area is regularly monitored, and that these areas are adequately protected and maintained going forward

Future treatments of the existing natural resource areas should adhere to the following:

- Maintain, preserve and/or increase resource protection areas where appropriate, including riparian buffers/easements along Little Creek, any existing wetlands, and floodplains.
- Trails and passive recreation opportunities should be integrated into these areas in an environmentally-sound manner, where appropriate, and in accordance with County standards. However, any proposed outdoor recreation opportunities should be carefully explored, and should not result in disturbance of natural conditions.
- Little Creek is an under-leveraged asset in Triangle, and new opportunities for recreation and enjoyment of the creek should be considered that would benefit both Triangle and Quantico residents
- Open green space should be incorporated into new development, and disturbance of existing natural features, such as mature trees, should be minimized to the utmost extent possible.
- Explore conservation easements and other similar programs that encourage the protection in perpetuity of sensitive environmental areas from development and disturbance.

Parks, Plazas and Open Space Areas

Open space areas provide buffers around RPAs and other natural areas. They also create opportunities for outdoor recreation, and can be ideal locations for shared use paths, trails, and corridors for wildlife. The County will need to take care to maintain the integrity of these areas, particularly when surrounding areas are being developed. Shared/multi-use paths and trails for both bicyclists and pedestrians can connect different areas within Triangle, as well as connecting the community to the surrounding areas, such as Dumfries, MCB Quantico, Prince William Forest Park and Locust Shade Park. By connecting natural areas with public, residential, commercial, and civic space via multi-use paths, the County can give residents the opportunity to move safely in and out of the study area without the use of a private automobile, and make Triangle a better place to live, work, shop, and play.

As previously noted, Fuller Heights Park is one of Triangle's greatest community assets;; however, the park is already highly utilized for youth sporting events throughout the year. More opportunities for flexible open space with different types of programming are needed in Triangle. One opportunity area is just across Fuller Heights Road from the Park, where there is currently an older residential apartment community with a large central parking area. There is potential to add a plaza or similar publicly accessible open space feature there that would allow for flexible programming (food truck "rodeos," community events, etc.) that could also create synergies with the youth sports teams and families using Fuller Heights Park.

As Triangle continues to develop, there are also opportunities for adding additional publicly accessible open space/recreational amenities, to better serve its growing population and residents living in the surrounding areas. It is important to design and implement additional parks, plazas, and open spaces in ways that are sensitive to existing developed and undeveloped areas, in a manner that will enhance Triangle's sense of place. For example, stakeholders have also expressed interest in seeing more open space between Fuller Road and Fuller Heights Road, bordering MCB Quantico. Triangle and County stakeholders have also expressed interest in seeing more open space on the western side of Route 1, in the southern portion of the study area. This would create an opportunity for an open space that could be shared by members of both the Triangle and Quantico communities. "Daylighting" that area of Little Creek is proposed to create both passive and active recreation opportunities for residents and visitors along the creek.

In keeping with existing proposals for completing the regional Potomac Heritage National Scenic Trail, a new segment along Joplin Road should be created to connect from Prince William Forest Park to the trail along Route 1.

Future design and programming of parks, plazas, and open spaces in Triangle should keep the following tenets in mind:

- New parks, plazas, and open spaces should be incorporated into new development wherever possible, particularly new residential development.
- Any public open space in Triangle should be readily accessible to residents across the age and ability spectrums and should incorporate best practices for accessibility wherever possible.
- Programming of new and existing public spaces will need to cater to a wide range of users of varying interests and abilities. The County will need to consider balancing “passive” recreation areas (open spaces with trails, etc.) and “active” recreation areas (outdoor theaters, obstacle courses/playgrounds, etc.)
- New open/public space will need to adhere to design best practices, and incorporate shade, seating, picnic tables, etc. where appropriate and desirable.
- Any new spaces created will need to consider adjoining uses; i.e., areas with adjacent dining and café uses may want to consider providing additional seating, trash receptacles, etc.
- Clear wayfinding and signage should be incorporated directing residents and visitors to public open spaces, parks, and plazas.
- Incorporation of public art in open spaces is highly encouraged, as it will help enhance Triangle’s sense of place. Well-placed public art can also serve as a defining feature for the Route 1 Potomac Defense Corridor. Any public art selected for open spaces in Triangle should consider the context of the area, including historical and cultural references.
- Any plazas, parks, and related open spaces near roadways should be designed to provide buffers from automobile travel lanes for safety; for instance, parking lanes, landscape planting areas with trees, shrubs, public art, etc. are elements that could enhance the streetscape, while also protecting pedestrians from vehicular traffic.

Streetscape Areas

Enhancing Triangle’s streetscapes, particularly along Route 1, Fuller Road, Quantico Gateway Drive, and any other areas targeted for new development and/or redevelopment, can drive additional economic development, enhance quality of life for new and existing residents, and help provide/reinforce a sense of place and civic pride for the study area.

Street trees, rain gardens, bioswales, and other BMPs for managing stormwater and beautifying the streetscape should be considered for all of Triangle's higher-traffic areas. These elements not only manage runoff and beautify the area, but also enhance both real and perceived safety for pedestrians and bicyclists, promote clean air, and provide crucial shade to pedestrians during hot weather. Street trees should be a feature of all streets regardless of subdistrict, land use, or density. Right-of-way setbacks should also incorporate pedestrian amenities and street furniture, where appropriate/feasible.

Green roofs should also be considered for any new development in Triangle (both commercial and residential) where feasible. It is also possible to retrofit certain existing buildings with green roofs. Green roofs can be an attractive amenity for offices, retail shopping areas, restaurants, and private residential developments. When constructed following industry best practices, they can provide effective stormwater management and treatment, and help reduce the "urban heat island effect" in more densely developed areas.

Streetscape enhancements recommended for Triangle include the following:

- All streetscape amenities and enhancements should incorporate best practices and be designed in accordance with the County's Design and Construction Standards and VDOT standards if within the public right of way.

Route 1

- Green infrastructure and streetscape improvements to Route 1 should follow the guidelines for commercial streetscapes, and should also include ceremonial elements, public art, and other placemaking features where possible, highlighting the relationship between Triangle and MCB Quantico as part of the Potomac Defense Corridor.

Commercial Streetscapes

- Landscape planting areas should be located along the edge of the curb, and should include trees as well as other planting areas, amenities for pedestrians and bicyclists (benches, trash cans, bike racks, kiosks, lighting, etc.), where feasible. Lighting for safety will need to be carefully considered.
- Low Impact Development (LID) and stormwater features such as raingardens should be incorporated along the streetscape where feasible and appropriate. Durable and low-maintenance materials are recommended.

- Sidewalks should provide uninterrupted connectivity and be wide enough to allow people to walk side by side or pass comfortably.
- The area between the edge of the sidewalk and build-to lines in commercial areas should be functional and useful for the adjacent buildings/uses; for example, areas adjacent to restaurants and cafes should provide space and/or seating for outdoor dining, sandwich boards, planters, public art, etc. to create a functional and vibrant pedestrian environment. Areas located adjacent to retail uses should provide space for “pop-up shops” and other complementary outdoor uses, where feasible and appropriate.

Residential Streetscapes

- Residential streetscapes should also include a landscape planting areas/amenity zones where possible that includes trees, stormwater management features, and understory landscaping to provide shade and buffer pedestrians and bicyclists from the right-of-way.
- Sidewalks should provide uninterrupted connectivity and be at least 5 feet in width to allow people to walk side by side or pass comfortably.
- Again, lighting for safety will need to be carefully considered; however, while it is important to illuminate the streetscape for safety, utilizing lighting that does not create light pollution and/ or interfere with surrounding residences, is also key.

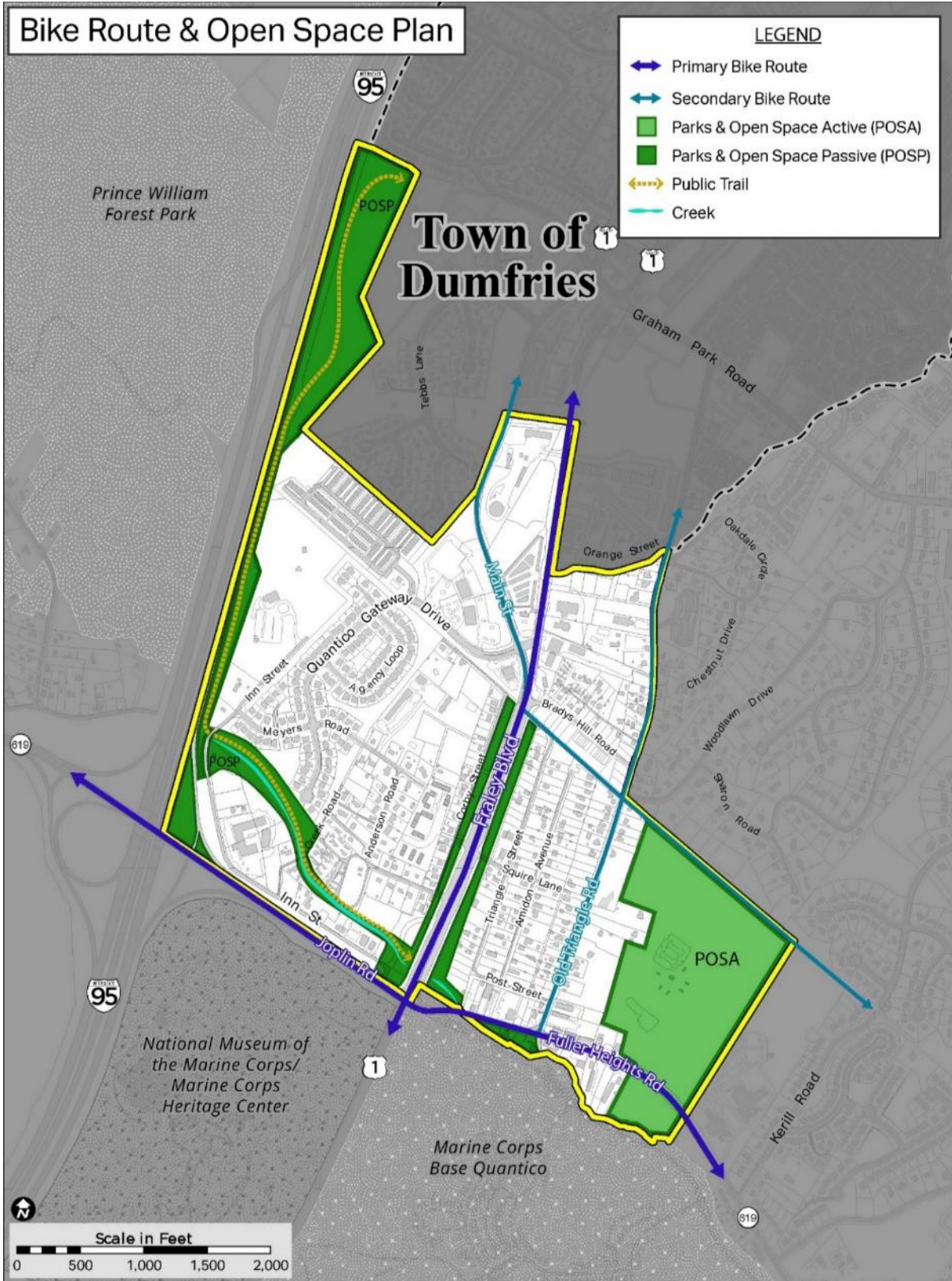


Figure 41: Bicycle Route and Trail Networks


Recreation Field Areas




Recreation areas, like Fuller Heights Park, are considered “active recreation” spaces. Active recreation spaces usually fall outside of environmentally sensitive areas but may be adjacent to them. Recreation spaces are essential for supporting community health, well-being, and quality of life. Any new development that occurs in Triangle will need to consider incorporating active recreation spaces wherever possible. While it is not always feasible for each small-scale development to have its own active recreation space, creative planning and partnerships can allow multiple developments to share active recreation space, which can provide a focal point for development and an anchor for the community.




Interactive programming is essential to “activate” community recreation spaces and ensure that they are well-utilized and beneficial to all residents. These spaces should be accessible to residents of all ages and abilities and include active recreation elements like intramural/open play fields, outdoor exercise equipment, pavilions, bike/skatepark elements, and programmable flex space such as plazas, pavilions, and lawns for community events. Adequate lighting, wayfinding signage, and high visibility are essential for making these spaces accessible to the broader community. Active recreation spaces should also incorporate stormwater BMPs to manage runoff from playing fields and other open spaces. If thoughtfully designed, these BMPs can become attractive amenities in and of themselves, enhancing the aesthetic beauty of community recreation spaces.

Recommended Green Infrastructure “Toolkit”

The following table illustrates options for green infrastructure “tools” that can be implemented in the study area, either as standalone efforts or in conjunction with new development.

Tool	Description	Image
Open Space Preservation	The intent of open space preservation is to retain areas of existing open and green space by prioritizing infill and redevelopment over greenfield development, and protect wooded areas, riparian zones, and areas otherwise unsuitable for development, as well as provide both active and passive recreation opportunities for members of the community.	

Tool	Description	Image
Creation of New Open Space	<p>Areas where land is being cleared or derelict structures demolished for development should also be considered for the creation of both active and passive recreational open space for the Triangle community. Not only does additional open space provide a community focal point, but it can provide many ecosystem benefits and services as well and contribute to the health of surrounding natural areas.</p>	 <p>A photograph showing a large, open green space with a bridge in the background. The area is grassy and appears to be a park or recreational area. There are some people sitting on the grass, and a yellow structure is visible in the distance. The bridge is a large, steel structure with a walkway.</p>
Green Roofs	<p>Green roofs, when implemented correctly, can reduce stormwater runoff volumes, improve water quality, and mitigate the urban heat island effect in densely-developed areas. They can also provide gathering spaces and be an attractive amenity for both commercial and residential development. Civic buildings, such as schools and recreation centers, can also incorporate green roofs, where appropriate.</p>	 <p>A photograph of a green roof. The roof is covered with a variety of colorful plants, including green and orange flowers. The roof is surrounded by trees and a building in the background.</p>
Porous Pavement	<p>Porous pavement, a permeable pavement surface that is built with underlying stone aggregate that temporarily stores surface runoff before allowing it to infiltrate fully into the subsoil, can reduce the amount of impervious area in a development and provide multiple stormwater benefits. Porous pavement may not be appropriate for all areas; typically, it should be used in low- to medium-traffic areas, such as residential roads, overflow and special event parking, driveways, and alleyways. Types of porous pavement include porous surfaces, including porous asphalt, pervious concrete, and grass or permeable pavers.</p>	 <p>A photograph of a paved area with porous pavement. The pavement is made of small, light-colored stones. There are cars parked on the left and a building on the right. The sky is blue with some clouds.</p>

Tool	Description	Image
<p>Bioretention Facilities</p>	<p>Typically, bioretention facilities are vegetated landscaping features that provide temporary storage and on-site treatment of stormwater runoff. They are commonly located in parking lot islands or within small pockets of residential land uses but can also be adapted for urban streetscapes. Depending on how they are designed and maintained, they can also provide beautification along streetscapes and in public open spaces.</p>	
<p>Vegetated Swales</p>	<p>Vegetated Swales are usually wide, shallow channels typically lined with a variety of plants, shrubs, and/or grasses. These features usually border large impervious surface areas, such as parking lots, and convey large amounts of stormwater naturally—in some instances replacing pipes. They can also be used along streetscapes and within recreation areas, where appropriate.</p>	
<p>Naturalized Infiltration Basins</p>	<p>Naturalized infiltration basins are created either by impounding of a natural depression/existing low area, or by excavation. These features provide temporary storage and infiltration of stormwater runoff in areas of transition between higher and lower activity. Native plantings such as wildflowers and seasonal grasses can be added to existing basins to provide wildlife habitats and aid infiltration. Depending on their design, these basins can also provide beautification for public open spaces.</p>	


Tool	Description	Image
Stream Daylighting	Stream daylighting is recommended for Little Creek, which runs close to Fuller Road in the study area. Daylighting involves removing any human-constructed fill or cover of natural channels, and restoring the channel to its original, natural conditions. This not only provides stormwater and ecosystem benefits but can open up opportunities for community enjoyment and recreation.	

Figure 42: Green Infrastructure “Toolkit”

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. The intent of this section is to facilitate the identification, research, preservation or documentation, and interpretation of the history of this small area plan.

As development proposals for Triangle are received, surveys will need to be conducted to assist in the identification of additional resources, and to ensure that measures are taken to protect any existing/newly discovered historic and cultural resources in the study area. Preserving and promoting Triangle’s rich heritage will be key to better establishing a “sense of place” and identity for the community.

As previously noted in the Cultural Resources and Existing Land Uses sections of the SAP, the planning area’s pre-contact (Native American) history is consistent with what has been documented for eastern Prince William County. Multiple archaeological surveys and studies have been conducted of the Triangle area over the last several decades, mostly along Route 1. According to those studies, no significant new archaeological or architectural resources not already recorded were found in Triangle specifically, but the surveys recorded approximately 59 architectural resources in the surrounding vicinity along Route 1, including one National Trust-registered property in the Town of Dumfries, just to the north of Triangle. However, future plans, policies, and developments in the area will need to consider the potential for undiscovered archaeological resources and ensure that due diligence to protect any resources that are discovered is undertaken.

Along the corridor extending 100 feet from the edge of pavement on each side of U.S. Route 1 from the Stafford County line to Route 123, eight archaeological sites and 14 artifact locations were identified. Twelve of the artifact locations consisted of nondiagnostic Native American lithics. Three of the eight sites recorded were located on MCB Quantico. One Civil War site was recorded just south of Neabsco Creek. One Civil War gun emplacement and several trenches were recorded along Route 1; another gun emplacement and trench were located on a hilltop to the west. on the north slope of the hill. A Civil-War-era cemetery, the Amidon-Lunsford cemetery, has also been identified within the study area.

All future plans, policies, and developments will need to ensure that there are no encroachments on this historic cemetery. Triangle also has two Historic Sensitivity Area overlays, as discussed in the Existing Land Uses section of the SAP. These overlays which denote areas of potentially significant known but ill-defined or suspected historic sites, along its western edge. A small portion along the area's northern border lies within both Pre-Historic and Historic High-Sensitivity areas. The southeastern corner of the study area along Fuller Heights Road/Little Creek also falls within a Pre-Historic High-Sensitivity area. Any proposed development or land use changes in these areas will need to undertake studies/due diligence, where appropriate, to ensure that no historic resources are disturbed or compromised, and that adequate provisions and plans are made for protecting resources that may be discovered during the development process. Plans and new developments will also need to consider the surrounding historic context, in addition to site-specific resources.

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.

Policy — Identify, document or preserve, and interpret pre-contact Native American archaeological sites, as well as other known and potential archaeological sites.

- Require Small Area Plan Phase I cultural resource surveys on undeveloped land in the planning area 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 or avoidance to allow County archaeological research in the future.
- Conduct research and archaeological studies searching for the Revolutionary War archaeology site 44PW1844: "American Wagon Train Return March Camp No. 7."

- 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.
- Ensure that any new development in the plan area is adequately buffered/does not encroach on any known historically or archaeologically significant sites or interfere with access to those sites. Adjacent development should be respectful of historic context.
- Identify funding sources such as grants (matching or fully funded) to fund cultural resource surveys. Cultivate private and public partnerships to conduct cultural resources research.
- Consider graduate internships to complete cultural resource action strategies in this plan. Cultivate partnerships with regional colleges and universities.
- Partner with the Planning Office, the Historical Commission, the Architectural Review Board, and the Department of Parks, Recreation and Tourism on internship programs and projects.

Policy — Interpret Triangle’s history for the benefit of citizens and visitors.

- Prepare a history or histories of the planning area that can easily be shared with residents and visitors; consult and partner with Prince William Forest Park on research and interpretation of the area’s history.
- Promote and celebrate the proximity of the planning area to important internal and adjacent historic sites, including the Amidon-Lunsford Cemetery, the Iwo Jima Memorial, Marine Corps Museum at MCB Quantico, the Weems-Botts Museum in Dumfries, and Prince William Forest Park.
- Ensure that appropriate wayfinding signage, historical markers, and interpretive exhibits and signage exist that emphasize Triangle’s connections to these important nearby historic sites.
- Promote the history of Prince William Forest Park and its importance to the plan area;
 - Partner with developers and property managers to install historical markers and interpretive kiosks in consultation with the Historical Commission, the Planning Office, and the Historic Preservation Division in areas where development occurs adjacent to historic sites Collocate with planned open space and parks where appropriate.

- Include interpretation of the planning area's history in planned open spaces where appropriate and prepare and distribute that history through various interpretive media.
 - Where technology reduces cost and increases efficiency, employ technology to bring historical interpretation to the public.
- Require new development to reference the Plan Area's historic context in placemaking, where appropriate.
- Where appropriate, plan and install interpretive, interactive exhibits along existing and new trails throughout the planning area, and connect those trails to commercial, residential areas, and attractions both inside and outside Triangle.

ECONOMIC DEVELOPMENT

Goal: Incentivize economic development to attract targeted industries to become part of the Potomac Defense Corridor and capitalize on the significant impact of MCB Quantico and other regional assets to build an interconnected, innovative and welcoming community that has the distinction of being the southern gateway into Prince William County.

1. Leveraging its proximity to MCB Quantico, Triangle will establish a more robust presence in the Potomac Defense Corridor by developing new services and amenities, including office space and convention center facilities, to accommodate MCB Quantico contractors and other workers in complementary industries.
2. In support of the contractor facilities and for the benefit of local residents, Triangle will enable the development of neighborhood-level mixed-use areas with retail, food and beverage, and service commercial establishments connected by an attractive public realm.
3. Triangle will offer high-quality IT infrastructure to accommodate changes in office work, from traditional office to more home offices and flexible work schedules and structures.

According to the MWCOG Round 9.1a TAZ forecast data for the Triangle Study area, the Triangle area's population will increase significantly between 2020 and 2040, by approximately 74 percent in twenty years. This significant increase in population presents multiple opportunities for Triangle's growth and development. Triangle is also projected to see the number of jobs in the area increase by 757 percent, from just 350 jobs in the study area and vicinity in 2020 to nearly 3,000 jobs in 2040. If these projections come to fruition, although they would present an incredible opportunity for Triangle, accommodating such a significant increase in jobs in Triangle and the surrounding vicinity will also be a major challenge for the County the over the next two decades.

According to the 2018 Target Industry Study completed for Prince William County, the strongest of the industry clusters analyzed were the Healthcare Cluster and the Federal Government Contracting Cluster. The Communications Technology Cluster (ICT), though currently small in the County, is also a growth opportunity, as these businesses tend to support and create synergies with Healthcare and Federal contracting. However, these industries need access to powerful broadband and electrical infrastructure, which can present challenges for the County.

Target Industry	Existing Business Presence	General Requirements	Opportunity Ranking	Supportive Actions to Grow Industry within Small Area
Federal Government Contracting	Quantico Gateway Center	<ul style="list-style-type: none"> Proximity to military infrastructure/ installations and nearby market, and supply chain Commercial zoning Class A office space Information technology infrastructure Easy Access to I-95 	<p>Medium</p> <p>The area does have commercial zoning, IT infrastructure. The base is home to over 25,860 jobs in 22 agencies. In addition to the Department of Defense, the FBI, DEA, DOS, Homeland Security, Capital Police, Secret Service, and ICE all train there.</p>	<ul style="list-style-type: none"> Focus on marketing to recruit Federal Government Contractors that supports the security and military industry.

Figure 43: Target Industry Table

Existing Economic Development Assets

As previously noted, the study area is largely residential, with small pockets of retail/commercial and office uses. From the data available, it appears that office space vacancies have historically been high (over 10 percent), but as previously noted, the sample size is small. There is approximately 52,000 square feet of retail and other commercial space in the study area; available data is incomplete, but it appears that retail vacancies have historically been much lower than office vacancies in the study area over the last five years. There is very little industrial space currently available in the study area. Arguably, Triangle's greatest existing economic development strengths are its residential population, and its proximity to MCB Quantico/the emerging Potomac Defense Corridor. It is recommended that any economic development strategy for the study area build on these existing strengths.

Targeted Development Areas

During stakeholder discussions, two target areas for development in Triangle were established:

- East of U.S. Route 1 along Fuller Heights Road
- The portion of Quantico Gateway Drive that abuts U.S. Route 1

Office Development

Most of Triangle's existing office space is along Quantico Gateway Drive. There are opportunities to build on existing synergies there; however, it is important that any new office space that is developed in the study area be designed around the specific needs of its targeted tenants, and every effort should be made to establish strong partnerships and communication with MCB Quantico's contractors prior to planning and executing any new office development. Speculative ("spec") office development is not recommended for the study area, without pre-positioning or planning, to ensure that new office space is as fully utilized as possible. Additionally, any other office space targeted towards the County's ICT cluster should be built with specific tenants already in mind and should be tailored to their specific space needs. Existing underperforming office space could also be retrofitted in the short-term, if feasible, to accommodate current contractor demand.

Retail Development

As previously noted, development of retail and other commercial space in Triangle is another significant opportunity area. Not only would additional retail/flexible commercial space serve Triangle's current residential population (which, as previously noted, is expected to grow significantly in the coming years) but would also serve the 4,000-plus personnel living and working at MCB Quantico. As discussed in the

stakeholder interviews, retail space to accommodate more family-oriented services and amenities, including new cafes and restaurants, child-friendly activities (childcare, kid-friendly gyms and classes, other recreational/entertainment spaces), and other local-serving retail and services is in high demand both from Triangle and MCB Quantico residents. As with any new office space planned for development, it is critical that developers and Prince William County consider the needs of the end user/tenants of the space during the planning stages and engage the community and MCB Quantico personnel on defining what types of uses would be ideal for those new spaces. Local stakeholders—including real estate developers active in Triangle and MCB Quantico representatives—were consulted by the planning team during Small Area Plan preparation.

Residential Development

In Prince William County and the greater region, there is significant demand for “missing middle” housing that is affordable to middle-income families. This demand is only predicted to increase in the coming years, and this is therefore a significant development opportunity for Triangle. Because Triangle’s character is already primarily residential in nature, and the study area is already home to several great community assets (like Fuller Heights Park), it is well-positioned to add additional residential development. There are also opportunities to increase density in some of Triangle’s existing neighborhoods, by allowing accessory dwelling units, more multifamily dwellings, etc. A number of local developers have developed or applied for development of multifamily housing and town homes in the past couple of years. To capitalize and build on this market momentum, the Small Area Plan encourages mixed use development that can create a community focus, thereby complementing the residential development and expanding further the housing stock. Future residential projects should be planned in conjunction with new commercial development. Additional programming and amenities will attract families and new residents. As noted in the stakeholder interviews, Triangle’s current struggle for “identity” can be a barrier to attracting new residents, so ensuring that the community’s sense of place continues to develop, and advertising what the community already has to offer, will be key to attracting new residents. Also, to the extent permitted by law, Prince William County will need to work with the private sector to ensure that adequate public facilities (schools, medical care, emergency services) are provided to support residential growth.

Topic	Regional (Round 9.1a, Year 2040)	Countywide (Round 9.1a, Year 2040)	Triangle and Vicinity (Round 9.1a, Year 2040)
2020 Population	5,690,020	467,931	2,979
2040 Population	6,712,800	569,340	5,193
Growth 2020-2040	1,022,780	101,409	2,214
Percent Increase	17.97%	21.67%	74.32%
2020 Employment	3,360,566	164,813	350
2040 Employment	3,946,885	240,853	2,967
Growth 2015-2040	586,319	76,040	2,617
Percent Increase	17.45%	46.14%	747.71%

Surrounding Uses

Again, Triangle’s proximity to MCB Quantico is a key (and currently under-leveraged) asset. In order to fully leverage this strength, Prince William County will need to continue to work closely with MCB Quantico’s stakeholders to ensure that future mixed-use development proposals meet the demands of the base and its contractors for off-installation office space, housing, and retail, dining, and services. Current study area residents and stakeholders should also participate in discussions regarding future growth and development in Triangle.

Tools & Incentives

As discussed in the Existing Conditions section, portions of Triangle are located within existing HUB Zones, and a portion of the study area is within the County’s Redevelopment Overlay. Both of these areas offer opportunities to incentivize new commercial growth and development; however, these areas may need to be extended to fully encompass Triangle’s target growth areas.

Prince William County also offers other county-wide economic development incentives, including competitive tax rates, the Prince William County Economic Development Opportunity Fund, and Low Business Tangible Personal Property Tax Rates on computer equipment.

Since Triangle is small geographically, and mostly residential in nature, certain development financing and incentive tools (like tax-increment financing districts) would probably not be appropriate for the study area, unless they stretch beyond the borders of the study area. For example, there may be additional opportunities for a tax-increment financing and/or businesses improvement district along the Route 1/Potomac Defense Corridor, but these would need to be carefully coordinated and managed by the County.

Strategic re-zoning of certain parts of the study area, along with public-private partnerships, and a coordinated effort by the County to ensure the provision of necessary infrastructure to serve new development, will be the key strategies for moving Triangle forward.

Strategic Rezoning

As noted in the Existing Conditions analysis, some residential areas of Triangle may benefit from being rezoned at a higher density. Additionally, as office and other commercial development moves forward, there may be other areas that emerge along key corridors that would benefit from floor-area-ratio/density bonuses, or other zoning incentives. Overall, it is recommended that Triangle's zoning be re-evaluated in light of the goals outlined in this Small Area Plan, to ensure that it is consistent with the area's vision moving forward.

Public-Private Partnerships

Prince William County already has a robust and diverse portfolio of partnerships with both public and private entities, which is key for its continued growth and economic development. The County's complete list of current partners can be found here: <http://www.pwcecondev.org/state-local-partners>. In the past, the County has leveraged these partnerships with much success; Innovation Park is one example. As already mentioned, partnering more closely with MCB Quantico and its many contracting organizations will be critical in moving forward with targeted office and commercial development that meets the needs of its potential users.

Infrastructure Improvements

Targeted infrastructure improvements will also be critical to supporting new development in the Triangle area. As previously noted, for example, ITC clusters need powerful, reliable broadband connectivity and electrical infrastructure. Prince William County will need to work closely with the development community, utility providers, and other key stakeholders to ensure that adequate infrastructure and public facilities to service new development are provided. For any new residential development proposed for the study area, the County and development community will need to evaluate whether existing schools, emergency services, and utility infrastructure can accommodate a potential influx of new residents. The County should also consider including any major proposed infrastructure improvements in the Capital Improvement Plan (CIP) planning process going forward. It is important that the County ensure that any costs associated with new development are fairly shared with the development community.

Prince William County's Capital Improvement Plan

The Prince William County financial and program planning ordinance requires that the County Executive prepare a capital improvement plan, called a Capital Improvement Program (CIP), on an annual basis. The CIP process is guided by the County's Board of County Supervisors' (BOCS) adopted Strategic Plan, Comprehensive Plan, and Principles of Sound Financial Management. The CIP incorporates the actions and goals of the Strategic Plan, identifies revenue sources for each project, meets the County's financing policies per the Principles of Sound Financial Management (PSFM), and integrates the County's government and school projects into one detailed plan in order to prioritize capital improvements throughout the County. The following projects are programmed FY2021-FY2026 in the Triangle Small Area Plan or in the near vicinity:

- Fuller Road/Fuller Heights Road Improvements**

Project Cost: \$4,400,000

Project Description: Converts section of existing Fuller Road to a four-lane divided section and relocates Fuller Road and Fuller Heights intersection to increase efficiency of traffic flow.

Projected Date of Completion: FY2022

Magisterial District: Potomac

Small Area Plan Impact: These improvements will need to be taken into consideration when planning for new commercial development and open space along Fuller Road/Fuller Heights Road in the planning area. Timing of new development will need to be considered, depending on the County's timeline for completing the improvements²⁵



Impact on Comprehensive Plan Chapters		
Cultural Resources	Libraries	Sewer
Economic Development	Parks & Open Space	Telecommunications
Environment	Police	Transportation
Fire & Rescue	Potable Water	Small Area Plans
Land Use	Schools	
Impact on Strategic Plan Goals		
Robust Economy	Wellbeing	Mobility
Quality Education	Safe & Secure Community	

²⁵ <https://gisweb.pwccgov.org/webapps/cip/>

- **Locust Shade Park Grounds Maintenance Shop**

Project Cost: \$1,300,000

Project Description: Constructs a Grounds Maintenance Building at Locust Shade Park to support park facilities on the eastern end of County.

Date of Completion: FY2021

Magisterial District: Potomac

Small Area Plan Impact: This CIP project will have a negligible impact on the plan area, as it is located well to the south of Triangle.²⁶



Impact on Comprehensive Plan Chapters		
Cultural Resources	Libraries	Sewer
Economic Development	Parks & Open Space	Telecommunications
Environment	Police	Transportation
Fire & Rescue	Potable Water	Small Area Plans
Land Use	Schools	
Impact on Strategic Plan Goals		
Robust Economy	Wellbeing	Mobility
Quality Education	Safe & Secure Community	

Sources of Funding and Financing

In terms of financing improvements, the County has multiple options, including issuing municipal bonds, which could include tax-exempt or taxable industrial revenue bonds (IRBs) on behalf of qualified companies to finance the construction of buildings and related infrastructure (including parking). The County could also structure agreements with the development community that allow for the provision of infrastructure improvements/adequate public services by the developer(s), depending on the scale of the new development.

There are also multiple local and state programs that offer grants, incentives, technical assistance, and other resources for different types of economic development initiatives:

²⁶ <https://gisweb.pwccgov.org/webapps/cip/>

- GoVirginia Support and Grant Programs: Prince William County is part of the GoVirginia Region 7, a competitive state grant program designed to incentivize the creation of high-paying jobs throughout the Commonwealth.
- The Virginia Economic Development Partnership (VEDP) offers a comprehensive database of available grants and incentives for businesses and other investors in the Commonwealth, which can be accessed at <https://www.vedp.org/incentives>
- 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. These tend to be for larger-scale economic development projects, and may not apply to new development in Triangle, but are a good resource to be aware of.

There are significant opportunities for Triangle to spur quality, sustainable economic development that serves both its existing population and any future residents and employers that choose to locate in the study area; however, adequately positioning, planning, and preparing for this new development will be a critical first step for Prince William County in the coming years.

Economic Development Implementation Strategies

Development Focus Area	Implementation Strategies	Recommended Partners	Timeframe
Office/Commercial Development	Form a committee/working group with MCB Quantico and Triangle/Prince William County stakeholders to determine specific needs of MCB Quantico contractors and personnel related to office and retail/commercial uses in Triangle (i.e., secure conferencing space, flexible layouts, etc.)	MCB Quantico, Prince William County Economic Development, Prince William Chamber of Commerce	Short-term
	Evaluate existing office space in the study area to better understand why it is underperforming, and how it can be retrofitted to suit current market demand	Prince William County Economic Development, Prince William Chamber of Commerce	Short-term

Development Focus Area	Implementation Strategies	Recommended Partners	Timeframe
	Re-zone target areas for growth to better align with SAP goals, including adding additional density along key corridors	Prince William County Economic Development	Mid-term
Retail, Dining, and Services	Package development incentives to make development of office, retail/commercial, and convention center space in Triangle more attractive to the development community	Prince William Chamber of Commerce; VEDP	Short-term
	Engage Triangle and MCB Quantico residents to provide input on new development in the study area; determine what types of retail, dining, and services uses are feasible/high-demand for Triangle's target development areas	MCB Quantico, Prince William County Economic Development	Short-term
Housing	Determine focus areas for a variety of typologies of new, "missing middle" residential development, including multifamily and single-family attached and detached housing. Explore options to amend low-density residential zoning to encourage additional density by allowing more multifamily development and accessory dwelling units.	Prince William County Office of Housing and Community Development	Mid-term
Public Infrastructure	Evaluate existing utility infrastructure capacity to determine what types of upgrades might be needed to support new office, commercial, and residential development; work with end-users to determine specific infrastructure needs (i.e., high-	Private Utilities (i.e., Dominion, Comcast, Verizon, etc.)	Mid-term

Development Focus Area	Implementation Strategies	Recommended Partners	Timeframe
	capacity broadband for ITC users)		
	Review existing public facilities and services, to ensure that they have the capacity to accommodate new residential growth in the study area	Prince William County Public Schools	Mid-term
	Implement urban design strategies outlined in the SAP to improve streetscapes and wayfinding, and create a more attractive public realm/sense of place, to aid in the attraction of new, compatible development	VDOT, Prince William County Transportation	Mid-to-long-term
Mobility	Improve connectivity throughout the study area; add shared-use paths and trails where feasible	VDOT, Prince William County Transportation	Mid-to-long-term
Quality of Life	Evaluate existing recreational/open/public space and associated programming; work with residents to determine how to increase utilization of existing public areas, and what additional public space might be needed/demanded in the future.	Prince William County Office of Housing and Community Development	Mid-term

LEVEL-OF-SERVICE

Goal: Identify public facility needs in order to meet expected demand and ensuring the health, safety, and wellbeing of the community.

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 Triangle Small Area Plan seeks to ensure adequate public facilities to meet the projected growth proposed in the Plan and ensure they are integrated into the needs of the surrounding area. Appropriate public services such as schools and parks should be incorporated within the Small Area Plan to provide the greatest proximity to residential density. Incorporating public facilities 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 served by the Dumfries/Triangle station 3F. The Small Area Plan is currently within the four-minute travel time for fire suppression and basic life support (BLS) standard for the fire & rescue station. Dumfries/Triangle station Station 3F and River Oaks Station 23 provide adequate coverage for eight-minute travel time for advanced life support (ALS) standard. The Safe and Secure Community Chapter of the Comprehensive Plan identifies Station 3F to provide increased service. The proposed densities within the Plan will increase the need for this station.

Projected Fire and Rescue Facility by Existing and Projected Population		
	Existing (2020)	Additional Need by 2040
Fire and Rescue Stations	1	0
Incidents (per year)	132	109

Police

The primary need for police force expansion and the facilities to house them relates to population growth. The Small Area Plan is currently served by the Eastern District Police Station which is located outside the boundaries of the Plan. The proposed population growth would translate to a need for about four new police officers. The growth in the Plan may contribute to increased station demands which could be alleviated by public safety satellite field office in Commercial/Mixed-Use area adjacent to Route 1. Animal Control and Training facilities 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 (2020)	Additional Need by 2040
Police Station	1	0.02
Satellite Field Offices	0	0
Administrative Support Facilities	0	497 sq. ft.
Animal Control	0	121 sq. ft.
Public Safety Training Center	0	587 sq. ft.

Criminal Justice

The level of service standards for criminal justice primarily address the need for adequate space for the PWC Sheriff’s Office. The proposed population growth would translate to a need for one new sheriff deputies. The facility demand generated by the proposed plan should be incorporated into future expansion of Sheriff’s Office facilities. Additionally, current policy encourages public safety satellite field offices in Commercial/Mixed-Use areas, as a ground floor use in a vertically mixed-use building, to increase public safety and sheriff visibility. It is recommended that a public safety satellite field office (for Police and/or Sheriff) be located in the Community Mixed Use Center.

Projected Criminal Justice Facility Needs by Existing and Projected Population		
Facility Type	Existing (2020)	Additional Need by 2040
Sheriff's Office	0	78 sq. ft.
Satellite Field Offices	0	0
Administrative Support Facilities	0	18 sq. ft.

Community 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. This Small Area Plan lies within four current school districts: two elementary schools, one middle school, and one high school. Based on current school design standards the growth in residential population through 2040 indicates an increase in student generation that would equate to the need for 16 percent of an elementary school, 5 percent of a new middle school, and 3 percent of a new high school. The PWCS's CIP shows 2 additional elementary schools (Potomac Shores #2 and Route 1 South Area) as well as 1 middle school (East-Potomac Shores) being completed or constructed and operational prior to 2029.

Projected School Facility Needs by Existing and Projected Population		
Type of School	Existing (2019)	Additional Need by 2040
Elementary	2	16%
Middle	1	5%
High	1	3%

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 Triangle Small Area Plan is primarily served by the Dumfries Library. The forecast Small Area

Plan growth would suggest a need for an additional Library facilities equivalent to a Neighborhood sized Library and/or expansion of current facilities by 2040.

Projected Library Facility Needs by Existing and Projected Population		
Library Needs	Existing (2020)	Additional Need by 2040
Sq. Ft. per Capita	0	1,087 sq. ft.
Books per Capita	0	4,531

Parks, Recreation and Tourism

Level of service for parks in Prince William County is assessed through park acreage as a percent of county land area, park quality, accessibility, level of development, and equitable distribution of park resources. To that end, the Comprehensive Plan has established park planning districts to analyze the park system at a sub-magisterial district level, and Triangle is within Park Planning District 14. Full explanation of the Level of Service methodology for Parks can be found beginning in Appendix A of the Parks, Recreation and Tourism Chapter of the Comprehensive Plan.

Triangle Small Area Plan proposes an increase in residential density that together with the increased employees will generate the need for parks and recreation facilities. The existing Fuller Heights Park and the nearby Locust Shade Park offer robust active recreation opportunities. The environmental resource areas offer the opportunity to preserve natural resources and provide a robust trail system connecting to the surrounding area. The Community Mixed Use Centers will create the need for walkable urban parks and open space resources, such as pocket parks and linear promenades. These amenities may be incorporated into and refined through rezoning and site plan applications.

Linear/Greenway Parks

The dominant feature of the existing park system in the study area is the Little Creek Linear Park Greenway, a trail and open space corridor between the Garrison Wood Subdivision and properties along Inn Street planned to connect neighborhoods, parks, and nodes of activity with an inviting, accessible multi-use trail. The greenway passes through the southwest corner, and connections to the corridor are shown in Figure 40 Bicycle Route and Open Space. A critical level of service metric for Triangle Small Area Plan will be defined accessibility to the greenway corridor from all developed sites, quality of the trail itself, and connectivity of trails and green space within the Small Area Plan as a part of the larger greenway system. Where appropriate and consistent with

applicable law, contributions towards improvements to the greenway corridor, including proffer funds for trail improvements within the corridor, land dedications, and access trails, will be considered enhancements to the level of service provided by the Little Creek and Quantico Greenway.

Neighborhood Parks

Triangle Small Area Plan is not within the service area of any existing neighborhood parks. Additional neighborhood parks are a need identified as a high community priority in the 2018 *Community Needs Assessment* and highlighted by the park service area analysis in Appendix A of the Parks, Recreation and Tourism Chapter of the Comprehensive Plan. Therefore, development of high-quality neighborhood parks and public spaces is critical to adequately addressing level of service for parks within the study area. The Comprehensive Plan recommends a development standard for Neighborhood Parks of 75% active space and 25% passive (see page A-7 of the Parks, Recreation and Tourism chapter for details) to facilitate the development of context-specific, flexible neighborhood parks, plazas and public spaces within walkable and bikeable distances of residences and workplaces. Where appropriate and consistent with applicable law, contributions of proffer funds towards turnkey development of new neighborhood parks, land dedication to facilitate future park development, and other enhancements to public spaces and interstitial connectors, like public walkways to facilitate connectivity to neighborhood park sites from other nodes of activity within the study area, will be considered enhancements to the level of service provided by the neighborhood park system, provided they meet community design standards and support the goals for the park system expressed in the Comprehensive Plan and Parks and Open Space Master Plan.

Community Parks

The Triangle Small Area Plan is within the drive-time based service area of several community parks, defined in Appendix A of the Parks, Recreation and Tourism Chapter as a 20 -minute drive, there is a community park within the small area plan boundary of Park Planning District 14. Additionally, Fuller Heights Park is within the walk or bike service area. (defined in Appendix A as a 10-15-minute trip). With the addition of an estimated 2,465 residents and the concentration of compatible uses along the Route 1 and Fuller Heights Road, the community park and connections to the nearby regional park with network of linear parks, provides recreational opportunities for residents, employees, and visitors would enhance the level of service provided by the park system not only in the small area plan, but in Park Planning District 14 as a whole. The Comprehensive Plan recommends a development standard for Community Parks of 50% active space and 50% passive (see page A-7 of the Parks, Recreation and Tourism chapter for details) to facilitate the development of context-specific, flexible parks.

To the extent permitted by law, contributions of proffer funds towards turnkey development of new community parks, land dedication to facilitate future park development, and other enhancements to public spaces and interstitial connectors like public walkways to facilitate connectivity to community park sites from other nodes of activity within the study area will be considered enhancements to community park level of service, provided they meet community design standards and support the goals for the park system expressed in the Comprehensive Plan and Parks and Open Space Master Plan.

Park Quality

Lastly, as the existing conditions of the study area show a dearth of park space, all new park elements must be able to meet a quality level of service A, as defined in the Park and Facility Quality section of the Parks, Recreation and Tourism chapter.

Projected Park Facilities		
Type	Name	Description
Community	Fuller Heights Park	Complete expansion including 2 additional fields and promote this facility for sports tourism
Linear	Linear park and connectivity	Linear open space and trail running between connecting to the shared use path running along Route 1 Corridor.
Trail	Multiple use trail plan	Connect Locust Shade Park to Fuller Heights Park
Trail	Trail	Continue to develop and promote the Potomac Heritage National Scenic Trail corridor.

Broadband Needs and Wireless Communications Gaps

Large portions of the Small Area Plan are currently undeveloped providing opportunities to incorporate improved broadband and wireless communications infrastructure as development occurs. Throughout the study area, new development provides an opportunity to ensure that wireless communication infrastructure implementation follows Section 15.2 -2316.3 et seq. of the Virginia Code.

Mobility

Implementation of the Small Area Plan mobility 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 local and 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 will implement the planned transportation system incrementally and in a phased process linked to changing consumer 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

The intent of this section is to identify actions that will need to be undertaken to implement the plan. The recommendations in this section include the action, timeframe, coordinating agencies, and strategies to address the goals of the plan and are organized into the following areas:

1. Cultural Resources
2. Economic Development
3. Green Infrastructure
4. Implementation
5. Land Use
6. Level of Service
7. Mobility
8. Supporting Infrastructure

IMPLEMENTATION MATRIX

Implementation Plan				
Timeframe	Goal	Action Item	Coordination Agencies	Implementation Strategies
Mid-term	Land Use/Placetypes	Create attractive and green “horizontal” mixed-use areas (lower-density clusters of different types of single use spaces), where residents and visitors can shop, dine, and spend time with friends and family.	PWC; Private Partners	
Mid-term	Land Use/Placetypes	Create places that provide features, services, and amenities to attract a substantial share of MCB Quantico contractors, mixing uses whenever feasible	PWC; MCB Quantico	
Short-term	Land Use/Placetypes	Create safe places for people to gather, play, and socialize that are easily accessible by foot and by bicycle	PWC	
Mid-term	Land Use/Placetypes	Build on the Potomac Defense Corridor along Route 1 to maintain a focus on establishing provisions to support MCB Quantico by developing supplemental residential, retail, and office space, and connecting each element to create a series of cohesive, pedestrian-friendly neighborhoods.	PWC; MCB Quantico; Private Partners	
Mid-term	Land Use/Placetypes	Where appropriate and consistent with applicable law, enhance existing neighborhoods with a balanced range of housing types, at different levels of affordability.	PWC; Private Partners	
Mid-term	Land Use/Placetypes	Emphasize Triangle’s role as the Southern Gateway to Prince William County along the Route 1 corridor by encouraging better placemaking, incorporating more distinctive architecture and public	PWC	

		art, and creating a richer streetscape with plantings, street furniture, and other attractive amenities.		
Mid-term	Design	Create and implement flexible, appropriately detailed design standards for human-scale, pedestrian-friendly development.	PWC	
Mid-term	Mobility	Where appropriate and consistent with applicable law, within mixed-use areas, design and build complete streets that accommodate vehicles, pedestrians and cyclists.	PWC	
Mid-term	Mobility	Create a network of walkable and bicycle routes throughout the SAP and to the adjacent amenities/destinations.	PWC	
Mid-term	Mobility	Make Route 1 more comfortable to bike and walk along through safer and more connected bike and pedestrian facilities and enhanced public realm/beautification.	PWC; VDOT	
Ongoing	Mobility	Where appropriate and consistent with applicable law, create more safe pedestrian crossings across Route 1 and along the Joplin Road corridor.	PWC; VDOT	
Mid-term	Mobility	Focus Old Triangle Rd into a lower-stress bike route with pedestrian facilities that connects to Dumfries.	PWC	
Mid-term	Mobility	Where appropriate and consistent with applicable law, make VRE station(s) more accessible to civilian residents and employees in Triangle.	PWC; VRE	
Mid-term	Mobility	Connect to the planned BRT along Route 1 corridor.	PWC; OmniRide, DRPT	
Long-term	Green Infrastructure	Restore Little Creek on both sides of Route 1. Create a larger riparian buffer area along the stream for use as natural open space and/or parkland. Design these new open spaces in order	PWC	

		to showcase Triangle as an “ecologically healthy community.”		
Ongoing	Green Infrastructure	Use green infrastructure tools to increase green/natural spaces and enhance aesthetics along Route 1. Use these tools, along with other streetscape improvements, public art/monuments, memorials, etc. to honor and highlight Triangle’s strong relationship with the Marine Corps.	PWC; MCB Quantico; VDOT	
Mid-term	Green Infrastructure	Create an interconnected network of trails, walking routes, bicycle routes, and open space throughout Triangle that create attractive, safe, and connected options for people to recreate, and encourages residents to choose healthier and more active modes of transportation.	PWC	
Mid-term	Green Infrastructure	Create or enhance connections between the trail network in Triangle with surrounding networks and facilities, including the Potomac Heritage National Scenic Trail, Dumfries Main Street, and nearby public schools.	PWC	
Mid-term	Green Infrastructure	Create more public gathering places for people that are strongly tied to new mixed-use area services and amenities, that also provide a “sense of place”/identity for Triangle. These spaces should also provide as many ecosystem and stormwater management services as possible.	PWC	
Ongoing	Green Infrastructure	As development occurs in the study area, the County will need to be mindful of preserving and enhancing existing open space, in addition to providing new functional gathering/recreation spaces for residents.	PWC	

Ongoing	Cultural Resources	Require Small Area Plan Phase I cultural resource surveys on undeveloped land in the planning area 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 or avoidance to allow County archaeological research in the future.	PWC	
Ongoing	Cultural Resources	Conduct research and archaeological studies searching for the Revolutionary War archaeology site 44PW1844: "American Wagon Train Return March Camp No. "	PWC	
Ongoing	Cultural Resources	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	
Ongoing	Cultural Resources	Ensure that any new development in the plan area is adequately buffered/does not encroach on any known historically or archaeologically significant sites or interfere with access to those sites. Adjacent development should be respectful of historic context. Identify funding sources such as grants (matching or fully funded) to fund cultural resource surveys. Cultivate private and public partnerships to conduct cultural resources research.	PWC; Private Partners	
Short-term	Cultural Resources	Consider graduate internships to complete cultural resource action strategies in this plan. Cultivate	PWC; Universities	

		partnerships with regional colleges and universities.		
Short-term	Cultural Resources	Partner with the Historical Commission, the Architectural Review Board, and the Department of Parks, Recreation and Tourism on internship programs and projects.	PWC	
Short-term	Cultural Resources	Prepare a history or histories of the planning area that can easily be shared with residents and visitors; consult and partner with Prince William Forest Park on research and interpretation of the area's history.	PWC; MCB Quantico	
Ongoing	Cultural Resources	Promote and celebrate the proximity of the planning area to important internal and adjacent historic sites, including the Amidon-Lunsford Cemetery, the Iwo Jima Memorial, Marine Corps Museum at MCB Quantico, the Weems-Botts Museum in Dumfries, and Prince William Forest Park.	PWC	
Short-term	Cultural Resources	Ensure that appropriate wayfinding signage, historical markers, and interpretive exhibits and signage exist that emphasize Triangle's connections to these important nearby historic sites.	PWC	
Short-term	Cultural Resources	Promote the history of Prince William Forest Park and its importance to the plan area	PWC	
Short-term	Cultural Resources	Partner with developers and property managers to install historical markers and interpretive kiosks in consultation with the Historical Commission, the Planning Office, and the Historic Preservation Division in areas where development occurs adjacent to historic sites Collocate with planned open	PWC; Private Partners	

		space and parks where appropriate.		
Ongoing	Cultural Resources	Include interpretation of the planning area's history in planned open spaces where appropriate and prepare and distribute that history through various interpretive media.	PWC	
Ongoing	Cultural Resources	Where technology reduces cost and increases efficiency, employ technology to bring historical interpretation to the public.	PWC	
Ongoing	Cultural Resources	Require new development to reference the Plan Area's historic context in placemaking, where appropriate.	PWC	
Ongoing	Cultural Resources	Where appropriate and consistent with applicable law, plan and install interpretive, interactive exhibits along existing and new trails throughout the planning area, and connect those trails to commercial, residential areas, and attractions both inside and outside Triangle.	PWC	
Mid-term	Economic Development	Leveraging its proximity to MCB Quantico, Triangle will establish a more robust presence in the Potomac Defense Corridor by developing new services and amenities, including office space and convention center facilities, to accommodate MCB Quantico contractors and other workers in complementary industries.	PWC; MCB Quantico; Private Partners	
Mid-term	Economic Development	In support of the contractor facilities and for the benefit of local residents, Triangle will enable the development of neighborhood-level mixed-use areas with retail, food and beverage, and service commercial establishments	PWC; Private Partners	

		connected by an attractive public realm.		
Mid-term	Economic Development	Triangle will offer high-quality IT infrastructure to accommodate changes in office work, from traditional office to more home offices and flexible work schedules and structures.	PWC; Private Partners; Utilities	

INFRASTRUCTURE AND FACILITY PLAN

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Facility	Description	Coordination Agencies	Timeframe
Bike & Pedestrian	Where appropriate and consistent with applicable law, bike & pedestrian access along Joplin Road under I-95 bridge connecting destinations west of I-95 with Triangle residential and retail.	PWC /Private Partners	Medium-Term
Bike & Pedestrian	Where appropriate and consistent with applicable law, bike & pedestrian access along Old Triangle Road	PWC DOT/VDOT/Dumfries	Medium-Term
Little Creek Recreation Corridor Connections	Where appropriate and consistent with applicable law, Little Creek Recreation Corridor Connections to provide service to the area	PWC /Private Partners	Medium-Term
Little Creek Trail	Where appropriate and consistent with applicable law, recreation trail running from Fuller Heights Road to Route 1 shared use path.	PWC /Private Partners	Medium-Term