

SUFFOLK



2035: A VISION FOR THE FUTURE

CITY OF SUFFOLK COMPREHENSIVE PLAN

Adopted April 1, 2015





Suffolk is a nationally renowned, vibrant community committed to the health and vitality of its citizens, which offers strategic growth and diverse opportunities while preserving local character.

THE CITY OF SUFFOLK COMPREHENSIVE PLAN

2035: A VISION FOR THE FUTURE

Adopted by the Suffolk City Council
April 1, 2015
Resolution #15-R-013

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The City of Suffolk Department of Planning

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CHAPTER 1: INTRODUCTION



Our comprehensive plan is a shared vision for the future of our community. It is meant to be aspirational and inspirational. It is also practical. How should our community grow and develop? How do we accommodate new development and redevelopment, maintain public facilities and infrastructure, and provide services as growth occurs, while maintaining a high quality of life for our residents? This is our plan to do that.

The 2035 Comprehensive Plan is the third iteration in this family of comprehensive plans. The first was the 2018 Comprehensive Plan, which was originally adopted in 1998 and provided the foundation for Suffolk’s growth management system. The Comprehensive Plan for 2026, completed in 2006, served as the second iteration of this plan and refined and enhanced the City’s Focused Growth Strategy. That system has evolved with each update and continues to serve the City well. This update reinforces a strong and successful tradition.

This plan is intended to guide and assist the City staff, public, development community, City Council, Planning Commission, and other officials in decisions related to development, redevelopment, growth, preservation, and the provision of public services through the year 2035. The elements of this plan establish policy statements to guide decisions about growth, housing availability, transportation, public facilities and services, and the preservation and enhancement of natural and cultural resources.

This plan is to be implemented through the City’s land use regulations, capital facility planning, discussions by City Council and Planning Commission, and day-to-day administration of related planning policies and regulations.



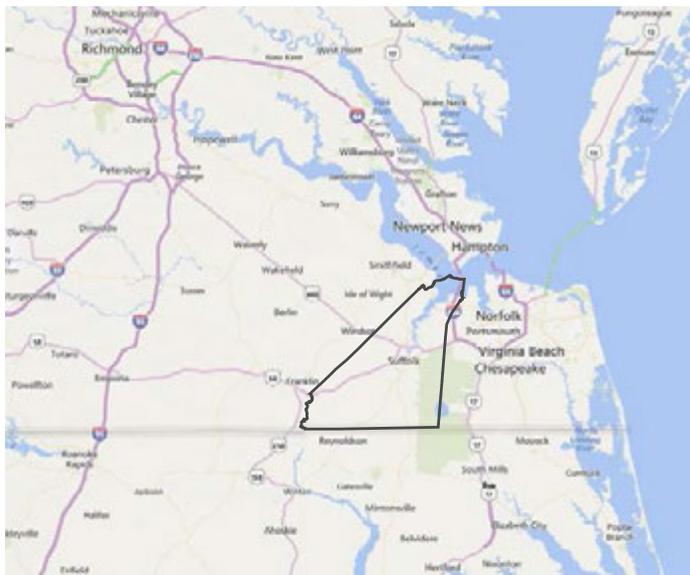
View of the Fairgrounds Revitalization and Redevelopment District

BACKGROUND

ESTABLISHMENT

Suffolk is located in the Hampton Roads region of southeastern Virginia. The City, encompassing approximately 430 square miles, is bordered by the counties of Isle of Wight and Southampton to the west, the state of North Carolina to the south, the cities of Chesapeake and Portsmouth to the east, and the James River to the north.

The town of Suffolk began near Constant's Wharf, named after John Constant who settled along the Nansemond River to establish his home, wharf, and tobacco warehouses. In 1808, the town was incorporated into Nansemond County and a decade later, in 1910, became a city independent from surrounding Nansemond County. Nansemond County was converted to city status in 1972, becoming the City of Nansemond. Soon after, in 1974, the cities of Suffolk and Nansemond and the unincorporated towns of Holland and Whaleyville consolidated to become the present-day Suffolk.



Map 1-1: Suffolk Location Map

Source: www.bing.com



Top: a farm in southern Suffolk

Bottom: a northern Suffolk residential development

DEVELOPMENT PATTERN

It is important to understand the existing development pattern of the City, because this plan calls for maintaining, reinforcing, and strengthening that pattern.

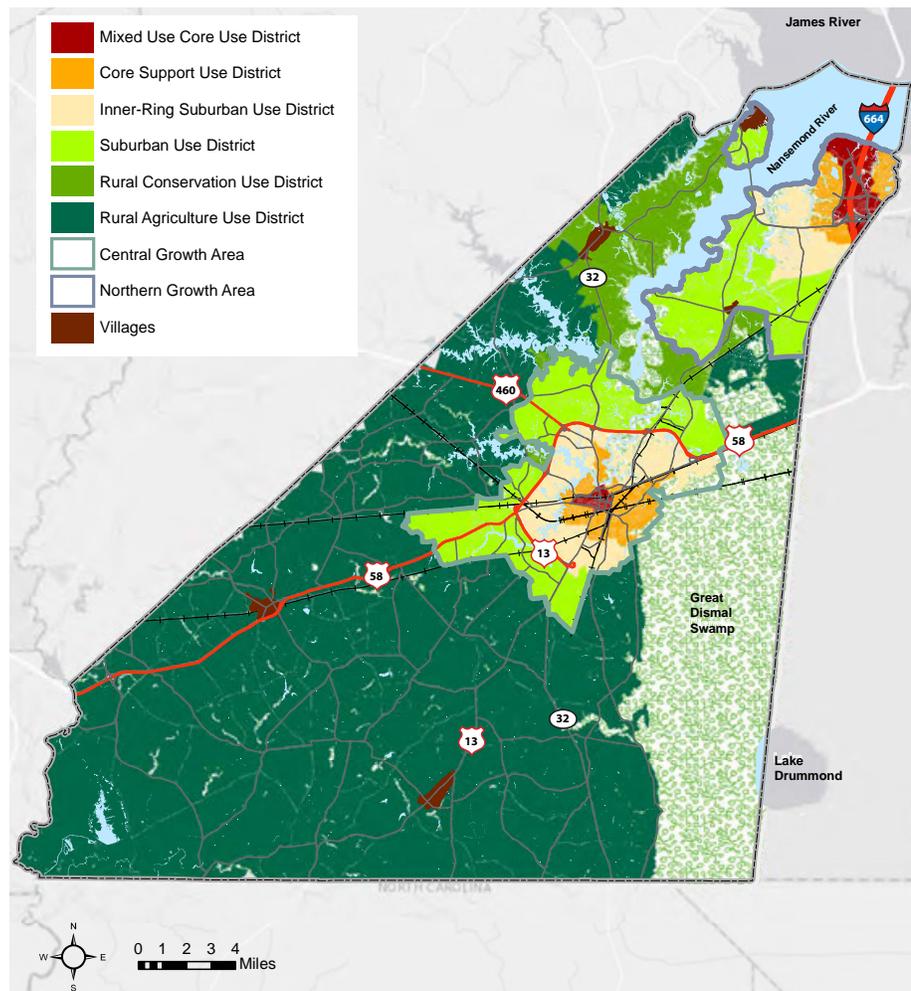
Suffolk is a predominantly rural area with two major centers of development: the historic downtown core located in central Suffolk and the more recently developed northern core radiating out from I-664. The character and development patterns within the City vary greatly. The City features a traditional downtown, a variety of suburbs, quaint rural villages, vast rural areas, beautiful waterways, and the Great Dismal Swamp. Suffolk is a vibrant, diverse city highly valued by its residents.

The development pattern of the central core is that of a traditional downtown, with a close-knit, grid-pattern street network that works around historic rivers, lakes, and swamps. Zoning designations in the area are designed to promote an urban mix of uses which allows for mixed use commercial uses on the main level and office or residential above. Businesses, offices, and many public facilities are located in the central core. Detached and attached single-family homes and small apartment buildings radiate out from the main commercial streets.

The northern core is suburban in nature, with commercial uses located mainly in large-scale developments and shopping centers surrounded by residential subdivisions. Residential development in the area features a mix of single-family detached and attached units and multi-family buildings. Recent developments have pushed towards creating mixed use communities, with a variety of housing types centered on a walkable, commercial area.

Outside of these major centers of development, Suffolk is largely rural. Rural villages serve as commercial and activity centers, and typically feature a small business area near a concentration of single-family detached homes. The density of development decreases as one travels out of a village and into the rural and agricultural areas of the City.

The City has worked hard to maintain a sense of place through preserving distinctions between urban, suburban, and rural character. This plan builds on this history of planning to promote the best of each of these city forms.



Map 1-2: Use Districts

The above map illustrates Suffolk's development pattern. The Use Districts guide the locations for different types of development patterns, land uses, densities, and areas for protection within the City's borders. These Use Districts are described in detail in Chapter 2 of the Plan.

STATE STATUTES FOR A COMPREHENSIVE PLAN

The Commonwealth of Virginia mandates that the City of Suffolk prepare and adopt a comprehensive plan for the physical development of the land within its jurisdiction under Section 15.2-2223 of the Code of Virginia. The Code of Virginia requires that this plan be reviewed at least once every five years by the local planning commission to determine whether it is advisable to amend the plan.

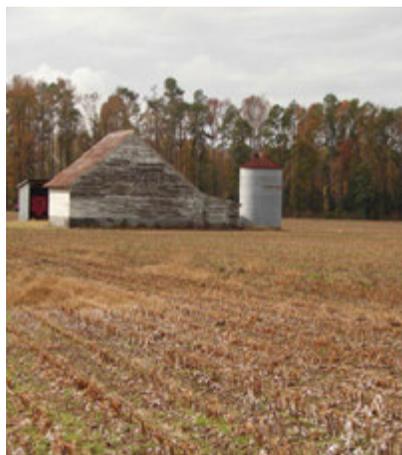
The plan must include assessments of existing conditions, growth trends, and future needs for the order, convenience, prosperity, and general welfare of the City's inhabitants. The Code of Virginia also requires the comprehensive plan to include a transportation and land use plan. The land use component is encouraged to identify and discuss the location of future public facilities such as parks, schools, waterworks, and sewage disposal, historical areas, areas for redevelopment, affordable housing, and areas of environmental significance.

PLANNING TRADITION IN SUFFOLK

The City of Suffolk has a strong planning tradition, beginning with the adoption of its first land use plan following the merger of the former cities of Suffolk and Nansemond in 1974. That plan instituted the concept of Urban Development Areas and established a managed growth policy based on directing future growth into these areas in order to prevent urban sprawl and to facilitate the provision of City services.

In 1976, the City adopted a comprehensive plan titled the 1990 General Plan, establishing future land use and transportation policies which were designed to guide development through the year 1990. This plan further detailed the Urban Development Areas and identified general areas of the City appropriate for the various types of development anticipated through 1990. The 2005 General Plan continued with that concept and identified large tracts of land adjacent to the UDAs for future residential development.

The process that culminated in the development of the 2018 Comprehensive Plan recognized the strengths of the previous plans, but also identified deficiencies that resulted in "over-abundant" land zoned for residential development. The 2018 Plan modified the City's vision and designated development areas more appropriate to the projected growth of the City. That approach and the Growth Areas envisioned in that plan continued into the Comprehensive Plan for 2026 and are still relevant today. This plan validates that approach and carries it forward.



The historic charm, agricultural heritage, and natural and recreation areas of the city contribute to a quality-of-life that is valued by residents and recognized nationally.

KEY FINDINGS

Suffolk features many unique neighborhoods, beautiful natural landscapes, and small-town charm. The City faces the challenge of maintaining these and other valued assets while experiencing sustained growth. This desire to accommodate growth while preserving Suffolk's special features has prompted the City to address service provisions, connectivity, environmental protection, and the quality of life and traditions as the City continues to grow and develop.

The following findings are the foundation for this plan:

1. The family of comprehensive plans that stems from the 2018 Comprehensive Plan has served the City well, and many of the themes and values are carried forward into this update, including the City's growth management plan that continues to uphold the City's commitment to focused growth and development.
2. The City has experienced steady growth for more than a century, with rapid growth occurring between 1970 and 2000.
3. The poor economic climate starting in the mid-2000s has slowed growth to a more modest rate, yet growth is still occurring. In 2010, the population reached 84,585.
4. While local growth has moderated due to the economic downturn, regional growth patterns will likely impact Suffolk as growth continues to shift west of the Elizabeth River. These regional forces will likely result in continued growth in Suffolk well into the future.
5. Significant capacity of 5,471 approved, but yet un-built, residential units have potential to absorb approximately 13 years of forecasted residential demand.
6. Because of the many valued natural assets throughout the City, including wetlands, waterways, rural areas, swamps, and viewsheds, the plan continues to focus development in the Northern and Central Growth Areas and identifies opportunities for infill and redevelopment within these growth areas.
7. Suffolk features many development types and character types, from dense, walkable urban neighborhoods, to riverside communities, and rural villages. The plan emphasizes enhancing existing character and promoting quality new development.
8. The transportation network plays a key role in accommodating growth within Suffolk and providing connections throughout the region. The plan addresses areas of limited connectivity within the City, as well as issues such as congestion, heavy freight traffic, emergency preparedness, and promoting mobility and alternate forms of transportation.
9. Public utilities and facilities within Suffolk are often impacted by regional dynamics. These regional ties are considered in this plan. The plan addresses the provision of utilities and services to the City and future growth, while considering the expansive land area and relative low-density nature of many areas of the City.

PLAN OVERVIEW

The principles, values, and plan themes resonate throughout the plan's seven chapters, which include background information, data analysis, policy statements, and recommended actions for implementation.

Chapter 1: Introduction introduces the plan and provides some general background information on the City. The plan principles, values, and themes are stated in this element.

Chapter 2: Land Use & Growth Management addresses future growth and development within the City. Maps are used to show the location of growth area boundaries, which are intended to manage and direct development towards existing communities. Growth management is the key principle that this plan is founded on. Different types of use districts are defined to provide guidance on appropriate densities, land uses, and development characteristics.

Chapter 3: Place Types identifies sub-areas of similar characteristics called place types. The character and nature of future development is defined for each place type. This chapter advances the City's interest in promoting high quality development.

PLAN STRUCTURE

Principles & Values include statements that set the tone for and serve as the foundation for each plan element.

Plan Themes represent the overall intent of the plan and guide the plan's policy and action statements.

Policy Statements are drafted for each plan element. These statements represent the goals of the element and provide guidance for future decisions.

Action Statements are provided to guide the implementation of the policy statements. These are directive statements that aim to work towards the realization of the plan's principles, values, and themes.

Chapter 4: Transportation Plan recognizes the critical relationship between land use planning and transportation and establishes the strategy for the management of the City's transportation network to accommodate anticipated growth. This plan addresses alternative transportation modes including transit, trails, and rail, and the concept for implementing complete streets.

Chapter 5: Municipal Facilities & Services establishes the background and current levels-of-service for schools, parks and recreation, utilities, and safety services. This element provides recommendations for these services in order to accommodate new growth, and provides guidance for locating future facilities.

Chapter 6: Housing addresses the current development pattern, housing availability, and housing affordability within the City. This element provides recommendations promoting quality residential development, housing options, reinvestment, and housing affordability with the goal to develop housing for everyone across the full range of incomes.

Chapter 7: Natural and Cultural Resources emphasizes the importance of the area's variety of natural, cultural, and historical assets. Protecting the environment is one of the plan's most important themes due to the City's commitment to being good stewards of the City's limited natural resources. This chapter provides background information on these resources and provides guidance on maintaining these resources in light of growth.

PRINCIPLES AND VALUES

The plan principles and values are statements that represent the shared vision of the community. These statements guide the development of the plan elements, setting the tone and serving as the foundation for each chapter.

During the planning process, public meetings were held to test the major principles and values of the previous plan. The public confirmed that the ideals represented in the principles and values still hold true.

1. **Maintain an efficient transportation network with effective choices for mobility.** This plan emphasizes two major issues relating to transportation: connectivity and transportation options. The current development pattern is largely automobile-oriented with congestion occurring in many areas of the City due to limited paths between population centers and heavily-used freight rail lines. Efforts have been made to improve the walkability of existing and new developments; however, pedestrian and bicycle connections are still needed throughout the City.
2. **Define and enhance the various unique character types and development patterns within the City.** Suffolk features areas of unique character throughout the City - from its rural agricultural areas and villages, to its dense and bustling downtown. Maintaining this variation and enhancing valued place types ensures that existing residents can continue to enjoy the areas they love, while future residents can enjoy the community choices and beautiful landscapes that exist today.
3. **Promote a diverse housing stock, providing options in terms of type, location, and affordability.** Changing trends in the housing market constantly support the case for providing housing options. Dense communities, attached single-family homes, and rental units are drawing consumer attention. Additionally, to maintain a competitive workforce across multiple industries and pay grades, variation within the housing stock is an asset.
4. **Protect the natural, cultural, and historical assets of the City.** During public meetings, residents emphasized the value of Suffolk's natural assets. The rural open spaces, an undisturbed rural night sky, the character-defining waterways, and the Great Dismal Swamp are treasured in the community and contribute to the quality-of-life. These natural assets, as well as the cultural and historic ties to the Nansemond, the defining early years of America, and agricultural production, are a part of what Suffolk is today, and should be preserved for the enjoyment and enrichment of future residents.



5. **Maintain high-quality services and facilities as growth occurs.**

As growth occurs, existing services and facilities will require maintenance and expansion to accommodate future growth. Facilities and services should be located with current population centers and future growth in mind to ensure that they are accessible from and adequately serve target communities.



6. **Preserve the agricultural heritage and character of the City.**

This plan continues the ideals of the Comprehensive Plan for 2026 regarding the preservation of agricultural land. The public strongly supported this value during the public meetings, as residents of rural villages and areas emphasized their love for the rural way of life and the general public voiced support of varied landscapes and rural natural assets. As adequate capacity exists within the vicinity of the identified Growth Areas in the central and northern parts of the City, the more rural southern portions of the City will be preserved for low-density agricultural uses.



7. **Keep jobs and schools near population centers.** A positive mix of jobs, schools, housing, retail, and recreation is the definition of a vibrant city. Single-family homes on large lots promote suburban isolation. The City has made positive steps towards achieving the goal including establishing a framework for incorporating smart growth principles in school planning, which emphasizes working together to make schools the focal point of communities, and the adoption of a mixed use zoning ordinance which allows for jobs and housing to be mixed on the same lot. This plan furthers this goal by promoting mixed use areas in more areas of the City and focusing growth in target areas.



PLAN THEMES

Based on the principles and values and on the public validation of the continued relevance of the ideals of the Comprehensive Plan for 2026, the plan themes reflected within the previous versions of this plan were again carried forward. These themes guide the plan's policies and action statements, ensuring that the vision represented in the principles and values is carried throughout the plan recommendations.

Balanced Growth and Development

The Comprehensive Plan for 2026 established a growth framework that promotes balanced growth between the Central and Northern Growth Areas. The plan also emphasized a balanced distribution of future population and jobs in relation to existing and future infrastructure, facilities, and services. In addition, the public emphasized the importance of development that balances impacts, options, uses, and connectivity for varied transportation modes.

A notable change from the recommendations of the Comprehensive Plan for 2026 is that the growth rate has been updated to reflect current trends, and has been reduced from 1,000 residential units per year to 522 residential units per year.



Vibrant Core Areas

Suffolk has two very distinct centers for population and activity. The central growth area features a core of traditional downtown development, able to accommodate retail in store fronts and residential and office uses in units above. The northern growth area features a core resembling a more suburban commercial lifestyle center, accommodating commercial, office, and institutional uses in often planned developments, sometimes with a residential component. While different, these centers are both valued - this plan aims to support both, while enhancing the unique character and vibrancy of each.



Preserved and Enhanced Character

The multitude of character types and development patterns within Suffolk are defining components of the City. These valued character types, which include rural villages, agricultural areas, urban neighborhoods, mixed use suburban developments, and others, should be preserved as growth occurs. To ensure that this is done, this plan includes guidance for future development to preserve and enhance existing character.



Enhanced Economic Diversity and Vitality

Suffolk is home to a variety of companies that contribute to many different industries. The Comprehensive Plan for 2026 emphasized the presence of military simulation and technology within Suffolk and preparing corridors for non-residential growth. In addition to these, the need for the development of quality retail and service businesses within the traditional downtown and concerns regarding the impact of growing industries on the transportation network, in light of the intermodal nature of freight movement within the region, are important elements of the region’s economic health.



Environmental Protection

The policies found within the two previous versions of this plan relating to environmental protection still hold relevance and are reflected in this plan. Environmental protection is an important theme for the City, as special development considerations are required for areas within the Chesapeake Bay Preservation Area (CBPA). Sensitive land use planning is needed to ensure the sustained use and quality of water reservoirs and sources within the City, as well as the protection of habitats and ecosystems.



Responsible Regionalism

Suffolk’s roadways, sewer and water service, and solid waste program continue to relate to regional plans and agreements. Roadways are impacted by transportation plans made by VDOT and the Hampton Roads Transportation Planning Organization (HRTPO). A Hampton Roads Sanitation District (HRSD) federal consent order decree may impact the City’s expansion of its sewer system, while the Western Tidewater Water Authority influences planned water facility development. Likewise, a regional agreement impacts solid waste management within the City. This plan considers these regional conditions when planning for future land use and growth, in recommendations provided for the transportation network, and in provisions of municipal facilities and services to help ensure that future development within Suffolk continues to support and enhance the vision reflected through these regional plans and agreements.



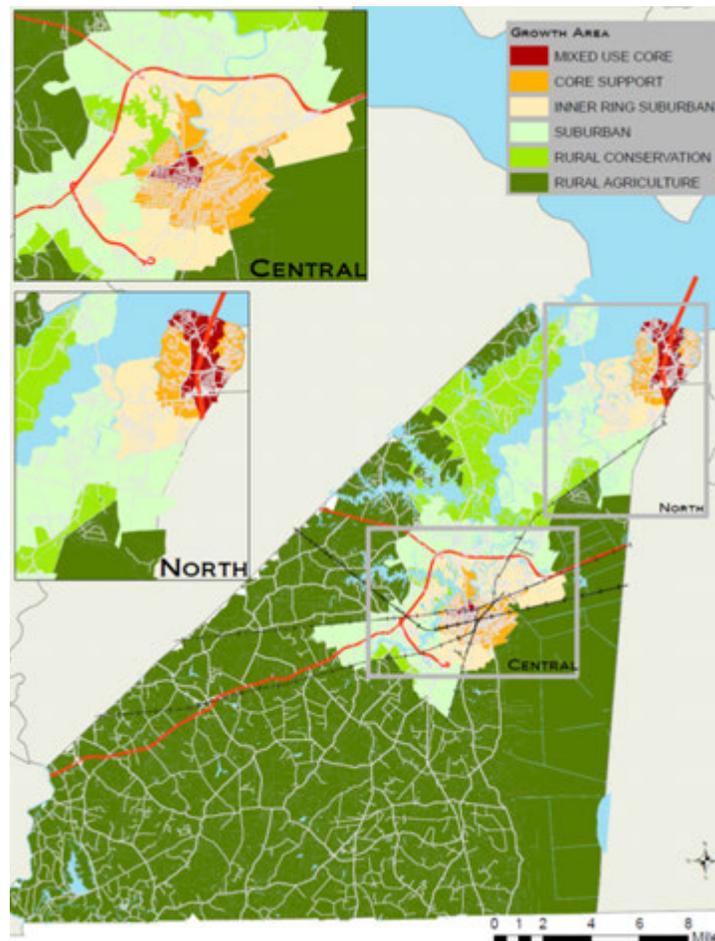
CHAPTER 2: LAND USE AND GROWTH MANAGEMENT



INTRODUCTION

FOCUSED GROWTH APPROACH

The key growth management principle on which both the 2018 Comprehensive Plan and the Comprehensive Plan for 2026 were founded is to manage and direct growth towards existing communities. Since their adoptions, previous City plans have been very successful at providing a basis for controlling the historically sprawling landscape of Suffolk. These plans set out a specific Focused Growth Approach that has guided development and the protection of community character and rural and agricultural resources. This framework is comprised of two main areas – the Central and Northern Growth Areas, and six Use Districts that set out the general character, intensity of development, and uses in the two Growth Areas. These Use Districts include the Mixed Use Core, Core Support, Inner Ring Suburban, Suburban, Rural Conservation, and Rural Agriculture districts.



Map 2-1: 2018 Comprehensive Focused Growth Approach

Suffolk's Focused Growth Approach has been in place since the adoption of the 2018 Comprehensive Plan. Revised over time, this framework (Comprehensive Plan for 2026 version shown here) guides new development and the protection of community character and rural and agricultural areas.

GROWTH AREAS

The Growth Areas concept is based on the way in which cities historically have developed. By establishing a range of development densities and uses in relation to a central core, the concept models the pattern exhibited by dynamic and successful urban places. Cities have evolved as centers of culture, trade and commerce. Mixed use centers with business and residential areas in close proximity were and remain the hallmark of older urban places. Urban form was compact—allowing people to walk to work, shop, and play close to where they lived.

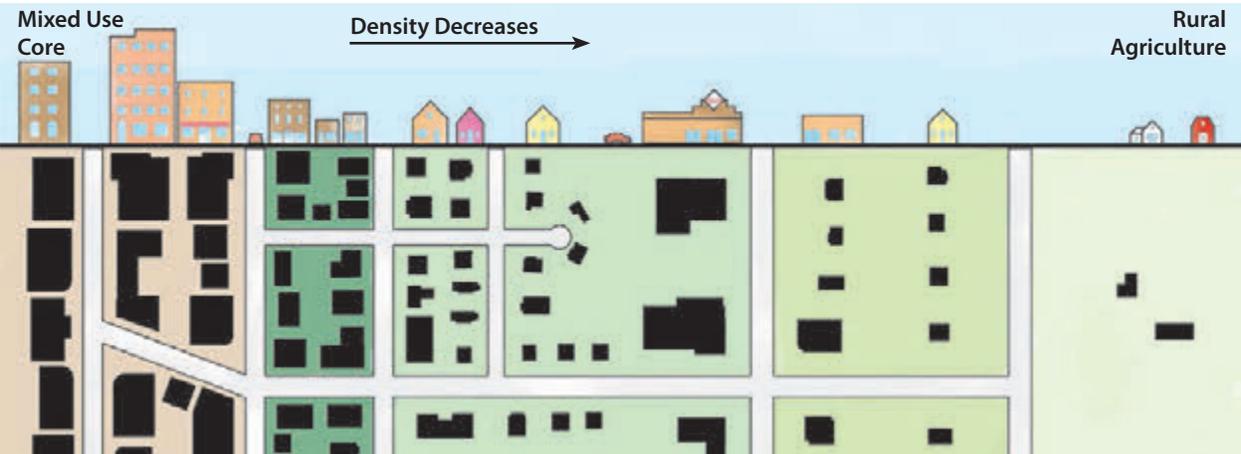


West Washington Street in Downtown Suffolk, 1930



North Main Street and Bank Street

The key concept behind the Focused Growth Approach is an emphasis on using the City’s historic urban form as the basis for use patterns and densities. The highest densities are located in the middle of the growth area and the mix and density of uses decrease the further one travels from the central district. In this way, a wider variety of uses from urban through rural can be located and accommodated. Various types of land uses are designated in specified Use Districts that are generally located in concentric bands surrounding the central district. The transition from one Use District to the next is based on increments of travel time and distance.



The main concept behind the Growth Areas approach is an emphasis on using the City’s historic urban form as the basis for setting use patterns and densities. The highest densities are located in the middle of the growth area (Mixed Use Core) and the mix and density of uses decreases the further one travels from the core.

Over time, especially in the post World War II-era, improvements in personal mobility have allowed for more dispersed urban areas. Core areas no longer needed to be diverse live/work centers. Cities spread out and large suburbs developed. This auto-oriented form is the dominant pattern that has guided the development of Suffolk up until the last decade. However, this trend is not sustainable. It is the purpose of the City's comprehensive plan to continue the use of the Focused Growth Approach to, over time, create a more sustainable development pattern in Suffolk by encouraging development and redevelopment in areas of the City that are already experiencing growth, such as the core of the Central Growth Area. The Focused Growth Approach will encourage more activity in this location and others, raising property values and encouraging further investment and redevelopment.

Historically, the rate of overall growth has not been beyond the City's ability to adapt and accommodate. While the City's growth management strategies have been very successful in containing and controlling development, the City's land resources have been absorbed at a rapid rate. There is a need to provide new opportunities for future development within the Focused Growth Approach. To balance the need to accommodate future projected growth and the desire to protect valuable environmental and agricultural assets in the City, this plan provides new development opportunities through increased intensity in specific Use Districts and the expansion of the Central Growth Area in strategic locations where the market is ready and infrastructure conditions are supportive for new development.



*Top: 58 Bypass merge
Bottom: Bennett's Creek*

DESIGN GUIDANCE

While previous plans were successful in controlling sprawl and reducing the pressure for development in rural areas of the City, they were limited in defining the quality and type of development options within the two Growth Areas. This update to the Focused Growth Approach advances the City's guidance regarding future design of new development and redevelopment, and sets out specific parameters for development within each of the Use Districts. These "Place Types" describe certain characteristics that should be concentrated in key locations, creating neighborhoods, centers, and corridors. These Place Types include Downtown and Town Centers, Urban Neighborhoods, Traditional Neighborhood Centers, Traditional Neighborhoods, Suburban Centers, Suburban Neighborhoods, Villages, Special Districts, and Corridors. The Place Type policies are explained in Chapter 3, and are intended to supplement this element.

KEY CONSIDERATIONS

Maintaining the Focused Growth Approach and Expanding Growth Capacity

The Focused Growth Approach has worked well and continues to be the preferred framework for managing and directing future growth. However, the former growth framework did not have enough capacity to adequately accommodate forecasted growth for the next 20 years. The revised Growth Areas incorporate additional capacity for future growth.

Capturing New Growth Opportunities

Current development patterns and market realities make some areas immediately outside of the 2026 Focused Growth Area boundaries prime for future development. This plan incorporates and includes these areas into the updated Growth Areas.

Coordinating Transportation and Land Use Considerations

Transportation improvements are needed to accommodate growth, but transportation improvement needs exceed funding. Focusing new development within the existing framework for growth will minimize need to enhance transportation infrastructure outside of Growth Areas.

Ensuring a High Quality and Character of Development

The quality and character of development is important to Suffolk residents, and new development should be designed to reflect historic development patterns and fit the context of surrounding developments and neighborhoods. A series of Place Types have been developed to guide the site planning and design of future development within the Growth Areas.

Protecting Natural Resources and Agricultural Lands

Suffolk has many natural resources that should be preserved, especially those related to water quality. The Focused Growth Approach maintains the conservation and agriculture status of lands outside the Growth Areas.

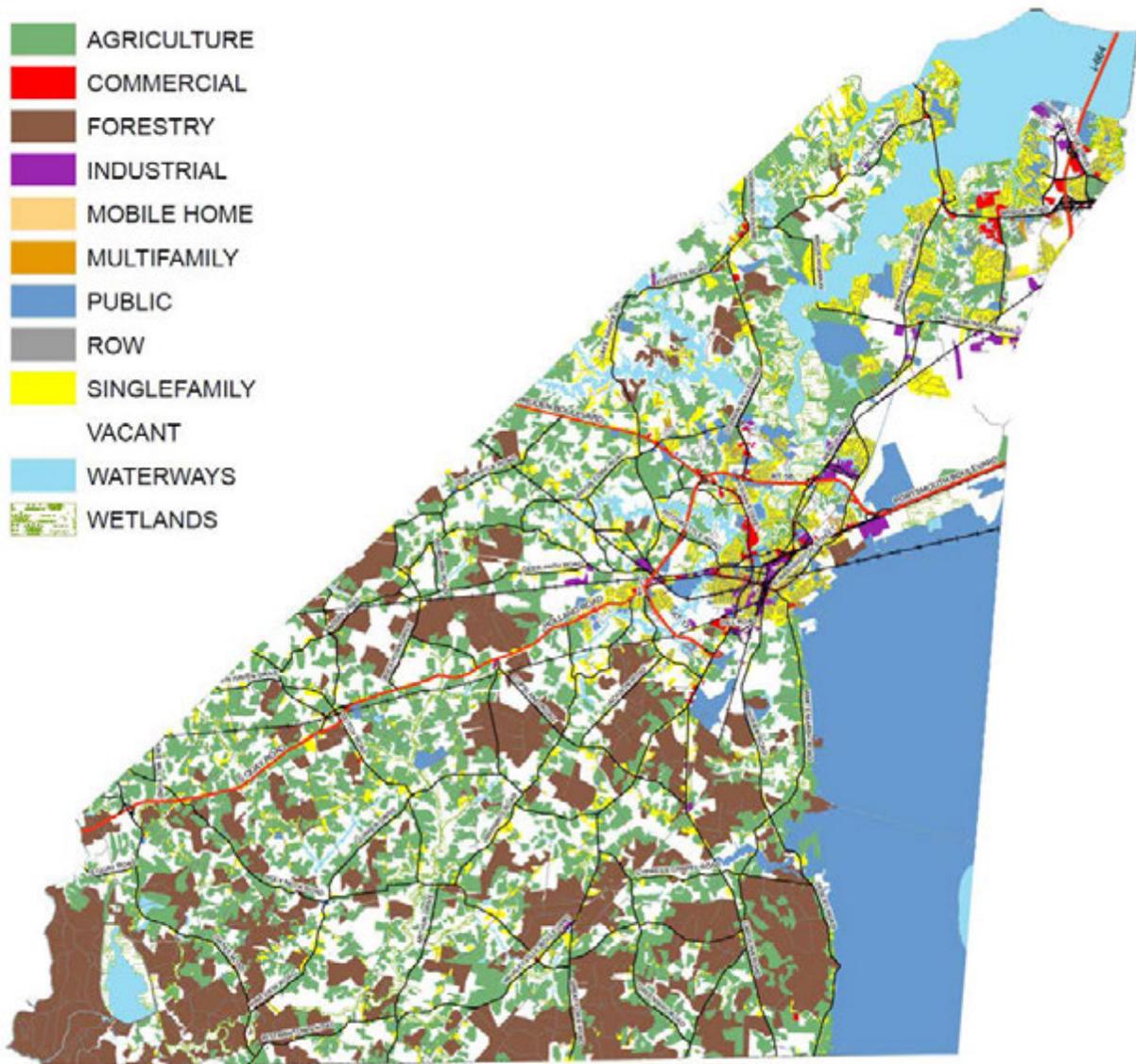


Hampton Roads Crossing - A pedestrian friendly campus community in Suffolk.

LAND USE CONDITIONS

EXISTING LAND USE

Most land in Suffolk is used for working lands purposes: agriculture and forestry. After working lands, residential uses are the most predominant land use in the City, followed by non-residential and commercial uses. The map below illustrates the locations of the various land uses found in Suffolk.

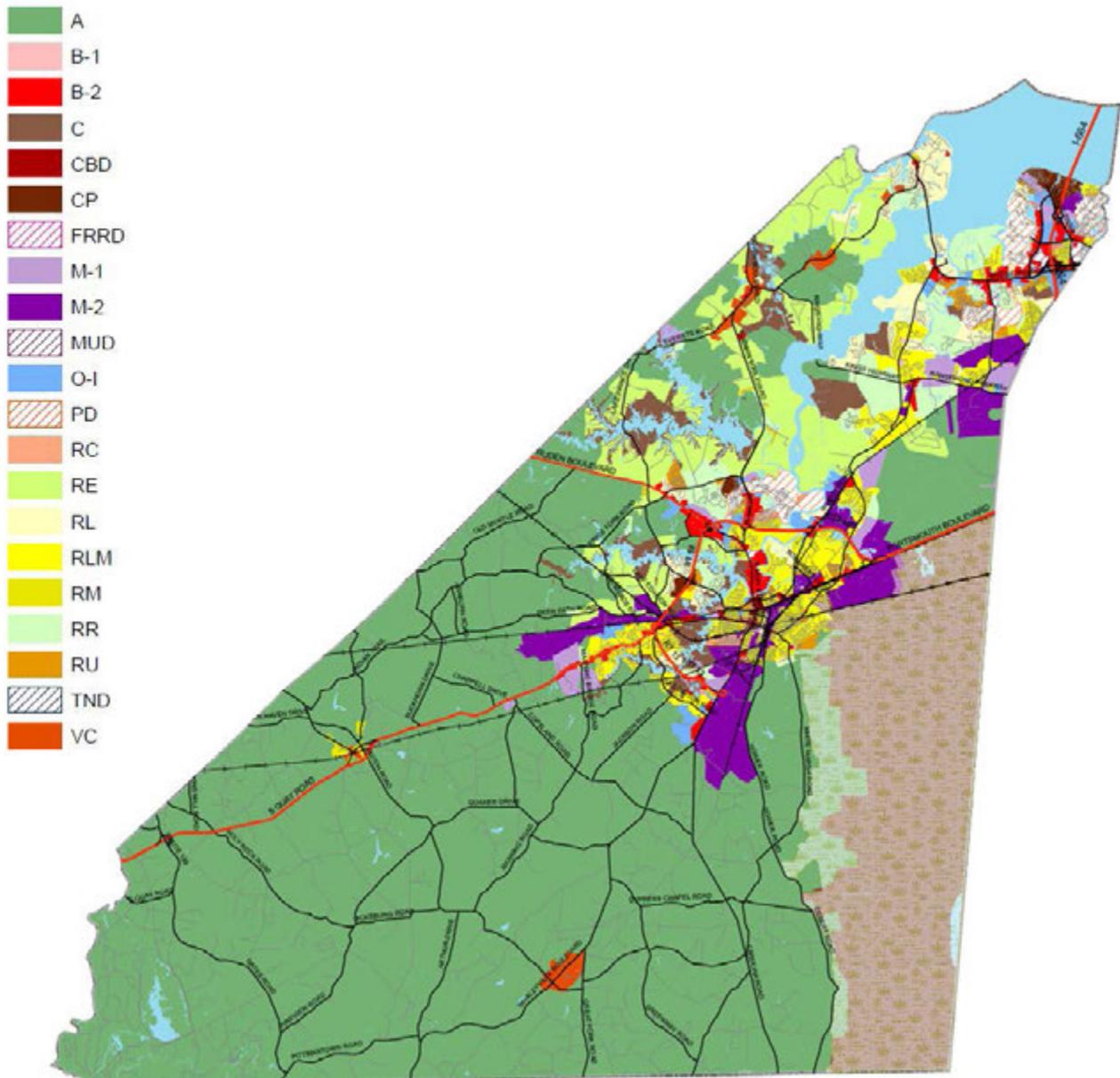


Map 2-2: City of Suffolk Existing Land Use

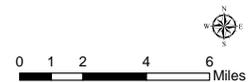


ZONING

Similarly to land use, the majority of lands in Suffolk are zoned for agricultural use, followed by residential and non-residential land uses. The map below illustrates the zoning district designations for land in Suffolk as of early 2012.



Map 2-3: City of Suffolk Zoning Map



DEVELOPMENT CAPACITY AND DEMAND

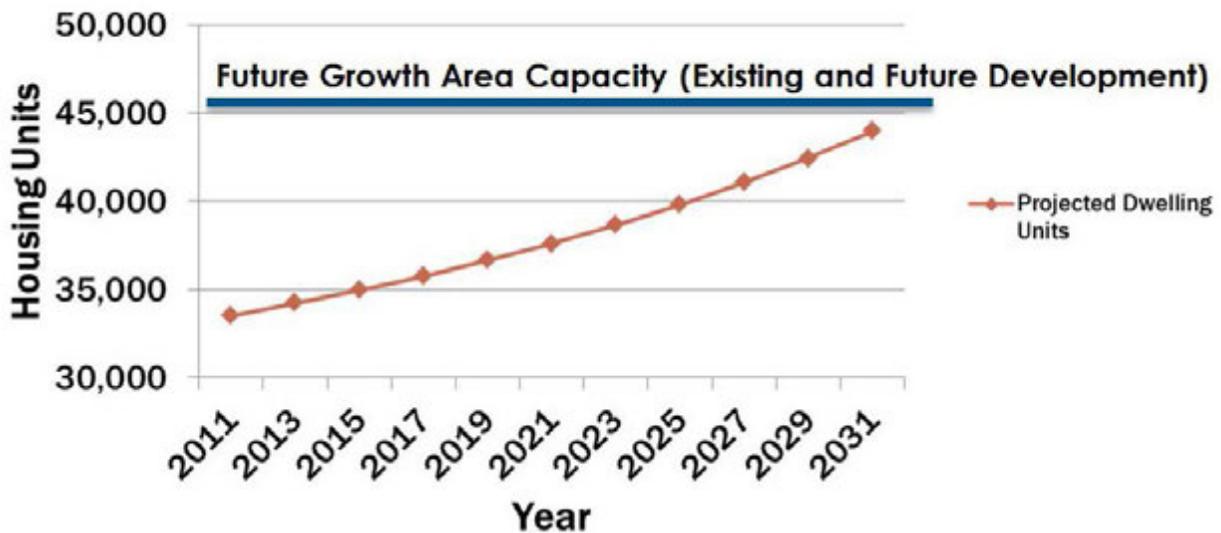
A study was conducted for Suffolk in 2011 that evaluated development trends and set out a 20-year forecast for future development through 2031. The table below provides the forecasted population, housing units, and jobs that Suffolk is expected to generate over this planning period. An additional 25,217 people are forecasted to live in Suffolk in 2031, resulting in the need for 10,437 new housing units, 11,459 jobs, and more than 13 million square feet of non-residential development, including commercial, retail, industrial, institutional and other uses.

Table 2-1: Suffolk Economic Forecasts

	2011 (Base Year)	2016	2021	2031	Cumulative Increase
Population	85,476	89,853	95,274	110,693	25,217
Housing Units	33,537	35,357	37,612	43,974	10,437
Jobs	25,512	28,023	30,684	36,971	11,459
Non-Residential Square Feet	18,382,000	21,297,000	24,290,000	31,694,000	13,312,000

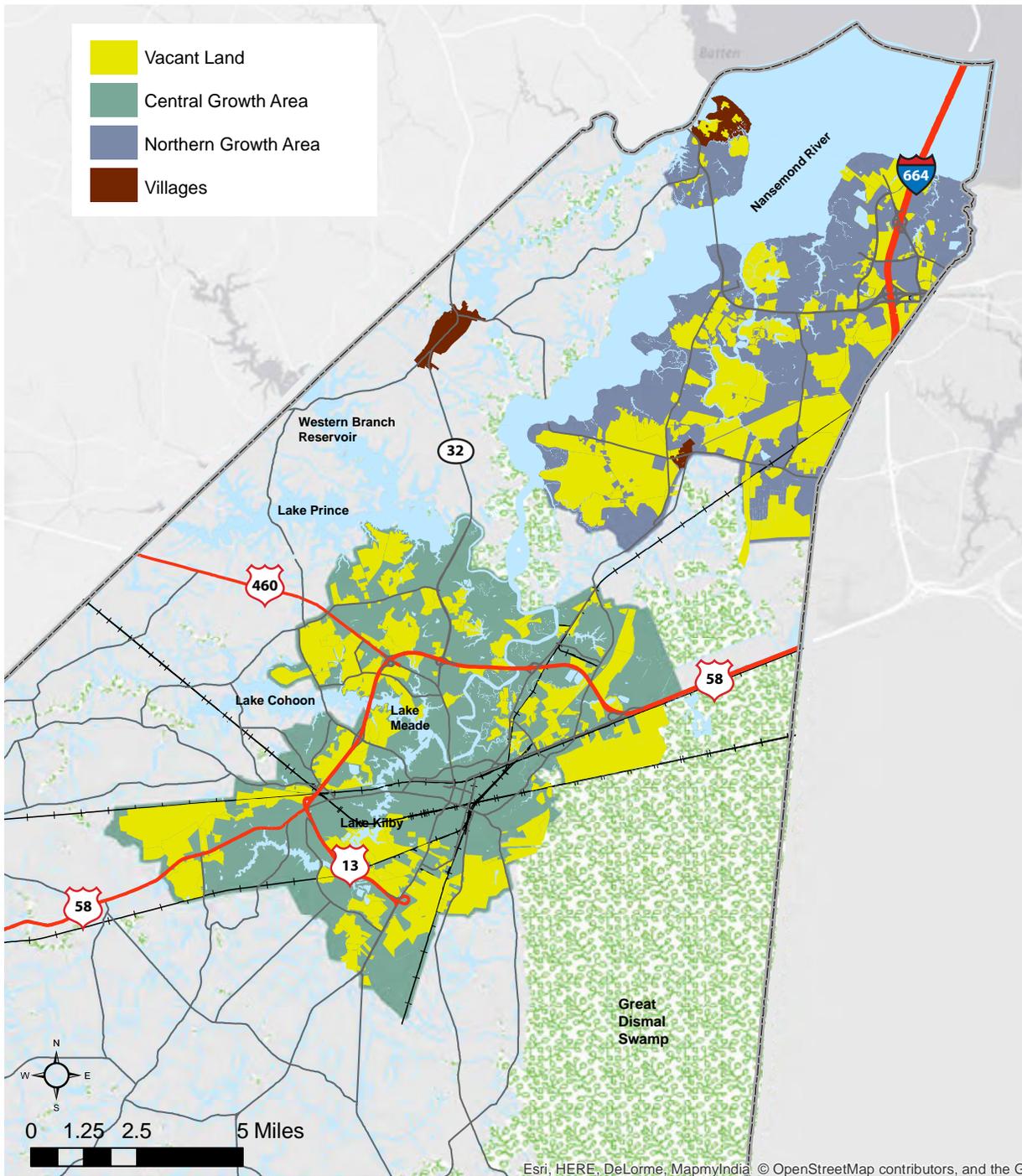
While there is sufficient capacity in the Growth Areas to accommodate more than 20 times the forecasted non-residential development, there is limited capacity for new residential development. The graph below illustrates that the total capacity for future residential growth, including existing development, projects that have been approved but have not yet been developed, and opportunities for future residential development, will require all the remaining residential lands in the two Growth Areas as forecasted through 2031. Further, as the gap between demand and capacity narrows, there is concern that the land market will be constrained creating a need for additional planned capacity.

Figure 2-1: Projected Dwelling Units



2035 SUFFOLK COMPREHENSIVE PLAN

The following map shows the undeveloped or vacant lands in Suffolk as of early 2012, as well as areas where environmental constraints limit development, such as swamps and marshes. This map illustrates that there are limited opportunities for new development in Suffolk.



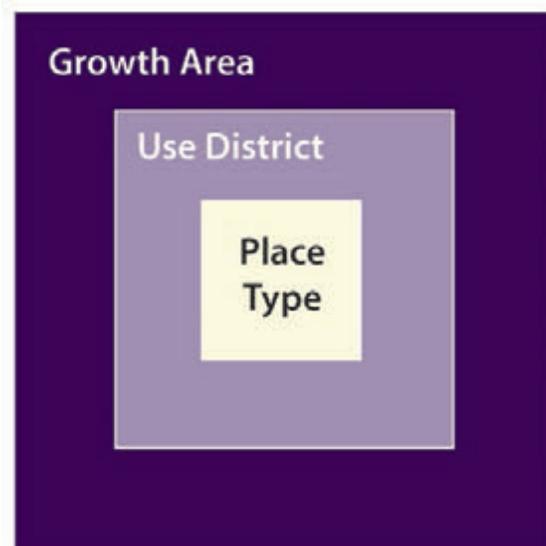
2035 FOCUSED GROWTH APPROACH

OVERVIEW OF APPROACH

The 2035 Focused Growth Approach has been refined to provide additional development opportunities to meet forecasts for future growth. Building off the growth approach included in previous plans, the 2035 Focused Growth Approach is set out in three parts:

1. **Growth Area** – Growth Areas denote the areas within which urban and suburban scale development will occur within the City. These planning areas are served by or could be served by public infrastructure in the future. Suffolk has two distinct Growth Areas: Northern and Central. This refined framework carries forward these two areas and expands opportunities for development in the Central Growth Area.
2. **Use District** – Use Districts designate smaller areas within the Growth Areas that have distinctive qualities, and differ in terms of intensity and types of land uses. The intent is that the Use Districts provide for the most intense development patterns in the core areas and decrease in intensity the further land is from the core. The framework carries forward the six Use Districts from previous plans: Mixed Use Core, Core Support, Inner-Ring Suburban, Suburban, Rural Conservation, and Rural Agriculture. This refined framework provides additional opportunities for Suburban Use District activities within the expanded areas of the Central Growth Area.
3. **Place Type** – Place Types are a new element in the Focused Growth Approach. They define special “places” that exist or are envisioned, and provide a more fine-grained guidance as to the specific design elements that should guide development of these areas. This includes Downtown and Town Centers, Urban Neighborhoods, Traditional Neighborhood Centers, Traditional Neighborhoods, Suburban Centers, Suburban Neighborhoods, Villages, Special Districts, and Corridors. These Place Types are addressed in Chapter 3.

The diagram below illustrates the relationship between the three framework elements. The Growth Areas represent the largest geographic areas. Multiple Use Districts exist within each of the two Growth Areas. Multiple Place Types then exist within each Use District.



GROWTH AREAS

The Central Growth Area is focused around the historic City core, and the Northern Growth Area is focused around major regional transportation routes. By accommodating forecasted development, the primary role of these Growth Areas is to provide a focus for development, reduce sprawl pressures in the rest of the City, and provide for more efficient and effective delivery of City services.

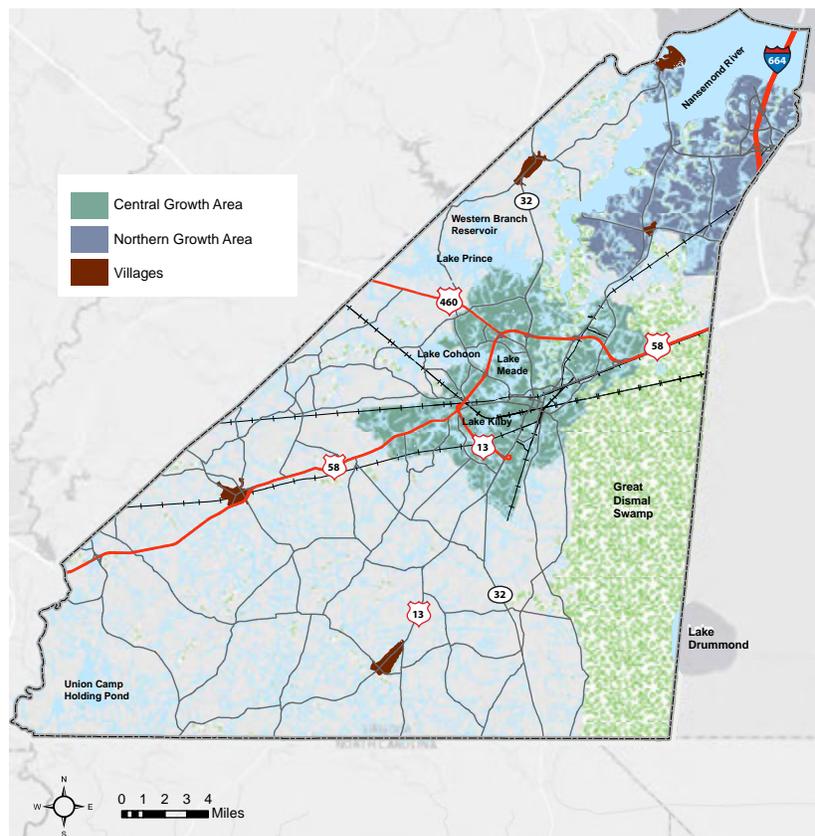
By accommodating growth in two discrete areas, development pressures are reduced in southern areas and as a result, much of the City’s rural character is preserved. In addition to the two Growth Areas, a key component of the growth management strategy is to designate a third large area of the City as a rural conservation / low density residential area. This area allows a lower density of residential development that is designed as a method of protecting the region’s water supply reservoirs that Suffolk hosts. Three key rural villages (Holland, Whaleyville, and Chuckatuck) have been designated to provide some growth outside of the Growth Areas. The remainder of the City is designated as an agricultural/conservation area with limited residential development potential. These goals are a continuation of the previous plan.

To ensure there is an adequate supply of land available to meet the development needs of future populations, the Focused Growth Approach incorporates the following:

1. Densities within the Use Districts have been increased to be more representative of the scale and intensity of new developments in Suffolk, with an emphasis on the core areas.
2. The Central Growth Area has been expanded to include three new areas. These areas are located along the Godwin Boulevard corridor, Lake Kilby Road, and Turlington Road, and are all served by public infrastructure. These adjustments extend the growth area to natural or parcel boundaries, and avoid dividing the boundaries on roads where both sides are served by the same infrastructure.

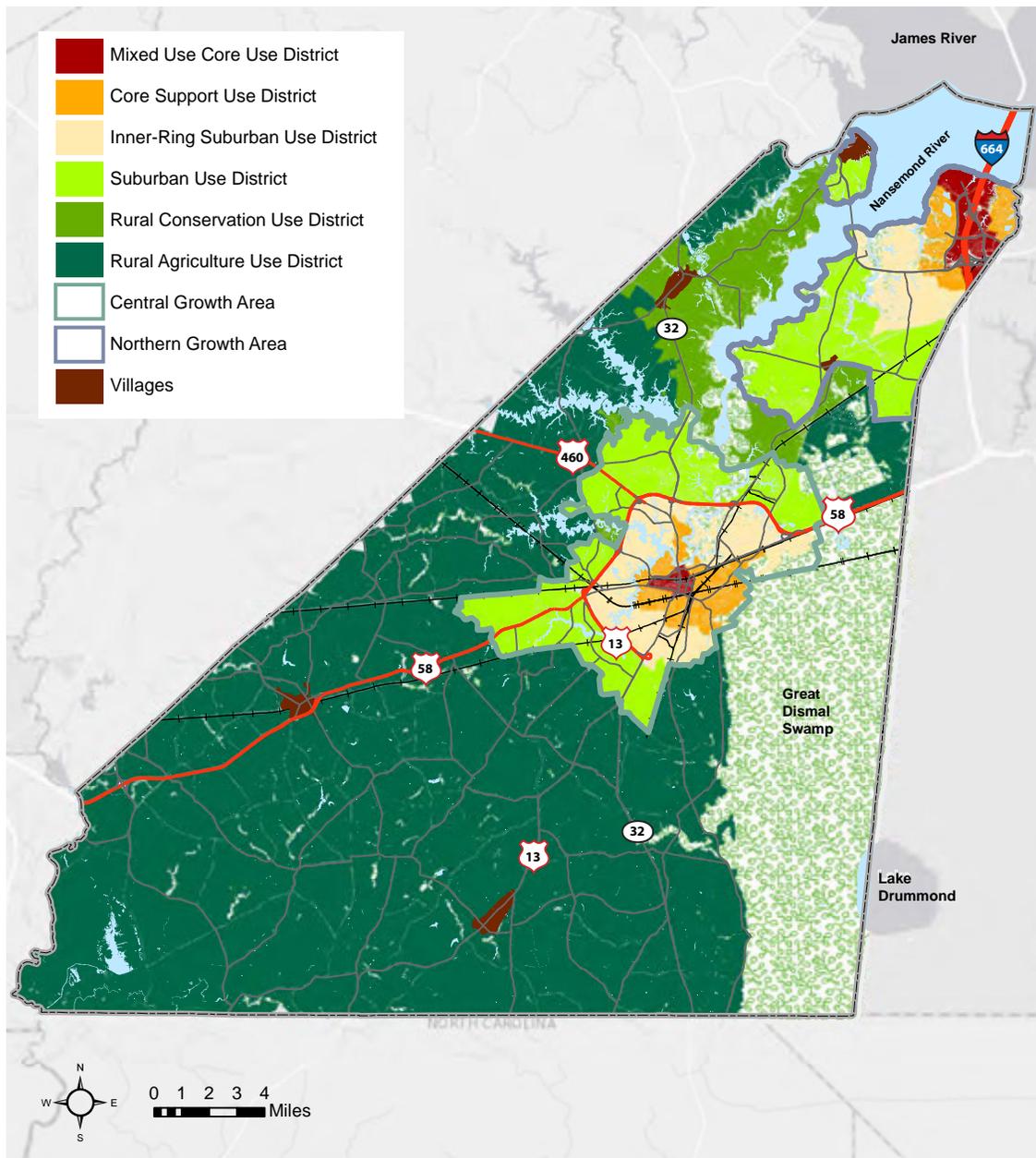
Map 2-5: Growth Areas

Suffolk’s Growth Areas focus development in the central and northern portions of the City, building off existing development patterns and directing growth away from valuable natural and agricultural resources.



USE DISTRICTS

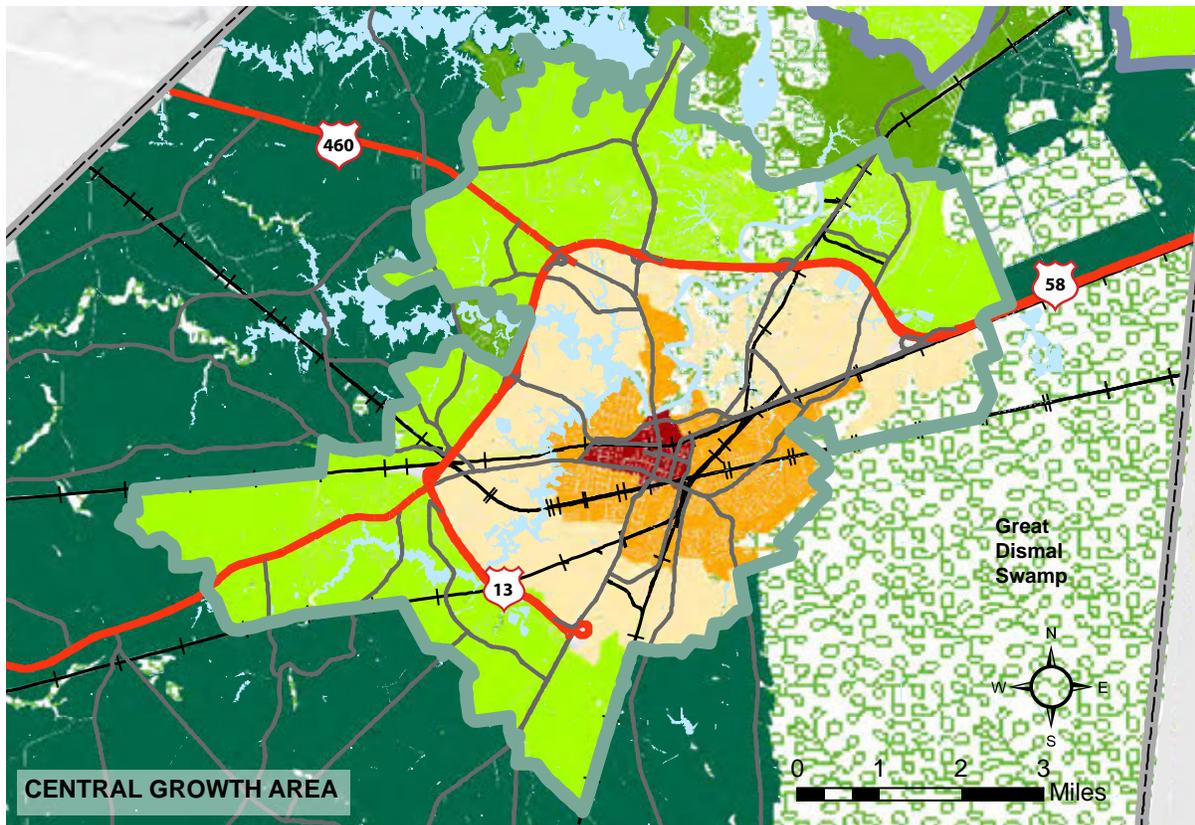
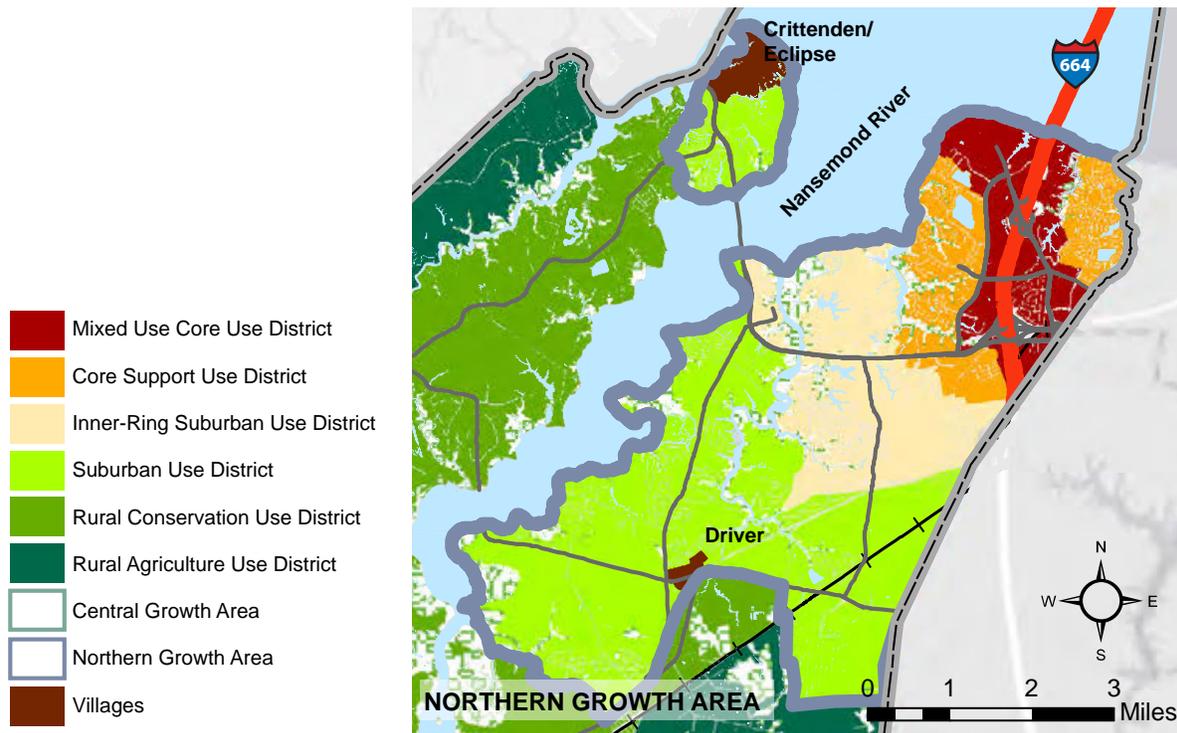
Six Use Districts provide greater guidance as to the type of development that should occur within the two Growth Areas. These Use Districts set out the development patterns, uses, and densities that should occur within these areas. The following maps illustrate the locations of these Use Districts, and their focus on creating a continuum of development, ranging from urban densities in the core areas to rural and conservation lands in the outer lying areas.



Map 2-6: Use Districts

Suffolk's Use Districts guide the locations for different types of development patterns, land uses, densities, and areas for protection within the City's borders.

2035 SUFFOLK COMPREHENSIVE PLAN



Map 2-7: Northern and Central Growth Areas

Mixed Use Core Districts

Mixed Use Core areas provide an area for high intensity business, retail, residential, and civic uses. The Mixed Use Commercial/Residential Core will enable Suffolk to compete regionally and nationally for the most intensive uses by providing both undeveloped and redevelopment sites that are appropriate for high density urban-scale developments. Suffolk's development pattern has the unique opportunity to provide high density development opportunities in a mix of settings. The Northern Mixed Use Core District, focused on the I-664 corridor, has significant amounts of greenfield development opportunities that can build upon the successes of the existing high technology businesses. The Central Mixed Use Core District of the existing downtown presents opportunities for redevelopment, rehabilitation and infill types of development.

Table 2-2: Mixed Use Development Characteristics Table

Mixed Use Development Characteristics	
Residential Uses	-Multi-family dwellings
Non-Residential Uses	-Regional scale retail in a vertical setting -Office -Hotel -Mixed use (vertical orientation) -Research and development -Civic buildings and community facilities (not including major infrastructure like pump stations or treatment facilities)
Densities / FAR	-25-40 dwelling units per acre -2.0-5.0 floor area ratio for non-residential development -6.0 floor area ratio for residential/hotel uses
Applicable Place Types	-Downtown/Town Center -Urban Neighborhood

Core Support Districts

Core Support areas provide a significant level of residential and ancillary retail and business activity to support the high density found in the Mixed Use Core district. The density and types of uses in the Core Support district should encourage walkable mixed use neighborhoods at a moderate scale. Mixed use development should be the predominant development type in the district. The Core Support District provides more housing opportunities that create a larger market area to support the non-residential uses located in the Mixed Use Core District. The proximity of this district to the Mixed Use Core District should shorten travel times, expand travel options, reduce congestion, and improve air quality. Potential transit corridors should be identified early in the development process and appropriate right-of-way

reserved. The highest density land uses should be clustered around these potential transit service corridors and stations. Sub-regional auto dependent retail uses (large retail stores, large grocery stores, home improvement centers, multiplex movie theaters) can be accommodated in the district. These uses should be integrated in well-designed mixed use centers focused on major arterials from which access should be exclusively channeled. Smaller, neighborhood-oriented stores (smaller grocery stores, drug stores, dry cleaners, restaurants, etc.) should be integrated in traditional neighborhood developments and should be walkable (within ¼ mile) from their intended residential market areas. A variety of housing types can be accommodated in this district, including single-family, townhomes, stacked townhomes, small apartment buildings, and others. Providing for a range of housing types on smaller lots in this district should encourage the development of homes at many different price points.

Table 2-3: Core Support Development Characteristics Table

Core Support Development Characteristics	
Residential Uses	-Single-family attached -High density single-family detached
Non-Residential Uses	-Mixed use, including big box retail, office, and residential -Office -Light manufacturing -Sub-regional level retail at designated locations -Neighborhood-level retail and convenience uses within pedestrian walksheds -Civic buildings and community facilities (not including major infrastructure like pump stations or treatment facilities)
Densities / FAR	-13-24 dwelling units per acre -0.5-2.0 floor area ratio for non-residential development -6.0 floor area ratio for residential/hotel uses
Applicable Place Types	-Urban Neighborhood -Traditional Neighborhood Center -Traditional Neighborhood

Inner Ring Suburban Districts

Moving further from the Mixed Use Core, the Inner Ring Suburban district is the first area from the center where exclusively residential neighborhoods should be located. Neighborhood design in this district should still be focused on walkable streets. Land efficient lot subdivision patterns can be explored in this district, such as zero lot lines. Cluster development patterns allowing for the preservation of usable open space are also encouraged. Neighborhood level retail nodes should be within walking distance from their intended markets. Sub-regional scale centers (large grocery stores, big box stores, home improvement centers, etc.) can be accommodated in this district at specific locations.

The line delineating the limits of the Inner Ring Suburban District along the southeast side of the downtown Core was the subject of the Carolina Road Corridor Land Use Strategy, performed by Urban Design Associates. The results of that study are incorporated by reference in this report. The Carolina Road Corridor Study looked at ways to extend the residential and commercial uses south of downtown without significantly impacting environmental resources or the economic development potential and importance of the Suffolk Executive Airport or significantly straining the City's finances. To summarize generally, the plan concluded that with ample development guidelines and good planning practices the desire to provide opportunities for an additional 1,000 new homes south of greater downtown Suffolk can be accommodated. The plan also accommodates new opportunities for some mixed use commercial centers and industrial uses south of greater downtown Suffolk. Most of this new residential and commercial development will be nestled in between White Marsh and Hosier Roads. One significant component of this plan is the incorporation of an Aircraft Overflight District as a strategy to protect the Suffolk Executive Airport from the encroachment of conflicting and non-compatible land uses, thereby preserving the airport as a valuable economic development engine.

Table 2-4: Inner Ring Suburban Development Characteristics Table

Inner Ring Suburban Development Characteristics	
Residential Uses	-Single-family -Traditional neighborhood developments
Non-Residential Uses	-Neighborhood retail commercial (grocery, dry cleaners, etc.) -Light manufacturing -Civic buildings and community facilities (not including major infrastructure like pump stations or treatment facilities)
Densities / FAR	-6-12 dwelling units per acre -0-0.5 floor area ratio for non-residential development -0-1 floor area ratio for residential/hotel uses -60 feet maximum height of building
Applicable Place Types	-Traditional Neighborhood Center -Traditional Neighborhood -Suburban Center -Suburban Neighborhood -Corridor -Special District

Suburban Districts

The Suburban district is the least dense area inside the Growth Areas. This district should be primarily composed of traditional residential subdivisions. Single-family dwellings are the most common use found in this district. Local and collector streets should be designed with sidewalks and be pedestrian friendly. Arterial and collector roads should have bicycle lanes and sidewalks that connect to neighborhoods and other key activity centers. Retail uses in this district are primarily neighborhood-scale centers. Larger, sub-regional-scale uses may be accommodated on specifically-identified sites with direct access to major transportation routes.

Table 2-5: Suburban Development Characteristics Table

Suburban Development Characteristics	
Residential Uses	-Residential subdivisions (traditional subdivision, Traditional Neighborhood development, cluster subdivision)
Non-Residential Uses	-Small convenience retail -Professional offices -Civic buildings and community facilities (not including major infrastructure like pump stations or treatment facilities)
Densities / FAR	-1-5 dwelling units per acre -0-0.5 floor area ratio for non-residential development -45 feet maximum height of building
Applicable Place Types	-Traditional Neighborhood Center -Traditional Neighborhood -Suburban Center -Suburban Neighborhood -Corridor -Special District

Rural Conservation District

Rural Conservation Districts provide an area of protection between the developed portions of the City and active agricultural lands. In most areas of the City, the Rural Conservation District is the first use type outside of the Growth Areas. The most common land use type in this district is low density residential in traditional, hamlet, and cluster subdivision patterns. Local and collector streets may or may not have sidewalks and pedestrian amenities, depending on the neighborhood design. The viewsheds from all major roadways should be maintained with a rural aesthetic using native trees and wide setbacks. Retail uses should be small and neighborhood-centered. Small retail uses supporting the rural character of the area (farmstands, agricultural supplier, etc.) are also allowed. Moderately higher levels of residential and commercial development are allowed in the villages of Chuckatuck and Oakland. Additionally, an Initiative Plan for the Crittenden/Eclipse villages, in the northern part of Suffolk, was completed in 2002 and is incorporated by reference. The low-intensity nature of

this district also provides for resource protection of the regional surface water supplies and lakes. Development in this district is allowed on individual septic systems provided City water is available.

Table 2-6: Rural Conservation Development Characteristics Table

Rural Conservation Development Characteristics	
Residential Uses	-Residential subdivisions (traditional subdivision, Traditional Neighborhood Development, cluster subdivision)
Non-Residential Uses	-Small convenience retail -Agricultural -Public safety facilities
Densities / FAR	-3 acres per unit or more -0.25 maximum impermeable area -45 feet maximum height of building
Applicable Place Types	-Corridor

Rural Agriculture District

Predominantly located in the south and northwest quadrants of the City, the purpose of the Rural Agriculture Districts is to maintain significant areas of the City for continued agricultural use. Retail, wholesale, and industrial uses directly related to the production of agricultural products are allowed on a limited basis. Development in this district is allowed with private drinking water wells and septic systems. Included in the Rural Agriculture District are two of the City’s designated rural villages-Holland and Whaleyville. The villages once served as the hubs of the City’s agricultural community and continue to provide important residential and retail and development opportunities in the southern half of Suffolk. The Suffolk City Council has recognized that the villages are an important part of the character of Suffolk and has made revitalization of them a priority. To accomplish this priority, the City has undertaken a series of initiative plans for the rural villages of Holland and Whaleyville. These plans, completed in 2000 and 2001, are incorporated by reference. The purpose of these plans was to establish themes and actions to support the villages as discrete places within the overall City of Suffolk. The Village Center zoning district allows a variety of compatible uses within villages, provided they meet design standards for building and site design that are consistent with village character.

Table 2-7: Rural Agriculture Development Characteristics Table

Rural Agriculture Development Characteristics	
Residential Uses	-Individual single-family homes (major subdivisions not allowed)
Non-Residential Uses	-Large-scale agriculture and forestry -Small farming operations (hobby farms, small horse farms) -Agricultural processing and related manufacturing
Densities / FAR	-0-1 dwelling unit per acre -45 feet maximum height of building
Applicable Place Types	-Corridor

THEMES, POLICIES, AND ACTIONS

Theme: Focused Growth and Development

Policy 2-1: Keep development focused in designated Growth Areas in the City.

- Action 2-1A: Ensure that the City's land use regulations support higher density/intensity development in focused Growth Areas.
- Action 2-1B: Continue the policy that there can be no justification for rezonings to residential subdivision uses outside the focused Growth Areas.
- Action 2-1C: Actively pursue expanded growth management authority from the General Assembly.
- Action 2-1D: Consider amending the City's land use regulations to add guidelines for the review of exceptional development opportunities outside the growth boundaries related to factors such as: the level of overall economic benefit to the City; adequacy of public facilities; net fiscal benefit to the City; compatibility with surrounding land uses; and advancement of the principles, values, and themes of the 2035 Comprehensive Plan.

Policy 2-2: Assure that development occurs in a predictable and orderly manner.

- Action 2-2A: Assess the City's zoning framework to identify locations where the City's current regulations do not reinforce the intent and spirit of the comprehensive plan, particularly for locations within the Growth Areas.
- Action 2-2B: Develop and maintain incentives in land use regulations that support traditional neighborhood designs.
- Action 2-2C: Continue the use of cluster developments to preserve and protect the natural environment.
- Action 2-2D: Ensure that the cluster development provisions allow for more community-usable open space.
- Action 2-2E: Amend the land use regulations to assure that transportation system planning and the preservation of right-of-way for transit are incorporated into the design and construction of new development projects, particularly large scale developments, in the Mixed Use Core and Core Support Districts.
- Action 2-2F: Ensure the provision of sewer service in the focused Growth Areas. Exceptions can be made for existing developed areas that have a large number of failing septic systems outside the focused Growth Areas.
- Action 2-2G: Ensure the provision of potable water service in the focused Growth Areas and those properties outside these areas zoned RE (Rural Estate). Exceptions can be made for those areas identified by the City's health department as having significant potable water quality concerns.
- Action 2-2H: Ensure that public infrastructure anticipates future population needs by requiring consideration of available and planned public facilities when reviewing rezonings and plan changes that would increase public service and infrastructure needs. This is crucial to the City's water and sewer system needs.

Policy 2-3: Promote a balance of residential and non-residential land uses.

- Action 2-3A: Continue to develop implementation tools that will help achieve an appropriate jobs-to-housing ratio.
- Action 2-3B: Continue to promote efforts to facilitate the retention and expansion of office, research and development, and manufacturing activity in Suffolk.
- Action 2-3C: Ensure that appropriately located zoned land is available to support the maintenance and continued growth of high technology, office and industrial uses throughout the City.

Theme: Enhanced Economic Diversity and Vitality

Policy 2-4: Promote compatibility in land use patterns.

- Action 2-4A: Ensure the ongoing viability of the Suffolk Executive Airport through protection from the encroachment of non-compatible land uses, such as suburban residential.
- Action 2-4B: Continue to develop new and expand existing incentives that promote and encourage mixed use development.
- Action 2-4C: Consider additional studies of land use patterns and compatibility issues along gateway corridors in Suffolk.
- Action 2-4D: Consider allowing higher density residential development than that prescribed in the 2035 Comprehensive Plan in certain areas of the Suburban Use District where transportation corridors and infrastructure are already established and where the proposed use is compatible with adjacent uses and the established development pattern.

CHAPTER 3: PLACE TYPES



The 2035 Comprehensive Plan identifies a range of uses, densities and development characteristics that are appropriate for each Use District within the designated Growth Areas. (Several of these uses and characteristics appear in multiple Use Districts.) Building on the *focused growth* concept from the previous Comprehensive Plan for 2026, this plan further defines each Use District as being made up of sub-areas, or Place Types.

All locations within the Use Districts can be identified as a specific kind of place, whether as it now exists, or as envisioned for the future. For example, the central Mixed Use Core Use District includes not only Suffolk's historic downtown, but also the surrounding historic neighborhoods. Instead of applying the previously defined ranges uniformly across each Use District, Place Types recognize that certain characteristics within an individual Use District should be concentrated in key locations, creating *neighborhoods*, *centers*, and *corridors*—or types of places—appropriate to the individual Use District context. Within each Place Type, the preferred development characteristics can be more specific and fully defined. These different places work together to establish the overall character of Suffolk. This plan identifies nine prototypical Place Types, described below, further defining the character of the future development desired for the City.

Just as the range of uses, development characteristics, and densities in the Comprehensive Plan for 2026 had some overlap between the designated Use Districts, some Place Types are appropriate in more than one Use District. The matrix on the next page summarizes the appropriate Place Types for each Use District.



Suffolk Center for the Cultural Arts located in downtown Suffolk

PLACE TYPES

Downtown & Town Centers may be either the historic downtown or a new development, but should be mixed use, compact, walkable places.

Urban Neighborhoods are primarily residential areas in close proximity to Downtown or a Town Center, comprised of a range of housing types, from apartments to townhouses and small lot single-family homes, arranged in a compact, walkable form.

Traditional Neighborhood Centers are similar in character to a Town Center but on a much smaller scale and lower intensity. They are located within or adjacent to a Traditional Neighborhood and may range in size from a few blocks to an individual corner store.

Traditional Neighborhoods may be historic neighborhoods or newer development. They have a walkable street network, and include a range of housing types (but are less intense than an Urban Neighborhood).

Suburban Centers are primarily auto-oriented commercial districts, but may include attached single-family and multi-family residential sub-areas. They may be developed in a variety of sizes and are usually located along major thoroughfares and surrounded by Suburban Neighborhoods.

Suburban Neighborhoods are residential districts, primarily built after WWII up until the present day, around a framework of irregular blocks. Although they may include a range of housing types, these are typically concentrated in sub-districts of a consistent type. (These areas are commonly referred to as subdivisions and apartment complexes.)

Villages are compact historic districts similar in character to Traditional Neighborhoods, but generally located within the more rural or suburban areas. They may consist of a concentration of houses at a crossroad or include a small Mixed Use center with locally serving businesses.

Special Districts are typically single-use areas with a form and character specific to their function. They may include industrial areas, office parks, and large institutional uses such as hospitals.

Corridors are thoroughfares that provide vehicular connections between different Place Types, primarily in the Suburban Use District and Rural Conservation areas. Although not standalone Place Types in and of themselves, the landscape and signage in these locations affect the overall character and perception of the City.



PLACE TYPES BY USE DISTRICT

		USE DISTRICTS						
		Mixed Use Core	Core Support	Inner Ring Suburban	Suburban	Rural	Conservation	Agriculture
PLACE TYPES	Downtown/Town Center	●						
	Urban Neighborhood	●	●					
	Traditional Neighborhood Center		●	●	●			
	Traditional Neighborhood		●	●	●			
	Village				●	●	●	●
	Suburban Center			●	●			
	Suburban Neighborhood			●	●			
	Corridor		●	●	●	●	●	●
	Special District		●	●	●	●		

PLACE TYPE COMPONENTS

Although there are many things that go into creating a sense of place, this plan identifies six components that establish the physical framework for development and define the basic characteristics of each Place Type. Each component is summarized below, with a specific description and illustrations by Place Type in the pages that follow. Each Place Type section concludes with Implementation Guidelines for future development.

Context & Scale identifies the appropriate Use District(s) for a Place Type and its typical size and intensity. It also includes a general description of the place, including a range of appropriate uses.

Blocks & Streets describes the typical block and street network for each Place Type, where appropriate, and how building sites relate to one another.

Site & Lot Configuration identifies the typical placement of a building on its lot, including setbacks, yards and lot coverage within each Place Type.

Buildings describes typical building form and function and the characteristic architecture for each Place Type.

Streetscapes & Public Spaces describes the typical and preferred public realm—the spaces between building facades, including sidewalk details, and greens, squares, plazas and parks appropriate to each Place Type.

Parking specifies the typical and preferred parking locations, arrangements, and configurations for each Place Type. The accommodation of automobile storage has a significant impact on the character of a place.

PLACE TYPES: FRAMEWORK FOR LONG-RANGE PLANNING

The Place Types fall into one of two categories—“pedestrian-oriented” or “automobile-oriented.” This is reflected in their component parts, described in the following pages. Are they walkable, compact, mixed use, having an interconnected network of streets and blocks, with buildings and signage oriented to pedestrians (while accommodating cars)? Or are they less intense, with uses separated, and a development pattern that favors, if not requires, an automobile?

This plan recognizes that many areas of Suffolk are and will remain automobile-oriented, while others are intended to become pedestrian-oriented, multi-modal places or, like the Downtown and its neighborhoods, already have a pedestrian-friendly structure and can be supported and improved.

Recognizing the desired character of a place can inform municipal investment and development regulation to consistently promote the appropriate character (scale and form) of development, whether infill revitalization or in a greenfield location.

Difficulties arise, and public funds are inefficiently spent, when this distinction is not made. Sidewalks along suburban arterials and high-speed thoroughfares through in-town neighborhoods are not productive expenditures of public funds. Smart planning can result in public expenditures that are investments, to help communities and economies grow and expand the tax base.

DESIGN MATTERS

While comprehensive plans and zoning ordinances typically emphasize quantifiable factors such as dwelling units per acre, floor area ratios, and land use categories. A plan with a focus on placemaking and the character and quality of new development places a priority on design, meaning the physical form that buildings take, their details and placement on the lot, and their relationship to one another, along with the creation and character of *public space*.



Top: Pedestrian-oriented example
Bottom: automobile-oriented example



Downtown Main Street Festival

Architectural features, building placement, site amenities, and similar elements can transform a block, development, or single building into a unique and special place. Buildings that fall into the same statistical category can be fundamentally different in their appearance and in their contribution to creating a sense of place. Successfully creating a sense of place will attract people to an area and will keep them coming back. This may include elements such as:

- A clear and comfortable place for pedestrians including good sidewalks, street trees, and greenery;
- Pedestrian oriented buildings that include architectural detailings and that are aligned to the street; and
- Places in which automobiles are accommodated but are not dominating.

This plan emphasizes design, not density!



The above pictures represent a range of design features that contribute to their sense of place.

DOWNTOWN & TOWN CENTERS



Context & Scale

The Downtown or Town Center is the focus and most intense part of a **Mixed Use Core** Use District. Pedestrian-oriented and compact, these places draw people from across the region.

Downtown is the main Center. Additional Centers may be created by new development. They should be accessible by transit, auto, bicycle, and pedestrians. Street character will vary, with ground floor retail in limited locations to promote synergy, and other streets primarily residential or office.

Centers accommodate nearly all the functions of daily life—from commerce, dwelling, recreation, civic and institutional, to research and development—and they are able to respond to market conditions.

These Centers are typically of a limited (walkable) size.

Mixed Use Core	Core Support	Inner Ring Suburban	Suburban	Rural
●				

Street & Block Pattern

Centers have an interconnected network of streets and small blocks (typically a rectilinear or distorted grid pattern). They have a walkable, pedestrian-oriented scale with multiple street connections to adjacent areas and a secondary network of alleys providing rear service access through the block. The streets are designed for slow-moving multimodal traffic and have wide sidewalks, street trees, and on-street parking.



Downtown's interconnected network



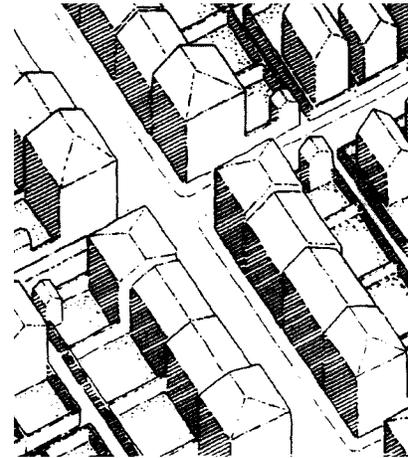
Typical Center street & block network

Site & Lot Configurations

All lots in a Center have street frontage. Typically there are multiple lots/buildings within each block and no required side lot setbacks. This continuous street frontage reinforces the Center's pedestrian-oriented nature. Complete lot coverage may be allowed, as long as there are public open spaces within a short walking distance. Center site and lot configurations do not accommodate large format (big box/auto-oriented) retail.



Lot siting: buildings to the street



Conceptual siting pattern

Buildings

Buildings in Centers are street-oriented, aligned along the back of the sidewalk, and typically multi-storied. Some streets will be lined with traditional "main street" shopfront buildings with ground story retail display windows and offices or residences above. (Because an area can only absorb a finite amount of retail, ground floor retail buildings should not be expected throughout the Center.) Buildings on other streets may be single use, but all are street-oriented.

Architectural detailing is pedestrian in scale, with frequent windows and functioning entry doors. These features promote an active and walkable streetscape.

Centers also commonly include civic buildings, such as a courthouse or church, which may have a more unique design but still address the street or public realm.



Downtown mixed use building



New center mixed use building



Historic Suffolk residential building



New center streetscape



Downtown streetscape



Public open space in a new Town Center

Public Spaces & Streetscapes

Streets and sidewalks are the City's foremost public spaces. Center sidewalks are wide and tree-lined, to promote *walkability* and accommodate significant pedestrian traffic. In addition, Centers include other kinds of public spaces, such as greens and squares for gathering. These spaces are defined and fronted by buildings and are often formally arranged.



Parking lots located away from street



Retail fronting the street, parking above

Parking

Parking should be on-street parallel or located away from the street in block-interior lots or structures. On-street parking contributes to pedestrian comfort, shielding the pedestrian from moving automobile traffic without detracting from *walkability*. Because Centers are compact and intense mixed use areas, on-site parking is not required. Lower off-site requirements and shared parking arrangements should be encouraged.

DOWNTOWN & TOWN CENTERS: IMPLEMENTATION GUIDELINES

Street & Block Pattern

- Maintain and enhance the existing streets and grid pattern.
- Encourage new streets to subdivide over-large blocks.
- New Town Centers should have an interconnected network of streets and small blocks: an average block perimeter of less than 1,300 feet is best for *walkability*.
- Maximize intersections/block corners.
- Alleys should provide parking and service access through all blocks.
- Traffic geometry should be designed for slow moving multi-modal traffic.
- All streets should have on-street parallel parking.

Site & Lot Configurations

- All lots should have frontage onto a street and/or other public space (*square, green, or plaza*).
- Blocks should be subdivided into multiple lots.
- Allow zero or limited side lot setbacks in Centers.
- Allow complete lot coverage, as long as there are public open spaces within a short walking distance.
- Discourage big box/auto-oriented retail formats within Centers.
- New buildings should be built to a facade alignment on each block. For infill sites this should be consistent with existing, contributing buildings.

Buildings

- Buildings should be oriented to the street, with working primary entrances on the facade.
- Subdivide building facades, especially on large buildings, with smaller scale elements to preserve a relative human scale along the block face.
- Cluster ground floor retail street frontages. Allow upper floors to be residential or commercial (non-retail).
- Allow single-use buildings (all residential or

all commercial) on the non-retail streets in the Center.

- Do not allow blank or mirrored building facades. They deaden the street frontage and adjacent properties.
- Facades should have between 30 and 70 percent transparency, with retail storefronts having 60 to 90 percent transparency.
- Encourage overhangs and awnings.
- Encourage durable, quality exterior building materials.
- Promote mixed use development at the highest intensity possible within the Downtown and Town Centers.

Public Spaces & Streetscapes

- All streets should have wide sidewalks.
- Encourage *squares, greens, and plazas* within the Downtown and Town Centers.
- Encourage special community buildings and/or monuments to be located fronting or within, *squares, greens, and/or plazas*.
- Design signage and lighting for the pedestrian (rather than fast-moving automobile traffic).
- New Centers should have a primary public open space, with distributed smaller public spaces.

Parking

- Promote a *park-once* environment in the Downtown and Town Centers.
- Promote on-street parallel parking for all streets in a Center.
- Parking structures and large shared parking lots should be located away from the street, especially at the ground story/sidewalk frontage.
- Allow off-site parking and encourage lower minimum requirements and shared parking arrangements.
- Consider maximum reserved parking limits.
- Plan to replace surface parking lots with publicly accessible parking structures.
- Incentivize publicly accessible parking structures in new developments.

URBAN NEIGHBORHOODS



Context & Scale

Urban Neighborhoods are located in the **Mixed Use Core** and **Core Support Use Districts**. Predominantly residential and always pedestrian-oriented, these moderate to high intensity areas are generally adjacent to Downtown or a Town Center. Urban Neighborhood residences complement the commerce within the Centers.

Urban Neighborhoods accommodate civic or institutional uses including churches and schools as well as small neighborhood-serving retail, such as corner stores, dry cleaners, and coffee shops.

These Neighborhoods are accessible by all modes of transportation. Street character will vary, depending on width, traffic capacity, sidewalk design, and building form. Urban Neighborhood size is limited and walkable. Edges are defined with major streets, large parks or waterways.

Mixed Use Core	Core Support	Inner Ring Suburban	Suburban	Rural
●	●			

Street & Block Pattern

Urban Neighborhoods are designed with an interconnected, walkable, network of streets and small blocks (typically in a grid pattern). Rather than isolated pods of development, they have multiple street connections to adjacent areas. A secondary network of alleys provides access to the rear of the buildings and through the block. Neighborhood streets are designed for slow-moving, multi-modal traffic.



Small blocks in an interconnected network



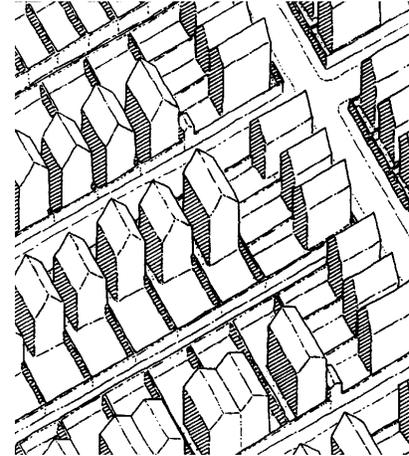
Typical street & block network

Site & Lot Configurations

All lots have street frontage and there are typically multiple lots per block. (A single building filling the block would be an exception rather than the rule.) Small or no side setbacks foster a continuous street frontage. Lots may be narrow, to fit a single townhouse, or larger to accommodate an apartment building. Buildings are placed toward the front of the lot with the rear generally used for private yards, gardens, and parking.



Lot siting: buildings to the street



Conceptual siting pattern

Buildings

Buildings in Urban Neighborhoods are street-oriented; they may sit directly at the back of the sidewalk or behind a dooryard (a shallow front yard). In either configuration, the buildings work together to define the street or pedestrian realm that is typically consistent for the entire block face.



New townhouses



Detached houses on small lots

Typically multi-storied, buildings in Urban Neighborhoods may be in a variety of configurations, including apartments, townhouses, brownstones, and small-lot detached single-family houses. Neighborhood buildings have functioning entrances on the street and may also have front porches, stoops, and balconies.



Small apartment building with dooryard



Historic apartment building

Roofs may be pitched or flat with low parapets. The architecture is pedestrian in scale and residential in character, excepting locations with neighborhood-serving commercial uses.



Simple Urban Neighborhood streetscape



Small but significant public open space

Public Spaces & Streetscapes

Urban Neighborhoods should include a range of usable public open spaces in addition to the streets and sidewalks; from greens and squares, to tot lots, playgrounds, and small parks.

Sidewalks are shaded by street trees, in individual pits or continuous tree lawns, and may be narrower than in the Centers. Streetscapes have a green edge due to the larger dooryards.

Signage is limited and lighting is scaled to the pedestrian.



Parking lots located within the block interior



Garage doors facing an alley, not the street

Parking

In addition to on-street parking, Urban Neighborhoods provide parking at the rear of the lot in the block interior, in garages or small parking lots.

Where served by public transit, lower parking requirements should be considered.

URBAN NEIGHBORHOODS: IMPLEMENTATION GUIDELINES

Street & Block Pattern

- Maintain and enhance the existing streets and grid pattern.
- Encourage new streets to subdivide over-large blocks.
- New developments should have an interconnected network of streets and small blocks: an average block perimeter of less than 1,300 feet is best for *walkability*.
- Maximize intersections/block corners.
- Alleys should provide parking and service access through all blocks.
- Traffic geometry should be designed for slow moving multi-modal traffic.
- All streets should have on-street parallel parking.

Site & Lot Configurations

- All lots should have frontage onto a street.
- Blocks should be subdivided into multiple lots.
- Allow zero or limited side lot setbacks in Urban Neighborhoods.
- Allow complete lot coverage, as long as there are public open spaces within a short walking distance.
- New buildings should be built to a facade alignment for each block. For infill sites this should be consistent with existing contributing buildings.
- Consider small neighborhood-serving retail in limited locations.

Buildings

- Encourage buildings to be oriented to the street, with working primary entrances on their facades.
- Articulate facades of large frontage buildings with smaller scale elements to preserve a relative human scale along the block face.
- Encourage facade elements such as front porches, stoops, balconies and bay windows to enliven the street.
- Building functions should be residential

(including hotel), allowing home office uses and accessory units.

- Do not allow blank or mirrored building facades. They deaden the street frontage and adjacent properties.
- Facades should have between 30 and 70 percent transparency.
- Promote development at the highest intensity possible within the Urban Neighborhood.

Public Spaces & Streetscapes

- Sidewalks should be on both sides of all streets.
- Encourage *greens* and *parks* within Urban Neighborhoods.
- Encourage special community buildings and/or monuments fronting and/or within these *greens* and/or *parks*.
- Lighting should be scaled for the pedestrian (rather than fast-moving automobile traffic).

Parking

- Promote a *park-once* environment.
- Promote on-street parallel parking for all streets in Urban Neighborhoods.
- Parking lots should be located away from the street, especially the ground story/sidewalk frontage, and within the block-interior.
- Encourage lower minimum requirements and consider maximum reserved parking where adjacent to Downtown, a Town Center, or a transit stop.



Urban Neighborhoods provide a good quality of life with a small environmental footprint.

TRADITIONAL NEIGHBORHOOD CENTERS



Context & Scale

Traditional Neighborhood Centers are located in the **Core Support, Inner Ring, and Suburban** Use Districts.

These moderate intensity areas are pedestrian-oriented. They may be as small as a few storefronts at an intersection or a multiple blocks-long neighborhood *Main Street*.

Traditional Neighborhood Centers accommodate neighborhood-serving retail, such as a small grocery, dry cleaners, and coffee shops as well as civic or institutional uses including churches and schools.

These Centers are accessible by all modes of transportation. Their size is limited and walkable. They are the heart of their Traditional Neighborhood.

Mixed Use Core	Core Support	Inner Ring Suburban	Suburban	Rural
	●	●	●	



Under-utilized Traditional Neighborhood Center



Center with public infrastructure improvements

Street & Block Pattern

Traditional Neighborhood Centers are designed within the Neighborhood's interconnected, walkable, network of streets and small blocks (typically in a grid pattern). They have multiple street connections with their Neighborhood. A secondary network of alleys should provide access to the rear of the buildings and through the block. Their streets are designed for slow-moving, multi-modal traffic.

Site & Lot Configurations

All lots have street frontage. Typically multiple lots sit along a block-face with a continuous street frontage. Buildings are placed toward the front of the lot and have a rear lot setback from the adjacent residences that is generally used for service and parking. Individual building placement (relative to the sidewalk) is consistent for the entire block-face.



Center with context-sensitive infill development



Conceptual siting: neighborhood storefronts

Buildings

Buildings in Traditional Neighborhood Centers are street-oriented. The buildings work together to define the street and a pedestrian realm.

Typically two to three stories, buildings have storefronts and one or more functioning entrances on the street. The scale of the Traditional Neighborhood Center buildings should be in proportion to their surrounding Neighborhood.



A new Neighborhood Center storefront



A corner store anchoring a Neighborhood Center

The architecture is typically “main street” in character with pedestrian-scaled details, such as vertically proportioned windows and sidewalk-oriented signage.

In evolving neighborhoods, single-family houses immediately adjacent to an existing Neighborhood Center are often converted for commercial uses.



A Neighborhood Center can be many, or just a few storefronts



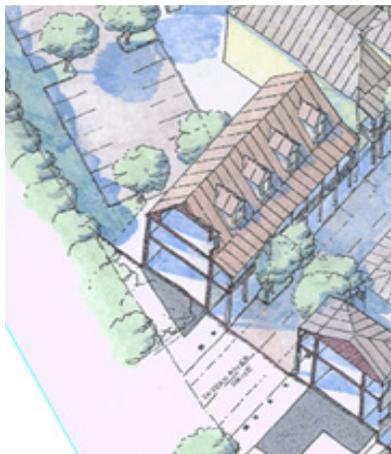
Simple Neighborhood Center streetscape



Small but significant public open space



On-street parking



Parking behind the buildings

Public Spaces & Streetscapes

Traditional Neighborhood Centers should include a public open space in addition to their streets and sidewalks.

Streets have on-street parking and sidewalks are shaded by street trees. The streetscapes will generally have an active edge due to the storefronts.

Lighting and signage is scaled to the pedestrian.

Parking

In addition to on-street parking, Traditional Neighborhood Centers provide parking at the rear of the lot. Parking lots should be coordinated, shared and sized for neighborhood-serving, not destination, retail and commerce.

Consider lower minimum parking requirements when the Neighborhood Center has a transit stop.

TRADITIONAL NEIGHBORHOOD CENTERS: IMPLEMENTATION GUIDELINES

Street & Block Pattern

- Maintain and enhance the existing street and block pattern.
- Encourage new streets to subdivide over-large blocks.
- New Traditional Neighborhood Centers should contribute to an interconnected network of streets and small blocks: an average block perimeter of less than 1,300 feet is best for *walkability*.
- Maximize intersections/block corners.
- Alleys should provide parking and through service access behind all Traditional Neighborhood Center buildings.
- Traffic geometry should be designed for slow moving multi-modal traffic.
- All streets should have on-street parallel parking.

Site & Lot Configurations

- All lots should have frontage onto a street and/or other public space (*square, green, or plaza*).
- Block-faces should be subdivided into multiple lots.
- Encourage zero lot line buildings in Traditional Neighborhood Centers.
- Allow complete lot-coverage, as long as there is a public open space within a short walking distance.
- Traditional Neighborhood Center site and lot configurations are scaled to neighborhood-serving retail.
- New buildings should be built to a general facade alignment for each block. For infill sites this should be consistent with existing, contributing buildings.
- Traditional Neighborhood Center lots should have good neighborhood manners with side and rear lot line setbacks to provide breathing room for adjacent residential neighbors.

Buildings

- Buildings should be oriented to the street,

with working primary entrances along their facade.

- Buildings in Traditional Neighborhood Centers should be of limited size to preserve a relative human scale.
- Encourage storefronts.
- Building functions should be retail and/or commercial at the ground floor. Upper floors may be commercial or residential (including bed and breakfast) use.
- Ground floor facades should have between 60 and 90 percent transparency, with upper floors having 30 to 70 percent transparency and an active streetscape.
- Do not allow blank or mirrored building facades. They deaden the street and damage adjacent properties.
- Encourage overhangs & awnings.
- Promote development at the highest intensity possible in new Traditional Neighborhood Centers.

Public Spaces & Streetscapes

- All Neighborhood Center streets should have wide sidewalks.
- Encourage a *square* or *green* in Traditional Neighborhood Centers.
- Encourage special community buildings and/or monuments, especially fronting the *square* or *green*.
- Signage and lighting should be scaled for the pedestrian rather than fast moving automobile traffic.

Parking

- Promote a *park-once* environment in Traditional Neighborhood Centers.
- Promote on-street parallel parking for all streets in Traditional Neighborhood Centers.
- Parking lots should be located away from the street and placed within the block-interior.
- Encourage centrally located, shared parking lots.
- Consider minimum and maximum parking requirements scaled to neighborhood serving retail.

TRADITIONAL NEIGHBORHOODS



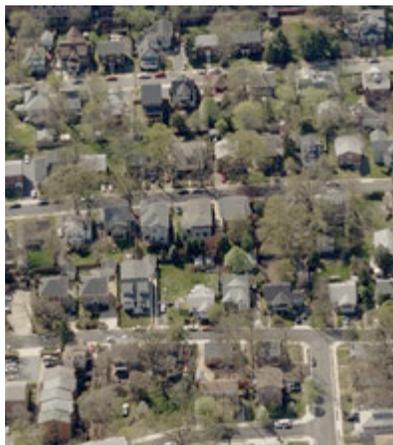
Context & Scale

Traditional Neighborhoods are located in the **Core Support**, **Inner Ring**, and **Suburban** Use Districts. Residential and pedestrian-oriented, these moderate intensity areas are generally in close proximity to the Downtown or a Town Center.

Traditional Neighborhoods also accommodate civic or institutional uses including churches and schools.

Traditional Neighborhoods are accessible by all modes of transportation. Their street character will vary, depending on street width, traffic, and building form. Neighborhood size is limited and walkable. Edges are defined with major streets, large parks, and fields (agriculture or conservation lands) or waterways.

Mixed Use Core	Core Support	Inner Ring Suburban	Suburban	Rural
	●	●	●	



Small blocks in an interconnected network



Typical street & block network

Street & Block Pattern

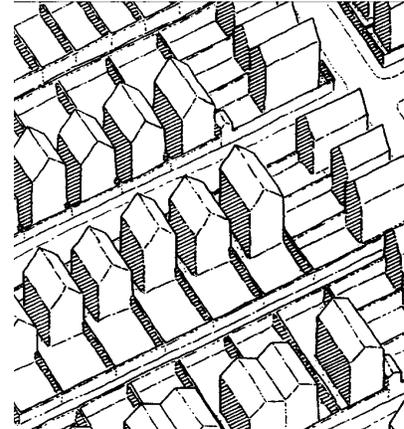
Traditional Neighborhoods are designed with an interconnected, walkable, network of streets and small blocks (typically in a grid pattern). They have multiple street connections to adjacent areas, including other Neighborhoods. A secondary network of alleys often provides access to the rear of the buildings and through the block. Their streets are designed for slow-moving, multi-modal traffic.

Site & Lot Configurations

All lots have street frontage. Typically multiple lots sit within a block. Small side lot setbacks foster a continuous street frontage. Lots may be narrow, to fit cottages and bungalows, or wider to accommodate larger houses. Buildings are placed toward the front of the lot with rear and side yards generally used for private yards, gardens, and parking. Individual building placement (relative to the sidewalk) is often consistent for the entire block face.



Siting: buildings front the street



Conceptual siting pattern

Buildings

Buildings in Traditional Neighborhoods are street-oriented; they typically sit behind a small to medium dooryard. In either configuration, the buildings work together to define the street and a pedestrian realm.

Typically two to three stories, houses may be in a variety of configurations, from bungalows, to cottages and four-squares, with small to medium lots. Townhouse and/or small apartment buildings are especially appropriate for transitioning to a more intense Place Type such as a Traditional Neighborhood Center, Town Center, or Urban Neighborhood.

Buildings have one or more functioning entrances on the street and may include front porches, stoops, and balconies. Their roofs are typically pitched with gable or hipped ends. The architecture is pedestrian in scale and residential in character.



Historic neighborhood houses



New single-family detached houses



House with large front porch



Single-family attached houses



Small but significant public open space



Simple pedestrian streetscape

Public Spaces & Streetscapes

A Traditional Neighborhood should include a range of usable public open spaces in addition to its streets and sidewalks. Greens, tot lots, playgrounds, and parks should be within a close walking distance.

Streets have on-street parking and sidewalks shaded by street trees. They generally have a greener edge due to the larger dooryards and tree-lawns.

Lighting should be scaled to the pedestrian.



Parking is located at the rear of the lot



Garage doors facing an alley, not the street

Parking

In addition to on-street parking, Traditional Neighborhoods provide parking at the rear of the lot, generally in garages.

Where served by transit, lower parking requirements can be considered.

TRADITIONAL NEIGHBORHOODS: IMPLEMENTATION GUIDELINES

Street & Block Pattern

- Maintain and enhance the existing streets and grid pattern.
- Encourage new streets to subdivide over-large blocks.
- New Traditional Neighborhood developments should have an interconnected network of streets and small blocks: an average block perimeter of less than 1,300 feet is best for *walkability*.
- Alleys should provide parking and service access through all blocks.
- Traffic geometry should be designed for slow moving multi-modal traffic.
- On-street parallel parking is appropriate for all streets.

Site & Lot Configurations

- All lots should have frontage onto a street.
- Blocks should be subdivided into multiple lots.
- Allow limited side lot setbacks.
- Encourage pervious surface area for Traditional Neighborhoods.
- New buildings should be built to a general facade alignment for each block. For infill sites this should be consistent with existing, contributing buildings.

Buildings

- Buildings should be oriented to the street, with working primary entrances.
- Encourage smaller scale elements to preserve a relative human scale along the block face.
- Encourage front porches.
- Building functions should be residential (including bed and breakfast), allowing home office uses and accessory units.
- Do not allow blank or mirrored buildings. They deaden the street frontage and damage adjacent properties.

- Facades should have between 25 and 70 percent transparency.
- Promote development at the highest intensity possible within new Traditional Neighborhoods and carefully calibrate new with existing for infill building sites.

Public Spaces & Streetscapes

- Incentivize sidewalks on all streets.
- Encourage *greens* and *parks* within Traditional Neighborhoods.
- Encourage special community buildings and/or monuments located fronting the *greens* and/or *parks*.
- Lighting should be scaled for the pedestrian rather than fast-moving automobile traffic.

Parking

- Promote on-street parallel parking for all streets in Traditional Neighborhoods. Additional parking should be located away from the street and placed within the block-interior.
- Consider lower minimum requirements where adjacent to Downtown, Town Centers, or a transit stop.
- Plan to replace any surface parking lots at the street fronts with parking within the block interior.



Simple Traditional Neighborhood open space

VILLAGES



Holland Village

Mixed Use Core	Core Support	Inner Ring Suburban	Suburban	Rural
			●	●

Context & Scale

Villages are Place Types that sit within **Rural Agricultural** and **Conservation Districts** and in **Suburban** Use Districts. Villages are the preferred place for any new growth or development within the Rural Districts.

Pedestrian-oriented, compact, and mixed use, Villages are the local focus for the area surrounding them. The limited retail in a Village serves the residents, the surrounding agricultural functions, and tourism.

Villages are of an easily walkable size and accessible by all modes of transportation. Their edges are defined by farms, fields, waterways, natural areas or roadways.



Chuckatuck building footprints: compact development promotes sense of space



Chuckatuck Vision Plan (UDA): compact growth preserves the countryside

Street & Block Pattern

Villages are designed with an interconnected, walkable network of streets and small blocks (typically in a grid pattern).

Ideally, there is service access to the rear of the buildings and through the block, especially for the *Main Street* area. Streets within Villages are designed for slow-moving, multi-modal traffic.

Site & Lot Configurations

All lots have street frontage. Typically multiple lots sit within a block. Small, or no side lot setbacks, foster a continuous street frontage. Lots may be narrow or wide. Buildings are placed toward the front of the lot with the rear generally used for yards, gardens, and parking. The individual building placement (relative to the street) is typically consistent for the entire block face.



UDA

Siting: Main Street buildings to the street



Village house with front yard

Buildings

Because a Village is a smaller version of a town, it includes several different types of buildings—from detached houses to *Main Street* mixed use buildings.

All Village buildings are street-oriented, whether sitting directly at the back of the sidewalk or behind a front yard. In either configuration, the buildings work together to define the street or pedestrian realm.



Main Street buildings in Holland



A new Main Street sidewalk

The architecture is pedestrian in scale and residential in character, excepting *Main Street* mixed use buildings. Front porches are very common on Village houses. Outside of the *Main Street* area, front yards and side yard setbacks are typical.



Village houses with pitched roofs and front porches



Simple Village streetscape



The Main Street storefront/sidewalk.

Public Spaces & Streetscapes

Villages should include usable public open spaces, whether formal greens or tot lots and playgrounds.

In the Village core, streets have on-street parking and sidewalks, preferably shaded by street trees. The perimeter streets may or may not have curbs or sidewalks, depending on their intensity.

Lighting should be scaled to the pedestrian and meet *dark skies* standards.



Parking to the rear



Houses face the street, garages to the rear

Parking

Villages should provide parking on-street and at the rear of the lot in garages or lots.

Parking in any *Main Street* area should be coordinated and promote a *park-once* situation.

VILLAGES: IMPLEMENTATION GUIDELINES

Street & Block Pattern

- Maintain existing streets and alleys.
- Encourage new streets to subdivide over-large blocks in the Village core.
- Promote alleys to provide parking and service access through blocks, especially in the Main Street area.
- Encourage an interconnected network of streets and small blocks around the Village core: an average block perimeter of less than 1,300 feet is best for *walkability*.
- Encourage new intersections and block subdivisions.
- Traffic geometry should be designed for slow moving multi-modal traffic.
- Encourage on-street parallel parking.

Site & Lot Configurations

- All lots should have frontage onto a street.
- Blocks should be subdivided into multiple lots.
- Allow zero or limited side lot setbacks in Village *Main Street* areas.
- Allow complete lot-coverage in Village *Main Street* areas, as long as there is public open space within a short walking distance.
- Discourage big box/auto-oriented retail formats within Villages.
- New buildings should be built to a general facade alignment. For infill sites this should be consistent with existing, contributing buildings.
- Village *Main Street* lots should have good *neighborhood manners*, with rear lot line setbacks to provide breathing room for their residential neighbors.

Buildings

- Buildings should be oriented to the street, with working primary entrances.

- Buildings in Villages should be of limited size to preserve a relative human scale.
- Cluster ground floor retail street frontages in Village *Main Street* areas. Allow upper floors to be residential or commercial (non-retail).
- Do not allow blank or mirrored building facades. They deaden the street frontage and adjacent properties.
- Facades should have between 30 and 70 percent transparency, with retail storefronts having 60 to 90 percent transparency.
- Encourage overhangs & awnings.
- Promote mixed use development within the Village *Main Street* area.

Public Spaces & Streetscapes

- *Main Street* areas should have wide sidewalks.
- Encourage *squares, greens, and plazas* within the Village.
- Encourage appropriate community buildings and monuments in Villages
- Design signage and lighting for the pedestrian rather than fast moving automobile traffic.
- Encourage Villages to have a public open space, such as a village green.

Parking

- Encourage on-street parallel parking for all streets in Villages.
- Promote a *park-once* environment in the Village *Main Street* areas. Parking lots should be consolidated away from the street frontage.
- Allow off-site parking and encourage lower minimum requirements and shared parking arrangements.
- Consider maximum reserved parking.

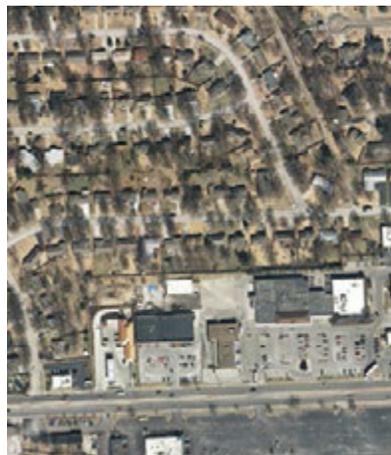
SUBURBAN CENTERS



Mixed Use Core	Core Support	Inner Ring Suburban	Suburban	Rural
		●	●	



Suburban Center with multi-modal access



Small Suburban Center and Neighborhood

Context & Scale

Suburban Centers should be concentrated in the **Suburban Use Districts**, but already exist in the **Core, Core Support** and **Inner Ring Suburban Use Districts**. Developed from the post-WWII era to the present day, they are auto-oriented at a low-to medium-intensity with a clear separation of uses. These Centers are commonly a collection of office and retail uses—malls, strip centers, or office parks—but may include residential uses, such as apartments, and civic or institutional uses, such as churches and schools. They are often surrounded by Suburban Neighborhoods and bounded by major roads. Depending on the context and scale of a Center, it may serve a neighborhood, the City, or the region. At the neighborhood scale, they may be as small as a single acre, while at the regional scale they may be 50 acres or more. Suburban Centers should be accessible by all modes of transportation, but the primary access is by automobile.

Street & Block Pattern

Suburban Centers are often designed on large development tracts within an irregular street pattern, with limited connectivity and access to the surrounding area, and long distances between intersections. Although pedestrians are accommodated, the streets are primarily for auto access and circulation. (Large Centers may have an internal circulation pattern separate from the City streets.)

Site & Lot Configuration

Suburban Centers can accommodate sites for large format commercial uses, parking structures or landscaped surface lots. Sites are often irregular in shape with limited street frontage, and they may be internally oriented. Suburban Center lots tend to be larger than those in Town Centers and should have a lower percentage of lot coverage. Individual lots or parcels may accommodate multiple buildings.



Suburban Center at neighborhood scale



Conceptual siting pattern

Buildings

Existing buildings are often standalone and single-use or in a shopping center configuration, with architecture and signage scaled to fast-moving automobile traffic.

The building character (particularly the window and door configuration) is typically reflective of its use—from retail to office or residential. Mixed use buildings are becoming more common, but are still the exception in these Centers. Building heights are typically reflective of the size or scale of the Center on the whole (with taller buildings located in regional-serving Suburban Centers, and neighborhood-serving Centers commonly limited to one story).

Suburban Center buildings may be street-oriented or face a parking lot. They tend to have larger footprints than the buildings in Town Centers.



Large format retail in new Suburban Center



A new Suburban Center



New grocery with architectural detailing



Standalone Suburban Center office building

Public Spaces & Streetscapes

Older Suburban Centers often have no usable public (or publicly accessible) spaces; however, new or redeveloped Centers often include a range of usable public open spaces, such as centrally located greens, squares and plazas. Sidewalks and street trees should be encouraged. Fences should be encouraged (in the absence of buildings) to help define the streetscape. Signage within a Center is often coordinated.



Suburban streetscape



Suburban Center formal green space

Parking

Parking is usually accommodated on-site, in either surface lots or structures. Surface lots should be heavily landscaped and screened from the street by decorative fencing or vegetation.



Parking lot screened by trees



Parking with canopy shade trees

SUBURBAN CENTERS: IMPLEMENTATION GUIDELINES

Street & Block Pattern

- Explore opportunities for and encourage additional street connectivity during redevelopment of existing Suburban Centers.
- Encourage an interconnected street and block pattern in new Suburban Centers.
- Recommend the creation of multimodal streets within and between Suburban Center developments.
- Encourage pedestrian access (especially public sidewalks) and other amenities for new and redevelopment projects.

Site & Lot Configurations

- Encourage any lot setbacks or required open spaces to be configured as usable/functional space (rather than leftover vegetative islands amid a sea of asphalt).
- Recommend the consolidation or alignment of open spaces on adjacent parcels to accommodate generous, usable green spaces with Suburban Centers.

Buildings

- New buildings should be oriented toward streets, either within or surrounding the development.
- Encourage alley- or rear-loaded parking.
- Suburban Center buildings should be of limited height (2 to 3 stories maximum).
- Encourage the use of durable, quality exterior building materials.
- Recommend that standalone buildings have façade treatments on all exposed sides.
- Encourage architectural detailing to break down the scale of large buildings and avoid blank walls.
- Discourage the placement of buildings with backs toward the street.

Public Spaces & Streetscapes

- Encourage the creation of public (or publicly accessible) open spaces within new Suburban Centers.
- Recommend generous sidewalks to provide pedestrian access to, and within, Suburban Centers.
- Limit the number and placement of freestanding signs within new developments, with size appropriate to the context.
- Use canopy shade trees to define the streetscapes and other public spaces.

Parking

- Discourage the use of surface parking lots between buildings and the street.
- Encourage the use of fencing, walls and street trees to screen surface lots and service areas from the public realm.
- Recommend canopy shade trees to improve the appearance, break up the expanse, and reduce the heat island effect of surface parking lots.
- Encourage pervious paving and other Low Impact Design (LID) treatments to reduce stormwater runoff and improve stormwater management in Suburban Centers.

SUBURBAN NEIGHBORHOODS



Mixed Use Core	Core Support	Inner Ring Suburban	Suburban	Rural
		●	●	

Context & Scale

Although existing Suburban Neighborhoods may be located in the **Core** and **Core Support** Use Districts, any new Suburban Neighborhoods should be concentrated in the **Inner Ring** and **Suburban** Use Districts. These neighborhoods, developed from the post-WWII era up until the present day, are predominantly low-intensity residential areas with an auto-orientation. Suburban Neighborhoods are often described as subdivisions, townhouse developments and apartment complexes. They may abut Suburban Centers, other Neighborhoods, or farmland, and major thoroughfares often define their edges.

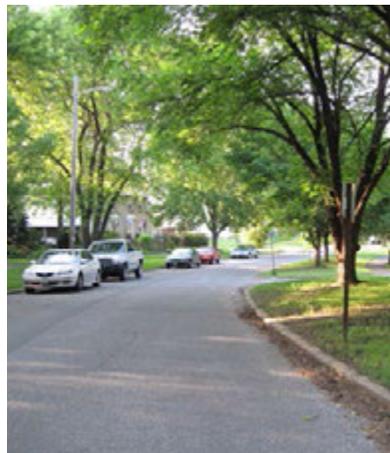
Suburban Neighborhoods should be accessible by all modes of transportation, but the primary access is by private auto.

Street & Block Pattern

Suburban Neighborhoods are typically designed around a curvilinear street pattern and irregular block structure, with limited points of connectivity and access, and long distances between intersections. Internal automotive connections within and between these Neighborhoods are often limited due to cul-de-sacs. Pedestrian connectivity and amenities within the Neighborhoods are often limited but may exist as pathways within common open areas.



Curvilinear suburban street network



Suburban Neighborhood street with parking

Site & Lot Configuration

Suburban Neighborhood lots tend to be larger than those in Urban and Traditional Neighborhoods with a lower percentage of lot coverage, and generous front, side and rear yards or setbacks. These lots are sometimes wider than they are deep and are typically front-loaded. They may be irregular in shape, particularly when located on a cul-de-sac. Buildings usually sit in the middle of their lot, well back from the street.



Siting: buildings set back from the street



Conceptual siting pattern

Buildings

Suburban Neighborhoods usually consist of residential buildings of a single type, or sub-areas with consistent types grouped together—such as single-family detached houses in one area, duplexes in another, and apartment complexes in another.

Houses are usually one to three stories, and townhouses and apartments are typically two to four. Pitched roofs are common throughout, although townhouses and apartments may have flat roofs with parapets.

Within a single Neighborhood, houses are usually of a similar scale and era, designed in the same architectural style. Houses within a Neighborhood typically have similar front yard setbacks and driveway and garage arrangements.



A street of front-loaded suburban houses



Side-loaded suburban house



Suburban apartments with access to transit



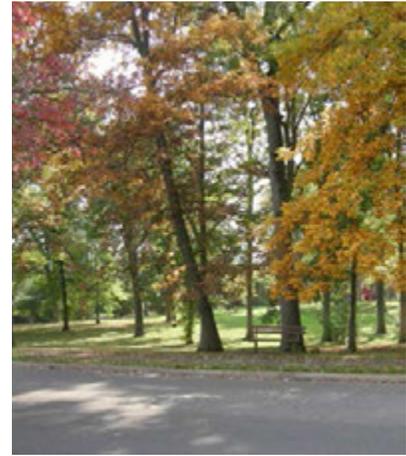
Houses with side-loaded garages

Public Spaces & Streetscapes

Older Suburban Neighborhoods often include wide streets without sidewalks due to their original auto-orientation; however, newer ones should include sidewalks on at least one side of each street. Suburban Neighborhood streetscapes tend to be more informal or irregular than those found in Traditional Neighborhoods. Suburban Neighborhoods should include public spaces such as parks, playgrounds or schoolyards.



Simple Suburban Neighborhood streetscape



Neighborhood park space

Parking

Suburban Neighborhood parking is typically accommodated via attached garages for single-family houses and some townhouse developments. Parking for other townhouse and apartment complexes is provided in surface lots. Surface lots should be heavily landscaped and located away from the street or screened from the street by decorative fencing or vegetation.



Parking within the block away from the street



Townhouses with rear-loaded garages

SUBURBAN NEIGHBORHOODS: IMPLEMENTATION GUIDELINES

Street & Block Pattern

- Encourage an interconnected street and block pattern within and between new Suburban Neighborhoods.
- Recommend the creation of multimodal streets within and between Suburban Neighborhood developments.
- Encourage pedestrian access (public sidewalks) and other amenities for new Suburban Neighborhoods.

Site & Lot Configurations

- Encourage townhouses and apartments to front onto public streets rather than surface parking lots. Alleys and private driveways can provide access to rear garages and parking.
- Encourage the planting of native canopy shade trees in all front, rear and side yards.
- Encourage the retention of natural features and mature native plants during site development.

Buildings

- Encourage side- or rear-loaded garages. On homes with front loaded garages, the garage should not project forward of the house, and should preferably be set back several feet behind the façade.
- Recommend architectural treatments such as material and color selection that de-emphasize the garage.

- Encourage the use of durable, quality exterior building materials.

Public Spaces & Streetscapes

- Encourage the creation of usable open spaces, from greens to playgrounds and parks, within new Suburban Neighborhoods.
- Recommend sidewalks with tree lawns to provide pedestrian access to, and within, Suburban Neighborhoods, particularly where connecting to schools, parks, and Neighborhood Centers.
- Use canopy shade trees to define the streetscapes and other public spaces.

Parking

- Allow on-street parking on Neighborhood streets.
- Discourage the use of surface parking lots between apartments and townhouses and the street.
- Encourage the use of fencing, walls, and street trees to screen surface lots and service areas from the public realm.
- Recommend canopy shade trees to improve the appearance, break up the expanse, and reduce the heat island effect of surface parking lots.
- Encourage pervious paving and other Low Impact Design (LID) treatments to reduce stormwater runoff and improve stormwater management in Suburban Neighborhoods.



CORRIDORS: CHARACTER AND IMPLEMENTATION GUIDELINES



Mixed Use Core	Core Support	Inner Ring Suburban	Suburban	Rural
	●	●	●	●

Context & Scale

Corridors are special thoroughfares that connect multiple contexts, passing through **Rural Districts** as well as **Inner Ring Suburban** and **Suburban** Use Districts.

When passing through a **Core** or **Core Support** Use District, a Corridor should follow the urban characteristics of that Place Type. The street and block pattern, site and lots, and building character along a Corridor will vary widely by context.

Each Corridor will be unique, and should be carefully planned in accord with its history, transportation role and natural environment.

The Streetscape

Corridors get their character from their streetscape. Common elements such as street lights, street trees, and (limited) signage can establish a consistent sense of place for the Corridor as it travels through various urban and rural contexts.

Parking

Parking will vary with the surrounding context; however, off-street parking should always be buffered from the Corridor view.



Corridors cannot thrive as continuous strip-commercial areas. With simple landscaping they can become positive green space and residential locations between the commercial areas.



With careful streetscape design, residences and corridors can comfortably coexist.

SPECIAL DISTRICTS: CHARACTER AND IMPLEMENTATION GUIDELINES



Context & Scale

Special Districts exist for exceptional uses that cannot comfortably sit within a Center or Neighborhood. Some will require clear separation from the general population for health and safety reasons and/or require adjacency to rail and interstate transportation. Other special districts may simply need their own distinct area to operate.

Special Districts are typically large scale and single-use.

The primary recommendation for current Special Districts is for their continued existence and the flexibility to improve and

Mixed Use Core	Core Support	Inner Ring Suburban	Suburban	Rural
	●	●	●	●



Special District within a Rural District

respond to market changes over time.

Some Special District uses, such as heavy industry, sit outside of, and as an exception to, the needs and activities of the general population. The various physical components of such special districts will be governed by and configured for their specific functional requirements. Extra care should be taken at their edges to respect adjacent activities and neighbors and buffer any impacts.



Special transportation demands

Others, such as airports, marinas, universities, and hospitals, provide an interface between the general population and their own special technical needs. These Districts will be required to respond to both their technical/functional requirements and those of the general population they serve. This may entail adopting the character and configurations of an appropriate or adjacent Place Type for the portion of the district serving the public.



Warehouse facilities in Suffolk, 2006

Streetscape

The streetscape within a special district will respond first to its functional requirements. Common elements such as street lights, street trees, and signage can establish an appropriate sense of place.

Parking

Parking (off-street) should be shielded from the view of adjacent properties. Low Impact Design (LID) should be encouraged.

RURAL: CONSERVATION/AGRICULTURE: IMPLEMENTATION GUIDELINES



Context & Scale

The **Rural Districts** (Conservation and Agriculture) preserve Suffolk’s natural and agricultural assets. They balance development in the **Growth Areas** and provide jobs through agriculture and tourism as they preserve the natural ecology, open space and water resources. Uses directly related to agricultural production and products are allowed on a limited basis.

Any development within the Rural Districts should be carefully reviewed to ensure that it serves this purpose.

Mixed Use Core	Core Support	Inner Ring Suburban	Suburban	Rural
				●

Roadways and Trails

Rural roads are primarily for through and agricultural traffic, although accommodations for bicyclists should be encouraged. Rural views and rural character should be protected along with the functionality of the roadways for agricultural uses.

Trails will provide access to many of Suffolk’s rural/natural resources and should be coordinated with appropriate user facilities.

Site & Lot Configurations

Building placement in the Rural landscape should respect existing viewsheds and generally be placed away from the roadway. Service areas (especially parking) should be shielded from view.

Buildings & Parking

Agricultural buildings are an inherent part of the District and should be sited as appropriate for their function.

Other rural buildings should respect existing viewsheds, and service areas (especially parking) should be shielded from view. Significant setback from the roadway is encouraged. The architecture should be traditional rural/agricultural in scale and character.

Public Parkland

Land in the Rural Districts will be both private and public. Much of the Conservation District property will be parkland, publicly accessible for recreational uses.

Rural Villages

Rural villages are part of the historic character of Suffolk. Two such Village Districts, Whaleyville and Holland, sit within the southern Suffolk Agricultural District. See the Village District Place Type for details.

CHAPTER 4: TRANSPORTATION PLAN



The City of Suffolk recognizes the critical relationship between transportation and land use planning. The Transportation element of the 2035 Comprehensive Plan emphasizes the continued provision of safe, efficient, and integrated transportation services throughout the City as well as accessibility within and to or from planned growth areas. The City of Suffolk also recognizes the importance of developing a balanced, efficient, multi-modal transportation network that minimizes impacts to the environment and reinforces the quality of life that Suffolk's citizens have come to expect. The Transportation element is meant to guide and support future development of the City's corridors, roads, and highways by promoting mobility and opportunity equity for all transportation system users, including low-income, disabled, and other minority populations.

During the development of this plan, public input on transportation issues focused principally on traffic problems and mobility options: systemic areas of congestion during high traffic periods; areas of projected high traffic volumes based on existing conditions and anticipated growth patterns; increased rail activity and transportation safety; additional river crossings; and, integration of various alternative transportation modes including public transit, pedestrians, and bicyclists.

The update to the plan is defined by several themes with corresponding policies and actions to follow in an effort to carry out the proposed transportation system improvement recommendations. These primary themes – including Balanced Growth and Responsible Regionalism – not only shape the City of Suffolk's land use and development patterns but also the level of accessibility desired, the context in which different transportation system improvements should be considered, and the necessary integration of the City's transportation system with the surrounding Hampton Roads region. This plan continues to recognize the importance of providing a safe, efficient, and multi-modal transportation system that enhances economic development opportunities and maintains a quality of life citizens have become accustomed to in the City of Suffolk.

As growth areas and their associated densities have been redefined, proposed transportation infrastructure improvements should be updated in anticipation of increased travel demand. The inter-relationship between land use and transportation is a key element in defining the long-range plan for the City's transportation system.

The goal of the updated Transportation element of the plan is to develop an outline of the measures necessary to provide a safe, efficient, multi-modal, and regionally integrated transportation network for the movement of people and goods throughout the City of Suffolk.

ROADWAYS

This section identifies the general location and classification of roadway facilities that serve existing and planned development in the City as well as traffic moving through the City. Functional classification provides an indication of the purpose for which a roadway facility is intended. Thus, each facility in the plan has a primary purpose in serving the mobility of traffic within and through the City. It also indicates where major roadway improvements – either on existing or new alignments – are to be implemented. These roadway improvements have been included in the plan because analysis of existing and forecasted development patterns indicates that the improvements will be needed to serve expected traffic volumes. Although potential funding sources for improvement have not all been identified,

several financing options/alternatives are offered that warrant the City pursuing further investigation. In addition to vehicular traffic, alternatives modes and the infrastructure necessary to support them are also addressed as a part of the update to the plan.

IMPACTS OF THE FOCUSED GROWTH APPROACH

This plan's Focused Growth Approach continues to emphasize the need for transportation infrastructure improvements in the vicinity of the Northern and Central Growth Areas where development is concentrated and new residential uses can be accommodated with improvements to existing facilities. Beyond that, the Focused Growth Approach provides the City with the opportunity to pursue development patterns and densities that may in time support the installation and operation of expanded transit service options. To present its citizens with transportation choices, the City must move from an over reliance on suburban patterns of growth. The Focused Growth Approach expands the successful policies of the Comprehensive Plan for 2026 to provide added dimensions to lifestyle and transportation mode choices.

In the process of analyzing the Focused Growth Approach, forecasts of the location and intensity of future development were recently adjusted to reflect changing growth projections; however, the location and orientation of travel will change only slightly from that expected under the previous Comprehensive Plan for 2026 policies. Essentially, the Focused Growth Approach will continue to provide for a greater degree of internalization of trips within the Northern and Central Growth Areas. Furthermore, the development policies associated with the Focused Growth Approach will also reduce the number of longer trips carried by roadways in these areas.

The Focused Growth Approach allows the City of Suffolk to avoid potentially accelerating the degradation of these corridors and their ability to move people and goods in a safe and efficient manner. Issues, that if allowed to go unchecked, cause bottlenecks and problems that are costly to fix, and undermine local community and state economic and quality of life objectives.

To preserve existing rural character, the updated Focused Growth Approach continues to discourage residential development in the rural southern area of the City. Maintaining agricultural zoning in this area will continue to ensure that the existing local roadway system – comprised of rural secondary roads – will provide adequate access throughout the area. However, to maintain adequate capacity and appropriate mobility, the City should continue to monitor the need for a secondary arterial roadway connecting Holland with Whaleyville.

In rural areas where volumes are expected to remain low and two-lane roads provide adequate capacity, improvements focus on deficiencies in roadway geometry such as poor sight distance, narrow pavement/travel lane widths, lacking or narrow unimproved shoulders, and roadside ditches. The specific improvements are discussed by relative priority in the analysis of future roadway conditions.

CORRIDORS OF STATEWIDE SIGNIFICANCE

The City's Focused Growth Approach must acknowledge and account for the facilities deemed Corridors of Statewide Significance (CoSS), as designated in the VTrans2035 Final Report to the General Assembly. The purpose of the CoSS at the state level is to provide a multimodal vision for the corridors that also helps guide localities in their land use and transportation plans. Multimodal transportation planning in Virginia has continued to gain in significance and application in recent years. The state defines multimodal transportation planning as:

"A coordinated system of roads, rails, ports, transit, bicycle, pedestrian and aviation resources that provides integrated and efficient options that meet citizen, visitor and business transportation needs."

As noted in the report, these are transportation corridors that "represent the multimodal connections to the Commonwealth's major activity centers." These corridors are recognized as vital to moving people and goods between regions and through the state. These are transportation facilities that "must be protected to ensure appropriate levels of mobility to allow for long distance travel." Designated facilities in the City include U.S. Route 460 (Pruden Boulevard), U.S. Route 58 (Holland Road), U.S. Route 17 (Bridge Road), and U.S. Route 13 (Whaleyville Boulevard). Interstate 664 is also included as part of the larger I-64 corridor.

Heartland Corridor (U.S. Route 460):

With U.S. Route 460 virtually bisecting Suffolk and the state, this corridor serves as a major link to points east and west as well as other corridors of statewide significance. This roadway and its components need to better serve its passenger and freight rail users, support increased intermodal activity, solve access management issues and encourage coordinated land use, transportation and freight movement decision making.

Southside Corridor (U.S. Route 58):

The U.S. Route 58 corridor serves as a link for major economic development activities along the Southside of Virginia. This roadway provides local access to the Virginia Beach Oceanfront, a primary connection to I-95 and I-85 to the west, and is a major artery for goods-to-market movement in the state. Improvement strategies for this thoroughfare include better access to airport and intermodal facilities, coordinated land use decisions aimed at commercial and industrial development, and continued support of the Southside Corridor Development Program to improve safety, capacity and economic development.

Coastal Corridor (U.S. Route 17):

The U.S. Route 17 corridor is a vital I-95 alternative to coastal destinations and through traffic, major connection for truck traffic between I-95 and Hampton Roads, and links tourism and cultural hotspots throughout the northern neck and middle peninsula. Improvement strategies to be implemented include strategic widening, intersection improvements and interchanges for improved traffic flow, improved access to intermodal, airport and the Port of Virginia, and transportation demand management (TDM) to separate local and through traffic.

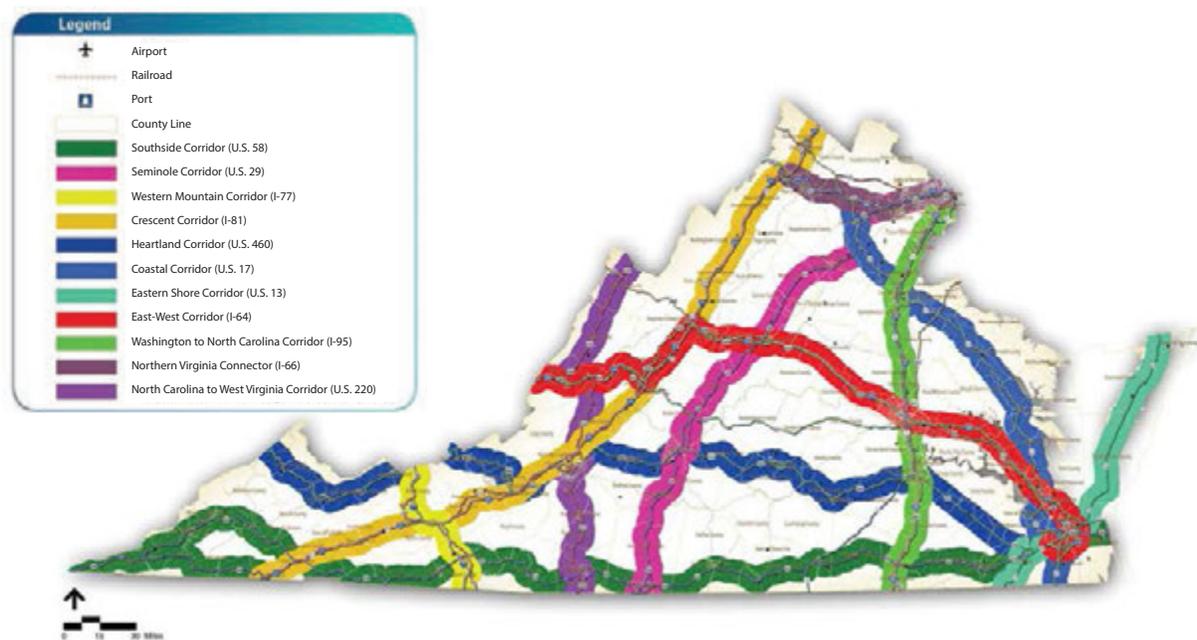
Eastern Shore Corridor (U.S. Route 13):

U.S. Route 13 serves as a major passenger and freight link between Hampton Roads and the Eastern Shore. It is the main road through the Eastern Shore and provides access to recreational opportunities

and military installations along the Chesapeake Bay and Atlantic Ocean. Corridor strategies include better access management along the roadway, discouraging development directly adjacent to the roadway, and ensuring continued freight movement across the Chesapeake Bay along the corridor through investment in the Bay Coast Railroad and Barge and encouraging other barge transport of freight.

East-West Corridor (I-64):

I-64 plus its components serve as a valuable link to larger urban areas to the east and west of Suffolk, as a major freight and evacuation corridor, and as a vital link to military, institutional and cultural facilities within the region and state. Potential improvement strategies include increased capacity for passenger and freight, including higher-speed service, in Hampton Roads, implement intelligent transportation solutions (ITS), ensure multimodal freight coordination with the proposed Craney Island expansion, and improve rural area transit by promoting choices in transportation options. This corridor includes I-664, which passes through the northern part of the City.



Map 4-1: Virginia's Corridors of Statewide Significance

Source: VTrans 2035 Final Report to the General Assembly

TYPES AND PURPOSES OF ROADWAYS

The Transportation element of the plan indicates the location and purpose of the principal roadway facilities needed to serve travel demand within and through the City. The functional classification system groups streets according to the land use served (or to be served) and provides a general designation of the type of traffic each street is intended to serve. The street functional classification system primarily defines the street in terms of roadway design and character, as well as operational features for the movement of vehicles.

Two major considerations when distinguishing arterials from neighborhood streets are access and mobility. The primary function of local or neighborhood streets is to provide access. These streets are intended to serve localized areas or neighborhoods, including local commercial land uses and mixed-use areas (i.e., low speeds, low volumes, and short distances). Local streets are not intended for use by through traffic. The primary function of arterials is mobility.

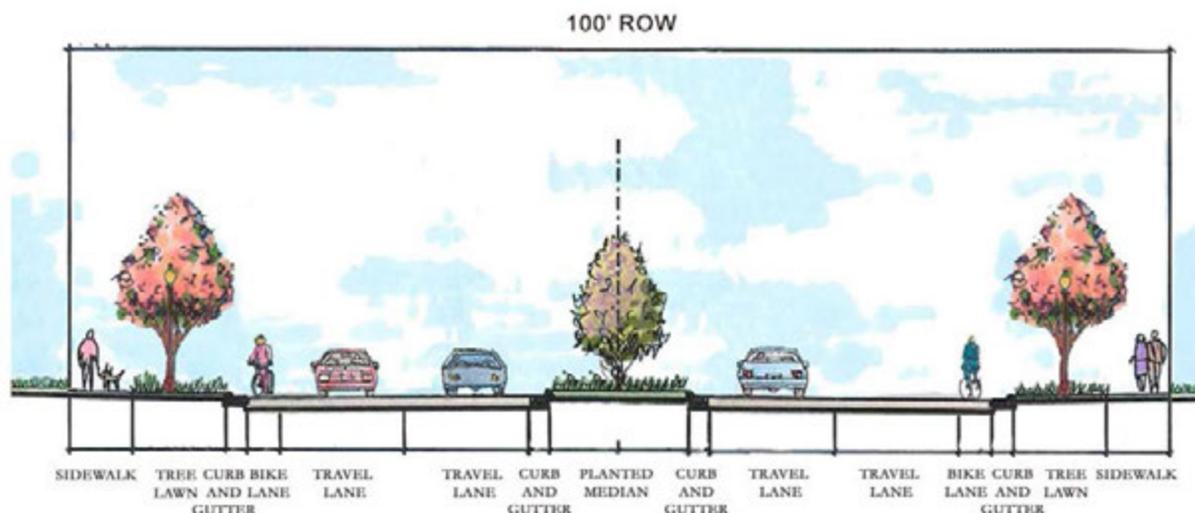
Limiting access points (intersections and driveways) on arterials enhances mobility. Too much mobility at high speeds limits access by pedestrians and bicyclists. The arterial is designed with the intent to carry more traffic than is generated within its corridor (i.e., higher speeds, higher volumes, and longer distances).

Classifying the street system within the City requires close examination of roles that each street performs in the overall transportation system. Existing plans, as well as quantitative and qualitative classification criteria, also help in the development of the hierarchy of streets within the City's transportation network. The existing public street network in the City is divided into several functional classifications, including arterials, collectors, and local streets. The facilities are defined as follows:

1. **Principal Arterial** - Including freeways, these facilities are intended to carry substantial traffic volumes at high speeds. They include the interstates and primary highways. Access to adjoining parcels is to be either prohibited or minimized. With a few exceptions located within the center core, principal arterials either are or are planned to be multi-lane facilities. Typical principal arterials include: Pruden Boulevard, Holland Road, Godwin Boulevard, Portsmouth Boulevard, and Bridge Road. Referring to the classification and roadway sections defined in the Unified Development Ordinance, the following type of facilities (with minimum right-of-way widths) may be included in this classification:

- Freeway - 120 feet
- Expressway - 90 feet
- Parkway - 90 feet
- Boulevard - 90 feet

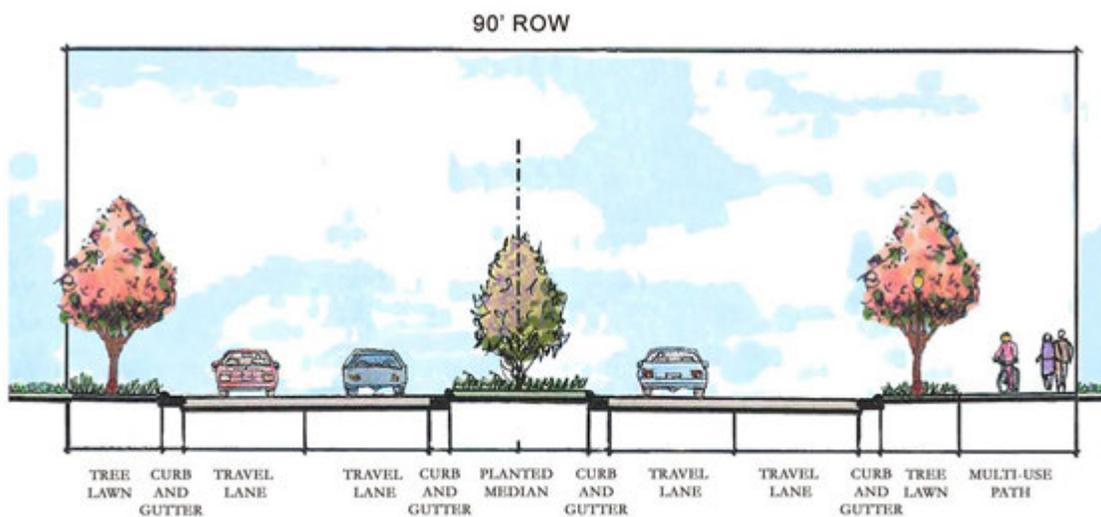
Figure 4-1: Principal Arterial Example Section



2. **Minor Arterial** - In addition to serving through volumes, these facilities also provide access to adjoining parcels and to collector streets. When compared with principal arterials, they generally carry lower volumes at lower speeds. Furthermore, several Minor Arterial highways are likely to remain as two-lane facilities through the year 2035. Typical minor arterials within the City include; Nansemond Parkway, Shoulders Hill Road, Lake Prince Drive/Pitchkettle Road, Cittenden Road, and Mineral Spring Road. The following type of facilities (with minimum right-of-way widths) may be included in this classification:

- Parkway - 90 feet
- Boulevard - 90 feet

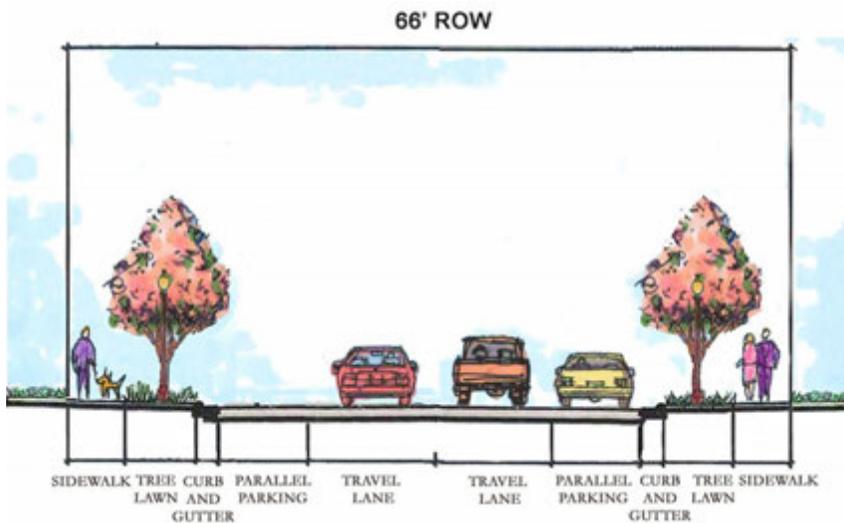
Figure 4-2: Minor Arterial Example Section



3. **Collector** - Facilities with the purpose of providing access between arterial highways and local streets are classified as collectors. These roadways usually intersect with an arterial highway, but provide a step-down service to adjoining land uses and to local streets. Collectors generally serve low traffic volumes at relatively low speeds. Typical collectors within the City include: Copeland Road (State Route 649), Manning Road (State Route 645), and White Marsh Road (State Route 642). The following type of facilities (with minimum right-of-way widths) may be included in this classification:

- Main Street - 70 feet
- Avenue - 70 feet
- Residential Main Street - 70 feet

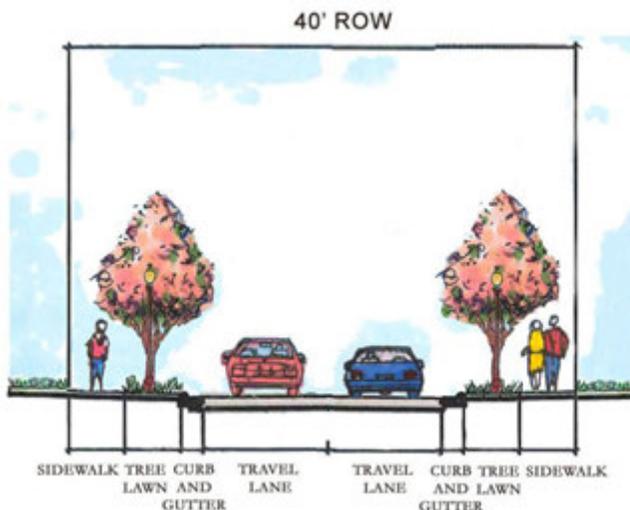
Figure 4-3: Collector Example Section



4. **Local Street** - Facilities that provide greater access and the least amount of mobility. These facilities typically connect to one another or to collector streets and provide a high level of access to adjacent land uses/development (i.e., frequent driveways). Locals serve short distance travel and have low posted speed limits (25 mph to 35 mph). Typical local roads/streets within the City include: Armistead Road, Respass Beach Road, Bennetts Creek Park Road, Blythewood Lane, or Kilby Avenue. The following type of facilities (with minimum right-of-way widths) may be included in this classification:

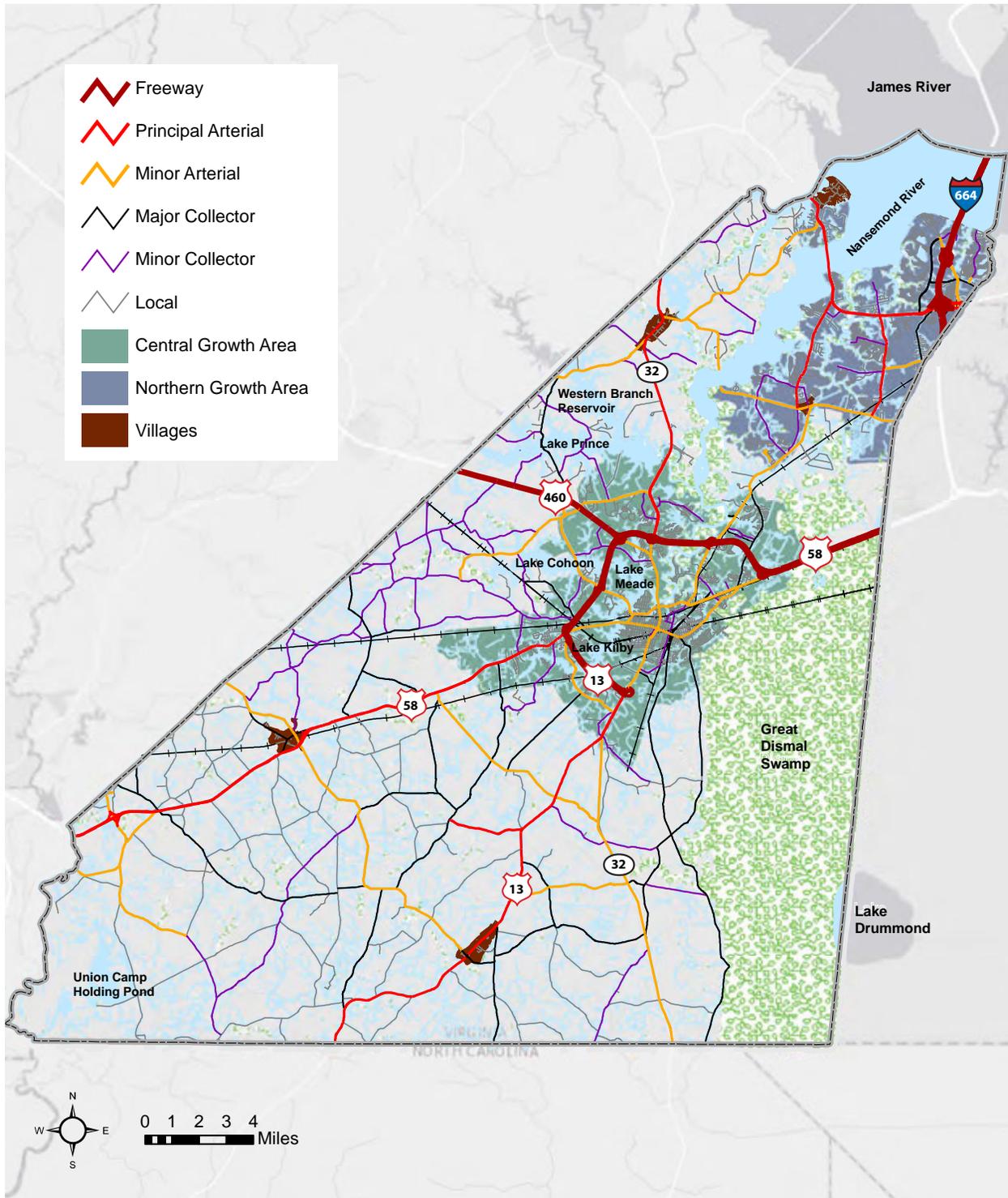
- Local Urban - 50 feet
- Local Rural - 40 feet
- Alley - 16 feet

Figure 4-4: Local Street Example Section



2035 SUFFOLK COMPREHENSIVE PLAN

The updated transportation element of the comprehensive plan and the associated street network functional classifications are shown in Map 4-2.



Map 4-2: Suffolk Roadways

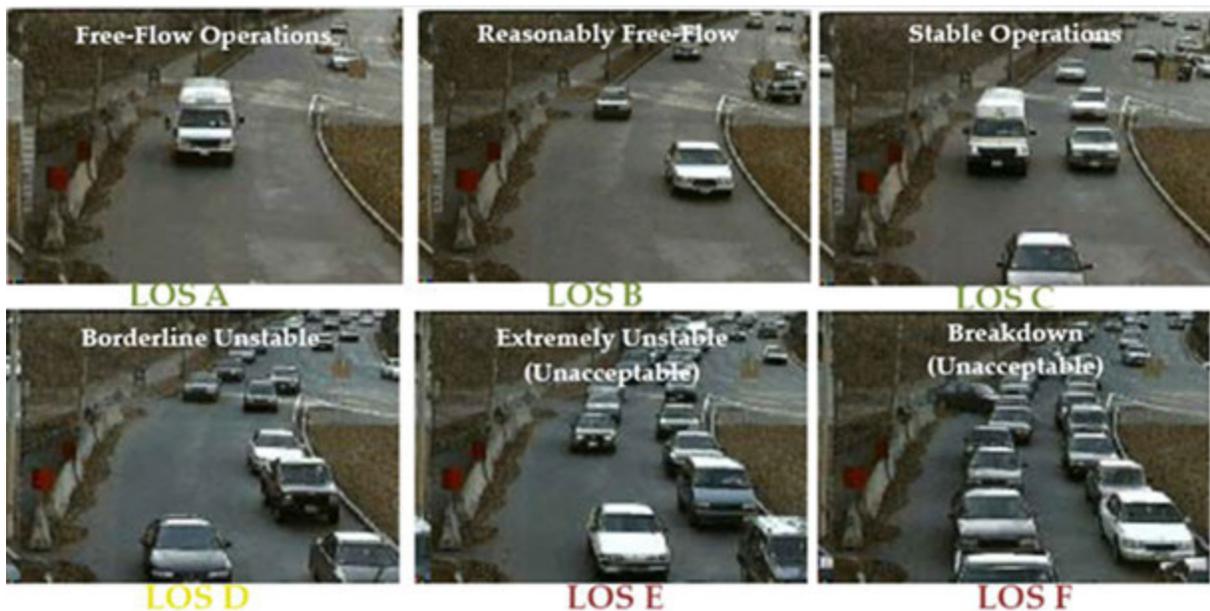
EXISTING ROADWAY CONDITIONS

Existing deficiencies on the City's roadway system generally can be classified into two categories: geometry and capacity. Geometric deficiencies involve roadways and intersections that have been designed for one functional need but are now being called upon to serve different purposes. Capacity deficiencies include those roadways and intersections that must serve vehicle volumes beyond their design capacity. Congestion can be the result of either geometric and/or capacity related deficiencies, but it is most frequently associated with a capacity deficiency.

LEVEL OF SERVICE

Level of service (LOS) describes traffic conditions by the amount of traffic congestion at an intersection or along a roadway. Level of service (LOS) places roadways into six letter grade levels of the quality of service to a typical traveler on a facility. LOS ranges from A to F, with LOS A representing the best range of operating conditions and LOS F the worst. The specific terms in which each level of service is defined varies with the type of facility involved. In general, LOS A indicates a condition of little or no congestion; LOS B represents reasonable free-flow speeds; LOS C represents flow near the free-flow speed but driver freedom to maneuver is becoming noticeably restricted with higher volumes; LOS D indicates reduced physical and psychological comfort levels with speeds beginning to decline; LOS E describes operation at capacity with limited usable gaps in the traffic stream; and LOS F indicates severe congestion, unstable traffic flow, and stop-and-go conditions. For intersections, LOS is based on the average delay experienced by all traffic using the intersection during the busiest (peak) 15-minute period. Figure 4-5 is a representation of traffic volumes under each level of service. In general, the greater the density of vehicles on a roadway facility, the greater the potential for conflicts and the lower the resulting operating speed.

Figure 4-5: Levels of Service



2035 SUFFOLK COMPREHENSIVE PLAN

Based on LOS standards, Suffolk's critical roadways are generally functioning at or above adequate service levels. Maintaining adequate service standards is important to maintaining quality of life for the City's residents. Table 4-1 shows the year 2012 volumes and the level of service based on average daily service flow rates on key highway segments throughout the City. While federal guidelines call for LOS C in urban areas and LOS B in rural areas, adequate conditions on Suffolk roadways is defined as LOS D or better in primarily urban areas while LOS C or better is typically accepted as adequate for facilities in rural and suburban areas. In an effort to avoid overdevelopment of a roadway, LOS D may be considered as acceptable for overall conditions with LOS E for select movements during peak periods of travel.

Table 4-1: Year 2012 Daily Volumes and Level of Service Critical Roadway Segments

Street	From	To	2012 Daily Volume	Level of Service (based on ADT)
Bennetts Pasture	Bridge Road	Kings Highway	8,200	C
Bridge Road	Chesapeake CL	Bennetts Pasture	33,000	E
Bridge Road	Bennetts Pasture	Crittenden Road	19,000	C
Carolina Road	Kilby Avenue	Brooke Avenue	11,000	B
College Drive	Hampton Roads Pkwy	I-664	18,000	D
Constance Road	Washington St.	Gays Row	8,200	C
Constance Road	Broad Street	Western Avenue	8,800	D
Constance Road	Main Street	Point Street	15,000	C
County Street	Gloucester Street	Old City Limits	3,000	A
Godwin Blvd.	Isle of Wight CL	Kings Highway	11,000	B
Godwin Blvd.	Kings Highway	U.S. Route 58	20,000	C
Godwin Blvd.	U.S. Route 58	Pruden Blvd.	19,000	C
Holland Road	Manning Bridge Road	Route 58 Bypass	32,000	E
N. Main Street	Pruden Blvd.	Constance Road	28,000	E
N. Main Street	Constance Road	Washington St.	19,000	D
Nansemond Pkwy.	Chesapeake CL	Kings Highway	12,000	E
Pinner Street	Lakeside Street	Old City Limits	8,400	C
Pitchkettle Road	Constance Road	Lincoln Street	3,000	A
Portsmouth Blvd.	Washington St.	U.S. 58 Business	21,000	C
Pruden Blvd.	Suffolk Bypass	Isle of Wight CL	19,000	B
Shoulders Hill Road	Bridge Road	Pughsville Road	10,000	D
U.S. Route 58/460	Suffolk Bypass	Chesapeake CL	66,000	C
Suffolk Bypass	Holland Road	Pitchkettle Road	38,000	B
Suffolk Bypass	Pitchkettle Road	Pruden Blvd.	36,000	B
Suffolk Bypass	Pruden Blvd.	Godwin Blvd.	43,000	B
Suffolk Bypass	Godwin Blvd.	Wilroy Road	54,000	C
Suffolk Bypass	Wilroy Road	Portsmouth Blvd.	48,000	C
SW Suffolk Bypass	Carolina Road	Holland Road	10,000	A

Street	From	To	2012 Daily Volume	Level of Service (based on ADT)
W. Washington St.	Constance Road	Broad Street	7,500	C
W. Washington St.	Broad Street	Main Street	9,000	D
E. Washington St.	Main Street	Pinner Street	9,400	D
E. Washington St.	Pinner Street	Factory Street	12,000	E
Wilroy Road	Suffolk Bypass	Constance Road	5,000	B

Source: Virginia Department of Transportation

Current deficiencies – as evidenced by congestion – occur most frequently in the area between northern Suffolk and downtown. Roadways on which congestion is primarily a product of capacity deficiency include:

- Bridge Road (Chesapeake CL to Bennetts Pasture Road)
- Nansemond Parkway (Chesapeake CL to Kings Highway)
- Main Street (Downtown)
- Mills Godwin Bridge (U.S. Route 17)
- Holland Road (U.S. Route 58 Bypass to Manning Bridge Road)

Areas where congestion is primarily a product of geometric deficiency include:

- Constance Road (Holland Road to N. Main Street)
- Shoulders Hill Road
- Constance Road (N. Main Street to Pinner Street/Wilgry Road)
- East Washington Street (Pender Street to White Marsh Road)

In addition to roadway deficiencies, congestion occurs at critical intersection locations, including:

- Shoulders Hill Road at Bridge Road (U.S. Route 17)
- Constance Road at North Main Street
- Wilroy Road at Nansemond Parkway
- Washington Street at Main Street
- Portsmouth Boulevard at East Washington Street
- Godwin Boulevard at Pruden Boulevard
- U.S. Route 58 Westbound Off-Ramp at Godwin Boulevard

FUTURE ROADWAY CONDITIONS

To evaluate the adequacy of the existing or planned roadway system, traffic volume projections were developed using the available 2034 Hampton Roads Transportation Planning Organization (HRTPO) Regional Travel Demand Model (TDM). Daily volumes from the 2009 base year and 2034 horizon year of the HRTPO TDM were compared in order to calculate anticipated annualized growth rates within the study area. The calculated annualized growth rates were applied to existing average daily traffic volumes to develop 2034 future traffic volume projections for the City roadway network.

Table 4-2 shows the existing 2012 volumes on existing roadways and resulting level of service (LOS) compared to the 2034 daily traffic volume projections on existing or improved roadways and resulting LOS operational conditions. The results indicate that some roadways will be able to maintain adequate LOS despite anticipated increases in daily traffic volumes, while others will need capacity improvements (i.e., roadway widening or additional lanes) to accommodate expected increases in traffic and maintain adequate operational conditions.

Table 4-2: Year 2034 Daily Volumes and Level of Service

Roadway	Segment	2012 Daily Volume	2034 Forecast Daily Volume	Existing Lanes/ Level of Service	2034 Adequate Number of Lanes/ Level of Service
Bennetts Pasture Road	Nansemond Parkway – Kings Highway	4,400	9,200	2/B	2/D
	Kings Highway – Bridge Road	8,200	18,300	2/C	4/C
Bridge Road	Chesapeake CL – 164 Western Freeway	21,000	35,900	4/C	6/D
	164 Western Freeway – Shoulders Hill Road	33,000	55,800	4/E*	6/E*
	Shoulders Hill Road – Bennetts Pasture Rd	26,000	45,100	4/D	6/E
	Bennetts Pasture Road – Crittenden Road	19,000	31,000	4/C	6/C
	Crittenden Road – Isle of Wight CL	15,000	21,000	4/B	6/C
Carolina Road	Washington Street – Southwest Bypass	11,000	17,900	4/B	4/D
	Southwest Bypass – Whaleyville Boulevard	17,000	25,500	4/C	4/D
	Whaleyville – NC State Line	4,400	4,900	2/B	2/B
College Drive	I-664 – Hampton Roads Pkwy	18,000	26,400	4/C	4/D
	Hampton Roads Pkwy – Western Freeway	17,000	28,800	4/C	4/E
	Western Freeway – U.S. Route 17	16,000	25,100	4/B	4/D
Constance Road	Pinner Street – Main Street	15,000	27,200	4/C	4/E*
	Main Street – W. Washington Street	8,000	13,100	2/D	2/E*
Finney Avenue	Main Street – Pinner Street	6,800	9,000	2/C	2/D
Godwin Boulevard	Vicinity of Isle of Wight CL – Kings Hwy	9,300	16,900	2/D	4/C **
	Kings Highway – Everets Road	11,000	20,200	2/E	4/C **
	Everets Road – Kings Fork Road	11,000	22,000	2/E	4/C
	Kings Fork Road – Suffolk Bypass	20,000	33,800	4/C	6/C
	Suffolk Bypass – Pruden Blvd	19,000	27,500	4/C	4/D

Roadway	Segment	2012 Daily Volume	2034 Forecast Daily Volume	Existing Lanes/ Level of Service	2034 Adequate Number of Lanes/ Level of Service
Hall Avenue	Saratoga Street – E. Washington Street	3,400	4,600	2/A	2/B
Hampton Roads Parkway	Portsmouth CL – College Drive	8,100	12,200	2/C	2/E
	College Drive – Harbour View Boulevard	9,200	15,200	4/A	4/B
Harbour View Boulevard	Hampton Roads Parkway – Bridge Road	18,000	41,400	4/C	4/E*
Holland Road	Constance Road – Suffolk Bypass	9,700	16,700	2/D	2/E*
	Suffolk Bypass – Kenyon Road	30,000	35,400	4/E*	6/E
	Kenyon Road – Lummis Road	27,000	32,000	4/D	4/E
	Lummis Road – Buckhorn Road	24,000	27,300	4/D	4/D
	Buckhorn Road – Southampton CL	24,000	27,500	4/D	4/D
I-664	Newport News CL – College Drive	58,000	72,300	4/D	4/E
	College Drive – 164 Western Freeway	62,000	84,900	6/C	6/D
	164 Western Freeway – U.S. Route 17	57,000	75,600	4/D	4/E
	U.S. Route 17 – Chesapeake CL	80,000	104,200	4/E*	4/E*
Kings Fork Road	Godwin Boulevard – Pruden Boulevard	4,500	11,200	2/B	4/B
	Pruden Boulevard – Pitchkettle Road	2,500	5,000	2/A	4/B
Main Street	Pruden Blvd – Constance Road	28,000	44,200	4/E*	4/E*
	Constance Road – Washington Street	19,000	28,300	4/D	4/E*
Market Street	W. Washington Street – Saratoga Street	3,700	8,200	2/B	2/C
	Saratoga Street – Main Street	5,400	11,600	2/B	2/E
Nansemond Parkway	Chesapeake CL – Kings Highway	12,000	21,800	2/E	4/C
	Kings Highway – Wilroy Road	11,000	23,800	2/E	4/D
	Wilroy Road – Portsmouth Boulevard	4,200	6,000	2/B	2/B
Pinner Street	E. Washington Street – Finney Avenue	4,900	6,100	2/B	2/B
	Finney Avenue – Constance Road	8,400	9,500	2/C	2/D
Pitchkettle Road	Kings Fork Road – Suffolk Bypass	2,200	7,500	2/A	2/C
	Suffolk Bypass – Constance Road	3,000	9,900	2/A	2/D
Portsmouth Blvd.	Suffolk Bypass – Washington St	21,000	27,300	4/C	4/D
	Washington St. – Pinner St	15,000	20,100	4/B	4/C
Pruden Boulevard	Main Street – Suffolk Bypass	9,600	12,400	4/A	4/B
	Suffolk Bypass – Kings Fork Road	19,000	24,500	4/C	4/D
	Kings Fork Road – Isle of Wight	16,000	15,900	4/B	4/B
Pughsville Road	Chesapeake CL – Shoulders Hill Rd.	5,100	9,000	2/B	2/D
U.S. Route 58/460	Chesapeake CL – Suffolk Bypass	66,000	80,300	6/C	6/C
Saratoga Street	Market Street – W. Washington Street	3,700	11,600	3/A	3/D
	W. Washington Street – Carolina Road	3,100	5,800	2/A	2/B
Shoulders Hill Road	Nansemond Parkway – Pughsville Road	6,900	13,100	2/C	4/B
	Pughsville Road – Bridge Road	10,000	20,900	2/D	4/C
Southwest Bypass	Carolina Road – Holland Road	10,000	27,500	4/A	4/B

2035 SUFFOLK COMPREHENSIVE PLAN

Roadway	Segment	2012 Daily Volume	2034 Forecast Daily Volume	Existing Lanes/ Level of Service	2034 Adequate Number of Lanes/ Level of Service
Suffolk Bypass	U.S. 58 Business – Wilroy Road	48,000	55,400	4/C	4/C
	Wilroy Road – Godwin Road	54,000	67,400	4/C	4/D
	Godwin Road – Pruden Blvd.	43,000	57,300	4/B	4/C
	Pruden Blvd. – Pitchkettle Road	36,000	49,000	4/B	4/C
	Pitchkettle Road – Holland Road	38,000	52,900	4/B	4/C
Washington Street	Portsmouth Boulevard – Pinner Street	12,000	17,200	2/E	2/E*
	Pinner Street – Main Street	9,400	11,700	2/D	2/E
	Main Street – Constance Road	7,500	13,600	2/C	2/E*
Western Freeway	Portsmouth CL – College Drive	45,000	68,800	4/C	4/E
	College Dr. – I-664	35,000	52,000	4/B	4/C
	I-664 – U.S. Route 17	19,000	33,900	4/A	4/B
Whaleyville Boulevard	Carolina Road – Copeland Road	9,600	14,700	2/D	4/B
	Copeland Road – NC State Line	9,000	15,400	2/D	4/B
White Marsh Road	E. Washington Street – Seminole Drive	2,300	4,500	2/A	2/B
	Seminole Drive – Hosier Road	560	2,900	2/A	2/A
Wilroy Road	Nansemond Parkway – Suffolk Bypass	7,900	16,700	2/C	4/C
	Suffolk Bypass – Constance Road	5,000	8,800	2/B	2/D

* LOS E is indicated with an asterisk when the roadway segment is supporting a volume greater than the available capacity (i.e., v/c ratio is greater than 1).

** Roadway segment reflects proposed lanes and LOS for bypass around the village of Chuckatuck.

For future roadway conditions analysis, service levels are based on the average daily traffic volumes on the freeway and arterial highway system as determined in the 2010 Highway Capacity Manual (HCM). As noted previously, LOS is a qualitative indicator that measures degrees of congestion based on traffic density. The 2010 Highway Capacity Manual designates LOS by the letters A through F, with A representing the least amount of congestion and F the most. Table 4-2 above reflects LOS A through E. For roadway segments supporting a greater volume than the available capacity (i.e., v/c ratio is greater than 1), a LOS E is indicated with an asterisk.

As of 2014, the U.S. Route 460 Corridor Improvements Project has been allocated public and private funding for upgrades from the Route 58 Bypass in the City of Suffolk to I-295 near Petersburg. Options for improvements to Route 460 continue to be evaluated and may include construction of a new facility in Suffolk. The impact of any potential alignment in the City will need to be explored as plans for improvement of the corridor are finalized.

In reviewing the evaluation results in Table 4-2, it should be noted that determining level of service for any specific roadway segment must consider a range of factors that may result in roadways with similar volumes providing different levels of service. However, for this planning study generalizations

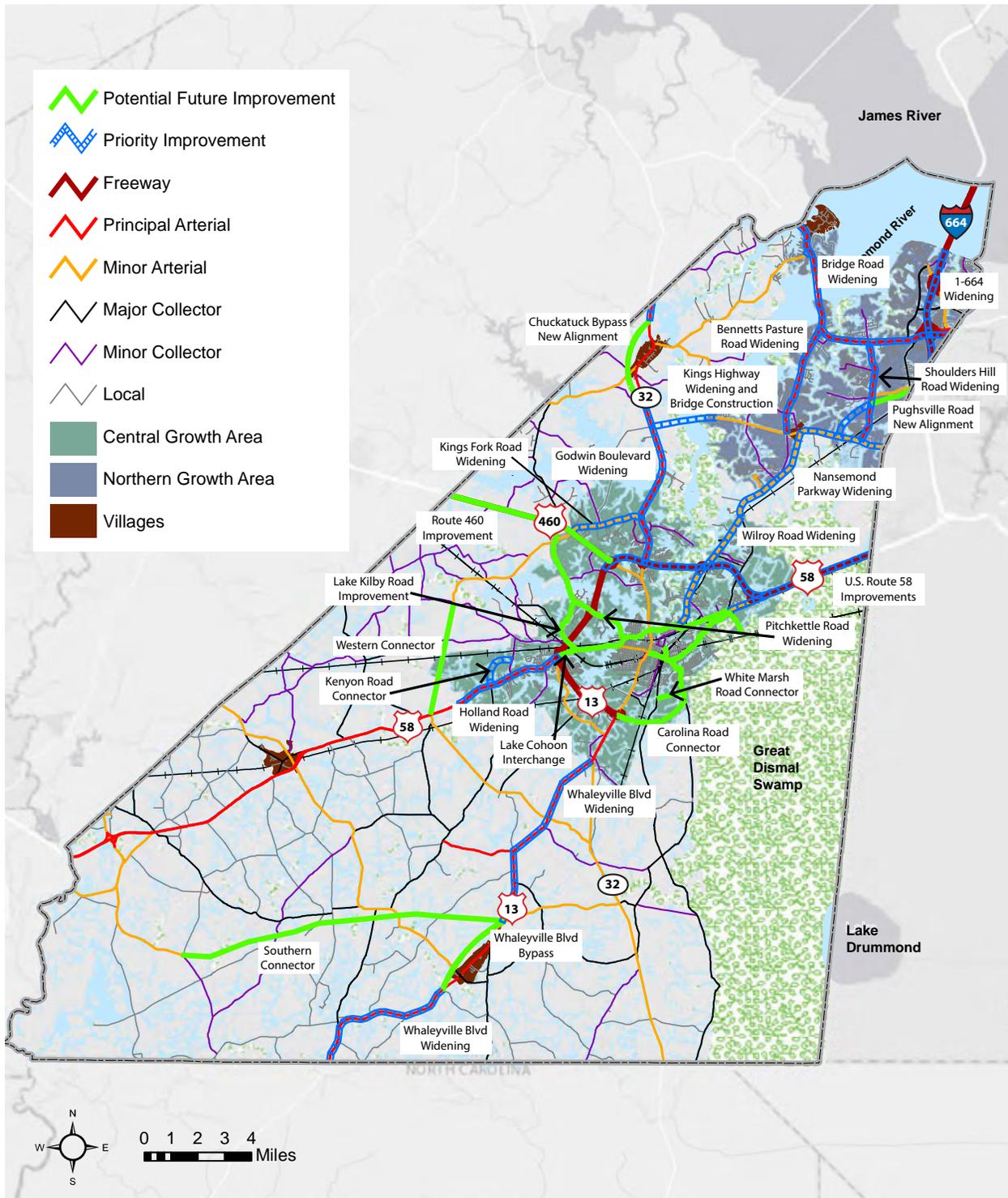
have been incorporated to evaluate LOS based on average daily traffic volumes. These are generalized levels of service based on similar roadway functional classifications and characteristics. There may be circumstances where the assumptions may be less than suitable. However, these service flow volume thresholds are adequate as a planning guideline for measuring highway level of service.

MAJOR ROADWAY IMPROVEMENTS FOR FUTURE CONSIDERATION

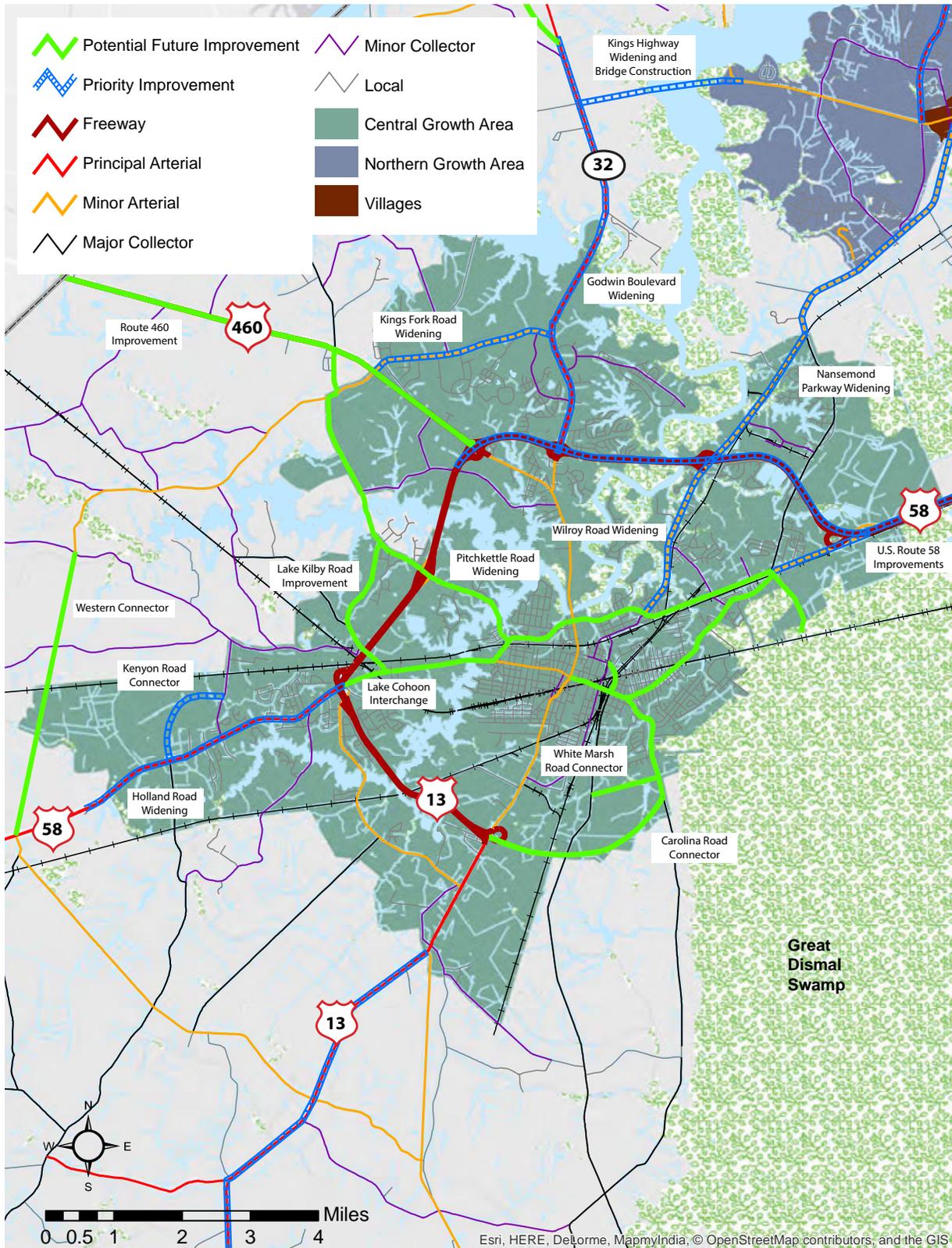
Based on the application of Highway Capacity Manual (HCM) service level criteria, the following facilities if unimproved are forecasted to be considered unacceptable by the year 2034 and are recommended for consideration of functional roadway improvements:

- Bennetts Pasture Road (State Route 647): Bridge Road to Kings Highway
- Bridge Road (U.S. Route 17):
 - Chesapeake CL to Isle of Wight CL
 - Mills E. Godwin Junior Bridge Widening/Construction of Second Span
- Godwin Boulevard (State Route 10):
 - Isle of Wight CL to Kings Fork Road
 - Kings Fork Road to Suffolk Bypass
- Holland Road (U.S. Route 58): Suffolk Bypass to Lummis Road
- Kings Fork Road: Godwin Boulevard to Pruden Boulevard
- Nansemond Parkway (State Route 337):
 - Chesapeake CL to Helen Street
 - Shoulders Hill Road to Sleepy Hole Road
 - Sleepy Hole Road to Wilroy Road
- Pughsville Road: Shoulders Hill Road to Chesapeake CL
- Shoulders Hill Road: Nansemond Parkway to Bridge Road
- Wilroy Road: Nansemond Parkway to Portsmouth Boulevard
- Whaleyville Boulevard: Carolina Road to NC State Line

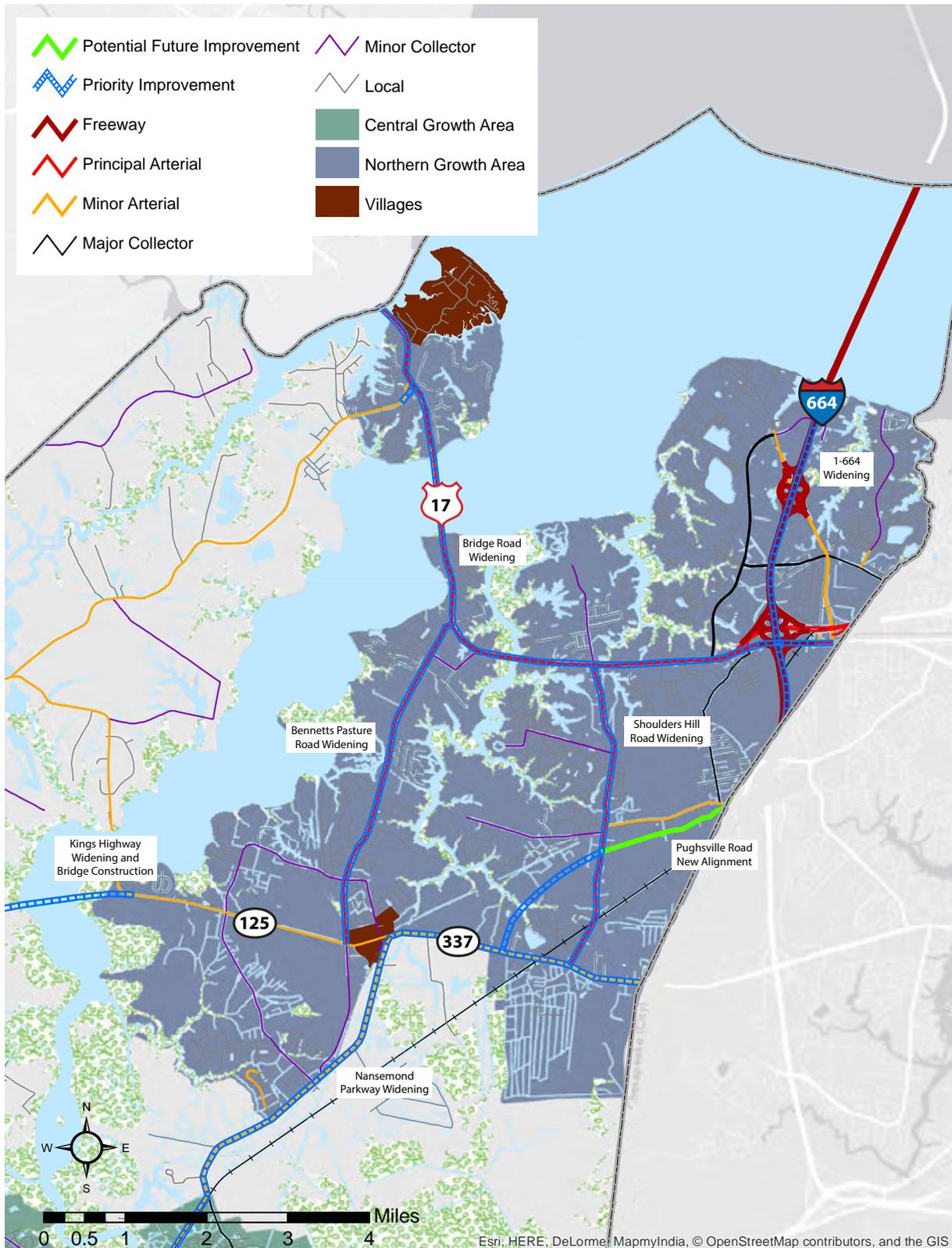
All of the anticipated improvements listed above provide for the addition of one lane in each direction. Associated with the corridor improvements along Bridge Road (U.S. Route 17), the existing Mills Godwin Bridge will need to be widened or a second span constructed to provide four travel lanes capable of better accommodating future traffic volume projections. The current Long Range Transportation Plan considers the Bridge Road improvements as a three-phase project to improve the roadway and the bridge segments. Maps 4-3, 4-4, and 4-5 reflect the proposed roadway improvement projects throughout the City.



Map 4-3: Proposed Suffolk Roadway Improvements



Map 4-4: Proposed Central Growth Area Roadway Improvements



Map 4-5: Proposed Northern Growth Area Roadway Improvements

FUNCTIONAL IMPROVEMENTS

Many existing roadway segments located within or adjacent to the focused growth area boundaries were originally built as rural secondary roads. These facilities generally have narrow lanes, little or no shoulders and open ditches for drainage. Right-of-way widths may be as narrow as 40 feet. Even though the two lanes provided may be considered adequate for capacity purposes, the geometric configuration of these facilities is not adequate for serving existing or forecasted traffic volumes as the surrounding landscape changes from a rural to suburban and urban character.

To provide adequate safety and functional efficiency, such facilities will not need additional lanes or capacity, but rather an improved pavement section. In some instances lane widths may need to be widened to a width of 11 to 12 feet or paved shoulders need to be added, and depending upon right-of-way availability, curb and gutter may be considered in lieu of open ditches. Ensuring that these roadways meet the pavement section guidelines as specified in the Unified Development Ordinance and the Public Facilities Manual should be a recognized goal. Accordingly, additional lanes may be warranted in the future.

Implementing the needed pavement section improvements will likely be accomplished in two ways. First, as part of the pavement management program and using funds provided to the City by VDOT for maintenance, pavement sections will be improved as the existing pavement deteriorates to the point of requiring reconstruction. Second, in association with development of adjacent properties, the City may require improvement to the pavement section that fronts the subject property as well as the existing turn-lanes or those determined as necessary to properly access the site.

RECOMMENDED ENHANCEMENTS TO TRANSPORTATION NETWORK

Although operational deficiencies and high levels of congestion prompt the need for roadway improvements, other opportunities may also exist within the City to further enhance the existing transportation network. The following facilities, while not projected to be considered unacceptable from an operational standpoint, should be considered for roadway improvements to enhance the immediate and surrounding transportation network and potentially alleviate other congested facilities:

- Kings Highway Bridge – Kings Highway (Route 125) to Godwin Boulevard (Route 10/32)
 - The drawbridge which previously linked the villages of Chuckatuck and Driver was deemed unsafe and closed to traffic by VDOT in March 2005. In 2007, the bridge was demolished and removed. At the time of its closure approximately 3,300 vehicles per day were using the bridge. Although traffic volumes are not overly significant, the bridge served as a vital link between two historic communities and in the City's overall transportation network of functioning water crossing routes. Cost estimates to replace the bridge are approximately \$90 million.
- Pitchkettle Road: Suffolk Bypass to Constance Road
 - The existing interchange of Pitchkettle Road with the Suffolk Bypass is a traditional, unsignalized diamond interchange. Pitchkettle Road is anticipated to operate at LOS D or better through the year 2034. However, current development to the south and east of the interchange has the potential to draw traffic volumes above the projected volume. This improvement should be considered and reevaluated on a periodic basis as development continues in the immediate area.

- Finney Avenue: Pinner Street to E. Washington Street
 - The presence of active rail lines within Downtown Suffolk restricts the mobility of traffic into and out of the busy mixed-use district. Many crossings of the rail line are at-grade, and as such, vehicular traffic operations are impacted. To address this obstacle to uninhibited access to/from and through downtown, a potential new roadway connection could be considered between Pinner Street and E. Washington Street. The connection between the two roadways would require a short railroad flyover (~1,300 feet). Other than Broad Street and Pinner Street, no other direct access points are provided from the north, making this improvement an ideal solution to existing and future railroad impacts, particularly if rail activity increases as anticipated over the next 20 years.
- Kenyon Road Connector: Kenyon Road to Holland Road at Manning Bridge Road
 - As the CenterPoint Intermodal Center and Virginia Commerce Centers continue to develop, alternative access to both facilities will become increasingly important. The Kenyon Road Connector will provide a direct connection between Holland Road to the south and Kenyon Road to the north.

This connection will consist of a facility designed and intended to accommodate truck traffic associated with both intermodal activity centers. The facility will alleviate a notable percentage of the truck traffic demand previously anticipated for the Kenyon Road/Holland Road intersection. As development continues at both the CenterPoint Intermodal Center and the Virginia Commerce Center, the City should continue to evaluate local traffic network operations in the vicinity of the two development sites.
- Lake Cohoon Road Interchange with the Suffolk Bypass
 - The existing signalized intersection of Holland Road with the Suffolk Bypass has been evaluated based on its proximity to the ramps providing access to and from the Southwest Suffolk Bypass (U.S. Route 13). As development continues along the Holland Road corridor, the signalized intersection has the potential to become increasingly congested particularly due to its proximity within the Holland Road/Southwest Suffolk Bypass interchange. To reduce vehicle conflicts and delay between the signalized intersection and interchange ramps, the signalized intersection could be closed, allowing for only right-turn movements to and from Holland Road. To accommodate traffic destined to and from the westbound Suffolk Bypass, a partial interchange could be constructed on the northeast quadrant of the Lake Cohoon Road underpass with the Suffolk Bypass. The new interchange would reduce congestion at the existing signalized intersection while maintaining access to the Suffolk Bypass and Holland Road.
- North Suffolk Connector: Shoulders Hill Road to Nansemond Parkway
 - An ongoing challenge with the transportation network in Suffolk is the number of active rail lines that impede traffic operations at the various at-grade rail crossings. An active rail line crosses Nansemond Parkway and Shoulders Hill Road providing access to the shipping terminal located in the City of Portsmouth. As containerized shipping activity increases in the area, rail activity will become more frequent and thus more likely to impact vehicular travel across the tracks. To provide an unimpeded route between Shoulders Hill Road and Nansemond Parkway, a bypass road (North Suffolk Connector) should be considered to maintain adequate traffic flow between northern Suffolk and the Downtown Suffolk urban core.

- Godwin Boulevard: Chuckatuck Bypass
 - The Village of Chuckatuck is bisected by Godwin Boulevard, intersecting at the heart of the village with Kings Highway. To preserve the local character of the village, a bypass road could be constructed to carry through traffic into and out of the City of Suffolk. The overall length of the bypass road would be less than one mile (~3/4 mile) and could alleviate nearly 10,000 vehicles, which consists of a higher than average percentage of trucks, passing through the Village of Chuckatuck on a daily basis.

COST ESTIMATES

Planning-level cost estimates, expressed in year 2013 dollars, have been prepared to show the amount of construction funds necessary to implement the improvements identified in the Transportation component of the Plan (See Tables 4-3 and 4-4). These planning-level cost estimates have been based on VDOT's statewide two-year cost averages for 2013, the VDOT Transportation & Mobility Planning Division's "Statewide Planning Level Cost Estimates" worksheet from 2009, and familiarity with similar projects and improvements throughout Virginia. They include the costs associated with construction, right-of-way, and engineering/design. Due to fluctuations in the costs of labor, materials, and equipment, fluctuations in the market and property values, the outcome of competitive bidding as well as the general planning-level nature of the recommendations, these estimated costs are neither exact nor guaranteed. The construction cost estimates were also cross referenced with average values based on the VDOT Road Inventory costs database. Data on the average cost to construct one lane mile from the database was provided by VDOT: <http://www.virginiadot.org/business/Gasb34-methodology.asp>.

Variation between actual and estimated costs will change as time passes, and the time value of money has not been taken into account. Cost estimations performed using the "Statewide Planning Level Cost Estimates" worksheet include right-of-way acquisition cost estimates developed with the sheet's methodology. The cost breakdown per project/improvement includes engineering/design costs, roadway/intersection improvement costs (e.g., cost per mile for a particular roadway typical section, turn-lane improvements, roundabout, bridges, milling, overlay, channelization, etc.), traffic signal equipment improvement costs (e.g., poles, mast arms, signal heads, pedestrian signal head equipment and construction), construction engineering and inspection (CEI) costs, and right-of-way (ROW) acquisition (where applicable). Furthermore, a 10 percent contingency was applied to construction cost. In the following cost summary tables, estimated dollars were rounded to the nearest \$1,000.

Table 4-3 shows that improvements to both I-664 and the Western Freeway are anticipated to be financed with state (and federal) funds since both facilities remain in the VDOT system. Cost estimates for the transportation improvements identified in Table 4-3 equal \$543 million. Of the \$543 million, only \$121 million would be the direct responsibility of VDOT, leaving \$413 million in transportation infrastructure improvements to be funded through a variety of financing options by the City.

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Table 4-3: Cost Estimates of Priority Projects (2013 Dollars)

Roadway	Segment	Project Description	Project Details	Cost (\$ Millions)	City Funds (\$ Millions)
I-664	I-664 MMBT Bridge to Suffolk ECL	Widen I-664 from 4 lanes to 6 lanes	Interstate Widening approximately 2.5 miles	\$115	\$0
Western Freeway (164)	Suffolk ECL to I-664 Interchange	Widen Western Freeway from 4 lanes to 6 lanes	Roadway widening approximately 3.75 miles	\$6	\$0
Nansemond Parkway	Chesapeake CL – Helen Street	Widen Nansemond Parkway from 2 lanes to 4 lanes	Roadway widening 0.4 miles	\$9	\$9
	Shoulders Hill Road - Sleepy Hole Road	Widen Nansemond Parkway from 2 lanes to 4 lanes	Roadway widening 3.5 miles Install/construct 1 traffic signal	\$53	\$53
	Sleepy Hole Road – Wilroy Road	Widen Nansemond Parkway from 2 lanes to 4 lanes	Roadway widening 1.75 miles Install/construct 2 traffic signals	\$27	\$27
U.S. Route 58/Holland Road	Suffolk Bypass (13/58/32) to location 0.7 miles west of Manning Bridge Road	Widen Holland Road from 4 lanes to 6 lanes	Roadway widening 3.1 miles Replace/Install 7 traffic signals	\$69	\$69
Bridge Road	Harbour View Boulevard/I-664 to Shoulders Hill Road	Widen Bridge Road (U.S. Route 17) from 4 lanes to 6 lanes	Roadway widening 1.5 miles Replace 4 traffic signals	\$33	\$33
	Mills E. Godwin Jr. Bridge	Construct second span to provide 4 travel lanes over the Nansemond River	Bridge length is approximately 1.0 miles at width of 40'	\$55	\$55
	Hazelwood Bridge	Construct second span to provide 4 travel lanes over Chuckatuck Creek	Bridge length is approximately 3,100' at width of 40'	\$35	\$35
Kings Highway Bridge	Nansemond River Crossing at Chuckatuck	Construct new 2 lane bridge over Nansemond River and roadway improvements connecting Kings Highway and Route 10	Bridge project length is approximately 4,200' at width of 40'. Roadway improvements are 1.2 miles in length	\$90	\$90
Shoulders Hill Road	Nansemond Parkway to Bridge Road	Widen Shoulders Hill Road from 2 to 4 lanes	Roadway widening 3.1 miles Replace traffic signals	\$42	\$42
TOTAL				\$534	\$413

Table 4-4: Cost Estimates of Additional Improvements (2013 Dollars)

Roadway	Segment	Project Description	Project Details	Cost (\$ Millions)	City Funds (\$ Millions)
Kings Fork Road	Godwin Boulevard – Pruden Boulevard	Widen Kings Fork Road from 2 to 4 lanes	Roadway widening 2.25 miles Replace 1 traffic signal	\$32	\$32
Bennetts Pasture Road	Bridge Road to Kings Highway	Widen Bennetts Pasture Road from 2 to 4 lanes	Roadway widening 3.5 miles Replace 1 traffic signal	\$53	\$53
Pughsville Road	Shoulders Hill Road – Chesapeake CL	Widen Pughsville Road from 2 lanes to 4 lanes	Roadway widening 1.3 miles Install/construct 1 traffic signal	\$23	\$23
Godwin Boulevard	Isle of Wight CL – 0.25 Miles south of Oliver Drive/Cherry Grove Road intersection	Widen Godwin Boulevard from 2 lanes to 4 lanes	Roadway widening length is approximately 0.35 miles	\$8	\$8
	0.25 miles south of Oliver Drive/Cherry Grove Road - Everets Road	4 lane Bypass segment of Godwin Boulevard (State Route 10/32) so widening goes around the Village of Chuckatuck	New 4 lane roadway segment (Chuckatuck Bypass) - 2.5 Miles	\$50	\$50
	Everets Road – Kings Fork Road	Widen Godwin Boulevard from 2 to 4 lanes	Roadway widening length is approximately 3.7 miles Bridge length is approximately 1,100' at width of 40'	\$55	\$55
	Kings Fork Road – Suffolk Bypass	Widen Godwin Boulevard from 4 to 6 lanes	Roadway widening length is approximately 1.4 miles Replace 4 traffic signals Upgrade/modify 3 traffic signals	\$33	\$33

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Roadway	Segment	Project Description	Project Details	Cost (\$ Millions)	City Funds (\$ Millions)
Whaleyville Boulevard	Carolina Road - Copeland Road	Widen Whaleyville Boulevard (U.S. Route 13) from 2 to 4 lanes	Roadway widening 2.35 miles	\$30	\$30
	Copeland Road - Freeman Mill Road	Widen Whaleyville Boulevard (U.S. Route 13) from 2 to 4 lanes	Roadway widening 2.0 miles	\$26	\$26
	Freeman Mill Road - Great Fork Road	Widen Whaleyville Boulevard (U.S. Route 13) from 2 to 4 lanes	Roadway widening 2.4 miles	\$31	\$31
	Great Fork Road - Little Fork Road	4 lane Bypass segment of Whaleyville Boulevard (U.S. Route 13) so widening goes around the Village of Whaleyville	New 4 lane roadway segment (Whaleyville Bypass) - 2.0 Miles	\$37	\$37
	Little Fork Road - Freeman Mill Road	Widen Whaleyville Boulevard (U.S. Route 13) from 2 to 4 lanes	Roadway widening 2.5 miles	\$34	\$34
	Freeman Mill Road - Virginia/North Carolina State Line	Widen Whaleyville Boulevard (U.S. Route 13) from 2 to 4 lanes	Roadway widening 2.25 miles	\$31	\$31
Finney Flyover	Pinner Street to E. Washington Street	Construct new 2 lane bridge over railroad tracks in downtown Suffolk providing grade separation and ability to maintain traffic flow	Bridge project length is approximately 2,650 feet with supplemental intersection improvements	\$17	\$17
Wilroy Road	Nansemond Parkway - Portsmouth Boulevard	Widen Wilroy Road from 2 to 4 lanes	Roadway widening 1.6 miles	\$29	\$29
Intersection Improvement Projects					
Wilroy Road	Wilroy Road at Nansemond Parkway Intersection Improvement	Intersection Improvement Project	Turn-lane improvements and modify/replace traffic signal/RRXX equipment	\$3	\$3
Bridge Road	Bridge Road at Shoulders Hill Road	Intersection Improvement Project	Turn-lane improvements and modify/replace traffic signal	\$1	\$1
TOTAL				\$493	\$493

It is noted that the cost estimates are not adjusted for annualized inflation. Over a period of 20 years, inflation will increase these costs by an approximate factor of 1.48 (assuming an annual average rate of inflation of 2.0%).

OTHER ROADWAY CONSIDERATIONS

In addition to the roadways identified for improvement, several roadway segments are forecasted to provide a marginally adequate service level of D by 2034 or may operate at a LOS E. While these facilities are not identified as an improvement priority due to funding constraints or limited potential for facility improvements due to restricted right-of-way, they are forecasted to serve increasing traffic volumes while exhibiting deteriorating service levels. As part of the annual development of the Transportation Improvement Program (TIP), these roads should be evaluated for inclusion as an improvement priority. Where roadway improvements are geometrically infeasible, the roadway segment should be evaluated on a periodic basis to identify operational deficiencies and opportunities for enhanced operations through signal timing optimization, modified signal operations, and improved equipment. This evaluation should include monitoring growth in traffic volumes and the growth in the level of development activity.

Table 4-5: Roadways Designated for Periodic Evaluation

Roadway	Segment	2012 Daily Volume	2034 Forecast Daily Volume	Existing Number of Lanes	2034 Level of Service
Bennetts Pasture Road	Nansemond Parkway – Kings Highway	4,400	9,200	2	D
Carolina Road	E. Washington Street – Southwest Bypass	11,000	17,900	4	D
	Southwest Bypass – Whaleyville Boulevard	17,000	25,500	4	D
College Drive	I-664 – Hampton Roads Parkway	18,000	26,400	4	D
Constance Road*	Pinner Street – Main Street	15,000	27,200	4	E
	Main Street – W. Washington Street	8,000	13,100	2	E
Finney Avenue	Main Street – Pinner Street	6,800	9,000	2	D
Godwin Boulevard	Suffolk Bypass – Pruden Boulevard	19,000	27,500	4	D
Holland Road	Lummis Road – Buckhorn Road	24,000	27,300	4	D
	Buckhorn Road – Southampton CL	24,000	27,500	4	D
Main Street*	Pruden Boulevard – Constance Road	28,000	44,200	4	E
	Saratoga Street – Main Street	19,000	28,300	4	E
Market Street*	Saratoga Street – Main Street	5,400	11,600	2	E
Pinner Street	Finney Avenue – Constance Road	8,400	9,500	2	D
Pitchkettle Road	Suffolk Bypass – Constance Road	3,300	9,900	2	D
Portsmouth Boulevard	Suffolk Bypass – Washington Street	21,000	27,300	4	D
Pruden Boulevard	Main Street – Suffolk Bypass	9,600	26,200	4	D
	Suffolk Bypass – Kings Fork Road	19,000	24,500	4	D
Pughsville Road	Chesapeake CL – Shoulders Hill Road	5,100	9,000	2	D
Saratoga Street	Market Street – W. Washington Street	3,700	11,600	3	D

Roadway	Segment	2012 Daily Volume	2034 Forecast Daily Volume	Existing Number of Lanes	2034 Level of Service
Washington Street*	Portsmouth Boulevard – Pinner Street	12,000	17,200	2	E
	Pinner Street – Main Street	9,400	11,700	2	E
	Main Street – Constance Road	7,500	13,600	2	E

* asterisk indicates geometrically infeasible roadway improvements

ROADWAY MAINTENANCE AND FINANCING REQUIREMENTS

On July 1, 2006, the City of Suffolk assumed planning, construction and maintenance responsibilities of all roadways within the City limits with the exception of I-664 and State Route 164 (Western Freeway). In addition to receiving annual payments from VDOT for maintenance activities, the City is eligible to receive construction payments as the roadways are included in the City’s urban system. The amount of urban maintenance funding is based upon the lane miles of either arterial or local roadways within a jurisdiction. The amount of roadway a community has is measured by calculating the total number of miles of roadway for each lane of roadway by functional classification. This is referred to as a “lane mile”. During FY 2012, the City of Suffolk maintained a total of 1,595 lane miles of roadway. Costs will likely continue to increase modestly as the City is responsible for providing and maintaining the facilities, material, equipment, and staff to conduct maintenance and construction programs independent of VDOT. Despite the additional responsibility of maintaining its own roadway system, the City has improved overall maintenance services and general costs have been better managed as a result of local control.

Since assuming control of the roadway system, the City has been able to effectively manage – according to its own policies – such development related issues as:

- Installation of Traffic Signals
- Interconnection of Traffic Control Device Communications
- Location of Median Crossovers
- Location of Access Driveways
- Installation of Turn Lanes
- Setting of Speed Limits
- Incorporation of Traffic Calming
- Adoption of Access Management Policies
- Encroachments in Rights-of-Way
- Repair and Inspection Policy in the Rights-of-Way

In summary, the assumption of roadway maintenance has provided the City with increased flexibility in responding to both transportation needs and development pressures through a wide range of fiscal, regulatory and policy strategies. It has also provided an increase in funds for transportation improvements.

FINANCING IMPROVEMENTS

With the incorporation of the Focused Growth Approach as a guide for future development, the City is pursuing a growth pattern that emphasizes use of existing facilities. Consequently, when forecasts based on the Focused Growth Approach are incorporated into a travel demand forecast model, the projections of future traffic volumes indicate increased travel demand along existing facilities. In many cases, the capacity of these facilities is adequate to meet the additional demand.

However, if left unimproved, several key facilities will not provide even marginally adequate service, and prolonged and severe congestion is anticipated to develop and worsen over time. Moreover, considering the City's forecasted needs and the limitations on resources from all sources, it is unlikely that many of the needed major new improvements can be realistically anticipated within the planning period. In this sense, the Focused Growth Approach represents the most rational policy because it seeks to focus demand in areas where available capacity can be more effectively used.

To define the limited level to which transportation improvements are anticipated to be funded within the next 20 years, the Hampton Roads 2034 Regional Long Range Transportation Plan was referenced. The Hampton Roads Transportation Project Priorities for the 2034 Long-Range Transportation Plan lists the following projects for the City of Suffolk:

1. Widening of Nansemond Parkway to four lanes from the Chesapeake City line west to Norfolk Southern railroad,
2. Widening of U.S. Route 58 (Holland Road) from the Suffolk Southwest Bypass to the western boundary of the focused growth area,
3. Widening of U.S. Route 17 (Bridge Road) from the Chesapeake City line to the Mills Godwin Bridge, and
4. Constructing the second span of the Mills Godwin Bridge (Bridge Road).

While engineering activities have begun on at least two of these projects, due to financial constraints, only the Nansemond Parkway widening project has been fully funded through completion of construction while the U.S. Route 58 (Holland Road) widening projected has been funded through right-of-way acquisition. However, it is also noted that Phase I of the Nansemond Parkway project (i.e., Nansemond Parkway at Shoulders Hill Road intersection improvement) was recently completed.

FINANCING OPTIONS

To address the funding shortfall, the City may pursue several options:

1. Increased federal and state funding and/or alternative state and federal funding sources;
 - a. Federal Funding Source Alternatives
 - i. Regional Surface Transportation Planning (RSTP)
 - ii. Congestion Mitigation and Air Quality (CMAQ)
 - iii. Highway Safety Improvement Program (HSIP)
 - iv. Transportation Alternatives Program (TAP)
 - b. State Funding Source Alternatives
 - i. Revenue Sharing
 - ii. Recreational Access Program
 - iii. Economic Development Access Program
2. Cash proffers associated with rezoning applications;
3. Roadway improvement proffers associated with rezoning applications;
4. Charter bond financing;
5. Roadway bond referenda;
6. Special taxing districts; and
7. Tolls.

Each of these options presents challenges for implementation, and either alone or in combination with others, none will fully address the funding shortfall.

SYSTEM MANAGEMENT

Without significant increases in resources, the capacity of the roadway system will be strained. To effectively minimize the adverse impacts of the capacity deficiency, several options are available. These techniques place an emphasis on the coordination of traffic signal timings, intelligent transportation systems (ITS) technology/techniques, and policies for access management. In general, the purpose of these options is to extend the life cycle of the existing roadway or corridor through the reduction of congestion along corridors caused by conflict points on major roadways from either access driveways or intersecting streets, or inefficient/aged traffic operations equipment/technologies.

With the implementation of the enhanced provisions regarding access management corridors within selected special corridor overlay districts and the adequate public facilities provisions of the Unified Development Ordinance (UDO), the City has in place the basic tools necessary to effectively implement a strategy for capacity preservation.

HAMPTON ROADS TRANSPORTATION ACCOUNTABILITY COMMISSION

On March 8, 2014 the Virginia Assembly adopted HB1253/SB513, which provides for the creation of the Hampton Roads Transportation Accountability Commission (HRTAC) for the purpose of managing Hampton Roads Transportation Fund (HRTF) revenues for the region. Signed into law on April 3, 2014 by Governor Terry McAuliffe, the HRTAC became effective on July 1, 2014.

The Hampton Roads Transportation Fund (HRTF) was established as a special non-reverting fund to be used solely for new construction projects on new or existing highways, bridges, and tunnels in the localities comprising Planning District 23. The new funding is part of the transportation funding package passed by the General Assembly in 2013. Use of monies deposited in the HRTF must be approved by the HRTAC, which shall give priority to those projects that are expected to provide the greatest impact on reducing congestion for the greatest number of citizens residing within Planning District 23 and shall ensure that the moneys shall be used for such construction projects.

The 23-member HRTAC consists of mayors from local governments, state legislators from the region, and area Commonwealth Transportation Board members. The mayor of the City of Suffolk serves on this commission and provides a local voice in regional transportation funding decisions. HRTAC project implementation takes into account project prioritization by the Hampton Roads Transportation Planning Organization, of which Suffolk is also a member.

PROPOSED INTERSECTION IMPROVEMENTS

In addition to adding lanes along key roadway segments, providing adequate levels of service or operational conditions over the transportation system also requires the installation of improvements at major junctions. Improvements can range from the installation of turn-lanes, updated traffic signal equipment, improvements to intersection geometrics, general safety improvements, pedestrian crosswalks, or even pedestrian signal equipment at signalized intersections.

While not listed in the same detail as roadway segments, several intersections will function as critical junctions in the network, and ensuring acceptable levels of service will be necessary for meeting the City's goals and objectives of providing adequate public facilities. Shown on Map 4-6, these intersections include:

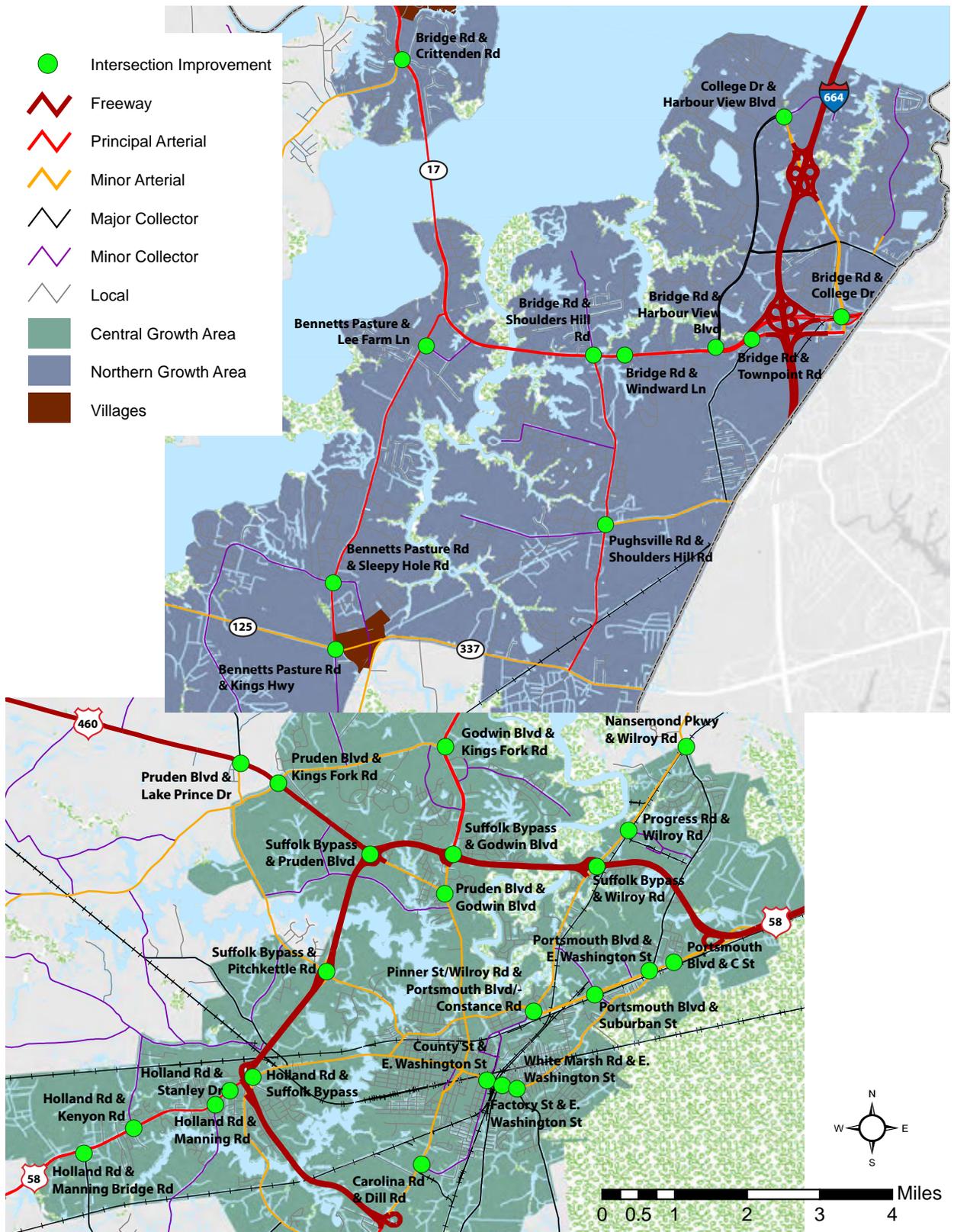
1. Bennetts Pasture Road at Kings Highway
2. Bennetts Pasture Road at Lee Farm Lane
3. Bridge Road at Harbour View Boulevard
4. Bridge Road at Shoulders Hill Road
5. Bridge Road at Crittenden Road

6. College Drive at Harbour View Boulevard
7. Godwin Boulevard at Kings Highway
8. Holland Road at Suffolk Bypass
9. Holland Road at Manning Bridge Road
10. Holland Road at Kenyon Road
11. Nansemond Parkway at Wilroy Road
12. Pinner Street/Wilroy Road at Portsmouth Boulevard
13. Portsmouth Boulevard at E. Washington Street
14. Portsmouth Boulevard at C Street
15. Pruden Boulevard at Kings Fork Road
16. Pruden Boulevard at Lake Prince Road
17. Pughsville Road at Shoulder's Hill Road
18. Suffolk Bypass Ramps to Wilroy Road
19. Suffolk Bypass Ramps to Godwin Boulevard
20. Suffolk Bypass Ramps to Pruden Boulevard
21. Suffolk Bypass Ramps to Pitchkettle Road
22. White Marsh Road at E. Washington Street

To ensure that these critical intersections do not develop into congested bottlenecks, they will need to undergo periodic evaluation for needed improvements. The analysis will consist of peak period capacity analysis to monitor the severity of deficiencies, queuing analysis to determine if turn lanes are adequate, and safety analysis to determine if congestion-related crash rates are increasing to unacceptable levels of severity.

Where deficiencies are determined, improvements should be developed and evaluated for inclusion in the Capital Improvement Program. Improvements should only be considered after it has been determined that operational improvements such as modifications to traffic signal phasing and/or timings or changes in traffic signs and pavement markings will not adequately address the deficiency.

In addition to periodic evaluations, evaluations of these intersections should receive detailed analysis as part of a traffic impact analysis for proposed development in the immediate vicinity. Furthermore, where proposed development occurs within the intersection area, the analysis should evaluate both intersection geometric improvements, traffic control measures, and access management actions that will address defined capacity and safety deficiencies. In some instances where a proposed subdivision or site plan will cause traffic volumes that exacerbate an existing deficiency, the City may opt to coordinate with the developer to fully address intersection issues.



Map 4-6: Planned Intersection Improvements

As shown on Table 4-5, a number of transportation improvements have been called for through the various village and neighborhood initiatives and revitalization plans. These improvements typically are needed to improve connectivity; provide for redevelopment, revitalization and infill development; and to provide safety improvements.

Table 4-6: Village and Neighborhood Transportation Improvement Initiatives

Project Name	Associated Plan
Godwin Boulevard (Route 10) Bypass	Chuckatuck/Oakland
Kings Highway/Godwin Boulevard Intersection Improvements	Chuckatuck/Oakland
Eclipse Drive/White Dogwood Trail Intersection Improvements	Crittenden/Eclipse
East-West Connectors	Carolina Road
Driver Lane/Nansemond Parkway Intersection Improvements	Driver
Driver Lane/Kings Highway Intersection Improvements	Driver
Kings Highway/Nansemond Parkway Intersection Improvements	Driver
Kings Highway/Bennetts Pasture Road Intersection Improvements	Driver
Carolina Road/Main Street Traffic Square	Hall Place/Downtown
Carolina Road/Saratoga Street	Hall Place/Downtown
Hollywood Connector	East Washington Street
Cypress Connector Road	East Washington Street
6th Street Spine	East Washington Street
Rosemont Avenue Extension	East Washington Street
Liberty/County/Moore Intersection Improvements	East Washington Street
Whaleyville Boulevard Bypass	Whaleyville
Robertson Elementary School Access Road Connections	Whaleyville
Crepe Myrtle Drive Connection	Holland
Freeman Avenue Entrance Realignment	Huntersville
Hunter Court Extension	Huntersville
Skeet Road Extension	Huntersville
Newport Street Extension	Olde Towne
Finney Avenue Extension (West)	Downtown
Pine Street Extension	Downtown
Smith Street Extension	Downtown
Wellons Street Extension	Downtown
County Street/Liberty St/East Washington St Intersection	Fairgrounds

ALTERNATIVE TRANSPORTATION MODES

TRANSIT

Transit riders typically fall into one of two categories – choice or captive. Choice transit riders choose to leave their vehicle at home to save time and money or for other reasons, while captive riders use transit because they have no other option. This may be because they lack access to a personal vehicle or because they have a physical impediment. Captive riders also include those too young to drive, the elderly, persons with disabilities, and those without the financial means to own and operate a personal vehicle. It is important that the City of Suffolk continue to provide public transit options to both of these types of riders in the future.

Effective January 1, 2012, the City of Suffolk withdrew from Hampton Roads Transit (HRT). This withdrawal was preceded by an HRT efficiency study indicating that Suffolk's layout, infrastructure and population did not mesh well with HRT's business model. HRT had recommended reducing Suffolk's transit system from four routes to two but maintained that Suffolk would need to maintain a full cost participation in the commission. To replace the service, the City established Suffolk Transit. Utilizing contract services provided by Virginia Regional Transit (VRT), Suffolk Transit has developed a system using smaller buses and a more flexible administration to meet the needs of Suffolk while avoiding the costs of a large administration and commission. Outside the existing bus service area, limited bus service is still provided by HRT to the Lakeview Industrial Park on College Drive.

Funding for the current service is maintained through the collection of fares, local assistance and state grants for both operational assistance and capital assistance. Initially limited in scope to the two routes that HRT had recommended, Suffolk Transit has since added two part-day routes, restoring most of the service area that was served by HRT. Routes have been re-named, using colors for route identifiers (see Figure 4-6). Current route information can also be found in Table 4-6 – Suffolk Transit Routes, Service Areas, Operating Hours, and 2013 Ridership.

Table 4-7: Suffolk Transit Routes, Service Areas, Operating Hours, and 2013 Ridership

Route	Service Area	Operating Hours	FY2013 Ridership
Green	Main St (U.S. Route 460) Corridor - Godwin Blvd (Route 10)	6:30 am - 6:30 pm	28,485
Orange	East Washington/White Marsh/Dill Rd/Carolina Rd	6:00 am - 6:30 pm	24,874
Red	Portsmouth Blvd/East Constance/Main St/Godwin Blvd	9:30 am - 2:30 pm	4,455*
Yellow	West Washington/Holland Rd/Wellons/Carolina Rd	6:30 am - 9:30 am 2:30 pm - 6:30 pm	**

* - Service on the Red route began August 13, 2012

** - Service on the Yellow route began August 1, 2013

Figure 4-6: Suffolk Transit Routes



For individuals holding ADA certification, paratransit services are provided through Suffolk Transit using VRT’s subcontractor, Senior Services of Southeastern Virginia (SSSEVA).

As the Northern Growth Area continues to develop, more local and regional trips could allow for enhanced public transportation options through local expansion and opportunities for regional cooperation and connectivity. Continued redevelopment and growth in the Central Growth Area also has the potential to revitalize the demand for public transportation needs between the two growth areas. The City should monitor the need for this potential demand through the activities of the Economic Development Authority and as new employment and activity centers are established in the two focused growth areas. As workforce demands increase, the provision of public transit services between these areas may warrant expanding existing services. A pilot program began in August, offering additional transit service in the Northern Growth Area as well as a connector route between downtown, North Suffolk, and the Chesapeake Square Mall in the Western Branch area of neighboring Chesapeake. The City also maintains a Transit Development Plan, which is updated regularly and serves as the primary strategic planning document for transit needs. This plan will help to further refine recommendations for enhancement of service in key areas.

To more effectively accommodate transit service, the City must also consider it in the process of designing roadway improvements and reviewing development proposals. On facilities where transit service is or is planned to be provided, installing or reserving adequate space for transit vehicle turnouts and stations should be implemented. The traffic signal system should be enhanced to provide transit “queue jumping” or vehicle priority phasing, where appropriate. Finally, Intelligent Transportation System (ITS) communication facilities and systems should be designed and installed to accommodate transit communications.

Taken to the next level, transit service can be expanded to provide a connection between the two growth areas of the City as well as the region. While the abandoned railroad right-of-way will not be needed for a highway or parkway, it should be preserved as a future multi-modal corridor or, should development patterns create significant increases in demand, it could accommodate light rail transit or some form of commuter rail. In the Hampton Roads Regional Transit Vision Plan Final Report, prepared by the Virginia Department of Rail and Public Transportation (DRPT) in February 2011, a commuter rail corridor is envisioned between downtown Suffolk and Harbor Park in the City of Norfolk. This further supports the City's vision of expanded integrated transit service at the regional level. DRPT also completed a Transit Development Plan for the City of Suffolk in 2013. This plan included service expansion projects, operations projects, and financial plans for capital and operation costs.

TRAILS

The transportation system should also include consideration of pedestrian and biking recreational uses. As with transit, design and construction of new and improved roadways should include consideration of facilities for non-motorized transportation. In the development review process, the pursuit of community inter-connectivity should include consideration of sidewalk and trails (in addition to streets) where subdivision and commercial centers abut existing communities.

Abandoned railroad rights-of-way can also be used as a resource for recreational trails as well as functional transit. The Suffolk Seaboard Coastline Trail has already been identified to connect Moore Avenue (Downtown Suffolk) to the City of Chesapeake along a nearly 11-mile tract of abandoned railroad rights-of-way. Construction of the first phase of the trail is scheduled to begin in 2014. The City should continue working to generate funding for the construction of the multi-use path and work towards construction to provide a unique recreational opportunity to link Suffolk with the cities of Chesapeake, Portsmouth, Norfolk, and Virginia Beach. This multi-use recreational trail extending from Suffolk to Virginia Beach is a part of the Hampton Roads Regional Trail system.

In addition to the significance of the trail at the regional level, the Seaboard Coastline Trail has also been identified as a part of the East Coast Greenway (ECG). The ECG is a developing trail system, linking many of the major cities along the eastern seaboard from Calais, Maine, to Key West, Florida. Nearly 30 percent of the route is already on traffic-free greenways, creating safe, accessible routes for people of all ages and abilities. Once completed, the Suffolk Seaboard Trail has the potential to become one of the region's premier linear recreational facilities.

AIR TRAVEL

The City of Suffolk is served by two major commercial airports within one hour's driving distance: Newport News-Williamsburg International Airport in Newport News (approximately 45 minutes) and Norfolk International Airport (approximately 1 hour). These two airports offer daily commercial passenger flights serving both domestic and international travel. The Suffolk Executive Airport is a small general aviation facility located in the south/central area of the City. It is a base for several small private planes, several aviation maintenance businesses, and a recreational skydiving center. Services include:

- Aviation fuel
- Aircraft parking (ramp or tie-down)
- Maintenance
- Computerized weather and flight planning
- Hangar leasing

There is no scheduled commercial passenger service at this airport, and the population served is confined to tourists and business clientele who travel by private plane. The airport has two runways, the main at 5,060 feet and the secondary at 3,750. Both runways can handle most turbo-prop aircraft as well as light corporate jets.

PASSENGER RAIL

As a result of the Tier 1 Environmental Impact Statement (EIS) conducted by the Virginia Department of Rail and Public Transportation (DRPT) and the Federal Railroad Administration (FRA) Record of Decision (ROD), passenger rail service returned to Norfolk in December 2012. The City of Norfolk is continuing to seek the opportunity of being added to the Southeast High Speed Rail (SEHSR) Corridor, hoping to upgrade existing service and initiate “high-speed” (110mph) passenger rail service in southeastern Virginia.

For now, passenger service to Norfolk and the Southside of Hampton Roads will be at conventional speed over existing Norfolk Southern freight tracks between Petersburg and Norfolk. Unless a separate passenger-trains-only track with advanced signals can be financed and constructed parallel to the current freight rail line, trains on the straight stretch of rail from Petersburg to Suffolk will be limited to 79 mph.

Despite passenger rail service traversing through the City of Suffolk on existing Norfolk Southern freight tracks, the Tier 1 EIS and the associated ROD did not include the recommendation of a station in the City of Suffolk. However, the ROD does indicate that “new station locations were evaluated generally in terms of accessibility to the larger transportation network. Specific station sites will be determined in the future by the municipalities, and appropriate levels of environmental documentation will be undertaken at that time.” The City participates on the HRTPO Passenger Rail Task Force and is following the discussion of Norfolk to Richmond high speed rail. Through this and other means, the City of Suffolk will continue its efforts to secure and construct a passenger rail station in proximity to the current 79 mph route and the anticipated high speed rail route.

Additionally, the high speed rail alternative from Norfolk to Petersburg should be supported as an alternative to air or automobile travel from Hampton Roads to locations north and south along the I-95/85 corridors.

FREIGHT RAIL

The City of Suffolk is well served by freight rail service, and rail lines extend across its boundaries connecting the ports of Hampton Roads with inland markets and inland freight terminals. Growth in port activity has the potential to provide benefits through investment and job creation, but trains also

interrupt the flow of traffic on Suffolk's streets. These impacts will become more frequent and prolonged as freight rail traffic increases.

Three railroad companies (Commonwealth Railway, Norfolk Southern, and CSX) currently operate within the City limits. These trains traverse 51 public at-grade highway-rail crossings and areas that range from open rural to densely-populated residential, commercial, and industrial areas. All three lines travel through the downtown area.

Norfolk Southern (NS)

NS is a Class I railroad that operates two rail lines within the study area. The first is a 15.4 mile double track main line that predominately carries coal trains through the City. The section of the main line from downtown Suffolk to the northwestern City limits is part of the Heartland Corridor and provides an important link for intermodal trains. The Heartland Corridor has regional and national significance and the state and federal governments have made significant investments for improvements along this corridor. There are 11 public crossings along the mainline within the study area and all of them are gated. There is a small NS interchange yard along the mainline in the western part of downtown. NS also has a 16.6 mile single track that splits apart from the main line in downtown Suffolk and heads southwest towards Danville, Virginia. Three of the 17 public crossings along the single track to Danville (Longstreet Lane, Barnes Road, and Harvest Drive) are all currently not gated.

CSX

CSX is a Class I railroad that operates two rail lines within the study area. The first is a 19.4 mile single track main line that runs through the City and contains 10 public crossings. Three of these crossings do not have gates (Moore Avenue, Pine Street, and Kingsdale Road). CSX has a small siding along this route just west of the downtown area in Kilby. CSX also has a 2.3 mile single track spur that travels south from downtown to a row of industrial facilities. All the crossings on the CSX south line are gated.

Commonwealth Railway (CWR)

CWR is a Class III short line railroad that operates 11.5 miles of track in Suffolk. It provides a link for intermodal trains between the West Norfolk section of Portsmouth to an interchange in downtown Suffolk where the rail cars are transferred to NS and CSX lines. This rail line passes near suburban and urban residential neighborhoods and contains nine public at-grade highway railroad crossings within the study area. All of these crossings are gated. There is a small marshaling yard along the line near Sportsman Boulevard.

FREIGHT RAIL TRAFFIC IMPACTS

Maersk Sealand opened the APM Terminals on the Elizabeth River in Portsmouth on September 7, 2007. As one of the largest container transfer terminals on the east coast, rail activity to and from the site has steadily increased over the past four years resulting in increased rail traffic traversing through the City of Suffolk. The rail system improvements associated with the new port facility and container transfer operations included the establishment of a siding yard (to combine and split trains) on a site immediately south of Nansemond Parkway Elementary School near Sportsman Boulevard.

2035 SUFFOLK COMPREHENSIVE PLAN

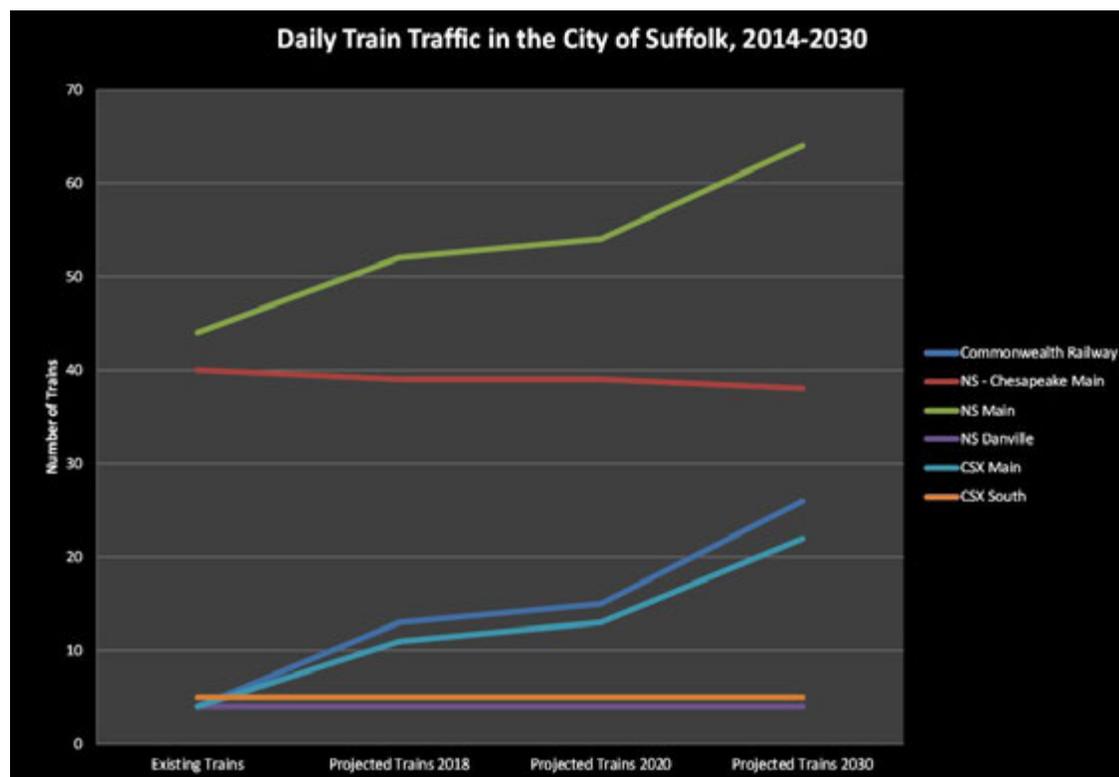
With increased container activity, particularly that intended for shipment via rail, it is expected that rail activity through the City of Suffolk will steadily increase over the next 20 years. As average daily train activity through the City increases, there are anticipated impacts to safety and mobility. Table 4-7 and Figure 4-7 reflect existing train activity and projected train activity based on a 2030 horizon year*. The number of trains traversing the City is expected to increase by 57% over that period.

Table 4-8: Existing and Projected Train Activity (2014 to 2030) by Railroad Line

Name	Existing Trains	Projected Trains 2018	Projected Trains 2020	Projected Trains 2030
Commonwealth Railway (CWRY)	4	13	15	26
NS From Chesapeake Main	40	39	39	38
NS Main	44	52	54	64
NS Danville	4	4	4	4
CSX Main	4	11	13	22
CSX South	5	5	5	5

*Source Moffatt and Nichol "Suffolk Rail Study" presentation to City of Suffolk March 19, 2010

Figure 4-7: Existing and Projected Train Activity (2014 to 2030) by Railroad Line



Increasing freight rail traffic has the potential to further impact several key at-grade crossings throughout the City, including:

- Shoulders Hill Road
- Nansemond Parkway
- Sportsman Boulevard
- Nansemond Parkway at Wilroy Road
- Progress Road
- QVC Truck Access
- Olde Mill Creek
- Suburban Drive
- E. Washington Street

In addition, rail service to the containerized terminal passes through Downtown Suffolk, affecting vehicle operations at the following at-grade crossings:

- Wellons Street
- S. Saratoga Street
- S. Main Street
- Commerce Street
- E. Washington Street
- Liberty Street

While relatively infrequent, the delays from train movement will create extensive periods of congestion, and as both trains and traffic volumes increase, the time required to disperse congestion will increase.

To address the impacts of added train traffic, future analysis improvements should include:

1. Safety improvements to existing at-grade crossings
 - a. Installation of Quad Gates at existing at-grade crossing locations
 - b. Coordinated railroad pre-emption with adjacent traffic signal operations
2. Increasing train speeds through downtown to reduce delay
3. Construction of grade separated crossings where economically feasible and warranted by traffic demand associated cumulative vehicular delay
4. Construction of bypass roadways to circumvent rail crossings where possible

The Comprehensive Plan recognizes the importance of rail service as a viable transportation mode and supports the continued maintenance of existing and potential industrial rail access to the City's and the region's designated industrial sites. Rail activities should be monitored in an effort to determine the impact of potential service or design changes in the City and region. Finally, continued consideration should be given to improvements that will enhance safety at the numerous at-grade railroad crossings that exist throughout the City.

COMPLETE STREETS

The inclusion of Complete Streets in the Transportation element of this Plan is a response to public interest in transportation choices and further recognizes the need to provide mobility options beyond the automobile to the people of Suffolk. Citizens, business owners, and local officials recognize the importance of a shift from an automobile-dominated roadway to a balanced, multi-modal transportation system that respects all users of the roadway and the rights of adjacent land owners.

The Smart Growth American National Complete Streets Coalition defines Complete Streets as follows:

“Complete Streets are streets for everyone. They are designed and operated to enable safe access for all users, including pedestrians, bicyclists, motorists and transit riders of all ages and abilities. Complete Streets make it easy to cross the street, walk to shops, and bicycle to work. They allow buses to run on time and make it safe for people to walk to and from train stations.”

“Complete Streets” is a term used nationally to describe the transformation of vehicle-dominated thoroughfares in urban and suburban areas into community-oriented streets that safely and conveniently accommodate all modes of travel, not just motorists. This section of the transportation element describes some of the processes and components associated with the development and adoption of a complete street policy.



Source: Smartgrowthamerica.org



Source: National Complete Streets Coalition

IMPLEMENTING COMPLETE STREETS

Transforming major thoroughfares into Complete Streets is complicated, requiring a diverse range of skill sets and broad support from the community. Fortunately, other numerous communities around the country have demonstrated success stories that have been translated into guiding documents. The most detailed guidance comes from a joint effort of the Institute of Transportation Engineers and Congress for the New Urbanism. With funding from the U.S. Department of Transportation and the U.S. Environmental Protection Agency, best practices have been published as “Context-Sensitive Solutions in Designing Major Urban Thoroughfares for Walkable Communities.”

Successful complete street transformations require community support and leadership, as well as coordination between various disciplines. In particular, support must include economic revitalization, business retention and expansion, property owner involvement, urban planning, urban design, landscape architecture, roadway design, utility coordination, traffic engineering, transportation planning, transit planners, architects, graphic artists, and developers.

GUIDING PRINCIPLES

The following principles embody the most important aspects of a successful Complete Streets program:

- Achieve community objectives.
- Blend street design with the character of the area served.
- Capitalize on a public investment by working diligently with property owners, developers, economic development experts, and others to spur private investment in the area. A minimum return-on-investment of \$3 private for every \$1 of public investment should be expected. Often in more densely populated areas, the ratio is 10:1 or more.
- Design in balance so that traffic demands do not overshadow the need to walk, bicycle, and ride transit safely, efficiently, and comfortably. The design should encourage people to walk.
- Empower citizens to create their own sense of ownership in the success of the street.

POLICY SUPPORT

Important policy documents that should reflect complete street policies or enabling language include:

- City of Suffolk Unified Development Ordinance
- City of Suffolk Public Facilities Manual
- Area Plans (for the applicable area served by the complete street)
- Park Master Plans (if adjacent to a particular corridor)
- Village and Neighborhood Plans
- Economic Revitalization/ Development Strategies

THEMES, POLICIES, AND ACTIONS

Theme: Balanced Growth

Policy 4-1: Provide opportunities for residents to adopt a lifestyle that is less dependent on auto travel.

- Action 4-1A: Focus development in the two Suburban/Urban Growth Areas based on the densities shown in Chapter 3.

The two Focused Growth Areas and surrounding Core Support and Inner Ring Suburban Districts provide for uses and design features that emphasize street interconnectivity and multi-modal options for completing commuting, shopping and recreational trips. Residential, commercial, and office uses are scaled so that densities among the various uses are commensurate.

By encouraging more efficient patterns of development in defined areas, specific land use policies and regulations that help significantly decrease both the total number of trips and overall trip lengths, as well as making transit use, bicycling and walking more viable, can be implemented.

- Action 4-1B: Promote implementation of mixed-use development where facilities, infrastructure and markets will sustain investment.

The two Mixed Use Core Areas are served by a network of arterial and collector roadways that, for the most part, have adequate capacity to accommodate anticipated traffic from intense mixed-use development. In contrast, development in suburban areas – particularly along Bridge Road (west of Shoulders Hill Road), Holland Road and Bennett’s Pasture Road, will cause trips to be routed to congested facilities.

- Action 4-1C: Discourage strip retail commercial development along major arterial corridors.

By focusing retail commercial development at appropriate crossroad locations and managing access to such developments, the City will preserve arterial roadway capacity while accommodating fiscally responsible growth. Moreover, focusing retail development provides increased opportunities for the use of non-auto trip methods – including pedestrian, bicycle and transit modes.

- Action 4-1D: Promote the development of an internal transit circulator system within the two mixed use cores.

With a goal of requiring an automobile only to either enter or exit the environs, the two Mixed Use Core areas include densities that can be served by internal transit circulator routes. If a trip is beyond the range of pedestrian limits (approximately ¼ mile), the transit circulator service expands the range pedestrians will have confidence to travel.

- Action 4-1E: Continue to tie development approval to the adequacy and funding of public facilities, including roads.
- Action 4-1F: Consider development of a Complete Streets policy to improve mobility options and connectivity throughout the City.
- Action 4-1G: Continue its efforts to secure and construct a passenger rail station in proximity to the current 79 mph route and the anticipated high speed rail route.

Theme: Responsible Regionalism

Policy 4-2: Suffolk will be a responsible participant in the regional planning and programming process.

- Action 4-2A: Develop roadway and transit improvement programs to be consistent with those adopted by the Hampton Roads Planning District Commission.

As part of the Hampton Roads urbanized area, Suffolk participates in the regional planning process. Where regional issues are involved, the City's plans and programs should be consistent with regional strategies.

- Action 4-2B: Planned improvements to facilities crossing jurisdictional boundaries should be coordinated with the neighboring locality.

Several facilities cross boundaries with adjoining localities and have been identified for improvement. When feasible, localities should coordinate funding and scheduling of construction activities to ensure that motorists experience seamless service along the corridor.

- Action 4-2C: Expand the type and location of transit service connections between routes within Suffolk and those serving regional destinations. Options for regional cooperation and connectivity should be considered.

Exploration of exclusive right-of-way for new rail service should be considered. This includes heavy rail, commuter rail and light rail services.

- Action 4-2D: In conjunction with the regional Transportation Improvement Program (TIP), annually evaluate the efficiency and need for improvements of those roadways and intersections designated in Map 4-3, Map 4-4, Map 4-5, and Map 4-6.
- Action 4-2E: Cooperate with plans to upgrade Route 460 from Suffolk westward to I-95. Similarly, consideration should be given to upgrading Route 58 from Suffolk westward to I-95.

- Action 4-2F: The City of Suffolk in coordination with the Hampton Roads Planning District Commission (HRPDC), VDOT, and the Virginia Department of Rail and Public Transportation (DRPT) shall cooperate with the Virginia Port Authority on their efforts to plan, build, and maintain efficient transportation systems for the movement of freight and goods through the region.
- Action 4-2G: Work proactively with the Virginia Port Authority, Commonwealth Railway, Norfolk Southern, and CSXT to improve safety and level of service on the surface transportation network (i.e., at-grade railroad crossings) that traverses the City's street network.
- Action 4-2H: Formally establish, enforce, and periodically update the City's Truck Route designations, and/or Truck Route Ordinance, as well as maintain appropriate signage for the truck routes to ensure compliance.
- Action 4-2I: Consider emergency evacuation needs as part of planning, design and funding of major corridor improvements, specifically for Routes 10, 58, and 460.
- Action 4-2J: Participate in and support the funding and advocacy activities of the HRTAC.

Theme: Preserve Rural Character

Policy 4-3: Investment in infrastructure will be targeted to areas where need either is or is forecasted to be greatest.

- Action 4-3A: Focus investment of transportation resources on facilities that serve growth areas with higher densities and/or provide adequate service to regional facilities.

As a tool to implement the vision of the Comprehensive Plan, investment in transportation facilities should emphasize accommodating desired development patterns and accessing regional markets. Investment in the form of added roadway capacity in rural areas will tend to heighten both commercial and residential development pressures which are the greatest threat to the rural character.

- Action 4-3B: Implement the planned bypasses around both of the villages of Chuckatuck and Whaleyville.

To ensure that each village develops as a focus of social and economic activity to serve the surrounding rural areas, through traffic (particularly the truck traffic through Whaleyville) should be routed to a controlled access bypass. Right-of-way for the bypass should be identified and preserved.

- Action 4-3C: Invest in enhancing rural road safety.

The majority of the roadways that traverse the rural areas of the City do not need additional capacity. However, the City should implement a strategic safety initiative to enhance the operational characteristics of these facilities. VDOT's High Risk Rural Roads (HRRR) Program may provide a portion of the funding source necessary to address this need.

Theme: Core Area Revitalization

Policy 4-4: The City will employ appropriate regulatory and financial incentives to ensure that access to and within the central core area supports private sector initiatives.

- Action 4-4A: Prioritize transportation investments to ensure adequate access from Growth Areas to regional markets.

To develop at planned densities, the two Growth Areas must have access to regional markets. Ensuring adequate roadway capacity and expanded transit service is critical to accommodating market demands within the desired setting.

- Action 4-4B: Interconnectivity of the street, sidewalk and trail systems within the Mixed Use Core, the Core Support and the Inner Ring Suburban Districts should be implemented with both public and private resources.

Realizing the trip reducing benefits of mixing uses and higher densities will be compromised if the roadway system is disjointed. The City faces a challenge with the presence of waterways and rail lines. Through development plan review and capital improvement plan investment, the City should ensure direct and convenient multi-modal travel opportunities are available.

- Action 4-4C: Continue to complete the street network per the adopted initiatives and redevelopment plans, making street connections wherever possible and appropriate.
- Action 4-4D: Maintain the City's commitment to incorporate Transportation System Management Strategies (TSM) and Transportation Demand Management Strategies (TDM) in order to improve operational management and better utilize existing and new roadways.

TSM strategies focus on changing the operation of the transportation system, typically with a primary focus on improving traffic flow and reducing traveler delay. TDM refers to a set of strategies aimed at reducing the demand for roadway travel, particularly in single occupancy vehicles.

Theme: Enhance Economic Vitality

Policy 4-5: Provide facilities and policies that ensure adequate multi-modal access throughout the growth areas of the City.

- Action 4-5A: Promote the prioritization of investment in major regional improvements that are critical to the City's economic development.

Four major roadway facilities are crucial to the City's access to regional markets:

1. I-664
2. I-64 (East of Bowers Hill)
3. Route 460 Corridor to I-95
4. U.S. Route 58

In cooperation with the HRPDC and VDOT, the City should emphasize the importance of these facilities in the competition for limited improvement funds.

- Action 4-5B: Preserve existing capacity on the roadway system by minimizing conflicts between vehicles accessing the local street system and through moving vehicles.

With the Special Corridor Overlay District (SCOD) in the Unified Development Ordinance, the City has a tool to preserve capacity by managing traffic conflicts. By application of the access management provision of the ordinance along major arterial corridors, capacity for through moving vehicles can be maximized until funding for needed roadway widening is available. Corridors where access management policies should be applied include:

1. Bridge Road
 2. Holland Road
 3. Carolina Road (South of Bypass)
 4. Whaleyville Boulevard
 5. Godwin Boulevard
 6. Pruden Boulevard
 7. Nansemond Parkway
- Action 4-5C: Increase the minimum allowable spacing between median crossovers to a distance of 1,000 feet on the following facilities:
 1. Bridge Rd (I-664 – Isle of Wight CL)
 2. Holland Road (Suffolk Bypass – Southampton CL)
 3. Godwin Boulevard (Suffolk Bypass – Isle of Wight CL)
 4. Pruden Boulevard (Suffolk Bypass – Isle of Wight CL)

- Action 4-5D: Conduct periodic and systematic evaluations of critical intersections to define deficiencies and develop improvements.

To avoid the development of bottlenecks at critical intersections, the City should establish a program of routine, scheduled evaluations of both the operation and capacity of these junctions.

Improvements should be considered for inclusion in the Capital Improvement Program. Review of proposed developments in the area of these intersections should consider implementation of access management measures to minimize congestion from conflicts. The City should also consider coordinating publicly funded improvements with improvements associated with private development.

- Action 4-5E: Consider options to mitigate impacts of rail traffic through grade separation, new road connections, or rail relocation.
- Action 4-5F: Create, designate and implement a bikeway and trail system serving both recreational and functional purposes.

As a quality of life attribute, a multi-modal system of bikeways and trails provides residents with numerous opportunities for non-auto oriented activities. For both residents and businesses, it is a direct indication of the commitment of the City to the high quality of life for its citizens.

For implementation, the design of any new or widened roadway facility should take appropriate accommodation of the bicycle mode into consideration.

- Action 4-5G: Assure the incorporation of transit related features in conjunction with design and construction of new roadways and road improvements.

To more effectively accommodate transit service, the City must also consider it in the process of designing roadway improvements and reviewing development proposals. On facilities where transit service is or is planned to be provided, installing or reserving adequate space for transit vehicle turnouts, new and improved park and ride facilities and stations should be implemented. Consideration to establishing exclusive right-of-way for transit service should also be explored.

- Action 4-5H: Explore the possibility of designating and protecting scenic roadways within Suffolk.
Scenic roads should be identified and protected from inappropriate widening or improvements which may, for example, remove significant trees or structures.
- Action 4-5I: Develop a "Complete Streets" policy for roadways in growth areas and/or neighborhood communities that are intended to be more pedestrian and bicyclist friendly.

As development patterns become more compact within the City there is the opportunity to reduce the reliance on the automobile as the primary means of transportation. A "Complete Streets" policy committee should be established to investigate the application of this policy in other communities. This should result in a policy that is adopted by City representatives and supported through language in the City's comprehensive plan/master thoroughfare plan, area plans, economic revitalization/development strategies, and system-level transportation plans.

- Action 4-5J: Develop a Bicycle and Pedestrian Master Plan.

Biking and walking are not only recreational activities but also prove to be viable alternative transportation modes within defined growth areas and throughout the City. A Bicycle and Pedestrian Master Plan should be developed to formalize policies, goals, and objectives of improving this alternative transportation network.

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CHAPTER 5: MUNICIPAL FACILITIES AND SERVICES



The City of Suffolk provides a wide variety of services to its citizens. These include parks, libraries, schools, police, fire, water, sewer, and stormwater services among others. In order to provide an adequate level of service, the delivery plans for these services must be closely coordinated with the City's land use policies.

PARKS AND RECREATION

It is now being recognized that parks and recreation amenities are essential to a quality lifestyle, to community health, and to economic prosperity. The value and functions of parks and open space extend far beyond the traditional image of playgrounds and athletic fields. When properly planned, implemented and maintained, a park and open space system provides multiple benefits: to residents through improved health and stress reduction; to the natural environment through resource conservation, flood water storage, and water and air quality improvement; to the image and identity of the City through cultural resource protection and diversification, increased visitation and investment; and to the community through decreased infrastructure costs, enhanced property values, diversified economic base and revenues from use of special features.

Since the last Parks and Recreation Master Plan was completed in 2000, the City has built or acquired and renovated several new facilities and improved and expanded several others. New facilities include Constant's Wharf Park and Marina, East Suffolk Recreation Center and Administrative Offices, Planter's Club, Sleepy Hole Park, Sleepy Hole Golf Course, and the Obici House. Bennett's Creek Park boat ramp and parking lot was expanded, its fishing pier was rebuilt, and a skateboard facility was added. Lake Meade Park was expanded with a large playground, skate park, dog park, and additional parking. In addition to improvements at all of these new and expanded facilities, all required ADA improvements were made at all City facilities. An updated Parks and Recreation Master Plan will be completed by the City by the end of 2014. It will further identify the park issues and needs of the community.

EXISTING CONDITIONS

The City currently manages 43 park and recreation facilities, which cover slightly over 1,928 acres. The City's parks and recreation facilities are shown in Map 5-1. These facilities and some specific characteristics are described below.

Parks

The Suffolk Parks and Recreation Department operates five regional parks and 15 neighborhood parks. These parks provide a range of amenities and opportunities for residents and visitors.

Regional Parks

Suffolk's regional parks are Bennett's Creek Park, Constant's Wharf Park and Marina, Lake Meade Park, Lone Star Lakes Park, and Sleepy Hole Park. These parks total 1,272 acres and provide unique and attractive outdoor activities.



Top: Bennett's Creek Park
Bottom: Kids playing at local playground

Neighborhood Parks

There are 15 neighborhood parks within Suffolk, ranging in size from less than an acre up to 30 acres, totaling 216.10 acres. These parks range in size and amenities and typically are designed to serve the neighborhood they are located in. Some of the parks include larger amenities such as swimming pools and tennis courts, while others may just have a small playground. As do their size, the quality of these parks also varies. New playground equipment was installed in many of the smaller parks in 2000-02 to replace outdated equipment, but these amenities should continue to be monitored to determine their safety and quality. The larger parks are generally in better physical condition, but there have been concerns that these parks are under-utilized and/or under-programmed. It is noted that programming has increased recently in response to public demand.

Recreation Facilities

Special Use Facilities

The City Parks Department operates six special use facilities described below. These facilities provide specialized programming and function as community gathering areas.

East Suffolk Recreation Center: The former East Suffolk High School was renovated and opened as a recreation center in 2009. It has 22,500 SF of area and hosts various programs including after school, fitness, basketball, and senior activities.

National Guard Armory: Although owned by the federal government, this building is operated as a rental facility.

Planters Club: The Planters Club is a rental facility that was part of the former Obici Estate along the Nansemond River. Since purchasing the facility in 2005, significant renovations have begun to address maintenance and ADA issues.

Suffolk Art Gallery: In the past two years, several facility maintenance issues have been addressed.

Whaleyville Community Center: Significant interior improvements were made to the facility in 2004. The Whaleyville Historical Society currently leases a portion of the existing facility.

Table 5-1: Suffolk Parks and Recreation Department System Inventory

Parks	Acres
Bennett’s Creek Park and Boat Ramp	56.8
Constant’s Wharf Park and Marina	9.0
Coulbourn Park	5.0
Crump’s Mill Pond	70.0
Cypress Park and Pool	30.6
Holland Athletic Field and Park	8.0
Ida Easter Park	1.0
Lake Kennedy Park	19.9
Lake Meade Park/Howard Mast Tennis Courts/Kidzone	67.8
Lakeside Park Tot Lot	0.7
Lone Star Lakes	1,063.0
Magnolia Park	5.0
Mary Estes Park	1.7
Planters Park	5.0
Pughsville Park	5.0
Sleepy Hole Park	73.6
Turlington Park	1.0
Tynes Park	1.0
Wellons Park	1.0
Whaleyville Square	0.1
Subtotal	1,425.2
Recreation Facilities	Acres
Booker T. Washington Rec Center and Tennis Courts	0.5
Creekside Elementary School	NA
East Suffolk Recreation Center	8.1
Forest Glen Middle School Tennis Courts	5.0
JFK Middle School Athletic Fields	10.2
John Yeates Middle School Athletic Fields	18.5
Kings Fork Middle School	NA
King’s Fork Athletic Field	9.9

New Whaleyville Community Center: Renovations are being made to the former Robertson Elementary School to create a new community center with similar amenities and programs to those at East Suffolk Recreation Center. The new center is scheduled to open by the end of 2014.

Athletic Facilities/Recreation Centers

The City’s largest athletic facility is the John F. Kennedy Athletic Complex, located at John F. Kennedy Middle School on East Washington Street in the Central Growth Area. Other athletic facilities include Kings Fork Athletic Fields and Holland Athletic Fields. Additional facilities are located at Forest Glen Middle School, John Yeates Middle School, Monogram Field, Peanut Park, and Wellons Parks.

There are seven recreation centers totaling 92,464 square feet as shown in Table 5-2, including six located at schools throughout the City. These provide gymnasiums and multi-purpose rooms for public use.

Greenways, Blueways, and Trails

A need for additional water access and multi-use trails in the City was identified during the public input process for this plan. The Suffolk Seaboard Trails project involves the construction of a citywide system of multi-use trails linking parks, recreation, cultural, historic facilities, and neighborhoods. The 11.5 mile trail will be completed in four phases beginning in downtown and ending at the Chesapeake city line near Interstate 664. There are also plans for construction of a pier for fishing and canoe/kayak access on the Nansemond River in Driver.

A number of recreation trails planned or developed at the national, state, and regional levels include the City of Suffolk along their routes. Among these are the Captain John Smith National Historic Trail and the proposed Southside Hampton Roads Trail. As the first national water trail, the Captain John Smith Chesapeake National Historic Trail follows the historic routes of John Smith’s travels, which includes the James and Nansemond River shorelines in Suffolk. The Southside Hampton Roads Trail aims to link 41 miles from downtown Suffolk to Virginia Beach through several mixed facility types including trails, bike lanes, shoulders, and the Elizabeth River Ferry. Of primary interest to bicyclists, certain trail segments are also walking/running friendly.

Mack Benn Jr. Recreation Center	NA
Monogram Field	8.8
National Guard Armory	4.5
Northern Shores Recreation Center	NA
Oakland Recreation Center	NA
Obici House	NA
Peanut Park	5.0
Planters Club	8.0
Suffolk Art Gallery	0.6
Whaleyville Community Center	8.0
Whaleyville Recreation Center	8.4
Subtotal	95.5
Under Development	Acres
Driver Park/Monogram Field	360.0
Other Facilities	Acres
Maintenance Shop	0.9
East Suffolk Administration Offices	NA
Suffolk Sportsplex	382.5
Seaboard Coastline Trail (11.5 miles)	66.7
Subtotal	450.1
TOTAL	2,330.8

Source: City of Suffolk 2014 Parks and Recreation Facilities Inventory



Bennett's Creek Park Boat Slip

Sleepy Hole Golf Course

The public golf course is an 18-hole facility purchased by the City of Suffolk in 2003. The golf course was renovated and reopened for use in 2004. The Obici House Mansion has also been renovated and has reopened as a club house and rental facility.

Other Public and Private Facilities

In addition to the facilities owned, operated and/or managed by the City, there are other facilities and recreation programs provided by other public and private entities. There are several private golf courses, marinas, stables and campgrounds in Suffolk that are open for public use. In addition to the facilities noted above, many other schools throughout the City have playgrounds and/or athletic fields that may be used by the general public. Local athletic organizations offer programs to area residents that utilize athletic fields throughout the City. The Great Dismal Swamp Wildlife Refuge, under the jurisdiction of the U.S. Fish and Wildlife Service, provides a unique natural resource that attracts over 25,000 local, regional, and national visitors each year. It currently provides 100 miles of hiking and biking trails, an interpretive boardwalk trail, bird watching, hunting, and fishing.

Table 5-2: Suffolk Recreation Centers

Name	Total Square Footage
Booker T. Washington Recreation Center	10,459
Creekside Recreation Center	12,058
Kings Fork Middle School Recreation Center	16,324
Mack Benn Jr. Recreation Center	10,283
Northern Shores Recreation Center	10,163
Oakland Recreation Center	10,859
East Suffolk Recreation Center	22,500
TOTAL	92,646

LEVEL OF SERVICE

The 2013 Virginia Outdoors Plan provides recommendations and guidelines for the state and for local governments regarding both outdoor recreation and natural resources that play an important role in residents’ quality of life. A part of this Outdoors Plan is to provide recommendations on a regional level. The City of Suffolk is included in the Hampton Roads region, which covers approximately 2,500 square miles and 22 local governments. The Outdoors Plan does not include formal recommended level of service standards. Rather, the plan provides specific recommendations and priority considerations for each region. The priorities identified for the Hampton Roads region are: health, youth, trails, water access, and land conservation.

To determine the needs of the region, the Outdoors Plan includes the results from the 2011 Virginia Outdoors Demand Survey which ranks the most popular outdoor recreation activities per region. The results for the Hampton Roads region show trails for hiking and walking being the most popular and trails for motorized off-road vehicles being the least popular. The City should use this information when planning future parks and recreation amenities.

Table 5-3: 2011 Virginia Outdoors Demand Survey - Hampton Roads Region

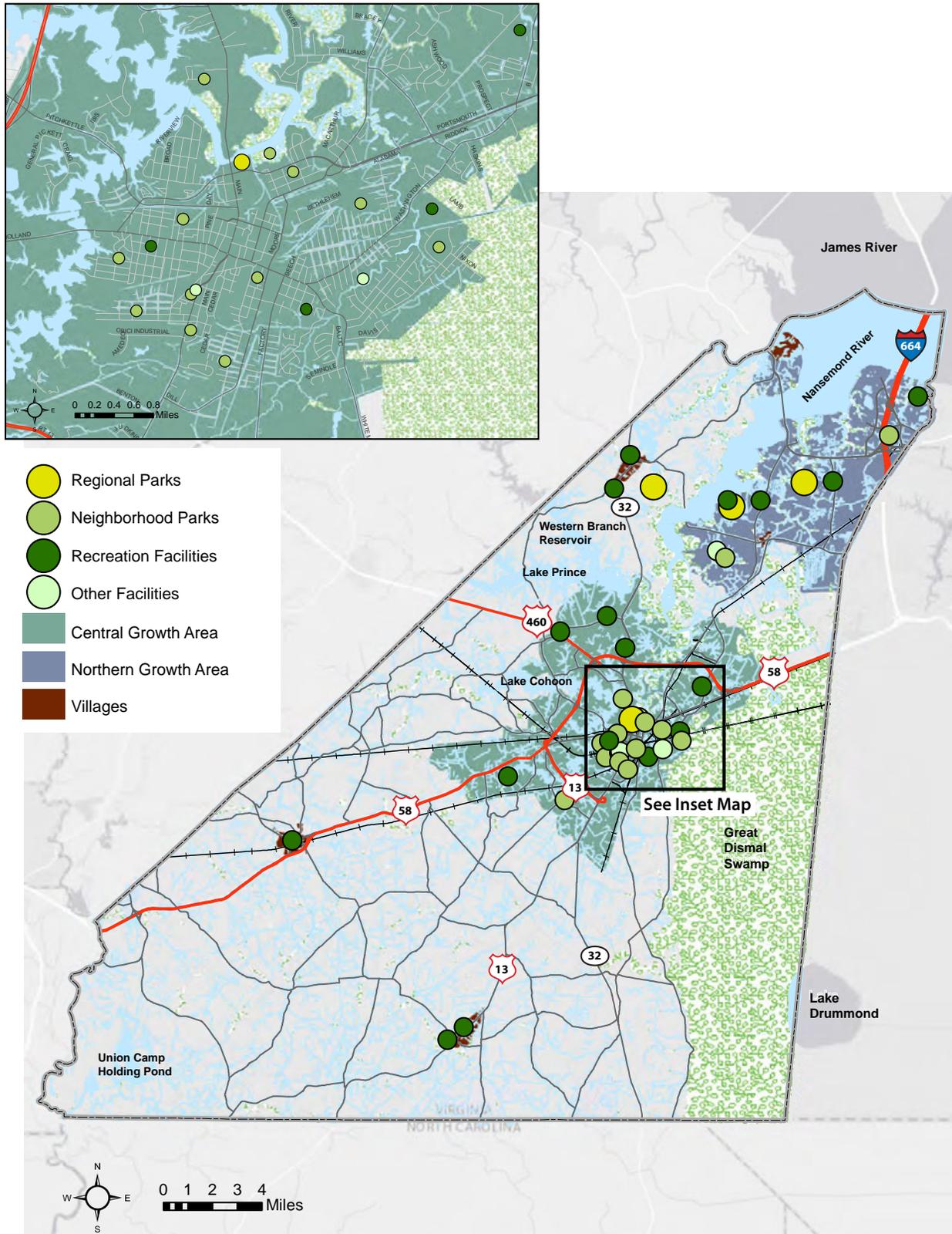
Activity	% of Households in Region
Trails for hiking and walking	72
Trails for bicycles	62
Public access to state waters for fishing, swimming, and beach use	59
Natural areas	56
Historic areas	55
Public access to state waters for non-motorized boating (canoeing or kayaking)	54
Trails for wildlife watching and nature study	47
Playing fields for outdoor sports (softball, baseball, football, and soccer)	44
Public pools	39
Outdoor playing courts for tennis and basketball	38
Trails for horseback riding	25
Public access to state waters for motorized boating	22
Trails for motorized off-road vehicles	17
Other	5

Source: 2013 Virginia Outdoors Plan

In comparison to the state overall and other communities in the region, Suffolk has a fairly low per-capita spending on parks and recreation. As of 2011, Suffolk spends \$55.55 per-capita and ranks 11 out of 14 compared to the region (top locality is the City of Newport News at \$121.55 per-capita and the lowest locality is the City of Chesapeake at \$36.58). They also spend less than the state, which spends \$62.81 per capita, and the average of the region, which is \$72.90. To maintain a competitive and quality parks and recreation program, the City should consider increasing their per-capita spending.



Left: East Suffolk Recreation Center, Right: 4th of July Celebration



Map 5-1: City of Suffolk Parks and Recreation Facilities

PUBLIC SAFETY

Public safety in the City of Suffolk is provided 24-hours per day by the Police Department and the Department of Fire and Rescue. The Police Department is organized into two precincts and 18 patrol districts. Precinct 1 covers the southern part of the City including the downtown area. Precinct 2 encompasses the northern portion of the City. The location of the existing police stations and the patrol sectors is shown in Map 5-2. Police services are also provided out of Police Headquarters, which is located in downtown Suffolk.

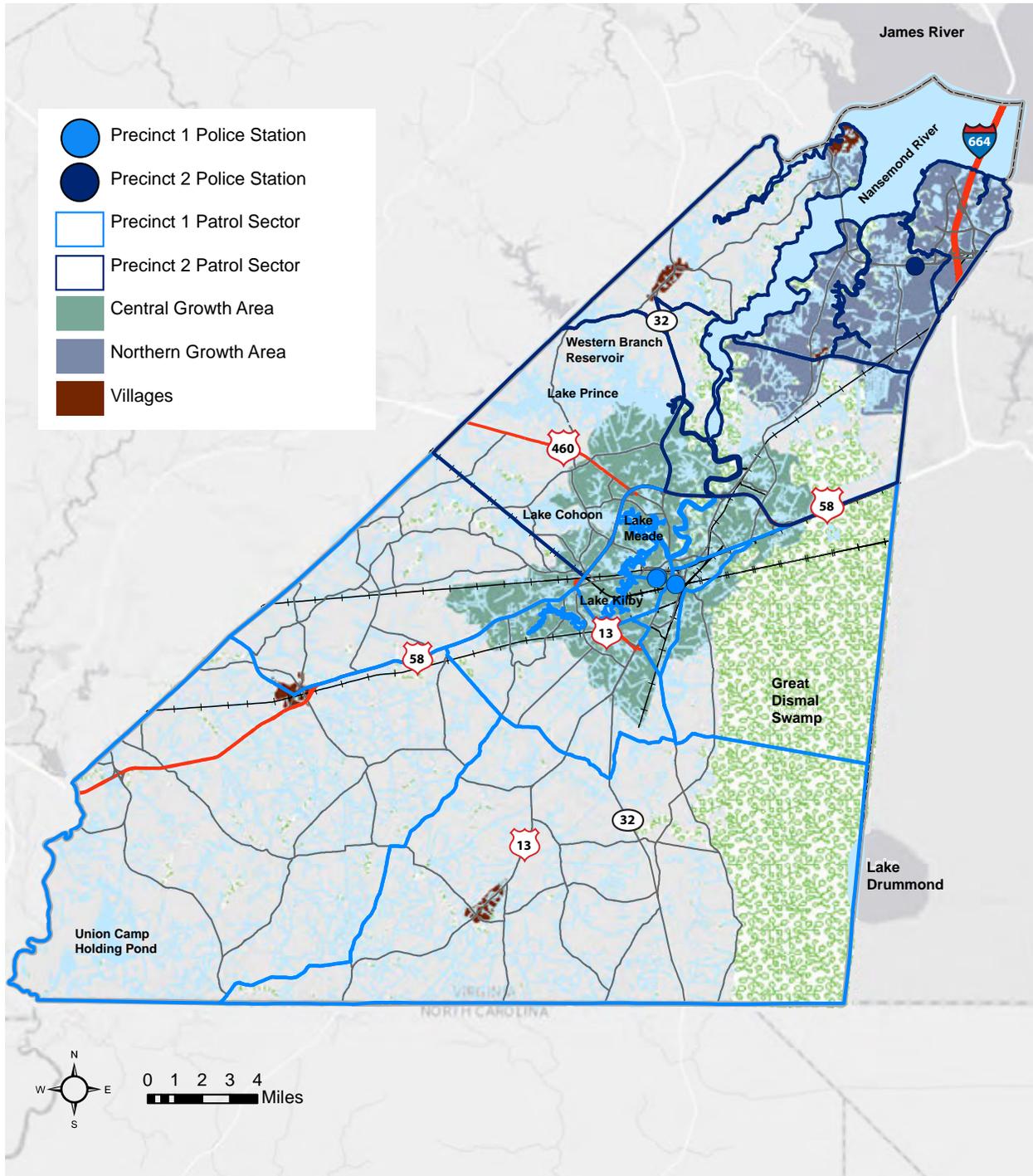
POLICE

The Suffolk Police Department strives to provide proactive and professional services to its citizens, in an effort to meet the City's goals of providing a safe, healthy and diverse community, and enhancing the quality of life of its citizens. It is able to accomplish this task by being organized and responsive along three main divisions: Operations, Investigations, and Administrative.

1. The Operations Division consists of Uniform Patrol services, the officers responsible for responding to 911 and non-emergency calls, as well as proactive patrol and enforcement; and Special Operations which incorporates the Motor Carrier Unit, SWAT, Marine Patrol, Traffic Unit, Honor Guard, and School Resource Officer Unit. Each of these units has a specialized enforcement mission or function, enhancing the Department's ability to provide targeted services to particular segments of the population.
2. The Investigations Division, consisting of Criminal Investigations, Special Investigations, the Neighborhood Enforcement and Surveillance Teams, offers focused, skilled, investigative services to its citizens. Criminal Investigations is responsible for following up on most felony, and some misdemeanor, reports of crime, while Special Investigations and the Neighborhood Enforcement Teams provide proactive investigative efforts targeted at gangs, narcotics, and vice related crime. They are aided in this endeavor by the Surveillance Team and the Criminal Intelligence and Analysis unit.
3. The Administrative Division consists of Records Management, Property and Evidence, the E-911 Public Safety Call Center, and the Office of Professional Standards. It is the mission of this division to provide quality internal and external customer service. This is accomplished by providing quality training, developing comprehensive policies, and holding officers accountable through internal investigations of policy infractions and misconduct.



*Top: Police Officer helping a child
Bottom: Suffolk Police Boat*



Map 5-2: City of Suffolk Police Stations and Patrol Zones

Quality service delivery is impacted by a number of factors including geography, population size, population age, calls for service, nationwide crime trends and special service areas such as walking and bike trails, or retail establishments. In 2013, the Suffolk Police Department was budgeted for 189 officers and 62 civilian personnel to carry out its mission. The goal in deployment of resources, among other things, is to maintain a response time of 5 minutes for priority 1 calls, 10 minutes for priority 2 calls, and 20 minutes for priority 3 calls. As the citizen population increases, either through increasing residential homes, or rapidly increasing business investments, calls for service naturally increase. Increasing calls for service requires commensurate staffing allocations to ensure that the City meets its stated goal of being a safe city.

The 2014-2023 Capital Improvements Plan allocates funding for an additional precinct and required staffing to meet the rapidly burgeoning business and residential population along the 460 and 58 West Corridors. It also provides for sufficient room for a training site, range, and K-9 facility, all of which are critical to providing effective and efficient use of human capital.

FIRE AND RESCUE

The Department of Fire and Rescue is committed to providing a superior level of emergency service that continually improves the quality of life, health, and safety of the citizens of Suffolk. To accomplish this, the Department operates four divisions:

1. The Operations Division offers a variety of services including 24-hour per day response to requests for assistance from any member of the Suffolk community or any visitor to our City. Responding to structure fires both commercial and residential, vehicle fires, hazardous materials incidents, and administering emergency medical care and transportation to the sick and injured are just a few of the requests for assistance that the Department responds to on a daily basis.

Fire and Emergency Medical Service Operations are provided by 2 battalion chiefs, 14 engine companies, 3 ladder companies, 1 rescue squad company, 9 advanced life support ambulances, and 1 EMS supervisor that operate out of 9 fire stations 24-hours per day. In 2013, Suffolk Fire, Rescue, & Emergency Services responded to 11,400 calls for service. The locations of the City's fire stations are in Map 5-3.

2. The Fire Prevention Bureau ensures that codes and ordinances affecting fire and life safety are conformed with; administers the permitting of various hazardous materials processes and storage; develops and presents fire safety programs to the general public; conducts periodic building inspections; investigates complaints of potential fire hazard; and provides training to update department personnel of current standards and practices. In addition, the Fire Prevention Bureau investigates fires of unknown, suspicious or incendiary origin, fires involving death or injury, explosions, false alarms, and hazardous materials incidents. The Bureau also maintains records and data pertaining to hazardous materials located in the City.



Top: Community outreach activities
Bottom: Suffolk Fire Station No. 5

3. The Training Bureau is responsible for the training of new recruits as well as required continuing education credits for all employees' certification levels. The levels include Firefighter I & II, Emergency Medical Technician-Basic, and Emergency Medical Technician-Advanced.

In addition, the Training Bureau teaches and maintains the CPR certification for all personnel in the department. The Training Bureau offers a variety of activities for existing personnel that include:

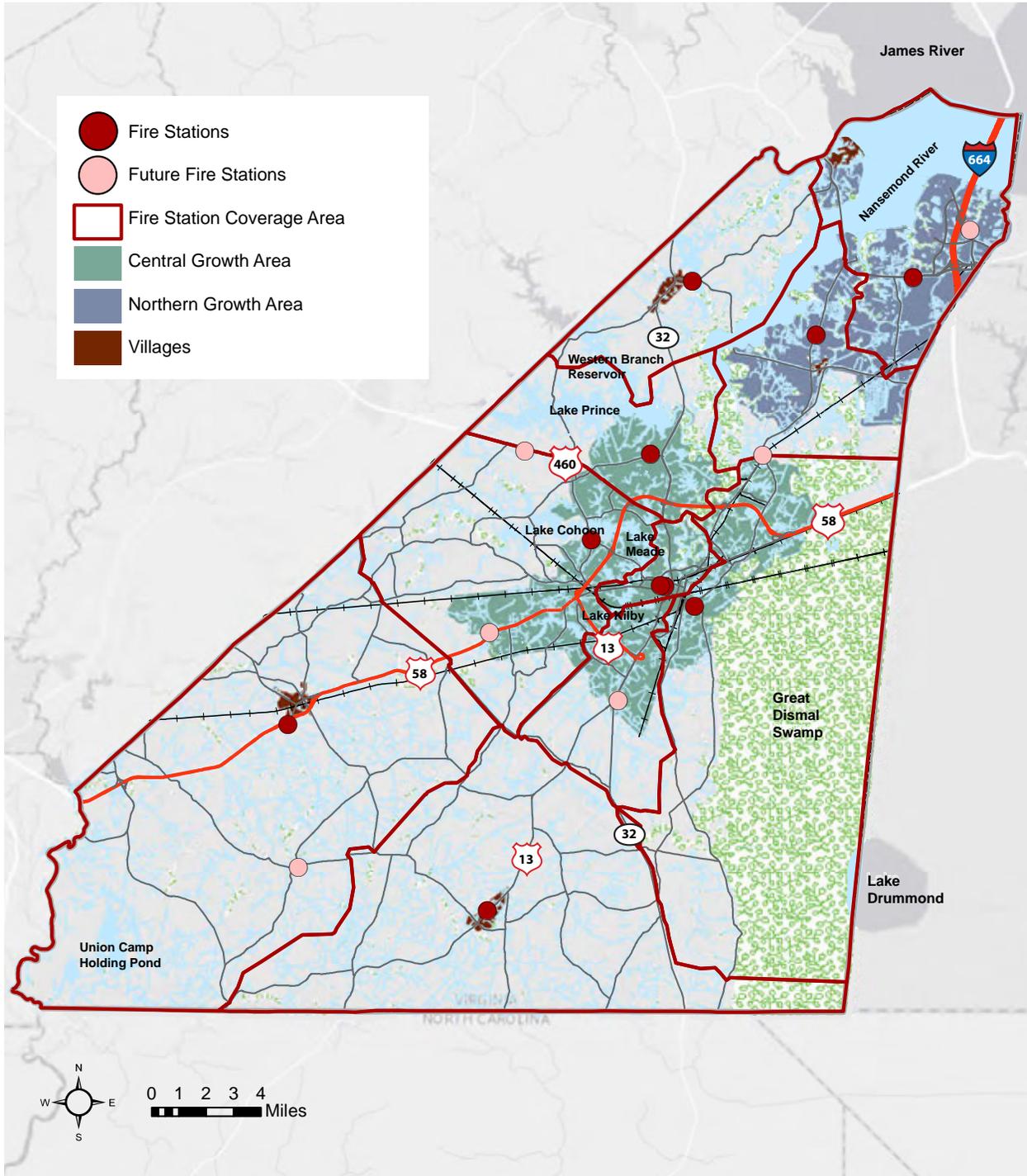
- a. Assignment of regular continuing education and recertification classes for firefighting, basic life support, and advanced life support.
 - b. Scheduling of officer and management programs and National Fire Academy courses.
 - c. Maintenance of a library of training manuals, textbooks and audio/visual training equipment.
4. The Office of Emergency Management is responsible for coordinating preparedness, response, recovery, and mitigation actions in the City. Daily activities include the maintenance of the City's emergency operation center and emergency operations plan, strategic planning for an all hazards approach to managing natural and man-made disasters, and various community outreach projects aimed at educating the public to be prepared for disaster. When a disaster or local emergency affects the City, the Office of Emergency Management is responsible for coordinating response, recovery, and mitigation with other local jurisdictions that are impacted by the same event, the Virginia Department of Emergency Management, and the Federal Emergency Management Agency.

Service delivery in the fire department is impacted by a variety of issues including the number of firefighters per 1,000 residents, the response times of firefighting companies, the staffing of firefighting companies, and the deployment of firefighting forces. The most widely recognized and accepted standard with respect to the staffing and deployment of firefighting resources is the National Fire Protection Association's (NFPA) standard for the Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations, and Special Operations to the Public by Career Fire Departments. The standard is also known as NFPA 1710.

In 2013, Suffolk Fire and Rescue was budgeted for 190 full time career firefighter positions (non-supervisory) and a population of 87,183 residents corresponding to approximately 2.2 firefighters per 1,000 people. It is important to note that this figure reflects a point of information and does not reflect the method of determining fire service staffing needs due to the presence of non-residential land uses as well as the vast geographical land mass of the City of Suffolk.

According to NFPA 1710, the fire department's fire suppression resources shall be deployed to provide for the arrival of an engine company within a 4-minute response time and the initial full alarm assignment within an 8-minute response time to 90 percent of the incidents that require a full assignment of apparatus. A full assignment is generally dispatched to calls involving fires or emergencies in a structure and consists of 2 engine companies, 1 rescue squad company, 1 ladder company, 1 medic unit, 1 battalion chief, and 1 EMS supervisor.

With respect to emergency medical service (EMS) calls, NFPA 1710 calls for the arrival of a first responder with an automatic external defibrillator (AED) to arrive on scene with a 4-minute response time to 90 percent of the incidents. Additionally, the fire department's EMS for providing advanced life support (ALS) shall be deployed to provide for the arrival of an ALS company within an 8-minute response time to 90 percent of the incidents.



Map 5-3: City of Suffolk Fire Stations and Coverage Zones

Although the staffing levels of Suffolk Fire and Rescue are somewhat comparable with those of neighboring jurisdictions in Hampton Roads when balanced against the number of residents, response times of fire and EMS units remain inadequate. Response times are a critical component in determining the level of service that a fire and EMS agency provides to its residents.

In order to reduce both fire and EMS response times, additional fire and EMS stations will have to be constructed to reduce travel times. As stated earlier, the vast geographical land mass of the City of Suffolk is a major hurdle that must be addressed in order to meet the established professional standards as well as the benchmarks that have been established by other fire & rescue agencies.

Another factor that dramatically impacts a fire department's service delivery is staffing. Along with response times, there are several professional standards and benchmarks that have been established for the fire and EMS service staffing. The National Fire Protection Association's 1710 also addresses fire department staffing as a factor of service delivery. NFPA 1710 states that fire company staffing requirements shall be based on minimum levels for emergency operations safety, effectiveness, and efficiency. More specifically, NFPA 1710 states fire companies should be staffed with a minimum of 4 on-duty personnel. Suffolk Fire & Rescue apparatus are routinely staffed with only 3 on-duty personnel.

The 2014-2023 Capital Improvements Plan allocates funding to a variety of fire and rescue related projects, which will presumably improve the service levels of the department. Projects include purchasing additional fire engines, aerial ladders, and ambulances to serve new growth and for replacements; repairing and adding to existing fire-rescue stations; construction of new fire-rescue stations; developing a fire training center; and implementing an emergency vehicle pre-emption system.

LEVEL OF SERVICE

Police

According to the Virginia Law Enforcement Professional Standards Commission (VLEPSC) and the Suffolk Police Department, there is no formal recommended level of service for public safety services. Rather than strive for a level of service recommended by a national or state agency that is external to the community, it is recommended that each police department strive to meet the priorities and needs unique to their community.

In order to provide an adequate level of service, according to the VLEPSC, the City Manager and the Police Chief must determine the services that are necessary to ensure public safety in the jurisdiction, the services that are desired by the residents, and the manner in which to best provide these services. Frequently, the City Manager and the Police Chief base the needs and priorities of the community upon knowledge and trends specific to the community. For example, in the Suffolk Police Department, the number of police officers necessary to provide adequate services is based on a variety of factors including, but not limited to, population, calls for service, quality of life, response times, and the working philosophy of the department.

The Suffolk Police Department currently employs 189 officers, corresponding to approximately 2 officers/1,000 people. Although national and state standards do not exist to determine whether this level of service is adequate, it is possible to compare this ratio to national averages and to other jurisdictions. For example, the Uniform Crime Report, published annually by the Federal Bureau of Investigation, reported that cities with a population of 25,000 to 99,999 averaged 2.1 police officers per 1,000 people in 2012.

It is recommended and desirable that the City establishes level of service based on response times. Response times are a good measure of service, as it is the basic building block and minimum level of service provided by uniformed officers. A more aggressive staffing would allow for service enhancements in proactive enforcement in uniform patrol as well as investigations.

Table 5-4: Police Staffing Recommendations

Staff Needed Based on Citywide Need	Base 2013	2033 Projected Demand	Net Increase
Police Lieutenant (range 31)	10	13	3
Police Sergeant (range 25)	24	32	8
Officer	147	167	20
Evidence Technician (range 17)	4	5	1
Police Records Technician	13	17	4
Communications Supervisor	3	5	2
Communications Operator	20	28	8
Net Increase for Police and Emergency Communications			46

Source: TischlerBise

Fire and Rescue

In the Department of Fire and Rescue, level of service is primarily determined by two factors: the number of firefighters per 1,000 residents and the average response time. With the current staffing level of 191 full time career firefighters, 58 supervisory personnel, 30 part-time emergency medical services personnel, and 218 volunteers. The current fire staffing average in Suffolk is 3.0 fire personnel per 1,000 residents. According to the Fire Chief, 2.5 firefighters per 1,000 residents is a standard recommendation in many fire manuals and is also used as a standard in municipalities throughout the nation.

Suffolk should strive to maintain its current level of service of 3.0 fire personnel/1,000 people. However, it is recommended that the City establish an “aggressive” level of service of 3.5 fire personnel/1,000 people to ensure fire protection services are adequate for the growing population of Suffolk. Increasing the level of service can lower the Insurance Services Office (ISO) rating and the corresponding insurance rates. Table 5-5 shows the amount of staffing required to meet the level of service.

Although staffing manuals are compatible with fire manuals and other municipalities, the response time of the fire rescue department is inadequate. Response time is a crucial component in determining the level of service. Ideally, a unit should be on the scene of an incident within 5 minutes of the call. According to the Suffolk Fire Chief, units arrive, on average, 6 to 7 minutes after the call due to the size of the City and the limited number of fire stations.

2035 SUFFOLK COMPREHENSIVE PLAN

The 2014-2023 Capital Improvement Plan allocates funding to a variety of fire and rescue related projects, which will presumably improve the service levels of the department. Projects include purchasing additional fire trucks and ambulances; repairing and adding to existing fire stations; constructing 5 new fire stations; developing a public safety center; and implementing an emergency vehicle pre-emption system.

Table 5-5: Fire/Rescue Staffing Recommendations

Staff Needed Based on Citywide Need	Base 2013	2033 Projected Demand	Net Increase
Fire and Rescue Full Time Employees (FTEs)	253	385	132

Source: Tischler Bise. Projected staffing needs were determined based on the modeling effort rather than an explicit policy discussion on future levels of service.

SCHOOLS

Rapid residential growth in the City of Suffolk has constrained the capacity of the public schools. As capacity decreases, the demand for new schools increases. Subsequently, new school construction has become a standard component of the City’s capital budget. The Suffolk Public School System currently has 19 schools - 12 elementary, 4 middle, and 3 high schools. Map 5-4 shows the location of the current schools in Suffolk. The school system has an enrollment of over 14,000 pupils that range from pre-kindergarten through the 12th grade.

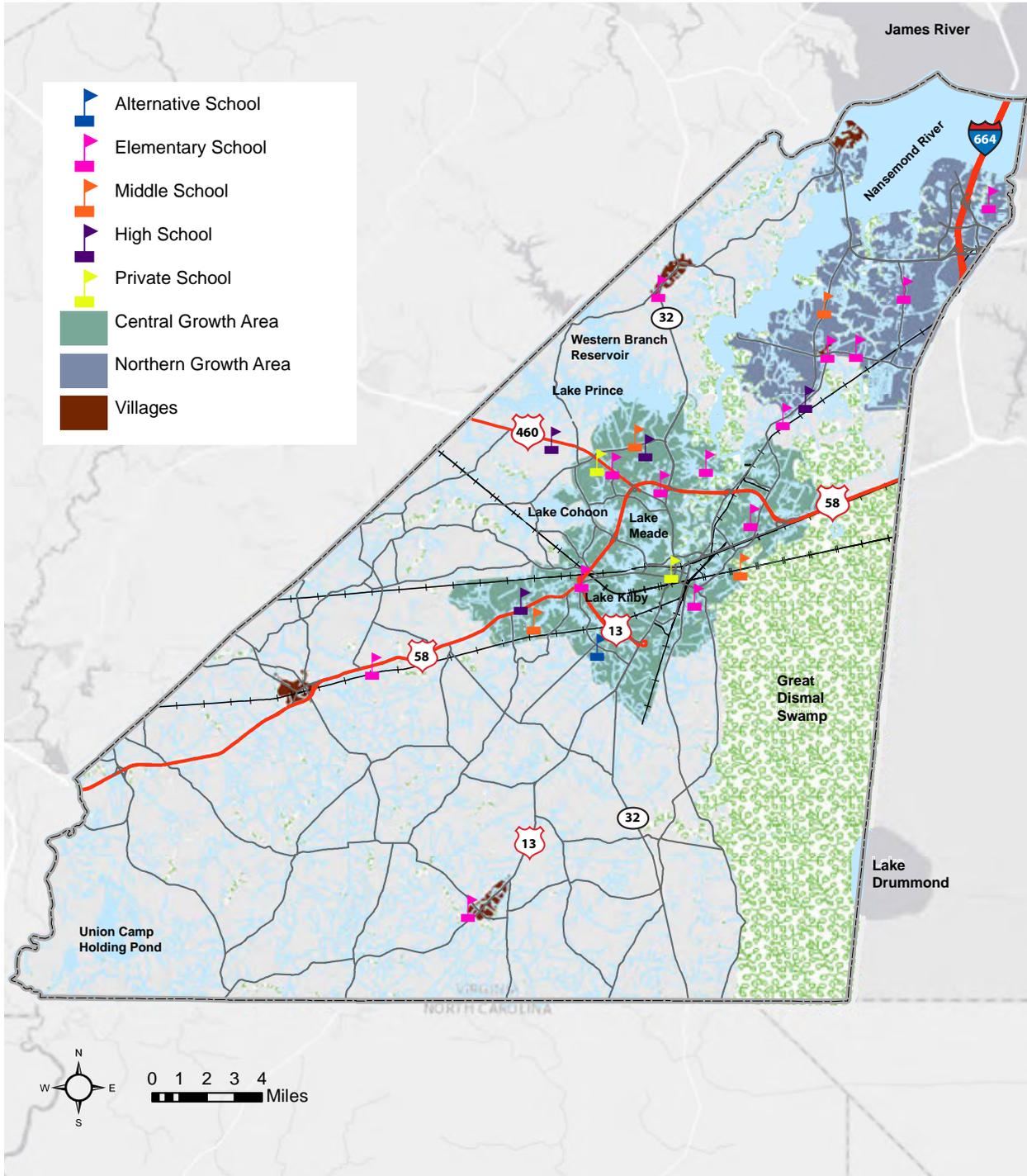
In recent years, new schools have been built at a rate of one per year and significant renovations have been completed at several existing schools. Recently built schools include Creekside Elementary School and Hillpoint Elementary School. The newest school – Pioneer Elementary School – opened to students in the fall of 2014. It replaced Southwestern Elementary School, which closed at the end of the 2013-2014 school year, and has a capacity of 650 students in pre-kindergarten through fifth grade.

Over the past several years, the schools division has been constructing large schools to take advantage of economies of scale in the physical plant, administration, and other areas. The newest elementary schools in the City are now being built to accommodate 700 to 800 students. Because of the lower density land use pattern in the City, this size school has been the most logical. As a result, there are few areas of the City where elementary school students can walk a safe, reasonable distance to school.

Recently, however, the City Council and school system have begun exploring the idea of smaller-scale, more neighborhood-scale schools. These schools could be located within walking distance of homes, and could serve as community centers and gathering places. To date, the City’s land use pattern has not supported this except in limited locations.



Left: Booker T Washington Elementary School, Middle: Forest Glen Middle School, Right: Kings Fork High School



Map 5-4: City of Suffolk Schools

2035 SUFFOLK COMPREHENSIVE PLAN

In the fall of 2005, the City Council endorsed a set of smart growth principles for school facility planning. The principles recommended that the school board and the City council work together to plan for public schools, that:

- Provide the highest quality education
- Involve broad community involvement in facility siting and planning
- Involve site selection that is consistent with the City’s long-range growth plan (comprehensive plan)
- For some facilities, particularly lower grades, the size of facility and site acreage may be smaller in size and fit well within context of the neighborhood or village in which they are located
- Function as centers and anchors of community by physical linkages to surrounding areas and after-school uses
- Support ease of accessibility for alternative modes of transportation (e.g. biking, walking)

Future school site selection and funding will be based on these principles.

The capacity of Suffolk schools has been an important issue in the City, as it is one of the levels of service standards used in the existing adequate public facilities review policy for re-zoning and conditional zoning cases. Capacity is generally dependent upon the programs offered in each school, funding sources, and other external factors. While capacity varies between schools, a target capacity is necessary in order to design new facilities and evaluate the level of service offered by each school.

LEVEL OF SERVICE

Data from Suffolk Public Schools indicates that total current enrollment is 14,365 students. The following tables illustrate the square footage of each elementary, middle, and high school; the current enrollment numbers as of February 24, 2014; and the current levels of service.

Table 5-6: Elementary Schools Inventory, Enrollment, and Utilization

Name	Year Built	Grades	Site Acreage	Total Schools sq. ft.	Enrollment	Effective Program Capacity	Current Utilization Building Capacity
Booker T. Washington Elementary	1999	PreK-5	15.8	93,000	480	531	90.4%
Creekside Elementary	2006	K-5	18.5	97,000	1,014	721	140.6%
Driver Elementary	1968	2-5	9.7	64,100	332	532	62.4%
Elephant’s Fork Elementary	1979	PreK-5	14.3	58,800	679	482	140.9%
Florence Bowser Elementary	1962	PreK-1	13.0	26,600	235	225	104.4%
Hillpoint Elementary	2008	PreK-5	15.9	97,000	809	758	106.7%

Name	Year Built	Grades	Site Acreage	Total Schools sq. ft.	Enrollment	Effective Program Capacity	Current Utilization Building Capacity
Kilby Shores Elementary	1979	PreK-5	15.3	58,800	558	508	109.8%
Mack Benn, Jr. Elementary	1998	PreK-5	26.6	86,100	732	756	96.8%
Nansemond Parkway Elementary	1979	PreK-5	14.6	58,800	548	561	97.7%
Northern Shores Elementary	1996	PreK-5	15.1	72,800	781	718	108.8%
Oakland Elementary	1997	K-5	8.5	62,000	512	487	105.1%
Southwestern Elementary	1955	PreK-5	14.1	52,300	495	412	120.1%

Table 5-7: Elementary Schools Level of Service

	Demand Units	Acres per Student	Total Schools SF per Student
LOS based on Current Enrollment	7,017	0.025	117
LOS based on Capacity	6,691	0.027	123

Table 5-8: Middle Schools Inventory, Enrollment, and Utilization

Name	Year Built	Grades	Site Acreage	Total Schools sq. ft.	Enrollment	Effective Program Capacity	Current Utilization Building Capacity
Forest Glen Middle School	1965	6-8	61.7	77,000	399	389	102.6%
John F. Kennedy Middle School	1965	6-8	39.2	142,400	564	644	87.6%
John Yeates Middle School	1965	6-8	28.5	105,100	1,135	914	124.2%
King's Fork Middle School	2001	6-8	35.4	187,000	997	1,035	96.3%

Table 5-9: Middle Schools Level of Service

	Demand Units	Acres per Student	Total Schools SF per Student
LOS based on Current Enrollment	3,165	0.052	161
LOS based on Capacity	2,982	0.055	171

Table 5-10: High Schools Inventory, Enrollment, and Utilization

Name	Year Built	Grades	Site Acreage	Total Schools sq. ft.	Enrollment	Effective Program Capacity	Current Utilization Building Capacity
King's Fork High School	2004	9-12	80.0	275,300	1,448	1,642	88.2%
Lakeland High School	1991	9-12	69.5	222,400	1,121	1,453	77.2%
Nansemond River High School	1991	9-12	50.0	222,400	1,526	1,424	107.2%

Table 5-11: High Schools Level of Service

	Demand Units	Acres per Student	Total Schools SF per Student
LOS based on Current Enrollment	4,160	0.047	173
LOS based on Capacity	4,519	0.044	159

School facility planning will continue to be an issue with the City as it continues to grow. The school system uses the general rule that the rate for each new single-family unit is 0.45 students per unit. Table 5-12 shows the estimated number of new student demands. As shown in the table, an estimated 5,200 additional students will be added to the school system during the next 20 years. With this in mind, and acknowledging the overcapacity of many of the existing schools, additional schools will need to be a City priority in the future.

Table 5-12: New Student Demands

	Unit	Current Infrastructure	Demand	Cost
Elementary Schools	Seats	6,691	2,600	\$47,271,000
Middle Schools	Seats	2,982	1,200	\$49,816,000
High Schools	Seats	4,519	1,400	\$40,683,000
Buses	Vehicles	280	109	\$5,468,000
Schools Admin Space	SF	120,000	20,000	\$1,099,000

LIBRARIES

In addition to the main library, the Morgan Memorial Library, the City also offers 2 branch libraries – North Suffolk Library and Chuckatuck Library – as well as a citywide bookmobile. At present, residential growth has outpaced the growth of the library system, resulting in an inability to provide adequate library facilities and materials to serve the population.

While the definition of adequate library facilities and materials is often specific to individual communities, the Library of Virginia offers public libraries guidance in determining the definition of “adequate” for their community. To aid Virginia public libraries in defining “adequate facilities and materials”, the Library of Virginia created Planning for Library Excellence, which includes access to standards and guidelines, as well as assistance in assessments, long-range and strategic planning, and evaluations.

For example, in a previous edition of Planning for Library Excellence, the Library of Virginia recommended that library facilities be designed to provide 0.6 square feet of library space per capita. It further recommended that the library meet the minimum “Guidelines for Determining Space Needs”, as defined by the Planning for Library Excellence. These included spatial guidelines for print and non-print collections; study and leisure reading areas; staff work and lounge areas; computer, listening, and viewing stations; and miscellaneous needs such as space for heating and cooling equipment, elevators, and general meeting and conference space.

While the recommendations for library space per capita are only a guideline for achieving adequate facilities, it is helpful to compare Suffolk’s current square footage to this recommendation.

Table 5-13: Library Facilities

Name	Total Square Footage	Year Built
Morgan Memorial Library	15,476	1986
North Suffolk Library	19,000	2007
Chuckatuck Library (rented)	2,000	n/a

Source: City of Suffolk

LEVEL OF SERVICE

Considering the 2013 population of Suffolk was 87,183, the Suffolk Public Library should provide approximately 52,300 square feet of library space to accommodate the current population, which reflects 0.6 square feet per capita as recommended by an edition of the Planning for Library Excellence. According to the Library Director, Suffolk currently has 35,776 square feet of library space, which results in 0.41 square feet/capita. This is currently an inadequate amount based on the recommendations previously noted.

A new downtown library is included in the 2014-2023 Capital Improvement Plan (CIP) with planning funding identified in the early years and construction funding in the later years. With the addition of this planned library, the square footage offered by the Suffolk Public Library will increase to approximately 45,000 square feet. If construction occurs within the 10-year CIP timeframe, levels of service would increase slightly given projected population; however, it will still be below the 0.6 square feet per capita desired level of service. Table 5-14 shows the number of square feet of library space and holdings required to meet this desired level of service.



North Suffolk Library

Table 5-14: Required Library Space and Holdings

	Unit	Current Infrastructure	Demand	Cost
Library Facilities	SF	35,776	10,000	\$423,000
Library Materials	Units	246,946	74,117	\$2,149,000
Library Vehicles	Vehicles	3	0	\$0

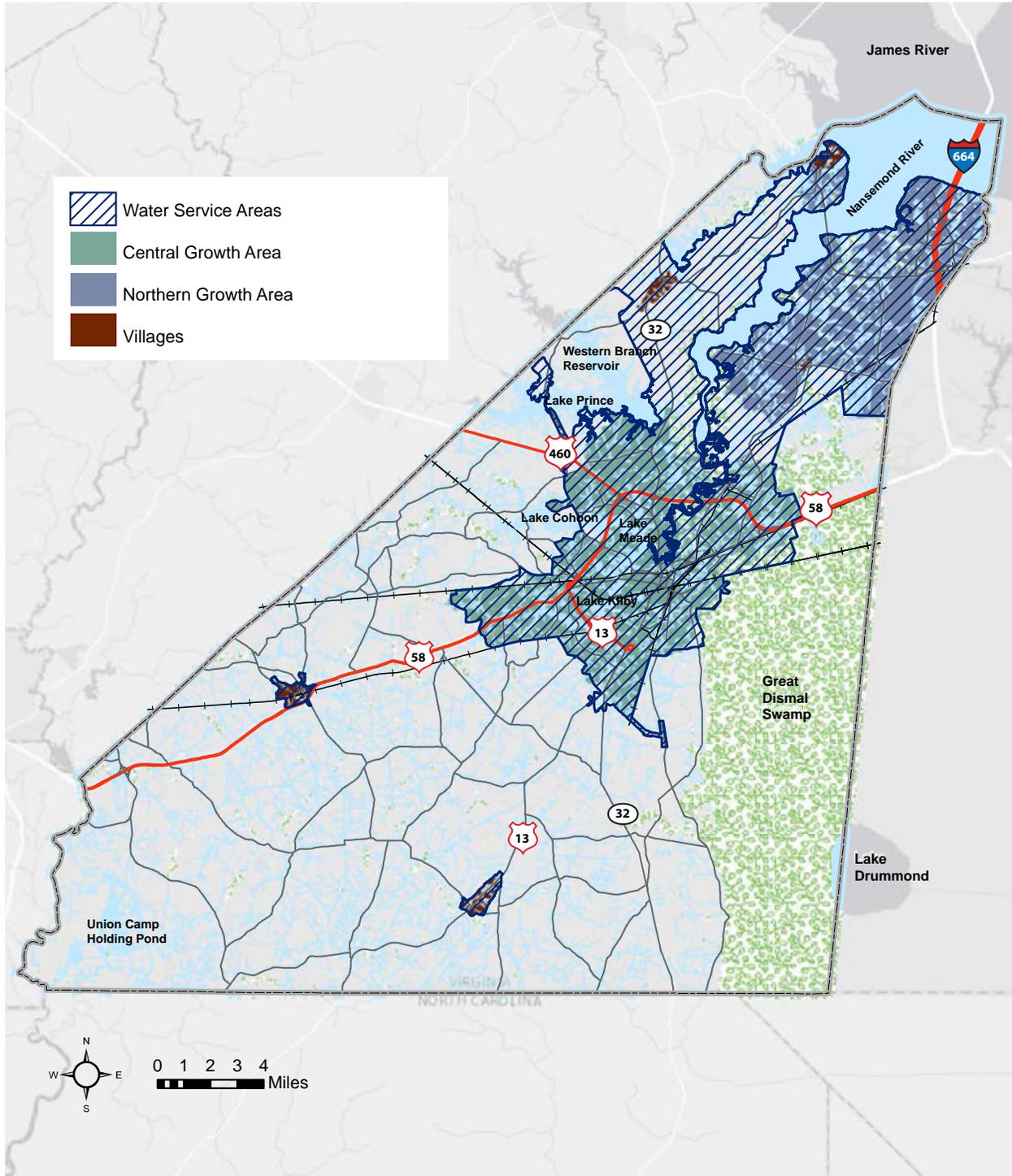
Source: City of Suffolk Fiscal Impact Analysis of Growth Scenarios

PUBLIC POTABLE WATER

WATER SUPPLY

The City of Suffolk is the source community for the majority of the surface water reservoirs serving the South Hampton Roads region. Within the City’s boundaries, there are nine water bodies that are currently used as municipal surface drinking water supplies (See Map 5-5). The City’s potable water supply is derived from a combination of surface and groundwater sources as indicated in Table 5-15. Surface water for the City is drawn from the Lone Star Lakes Reservoir system and Crumps Mill Pond Reservoir. Groundwater is withdrawn from four deep wells utilizing the Potomac Aquifer. These wells are located at the G. Robert House, Jr. Water Treatment Facility, on Rt. 10 adjacent to Western Branch Reservoir, and on Crittenden Road.

The City of Suffolk and Isle of Wight County formed the Western Tidewater Water Authority (WTWA) in 1998 as a regional approach to meeting its member jurisdiction’s long term water supply needs. This regional approach allows for the member jurisdictions to work jointly in the development of water sources and to minimize redundant facilities necessary to meet residents’ water demands. The Authority



Map 5-5: Public Water Service Area

and its member jurisdictions executed the Western Tidewater Water Agreement in 2009, which sets forth the Authority's operating arrangements through 2048. As noted above, the WTWA was issued a groundwater withdrawal permit for up to an annual average of 8.34 MGD (million gallons day) in 2005. The WTWA anticipates utilizing this permitted groundwater source to meet the member jurisdictions' demands prior to any expansion of surface water treatment facilities. In preparation of meeting the WTWA member jurisdictions' demands beyond their current water sources, inclusive of the WTWA permitted groundwater withdrawal, the WTWA, Suffolk and Isle of Wight executed an agreement with the City of Norfolk through 2048 for a raw water supply (3 MGD in 2014, increasing 1 MGD every two years, capping at 15 MGD in 2037). This unique ramp-up agreement allows for the WTWA members to develop additional treatment facilities on a timely schedule based on experienced demands.

In addition to the above water sources, the City of Suffolk executed a 40-year agreement with the City of Portsmouth in 1997 for treated, potable water supply from Portsmouth's Lake Kilby Water Treatment Facility (2.54 MGD). This treated water supply generally serves the core City south of the Route 58 by-pass.

The City of Suffolk also operates an active community well distribution system in the Whaleyville area. To satisfy a Consent Order with the Virginia Department of Health for high fluoride and sodium levels, the City recently installed a new well in this community which is currently meeting the primary maximum fluoride levels (less than 4 parts per million, ppm); however, if the Environmental Protection Agency (EPA) enforces the reduction rule requiring a maximum of less than 2 ppm for fluoride, future treatment or extension of City treated water may be required.

WATER TREATMENT

Residents of Suffolk's downtown area have received treated water for more than 100 years. The system has grown along with the City since the first connections to the system were made in 1889. Initially, the distribution and transmission system in the downtown area was owned and operated by the City of Portsmouth. In 1982, the City acquired the distribution and portions of the transmission system from Portsmouth at the same time it was developing the initial phase of the G. Robert House, Jr. Water Treatment Plant.

Raw water drawn from the Suffolk-owned surface water reservoirs and groundwater wells is treated at the G. Robert House Jr. Water Treatment Facility in the Chuckatuck area of the City. The facility produces potable water by blending treated surface water with groundwater. There are two separate treatment processes at the G. Robert House Jr. Water Treatment Plant, a conventional sedimentation/filtration process for surface water (3 MGD permitted) and an Electro Dialysis Reversal (EDR) treatment process for groundwater. Phase II expansion of the EDR facility was recently completed, expanding the total capacity of the plant to 17.45 MGD. As water demands increase beyond the existing plant's capacity, inclusive of the permitted WTWA groundwater source, the next phase will be constructed to expand capacity of the surface water by an additional 5 MGD. Though permitted at 3 MGD, the surface water plant is generally operated at 1 MGD with peak operation at 2 MGD to ensure the highest level of water quality delivered to City customers. This expansion will be scheduled based on need. This work consists of only the plant expansion and does not include expansion of the transmission system for treated water to various outlying areas identified in the City's growth corridor plans. See Table 5-15 for safe yield amounts of the City's water system.

Table 5-15: Suffolk Safe Yield Amounts

Name	Type	Yield (MGD)
Lone Star Lakes	Surface	1.20
Wells	Groundwater	18.50
City of Portsmouth Potable Water	Agreement	2.54
City of Norfolk Raw Water	Agreement	3*

*2014 amount is 3 MGD, increases 1 MGD every two years starting in 2016, capping at 15 MGD

WATER DISTRIBUTION

The City's water distribution system currently consists of approximately 454 miles of transmission and distribution lines, two booster pumping stations and 24,654 active water accounts. These include pipe diameters ranging from 2 to 36 inches. The City also has elevated and ground storage tanks for fire protection. The City has slightly over 14 MGD in above-ground storage and anticipates increasing its storage capacity to 18 MGD by 2026 (See Table 5-16 below). Overall average daily water use is 6.67 MGD (360,000 gallons per day of which is sold to Isle of Wight County), with an average peak use reaching 7.5 MGD during times of drought.

Table 5-16: Suffolk Water Distribution

Tank Name	Capacity (Gallons)
North Suffolk Tank	1,500,000
Wilroy Tank	500,000
County Street Tank	500,000
City Farm Tank	760,000
Holland Tank	300,000
Whaleyville Tank	200,000
WTP Tank - 1mg Clearwell	1,000,000
WTP Tank - 3mg Clearwell	3,000,000
Westport Tank	2,000,000
Carolina Rd Tank	2,000,000

WATER CHALLENGES

Protection of the City's water supply and that of surrounding communities is of vital importance to the region. The current zoning adjacent to the water supply reservoirs is primarily Rural Estate and will continue under the Focused Growth Approach. This zoning allows for minimal development while protecting the water quality of the reservoir supply systems. In suburban areas, the primary concerns for maintaining a healthy water supply revolve around minimizing water quality impacts due to construction activities, pollutant loading due to normal runoff from impervious surfaces and pollutants from accidental spills. The City has a neighborhood petition process for the extension of City sewer service to reduce the number of septic systems directly impacting watershed areas.

The biggest challenge facing the City related to water supply is the timing involved in deciding when to construct future water treatment capacity, as well as where and when to construct future water transmission lines. Since it takes many years to plan, design and construct water treatment facilities and large diameter water transmission pipeline projects, anticipating and predicting growth in areas where additional infrastructure is necessary based on demand is difficult. The greatest risk is under-predicting growth, which could leave the City unprepared to meet the water demands of its citizens and businesses. The City must be prepared to fully satisfy water demands if growth rates exceed current projections. For that reason, the City and WTWA must base long-term water infrastructure planning decisions on reasonable high-end growth projections that may exceed the projections in the growth plan.

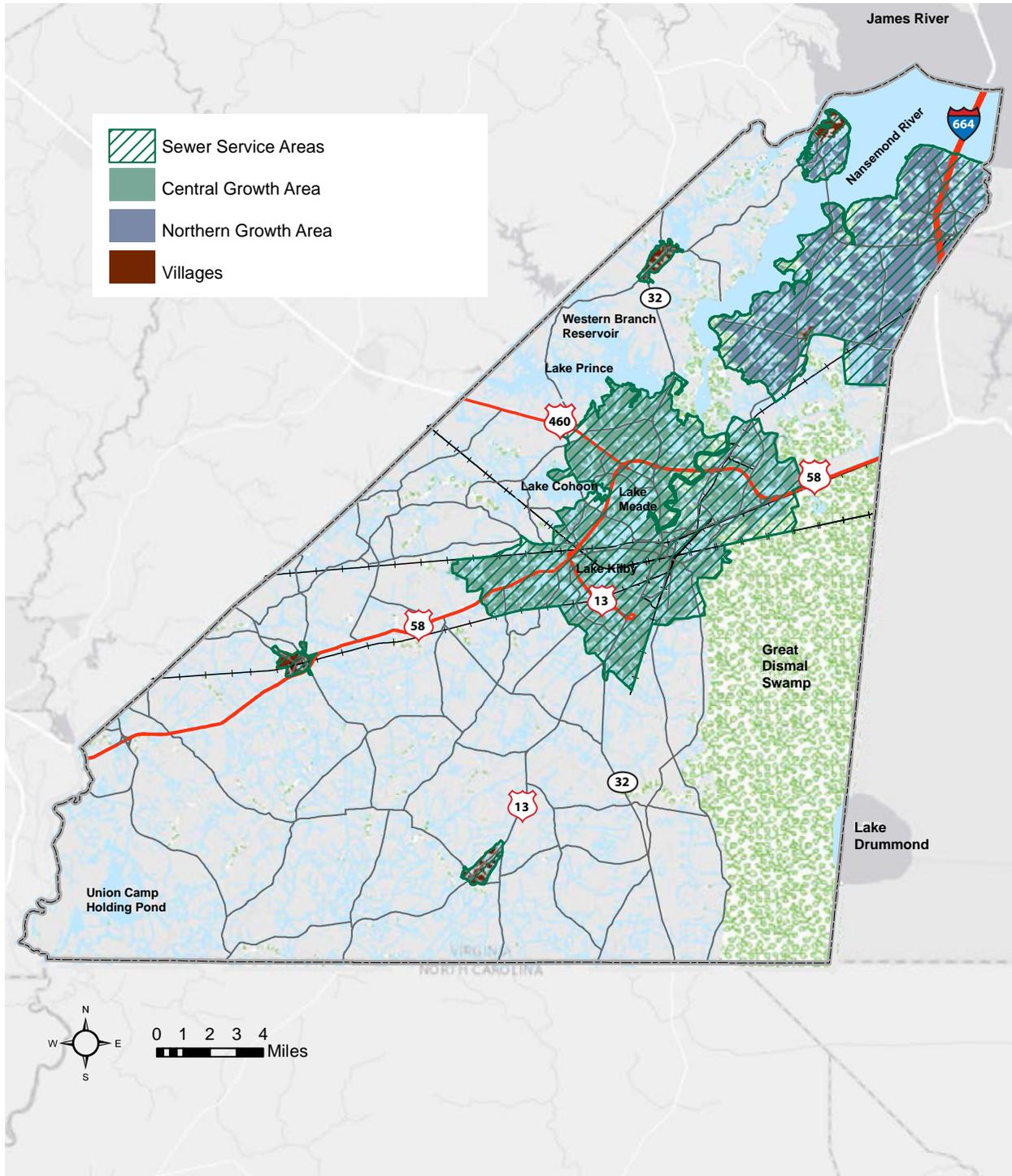
Additional challenges anticipated in relation to water supply and distribution include:

- Changing fluoride regulations that would affect the Whaleyville Well System requiring treatment to remove high fluoride levels or extension of the City's primary distribution system. This would eliminate the use of the existing community wells serving this area of the City. Removal of fluoride and disposal of waste concentrate are costly options for a small, rural area.
- Maintaining source water protection from urbanization and agricultural practices surrounding the City's many surface water reservoirs. Current zoning provides minimal protection, however, continued urbanization and growth in the rural areas of the City could present water quality runoff issues in the future.
- Balancing the implementation of new expanded facilities and their associated costs with minimizing any additional utility rate impacts to the City's customer base.

PUBLIC SANITARY SEWER

SYSTEM OVERVIEW

Approximately two-thirds of the City's population is served by the public sewer system, with the remaining population using on-site sewer disposal (septic) systems which are individually permitted by the Virginia Department of Health and are considered privately owned systems. Over the past 20 years, the City has extended sanitary sewer service to unserved areas to reduce the number of septic systems directly impacting watershed areas.



Map 5-6: Sanitary Sewer Service Area

The City's wastewater collection system currently consists of approximately 330 miles of sanitary sewer mains and 140 pumping stations (See Map 5-6). The City's system discharges to the Hampton Roads Sanitation District (HRSD) transmission force main, which conveys wastewater to the Nansemond Treatment Plant located in northeast Suffolk, just east of I-664 at the Monitor-Merrimac Memorial Bridge Tunnel.

The City currently generates approximately 5,124 CCF (centum cubic-feet) of wastewater per day.

FEDERAL CONSENT DECREE

In 2007, the City of Suffolk and the surrounding Hampton Roads communities, along with HRSD, were placed under a Department of Environmental Quality (DEQ) issued Regional Order by Consent (2007 Order). The 2007 Order was imposed for the purpose of reducing sanitary sewer overflows (SSOs) caused by inflow and infiltration (I/I) of stormwater and groundwater primarily during wet weather events. I/I reduces the capacity in the sewer systems which can increase the possibility of SSOs. HRSD has also entered into a Federal Consent Decree with the Department of Justice (DOJ), DEQ and the EPA in 2010 to ensure sufficient capacity within the region's sanitary sewer system. To work on a more regional and cost effective approach, the Hampton Roads communities and HRSD entered into a Memorandum of Agreement in 2014. This MOA provides for HRSD to develop and implement a Regional Wet Weather Management Plan (RWWMP), along with performing rehabilitation work within the communities' sewer assets to provide the necessary wet weather capacity. The MOA also set forth a schedule for amending HRSD's Decree by August 31, 2014 and the execution of a new DEQ Order by Consent for the Hampton Roads communities by December 31, 2014 (2014 Order). The 2014 Order will require the communities to maintain their systems, address significant deficiencies leading to infiltration/inflow within their systems and coordinate with HRSD on the development of the RWWMP. This new regional approach is anticipated to save the regional customers up to \$1 billion over the next 30 years.

The City has been a regional leader in its efforts to comply with the 2007 Order and in the development of the 2014 Order. The City's Utility Fund Capital Improvement Plan has identified the necessary projects to ensure compliance with the 2014 Order, and is updated regularly.

CHALLENGES

The biggest challenge facing the City related to its sanitary sewer system is the restricted capacity to meet growth projections because of the HRSD transmission force main and the lack of redundancy which limits system reliability. As mentioned above, HRSD is considering additional transmission in the future and the City is working closely with the agency for growth projection planning.

Another challenge includes providing sewer service to areas outside the planned Growth Areas to the surrounding rural villages of Holland and Whaleyville. These areas are west and south of the primary service area and are currently served by private on-site sewer disposal or "septic" systems. As these systems age and become less reliable, growth within these rural villages may necessitate consideration of extension of public sewer. Because of their remote locations, this is a costly option and other alternatives may also need to be considered to serve these areas.

STORMWATER

WATER QUANTITY AND QUALITY

The City's stormwater system is critical to protecting both the environment and property from flood damage. Stormwater is the result of rainfall in the community. Typically, some rainfall is absorbed back into underground aquifers through the soil. The remainder is known as runoff. This runoff moves over impervious surfaces such as streets, driveways, and roof tops into the City's streams and rivers through ditches and storm drains. Runoff can be a problem because as the water moves across the ground it can pick up contaminants and various pollutants. Some of these pollutants may include silt and soil, nutrients, trash, bacteria, oils, and heavy metals. The City of Suffolk has a distinct, separate stormwater system from the sanitary sewer system.

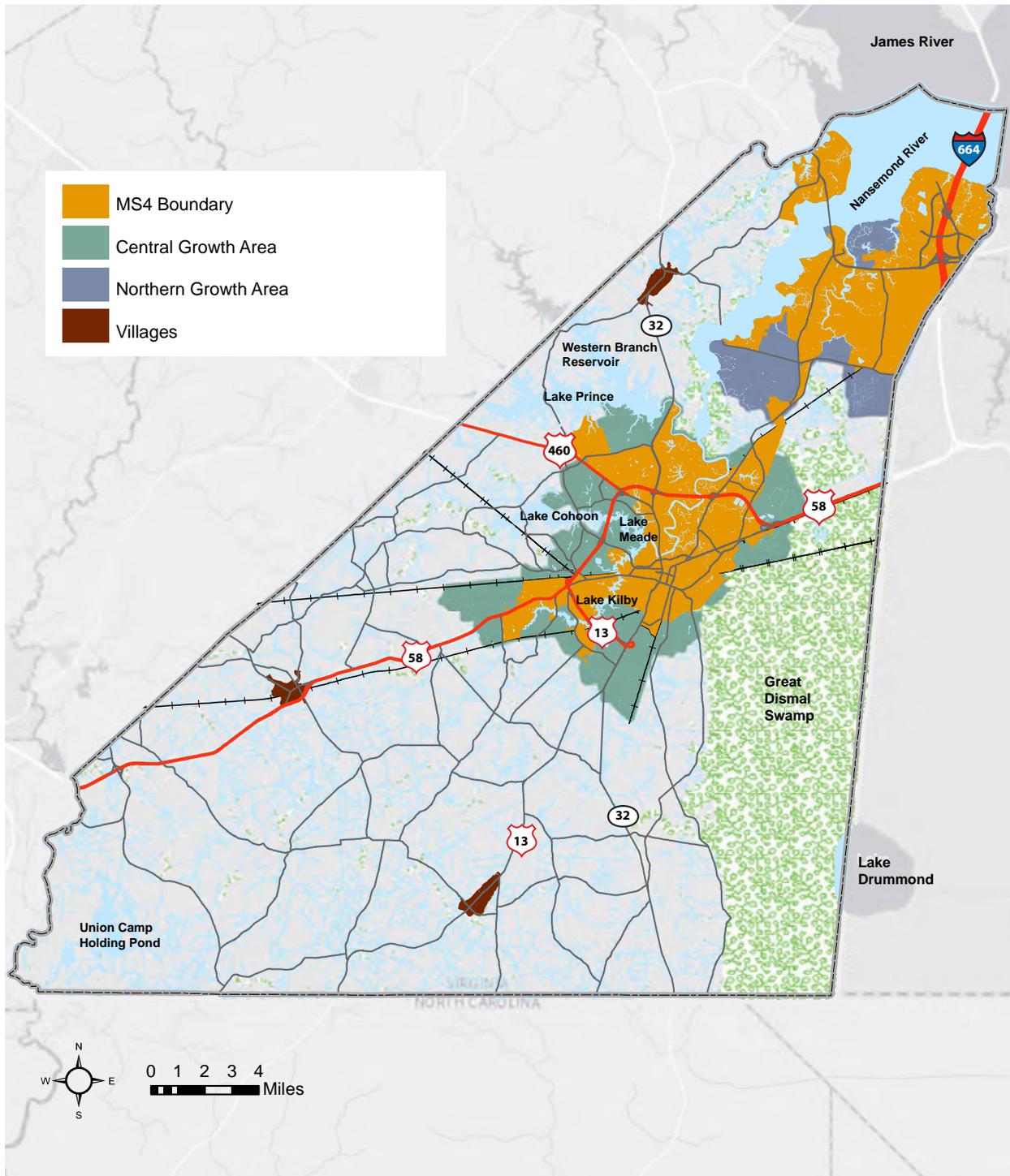
The City currently owns and maintains an extensive stormwater conveyance system that includes pipes, culverts, channels, ditches, storage and treatment facilities, and other structures. The goal of stormwater management facilities is to reduce pollutants entering the surface waters of the City to the greatest extent possible and to manage the quantity of stormwater discharge in order to reduce flooding risks throughout the City.

STORMWATER GENERAL PERMIT PROGRAM

The discharge of stormwater into surface waters is regulated by various federal, state, and local laws and regulations. The City of Suffolk's stormwater system is regulated under the Virginia Pollution Discharge Elimination System for Small Municipal Separate Storm Sewer Systems (MS4) general permit program, as shown on Map 5-7: Suffolk MS4 Boundary.

Under this permit the City must adopt the following minimum control measures:

1. **Stormwater Management Compliance Measure 1: Public Education and Outreach.** The City of Suffolk participates by voluntary contribution and membership in the Hampton Roads Planning District Commission (HRPDC) and the Hampton Roads Regional Stormwater Management Committee (RSMC). The City also utilizes the HRPDC's regional HR GREEN programs for public education and outreach.
2. **Stormwater Management Compliance Measure 2: Public Participation and Involvement.** The City of Suffolk holds clean up events and other water quality improvement community projects and educational events. The City of Suffolk participates by voluntary contribution and membership in the Hampton Roads Planning District Commission (HRPDC) and the Hampton Roads Regional Stormwater Management Committee (RSMC). The City also utilizes the HRPDC's regional HR GREEN programs for public participation and involvement.
3. **Stormwater Management Compliance Measure 3: Illicit Discharge Detection and Elimination.** The City of Suffolk monitors, detects, and eliminates illicit discharges into the stormwater system. The City continues to map, screen, and inspect municipal outfalls for illicit discharges. The Suffolk City Code provides monitoring and enforcement authority for the detection and elimination of illicit discharges into the stormwater system.



Map 5-7: Suffolk MS4 Boundary

4. **Stormwater Management Compliance Measure 4: Construction Site Stormwater Runoff Control.** The City of Suffolk continues to ensure that construction projects maintain compliance with the Virginia Erosion and Sediment Control (ESC) and Virginia Stormwater Management Program (VSMP) laws and regulations through permitting, plan review, and inspection. As part of the City of Suffolk's ESC program, the City is responsible for the issuance and enforcement of Land Disturbance Permits. The City of Suffolk's ESC and Stormwater Programs allow the City to aid in the reduction of pollutant laden stormwater runoff from construction sites and better protect our citizens and the environment from the adverse effects of unmanaged runoff.
5. **Stormwater Management Compliance Measure 5: Post-Construction Stormwater Management.** The City of Suffolk ensures that new development projects maintain compliance with the Virginia Stormwater Management Program (VSMP) laws and regulations through plan review, permitting, and inspection. The City conducts routine annual site inspections of Stormwater Best Management Practices (BMP) facilities to identify and correct BMP deficiencies. The inspections ensure that BMP facilities are maintained to design criteria and continue to properly function after construction. All BMPs within the City of Suffolk's MS4 permit area are tracked and identified for inspection.
6. **Stormwater Management Compliance Measure 6: Pollution Prevention and Good Housekeeping for Municipal Operations.** The City of Suffolk continues to develop procedures to help minimize and prevent pollutant discharge from daily operations such as: road, street, and parking lot maintenance; equipment maintenance; and the application, storage, transport, and disposal of pesticides, herbicides, and fertilizers.

The City of Suffolk MS4 Program Plan will continue to be updated as required and based on a schedule which is approved by the Department of Environmental Quality (DEQ). The program plan is reviewed annually by DEQ as part of the City's annual report required to maintain the City's VSMP permit.

STORMWATER UTILITY

The City maintains a stormwater utility, which charges a fee to property owners based on their impact to the stormwater system. Revenue collected from this fee is used for preventive and general maintenance of the stormwater system, including ditch cleaning, street sweeping, mosquito control, water quality monitoring, mapping and updating of computerized databases, capital improvements, and meeting various permit requirements including public outreach and educational programs.

THEMES, POLICIES, AND ACTIONS

Theme: Focused Growth and Development

Policy 5-1: Relate the availability of municipal services and facilities to the location and pace of growth.

- Action 5-1A: Ensure that the planning for and installation of public infrastructure services and facilities is coordinated within the focused Growth Areas. Action 2-1B: Continue the policy that there can be no justification for rezonings to residential subdivision uses outside the focused Growth Areas.

- Action 5-1B: Continue to tie development approval to the adequacy and funding of public facilities.

Policy 5-2: Assure that quality fire protection, emergency medical services, and emergency management are provided throughout the city.

- Action 5-2A: Continue to ensure that the response times for fire and medical emergencies established in the Fire Department's Strategic Plan are maintained or exceeded.
- Action 5-2B: Continue to work with the appropriate City departments to assure that fire and medical service response times and resources are not degraded due to increased calls for services resulting from growth or population expansion into uncovered Fire Demand Zones.
- Action 5-2C: Ensure the continued availability of effective and up-to-date training opportunities to fire and rescue and medical personnel in the areas of fire training and emergency management and the general public in the area of fire prevention.
- Action 5-2D: Through the fire prevention program, promote firewise techniques which minimize the conflicts between residential development and the wildland/urban interface.
- Action 5-2E: Advance the knowledge of firewise techniques to minimize wildfire damage through the distribution of information pamphlets and the amending of the land development regulations to encourage developers to incorporate such techniques into their project design.

Policy 5-3: Address the consequences of natural and manmade hazards and disasters through coordination and training in emergency planning, preparedness, and response.

- Action 5-3A: Continue to minimize the impacts of natural and manmade disasters through timely and effective mitigation, preparedness, response, and recovery achieved by local training and coordination and communication with local, regional, state, and federal emergency management agencies.
- Action 5-3B: Develop and adopt post-disaster procedures to guide decision-makers in areas such as emergency permitting, rebuilding, citizen outreach, and mitigation opportunities.
- Action 5-3C: Establish, expand, and enhance coordination and cooperative efforts with the general public and private sector in understanding the importance of emergency planning and preparedness.
- Action 5-3D: Develop strategies which decrease the conflict of increased residential development adjacent to the wildland/urban interface.

Policy 5-4: Develop strategies to ensure that low-lying areas of the City located along the James and Nansemond Rivers and their associated tributaries are not adversely impacted by sea level rise.

- Action 5-4A: Conduct an evaluation of the impacts of sea level rise on those public and private resources and wetlands and other natural resources located in the affected area utilizing this information to develop mitigation strategies and actions. Also include an evaluation of the potential impacts on non-tidal rivers/streams.

Policy 5-5: Continue to provide a high level of police protection throughout the City.

- Action 5-5A: Utilize resources efficiently and effectively in preventing and suppressing criminal activity.
- Action 5-5B: Plan for the expansion of the City's police department to meet the needs of the City's future population distribution including the creation of additional police precincts or patrol districts.
- Action 5-5C: Continue to ensure that the response times established in the Police Department's Strategic Plan are maintained or exceeded.

Policy 5-6: Partner with the community to enhance the quality of life and resolve neighborhood concerns.

- Action 5-6A: Encourage citizen commitment to partnering with police to fight crime.
- Action 5-6B: Expand citizen awareness and familiarity with the police officers who are assigned to protect their neighborhoods.
- Action 5-6C: Continue to work with the community, including crime watch groups, to alert citizens of crime problems in their neighborhood.
- Action 5-6D: Expand opportunities for citizen involvement in community oriented policing activities.

Policy 5-7: Continue to strive for a reduction in juvenile crime activity.

- Action 5-7A: Increase the awareness and visibility of programs aimed at youth crime prevention.
- Action 5-7B: Develop a program which educates children, their parents, and the general public on how to be aware of and avoid potential criminal situations.
- Action 5-7C: Work with the Suffolk Public Schools to stress the importance of education as a method to reduce crime.

Policy 5-8: Utilize leading-edge technology and methods to enhance community policing.

- Action 5-8A: Continue to increase the technical proficiency of all officers.
- Action 5-8B: Maintain an ongoing awareness of and ensure that police personnel are trained in the use of the latest advances in crime prevention technology.

Policy 5-9: Expand efforts to eliminate drug abuse and the sale of illegal drugs in the city.

- Action 5-9A: Increase drug prevention efforts at every grade level within the Suffolk Public Schools.
- Action 5-9B: Continue to bring police officers into schools to educate and interact with students.

Policy 5-10: Provide a high quality parks and recreation system for the enjoyment of the citizens of Suffolk and the region.

- Action 5-10A: Continue to develop and enhance the system of parks and recreation facilities distributed throughout the community.

- Action 5-10B: Continue to evaluate, refine and enhance programming offered to reflect the recreational desires of the community.
- Action 5-10C: Actively pursue the development of a system of greenways, blueways, bicycle, and pedestrian trails throughout the City with connections to other regional systems.
- Action 5-10D: Increase public access to Suffolk's shoreline and water bodies using water quality-friendly techniques.
- Action 5-10E: Evaluate opportunities to provide full access to waterways and rivers for boating activities.
- Action 5-10F: Maintain development guidelines and policies that support the parks and recreation system and produce compatible public amenities and open spaces.
- Action 5-10G: Actively utilize parks and recreation facilities, programs and staff to promote ecotourism as a contribution to economic development.
- Action 5-10H: Continue to explore the possibility of designating and protecting scenic roadways within Suffolk.

Policy 5-11: Continue to work collaboratively with the School Board to implement smart growth in school planning principles.

- Action 5-11A: Through ongoing evaluation, maintain or exceed the current level of service standard for education.
- Action 5-11B: Establish and maintain a quantitative approach to predicting student generation from new development.
- Action 5-11C: Ensure opportunities for a high quality education.
- Action 5-11D: Involve broad community involvement in school facility siting and planning.
- Action 5-11E: Ensure that school site selection is consistent with this plan.
- Action 5-11F: Ensure that new education facilities are smaller in size and fit well within context of the community in which they are located.
- Action 5-11G: Ensure the ease of accessibility to all education facilities.
- Action 5-11H: Continue to ensure that public education facilities function as centers and anchors of the community.
- Action 5-11I: Continue to support community uses after hours.
- Action 5-11J: Maximize the mixture of new construction and renovation programs.

Policy 5-12: Provide an improved library system that supports the needs of the citizens of Suffolk.

- Action 5-12A: Continue to support the funding and construction of an additional library in the mixed use core area of the Central Growth Area.

- Action 5-12B: Continue efforts to increase the overall library holdings in each of the existing libraries to be consistent with level of service standards.
- Action 5-12C: Actively explore the implementation of actions and policies which reflect advances in technology and the potential for partnerships with private industry, non-profit organizations, institutions of higher education, and the Suffolk Public School system.

Policy 5-13: Develop strategies and programs which enhance drinking water availability.

- Action 5-13A: Continue to develop appropriate schedules for the implementation of treatment and transmission projects to deliver potable water in a timely manner to meet the future demands within the City's and Isle of Wight County's service districts.
- Action 5-13B: Continue to work closely with state agencies in the development of regulations which promote and allow for the implementation of alternative sources of water to supply non-potable water demands.
- Action 5-13C: Continue to implement and update contingency plans to maintain water supply in case of an emergency.
- Action 5-13D: Continue to develop and implement projects within the City's Capital Improvement Plan for the timely extension, repair or replacement of water system assets to ensure appropriate capacity to meet current and future demands, promote economic development growth, and provide adequate fire protection within the City's water service districts.
- Action 5-13E: Ensure that the extension of the City's water distribution/transmission system to unserved or underserved developed areas are consistent with the Focused Growth provisions of this plan while improving the quality of life within these areas.
- Action 5-13F: Identify new sources of potable water to meet future demands of the City and portions of Isle of Wight County served by the Western Tidewater Water Authority.
- Action 5-13G: Continue to investigate alternative sources of water to meet additional water needs other than potable water.

Policy 5-14: Promote programs and projects that promote water conservation.

- Action 5-14A: Continue to work regionally through the Hampton Roads Planning District Commission's HRWET program to promote water conservation and water conservation projects.

Policy 5-15: Enhance the wastewater collection system.

- Action 5-15A: Continue to support the Hampton Roads Sanitation District in their efforts to ensure that the wastewater treatment and conveyance needs of the City, both current and future, are adequately met.
- Action 5-15B: Continue to ensure the City's wastewater collection system achieves compliance with all state and federal regulations, specifically with the Regional Special Order by Consent.

- Action 5-15C: Continue to develop and implement projects within the City's Capital Improvement Plan for the timely repair or replacement of system assets to ensure sufficient capacity to meet current and future demands, promote economic development growth, and protect adjacent surface water bodies within the City.
- Action 5-15D: Ensure that the extension of wastewater collection system to unserved or underserved developed areas are consistent with the focused growth provisions of the comprehensive plan and the City's VSMP permit requirements, while improving the quality of life within these areas.
- Action 5-15E: Investigate the feasibility of establishing an inflow and infiltration elimination program.
- Action 5-15F: Maximize the use of capital improvement funds to repair or replace deteriorated wastewater collection lines, manholes, and service laterals.

Policy 5-16: Promote the maintenance and safety of the stormwater system.

- Action 5-16A: Continue to undertake a proactive approach to stormwater system maintenance to improve water quality and reduce flooding.
- Action 5-16B: Establish a program to educate residents of the relationship of litter control and stormwater system maintenance as well as the elimination of illicit discharges.
- Action 5-16C: Investigate alternative maintenance methods and the use of higher technological machinery to maintain open stormwater drainage ditches, sediment ponds, and canals.
- Action 5-16D: Promote an enhanced inspection program to ensure quality construction of new stormwater infrastructure.

Policy 5-17: Ensure the continuation of an environmentally sound and efficient solid waste management system.

- Action 5-17A: Continue to work within the regional framework for solutions to solid waste management and disposal.
- Action 5-17B: Continue to cooperate with the Southeast Public Service Authority to address regional solid waste disposal.
- Action 5-17C: Continue to study and implement long-term solutions to solid waste disposal in order to avoid future problems to service, capacity, environmental impact, or cost.
- Action 5-17D: Educate the public on the identification and proper disposal of existing hazardous household materials.

Policy 5-18: Promote the use of recycled and recyclable products.

- Action 5-18A: Establish an education program which encourages residents and businesses to purchase, sell, and use more recycled waste products and/or other recyclable materials.
- Action 5-18B: Develop a program to encourage City departments to purchase and use recycled goods.

Policy 5-19: Develop strategies and programs which protect drinking water quality.

- Action 5-19A: Continue to enforce regulations and undertake actions which ensure reservoir protection and watershed preservation.
- Action 5-19B: Continue to identify projects and promote land use development practices that maintain and/or improve the quality of the City's drinking water.

Policy 5-20: Develop strategies and programs to meet the Virginia Department of Environmental Quality Implementation Plans for Total Maximum Daily Loads (TMDL).

- Action 5-20A: Continue to develop a Chesapeake Bay TMDL Action Plan – (Special Condition for Chesapeake Bay TMDL).
- Action 5-20B: Identify and incorporate additional best management practices into the City stormwater infrastructure to reduce pollutant runoff.
- Action 5-20C: Provide educational opportunities and materials to instruct citizens and developers on actions they can take to reduce pollutant load.
- Action 5-20D: Implement the Runoff Reduction Method for all new development and redevelopment projects in the City of Suffolk.
- Action 5-20E: Administer and enforce the Virginia Stormwater Management Program General Permit for Discharges from Construction Activities.

Policy 5-21: Update the City of Suffolk MS4 Program Plan.

- Action 5-21A: Continue to enforce regulations and develop programs to meet all requirements of the City MS4 Permit.

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CHAPTER 6: HOUSING



Housing is an essential element of the City, especially now as the population in Suffolk is projected to grow by more than 25,000 people by 2031, which will result in a demand for an additional 10,455 new housing units. Planning for future housing needs goes hand-in-hand with general land use and transportation planning. This chapter of the comprehensive plan summarizes trends in housing, and identifies policies to provide for future housing needs. The Hampton Roads Region of Virginia, Analysis of Impediments to Fair Housing Choice was prepared in 2011 and compared the City's demographics to the housing market, reviewed private and public sector housing practices, and prepared an assessment of current housing programs and activities.

In recent years, the City has experienced significant housing development in the two designated Growth Areas, however the rate of this growth has been higher than anticipated. Housing costs are on the rise (both new and resale). Keeping pace with housing demand and providing for a range of affordability to meet the needs of Suffolk residents will be continual challenges. Growing demand for housing choices based on shifting household characteristics and a noted increase in housing costs in the region makes developing housing choices for everyone across the full range of incomes and family types very important.

The long-term goal should be to ensure that housing needs in the City of Suffolk are being met along the full "continuum of care". However, based on market and demographic assessments, the City's highest short-term housing priority is to address the needs of the Suffolk workforce. "Workforce housing" is needed to promote housing opportunities for those who are active in the Suffolk workforce and who desire to live in Suffolk. This should consist of both homeownership and rental choices.

DIFFERENT HOUSING NEEDS IN A COMMUNITY

Housing needs apply to the full range of market and subsidized housing stock. Examples of housing needs in the City include:

1. Housing for the homeless
2. Publicly-assisted housing
3. Very-low income housing
4. Low-income housing
5. Moderate-income housing
6. High-income housing
7. Active senior housing
8. Housing for those on fixed or retirement incomes
9. Assisted living facilities and long-term care facilities
10. Fair and accessible housing for disadvantaged populations
11. Homeownership and rental housing

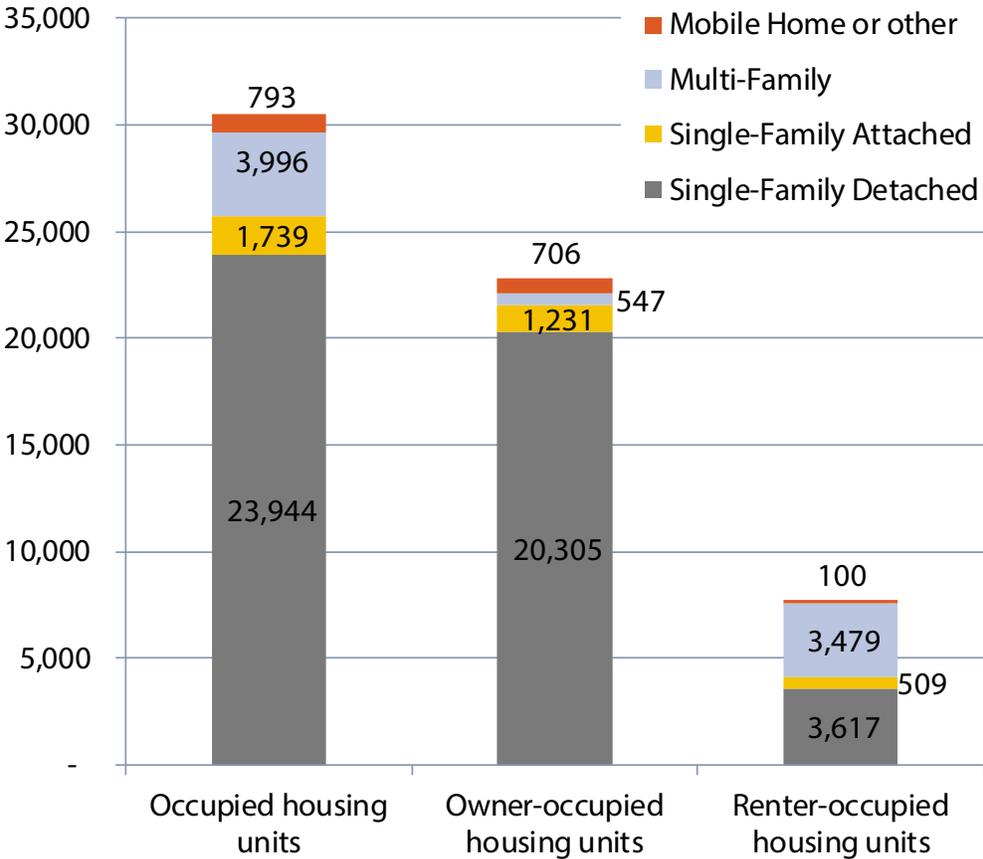
EXISTING HOUSING CHARACTERISTICS

Suffolk enjoys a wide range of housing options, from urban lofts to traditional suburban homes on large landscaped lots and farmhouses in the country. Many charming older houses and traditional neighborhoods can be found downtown and in the rural villages. Farmsteads and estates are scattered throughout the more rural areas of Suffolk, particularly south of downtown, and a substantial amount of newer housing has been built in recent years in the central and northern parts of the City, particularly along major transportation routes. The areas of housing form neighborhoods and the character of neighborhoods is addressed in more detail in the Land Use & Growth Management chapter of this plan.

HOUSING INVENTORY AND OCCUPANCY

Since 2000, the composition of the housing stock has not drastically changed. Almost 9,000 housing units were constructed, but the rates of homeownership only increased slightly (from 72% in 2000 to 74% in 2012), along with an increase to the vacancy rate, from 6% to almost 8%. Eight percent is a fairly high vacancy rate for growing communities such as Suffolk, but still very moderate when compared to other communities. As in most places, rental properties have a higher vacancy rate than owner occupied units.

Figure 6-1: 2012 Housing Inventory by Units in Structure



Source: 2012 American Community Survey

HOUSING AGE AND CONDITIONS

Only a small percentage of Suffolk’s housing stock was built before 1950 (12%). Generally speaking, this stock was constructed of durable materials and, with modern retrofitting of utilities, can have a significant useful lifespan. Thirty-percent of the City’s housing was built between 1950 and 1979. Depending on the construction quality these homes have variable durability and remodeling potential. Older homes in this category are now also eligible for historic designations if applicable. A majority of Suffolk’s homes were built after 1980 (58%).

Suffolk’s housing stock is found to be functionally complete with more than 99% of all occupied housing units having complete plumbing and kitchen facilities, with modern utility heating sources.

Figure 6-2: Housing Occupancy

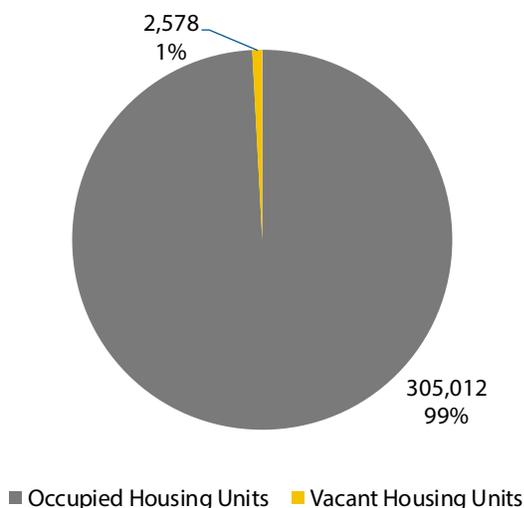


Figure 6-3: Housing Ownership

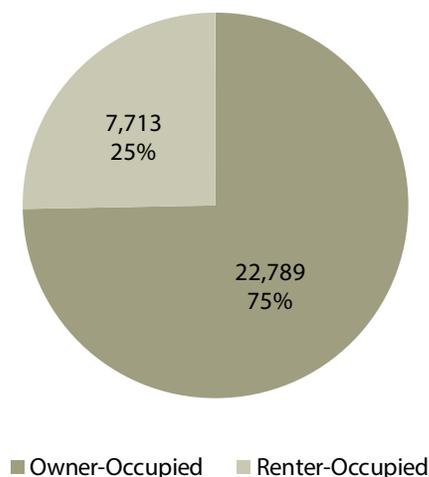


Figure 6-4: Age of Housing Stock

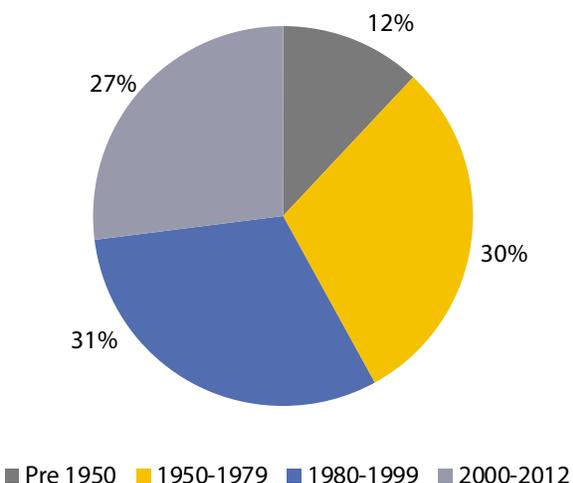
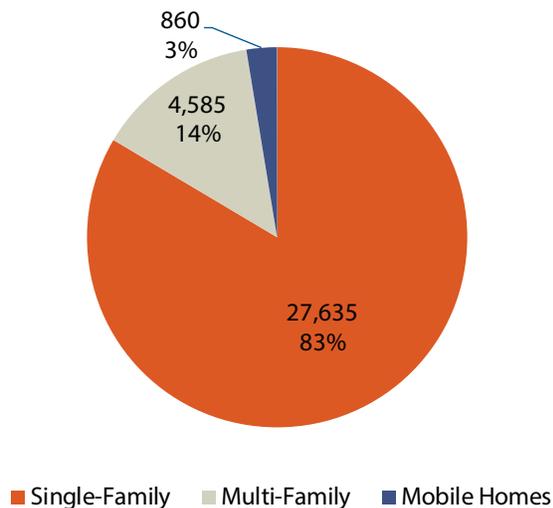


Figure 6-5: Housing Composition



Source: 2012 American Community Survey

FACTORS THAT IMPACT HOUSING VALUES IN SUFFOLK

1. Land costs
2. Land availability
3. Density allowed by zoning
4. Types of housing allowed by ordinance
5. Design and construction standards
6. Regional cost of living
7. Local development costs



Balmoral Residential

HOUSING VALUES AND AFFORDABILITY

Suffolk has experienced a housing boom in its recent past. Between 2000 and 2012, the City's housing stock increased by 8,847 units, which averages out to 737 units per year. The majority of this housing growth took place in the northern half of the City. Suffolk has also seen a drastic increase in housing values. According to the U.S. Census Bureau, between 1990 and 2008, median housing values in Suffolk nearly doubled, after adjusting for inflation. Similarly, median gross rents also doubled, while household income only increased by 38%. In addition to the rise in housing costs, the number of affordable apartment units has decreased. Suffolk had a drop of over 1,000 units that rented for \$500 or less. There was also an increase of over 1,900 units that rent for \$1,000 or more.

HOUSING VALUES AND AFFORDABILITY FACTS

Median Household Income

- All Households: \$66,479
- Owner Occupied: \$81,837
- Renter Occupied: \$32,437

Median Housing Value

- Owner Occupied: \$248,900

Median Monthly Housing Costs:

- All: \$1,323
- Owner Occupied: \$1,584
- Renter Occupied: \$982

of Households Paying more than 25% of income in rent or mortgage:

- Owner Occupied with Mortgage: 9,670 - 56% of households with mortgages
- Owner Occupied without Mortgages: 975 - 18% of households without mortgages
- Renter Occupied: 4,902 - 68% renter households

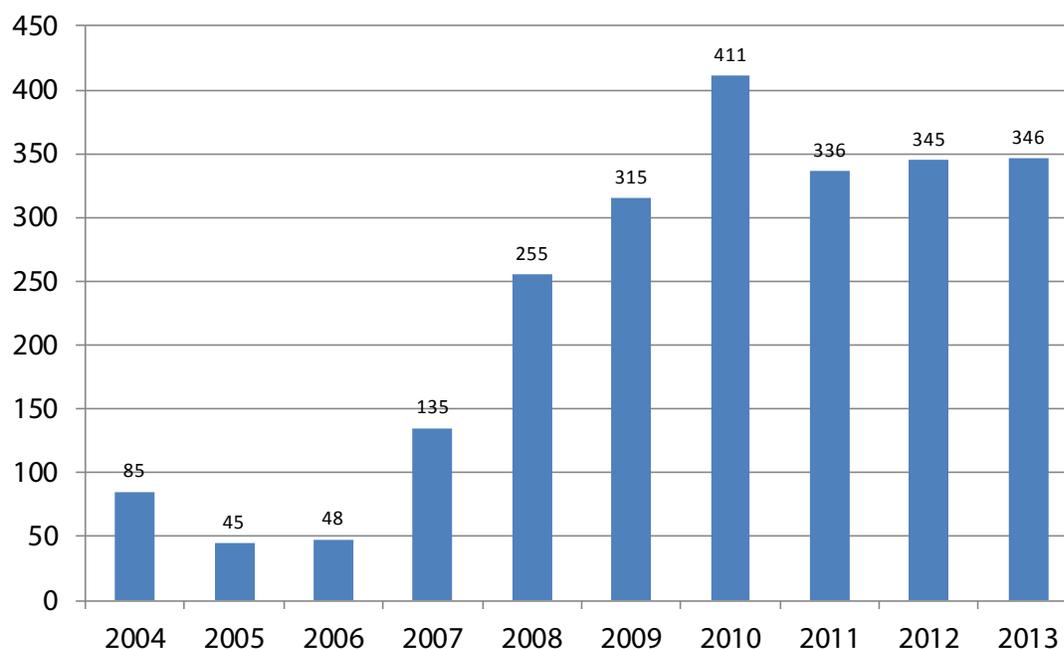
Source: 2008-2012 American Community Survey, Financial Characteristic (Table S2503)

FORECLOSURE RATES AND THEIR IMPACT ON HOUSING IN SUFFOLK

Foreclosures have a significant impact on home values which in turn impact the City's tax base leaving fewer resources to address the growing needs of the community. In 2007, the housing market crashed leaving many mortgage holders owning more on their homes than their present values. As foreclosures proceed, housing vacancy rates increase placing further decline into the housing market. The City of Suffolk had a 6% residential vacancy rate in 2000; in 2012 the rate was 8%. A study completed by HOME: Housing Opportunities Made Equal found that from 2000 to 2010 residential vacancies in Virginia increased by 30% and 9% of all the housing stock in 2010 was vacant. Although the study found that the total number of foreclosures is declining for the first time since 2007, the foreclosure rate is still 1,000% greater than in 2006.

The Suffolk City Assessor tracks local foreclosures and found that 2010 was the year with the highest rate of foreclosures and the last three years have been fairly consistent, yet very high in comparison to the pre-housing bust of 2007. The City's total housing stock in 2012 was 33,080 units, with 2,578 reported vacant. Foreclosures account for 346 of those units or only 13% of all vacant units in the City. While foreclosures appear to be a concern in Virginia, Suffolk has fared comparatively well. The chart below shows the City of Suffolk's foreclosures over the last nine years.

Figure 6-6: Annual Foreclosures 2004-2013



Source: City of Suffolk Assessor's Office, 2014

With housing prices and rental rates on the rise, it is necessary for the City to ensure that there is and continues to be plenty of adequate and affordable housing options available for its residents. The Affordable Dwelling Unit (ADU) Ordinance is the City's primary tool for realizing the construction of affordable dwelling units. It establishes regulations and developer incentives to promote the construction of affordable dwelling units as part of new residential development projects.

The ADU Ordinance, to date, has not been successful. The biggest challenge with this program remains in integrating affordable housing in new construction projects. The program allows developers with an option of setting aside affordable units in exchange for granting a bonus density. It appears, though, that the program has not been effectively promoted or does not provide enough incentives for developers to utilize it. This has resulted in lost opportunities to realize the construction and integration of affordable dwelling units as part of larger residential development projects.

DOWNTOWN, NEIGHBORHOOD, AND VILLAGE REVITALIZATION INITIATIVE PLANS

Between 1998 and 2006, the City adopted 12 different Downtown, Neighborhood, and Village Revitalization Initiative Plans. These Initiative Plans provide guidance in support of the protection and continued revitalization of many of Suffolk's older neighborhoods and rural villages. Through private and public efforts, the goal is to enhance these communities and create new development opportunities, investment and community improvements, along with implementation strategies. The plans address issues such as community vision, land uses and development patterns, and community character. Realization of these plans will be over the long-term, with progress limited to the availability of municipal funds necessary to complete costly infrastructure improvements and redevelopment of blighted areas.

To date, the City has used the following means to implement these recommended policies and actions:

- Rezoning land to establish new zoning districts, expand mixed use zoning districts, and add more uses and higher densities in existing zoning districts, which encourage co-location of jobs and housing, such as the Planned Development (PD), Traditional Neighborhood Development (TND), Village Center (VC), and Central Business District (CBD) zoning districts.
- Rezoning land to allow for additional commercial and industrial uses, thereby providing employment opportunities to Suffolk residents.
- Adopting and implementing Downtown, Neighborhood and Village Initiatives Plans, which provide opportunities for new housing and rehabilitation of existing housing.



A variety of residential building types within the City of Suffolk

PUBLIC HOUSING PROGRAMS

There are 466 public housing units in the City which are owned and managed by the Suffolk Redevelopment and Housing Authority (SRHA). These units include: Cypress Manor Apartments (113 units), Hoffer Apartments (80 units), Parker Riddick Village (93 units), Colander Bishop Meadows (80 units), and Chorey Park (100 units age restricted). Applications for housing assistance are accepted weekly. Qualifying applicants must be 18 years of age, a U.S. citizen or eligible for citizenship, and meet HUD income guidelines. Applicants must also go through credit reporting, state criminal background checks, personal interviews, home visits, and verification of current and previous landlords. Public Housing residents' rent is based on 30% of their gross annual income.

The Housing Choice Voucher (HCV) program, formerly Section 8, is a federally funded and income-based program designed to provide decent and safe housing in the private market to qualified low to moderate income families, elderly, and persons with disabilities. Qualified participants are responsible for finding their own rental housing, which can include single-family homes, townhomes, or apartments. They are then issued a voucher to assist in paying a portion of their rent. The voucher amount is largely determined by the family's total household income.

The City of Suffolk has a variety of other housing programs for low-income households, including housing rehabilitation loans and a homeownership program. As a recipient of Community Development Block Grant (CDBG) and Home Investment Partnership Program (HOME) funding from the U. S. Department of Housing and Urban Development (HUD), the City of Suffolk is required to prepare and submit action plans on an annual basis and a consolidated plan every five years. While CDBG funds are specific to the City of Suffolk, HOME funds are administered to the geographically contiguous cities and counties that make up the Western Tidewater HOME Consortium (WTHC); this includes the cities of Suffolk and Franklin and the counties of Isle of Wight and Southampton. The City of Suffolk serves as the lead agency for the WTHC and is responsible for the administration of the CDBG and HOME program funds.

The plans required for these programs outline the community development and housing needs of the City of Suffolk and other WTHC member jurisdictions, with particular emphasis on the provision of decent and affordable housing, suitable living environments, and expanded economic opportunities, primarily for low and moderate income persons.

THEMES, POLICIES, AND ACTIONS

Theme: Balanced Growth and Development

Policy 6-1: Encourage development of a balanced and diverse housing stock throughout the City.

- Action 6-1A: Ensure that the City's land use regulations allow for a variety of housing types, such as single-family detached, single-family attached, and multi-family.
- Action 6-1B: Encourage the use of existing residential density bonus provisions.
- Action 6-1C: Establish a comprehensive approach to increasing workforce housing in Suffolk and the ability of consumers to benefit from such opportunities.

- Action 6-1D: Develop incentives to encourage the construction of affordable housing in mixed use communities.
- Action 6-1E: Increase the supply of affordable and workforce housing in new construction and through rehabilitation of existing homes.
- Action 6-1F: Utilize existing housing assistance programs to generate more homeowners.
- Action 6-1G: Promote greater awareness of the City's affordable housing goals and its incentive and assistance programs.
- Action 6-1H: Research, identify, and pursue a variety of financing strategies to encourage availability of diverse housing types.
- Action 6-1I: Continue to review and update the City's Consolidated Plan to ensure that it conforms to and is consistent with the policies and implementation strategies of the comprehensive plan.
- Action 6-1J: Allow opportunities for retirement housing.
- Action 6-1K: Encourage construction of infill housing in the Mixed Use and Core Support Districts.

Policy 6-2: Provide for suitable development in the City's rural villages.

- Action 6-2A: Utilize the adopted village initiative plans to promote land use patterns within the rural villages which support the construction of affordable and market rate housing units.

CHAPTER 7: NATURAL AND CULTURAL RESOURCES



Protecting the environment is one of this plan’s most important themes. Understanding the inextricable interaction of the man-made and the natural environment is crucial to being good stewards of our limited resources. The City of Suffolk is blessed with an abundance of unaltered natural areas including the wetlands of the Great Dismal Swamp and the tidal wetlands along the banks of the City’s rivers and creeks. It is the responsibility of the comprehensive planning process to lay out the state of our natural resources and to develop policies and action statements to protect and preserve them, while balancing the needs of continued development. The Focused Growth Approach, as described in previous chapters, allows for this balance in a meaningful and sustainable way.

The Focused Growth Approach continues the City’s key environmental protection and land preservation policies — allowing for managed growth in the northern and central Growth Areas, limiting development in environmentally sensitive areas around the regional reservoir system, and reserving the remainder of the City for agricultural production. This plan continues to reinforce Suffolk’s contribution to the health of the Chesapeake Bay. It also recognizes Suffolk’s critical role as the host of most of South Hampton Road’s water supply.

As Suffolk continues to grow and prosper it is critical that the City provide clear and concise policies to ensure the health of our natural systems. Without appropriate controls and focus, development could overwhelm the natural environment.

TOPOGRAPHY AND CLIMATE

The City of Suffolk is the largest municipality in the state in terms of land area, encompassing 430 square miles.

The City is level with gentle slopes downward west to east with the higher ground closest to the Isle of Wight County border. The City has elevations ranging from approximately 85 feet to 25 feet and lower near key rivers.

Suffolk has a temperate climate consistent with its location close to the Atlantic Ocean in the southeastern United States. The City has a mean high temperature of approximately 69.4 degrees, and a mean low temperature of 49.3 degrees. Average precipitation is 48 inches.



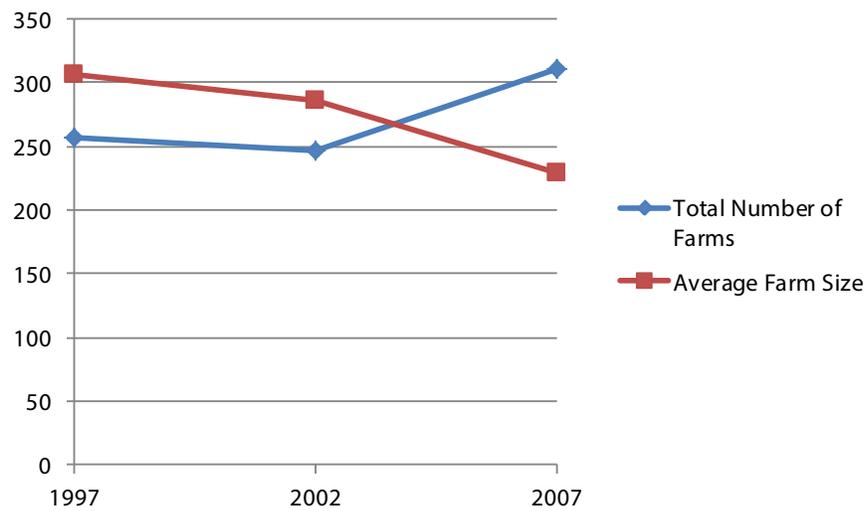
Cypress Trails

PRESERVING OUR AGRICULTURAL HERITAGE

Preserving our agricultural heritage is one of the key themes of this comprehensive plan. Historically, agriculture has played a major role in the City’s economy. The City’s predominant crop, peanuts, has been under pressure in recent years due to changes in federal crop support payments. Increasing land values throughout the City have put development pressure on the area. Due to the development regulations governing minor subdivisions in agricultural areas, large pasture and crop lands are being fragmented. This is especially a concern where development along a rural road may limit access to large lots that support agricultural operations.

The Census of Agriculture found that in the City of Suffolk, over the past 10 years, there has been an overall decrease of more than 7,000 acres of farmland (there was a decrease of 8,000 acres from 1997-2002, with a slight increase in acreage from 2002-2007). Over the same period, there has been a drastic increase in the number of very small farms (less than 50 acres), from 75 to 169. There has also been a steady decrease

Figure 7-1: Total Number of Farms and Average Farm Size 1997-2007



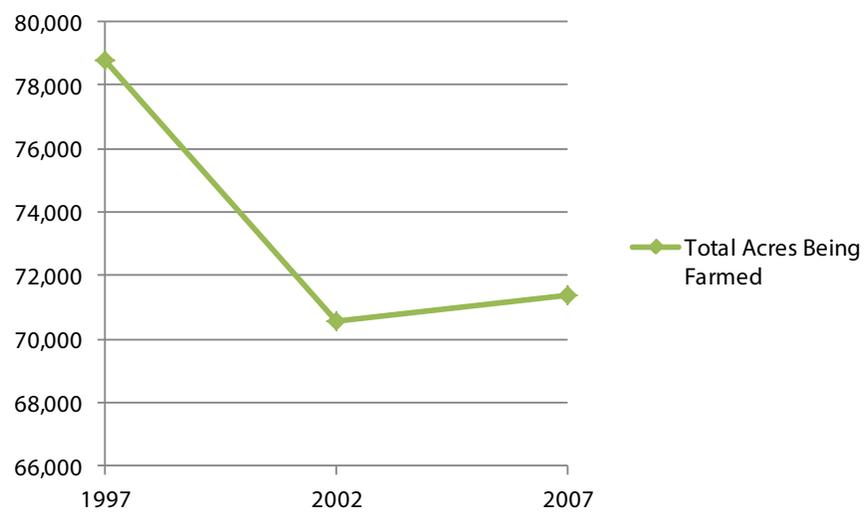
in the number of large farms (180+ acres), from 96 in 1997 to 67 in 2007. This is shown in Figures 7-1 and 7-2.

There are two key interrelated issues that are affecting the agricultural community in Suffolk today. They are:

1. Crops historically produced in the City of Suffolk, such as peanuts, are in some cases no longer generating sufficient levels of return to justify continued cultivation. Other crops, such as corn, have been experiencing increasing demand and production in the City.

2. As crop returns diminish, landowners are seeking additional ways to create value in their properties - mainly through residential development. This increased residential development in the southern portion of the City is causing conflicts between the agricultural community and new residents.

Figure 7-2: Total Acres Being Farmed 1997-2007



Residential development in the agricultural areas of the City has been held in check by limiting subdivisions. However, development in the area is still occurring using two options – family transfers and minor subdivisions. It is interesting to note that the City of Suffolk is the only city in Virginia that is required by state law (City Charter) to provide for family subdivisions.

Map 7-1: Prime Farmland, illustrates the extent and approximate locations of prime farmland soils in relation to the existing zoning classifications. Prime farmland is one of several kinds of important farmlands meeting certain criteria making it well suited to the production of food, feed, forage, fiber and oilseed crops, as defined by the U.S. Department of Agriculture (USDA). The designation as Prime Farmland is based on soil type and does not reflect the current land use. The majority of recent residential and commercial development has occurred within the Suburban/Urban growth areas, with outlying nodes around the rural villages, helping to preserve extensive prime farmlands in the southern and northern portions of the City where timber and agriculture are major land uses. The Focused Growth Approach continues to support this, by expanding the agricultural areas in the northwest portion of the City, and continuing to strictly limit non-agricultural development in the southern reaches of the City.

STATE OF AGRICULTURAL ECONOMY IN SUFFOLK

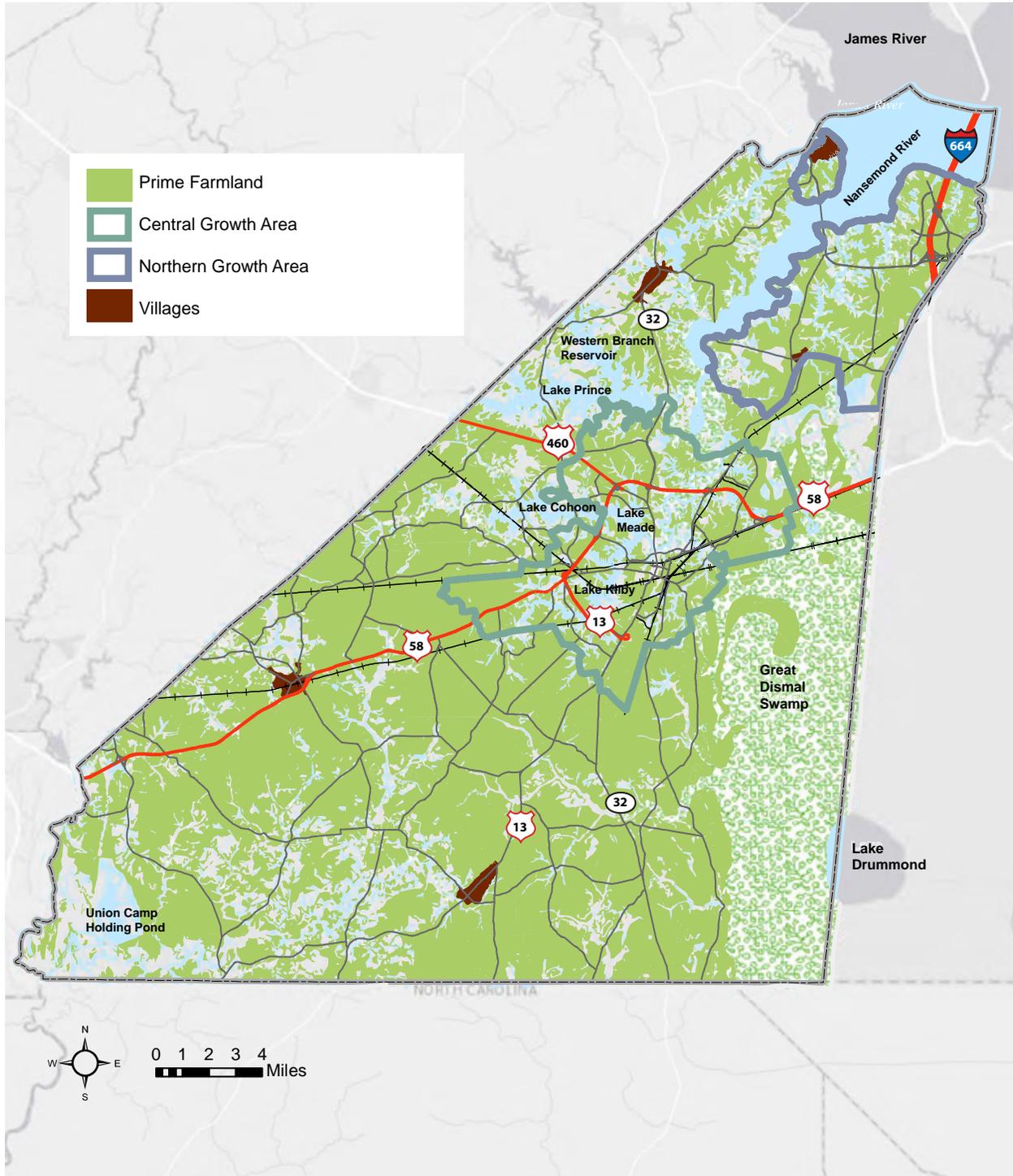
Historically, Suffolk has been known for its peanut crop. Recent changes in federal farm policy have caused a decrease in the economic value of the crop. Federal price supports no longer support direct quota plantings as was previously federal policy. Since 1997, there has been a drastic drop in both the number of peanut farms and the production of those farms. There has been a 72% decline in the number of peanut farms in the City and a 48% decline in the pounds of peanuts produced, as shown in Table 7-1.

Cotton is another key indicator crop for the City. Table 7-1 illustrates the sweeping changes that the cotton industry has experienced in the last 10 years. There has been great fluctuation in the number of farms, acreage, and production. The numbers reflect that the amount of cotton produced in 2007 is on par with the amount produced in 1997, which exhibits the continued demand for cotton in this region.

Out of the three main crops produced in Suffolk, corn is the only one that has shown an overall increase in the last 10 years. The number of farms has decreased, but the acreage of farms has increased 34% and the bales produced increased by 47% over the past 10 years. As the peanut production decreases, farmers may switch to other crops such as corn that yield a better return or have additional demand.



Top: Agricultural field in Suffolk
Bottom: Corn crop



Map 7-1: Prime Farmland

Table 7-1: Agricultural Production in Suffolk

	1997	2002	2007	10 year change	% change
Peanut Production					
Farms	112	78	31	(81)	(72%)
Acres	11,058	10,845	3,950	(7,108)	(64%)
Pounds	24,927,215	23,314,338	12,977,011	(11,950,204)	(48%)
Cotton Production					
Farms	48	30	28	(20)	(42%)
Acres	13,432	15,389	9,589	(3,843)	(29%)
Bales	20,599	15,600	19,517	(1,082)	(5%)
Corn Production					
Farms	99	65	69	(30)	(30%)
Acres	10,718	10,780	14,356	3,638	34%
Pounds	718,679	566,404	1,059,190	340,511	47%

PEANUT PROFILE IN A NUTSHELL

Four main varieties of peanuts are produced in the U.S.: Runners, Virginia, Spanish, and Valencia. Runners are the most common and account for approximately three-quarters of the U.S. production. The large, high-quality Virginia peanuts account for about 15% of domestic production, and Spanish and Valencia peanuts make up a combined 10% of production. At the national level, peanuts are a relatively minor crop, with farm-level value of production less than 5% of the value of corn production. Peanut production is concentrated in a small number of states and is a key contributor to local economies. Virtually all peanut production takes place in just nine states: Georgia, Alabama, Florida, South Carolina, Texas, Oklahoma, New Mexico, Virginia, and North Carolina.

AGRICULTURAL IMPACTS ON THE ENVIRONMENT

Agriculture can have significant environmental impacts if not properly managed. Grazing lands are considered a major source of non-point water quality problems in some areas depending upon management. Most often, problems relate to confinement of livestock or livestock's access to streams. Croplands, too, can have a significant impact on local and regional surface water quality. According to a United States Department of Agriculture publication, the following are a list of some of the management practices that can be used to reduce agricultural impacts to water quality:

1. Prescribed and rotational grazing

Good grassland serves as an effective cover to control erosion and filter sediment. A healthy well managed stand of grass effectively utilizes the available nutrients and prevents nutrient transport to the streams. A grazing management plan can be designed to rotate pastures or to limit the intensity and duration of grazing and animal access to the streams.



2. Nutrient and pesticide management

The application of fertilizers is done when optimum utilization of the grass is realized. Pesticides, when appropriate for pest control, are applied for the target species at the prescribed rates and timing to reduce potential off-site damage.



3. Livestock watering facilities

This provides livestock water from ponds, pipelines, or controlled access to streams. It also improves grazing distribution. This aids in reducing the impact and erosion potential on concentration areas. It also prevents long-term uncontrolled access to streams.



4. Livestock exclusion

This practice protects the streamside vegetation from overgrazing, trampling, or other impacts that degrade riparian vegetation or the stability of the stream. Due to water quality concerns, access by livestock to streams could negatively impact the stream or filtering function of the streamside vegetation. As such, restricted access to streams should be considered.



5. Riparian forest buffer

Riparian forest buffers are areas of forested land adjacent to streams, rivers, marshes or shoreline that form the transition between land and water environments. This practice often becomes the last means of intercepting pollutants in the form of sediment or chemicals in runoff or shallow groundwater before it enters the streams.



6. Land use changes

Conversion from cropland to a less intensive land use, such as hayland or forest on areas adjacent to stream systems, generally reduces the risk of pollutants entering the stream system.



Farmers should work with their extension agent, the Soil and Water Conservation service, and other agencies to determine best management practices to limit agricultural impacts to water quality.

The Peanut Soil and Water Conservation District and Natural Resource Conservation Service are the primary agencies that work closely with the agricultural community in the City of Suffolk. These agencies can assist landowners with the development of “conservation plans” and can provide funds to landowners to install conservation practices.

WATER RESOURCES AND CHESAPEAKE BAY PRESERVATION

Water resources are an integral part of the quality of life for residents of the City of Suffolk. The management of development and land disturbing activities directly affects the quality of surface water, drinking water, fisheries and wetland habitat.

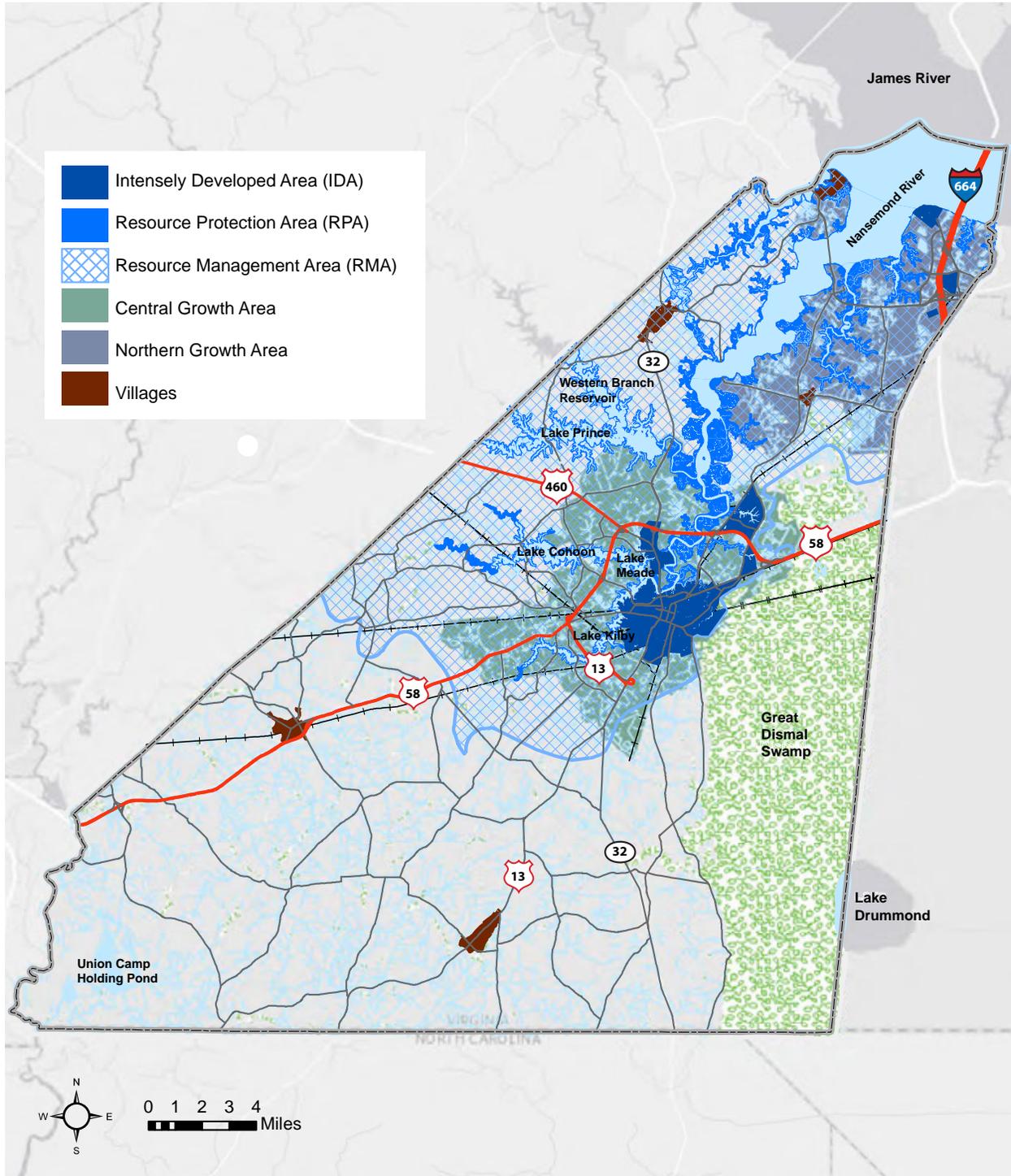
In the Commonwealth of Virginia, the Chesapeake Bay Preservation Act, and the associated Chesapeake Bay Preservation Area Designation and Management Regulations, adopted by the Chesapeake Bay Local Assistance Board, address non-point source pollution in the Chesapeake Bay watershed. Non-point source pollution is caused by rainfall moving over and through the ground. As the runoff moves, it picks up and carries away natural and human made pollutants, depositing them into lakes, rivers, wetlands, and coastal waters. The regulations identify and provide management strategies for portions of the basin, known as Chesapeake Bay Preservation Areas (CBPAs) -- lands where development has the potential to impact water quality most directly.

Land in a CBPA is categorized as either a Resource Protection Area (RPA), a Resource Management Area (RMA), or an Intensely Developed Area (IDA). RPAs are sensitive lands within 100 feet of the shoreline or along the banks of streams and wetlands. Development within RPAs is restricted to water dependent uses or redevelopment. RMAs are lands outside of the RPA that, without proper management, have the potential to significantly degrade water quality or to damage the protective features of the RPA.

An Intensely Developed Area (IDA) is a designated redevelopment area which incorporates portions of the RPA and RMA. The IDA includes areas in which development was concentrated as of January 21, 1992, so that little of the natural environment remains. Development within IDAs is much less constrained than in RPAs and RMAs.

The state legislature passed new stormwater regulations in 2011 that were enacted by the City of Suffolk on July 1, 2014. The new stormwater requirements are based, in part, on the Virginia Runoff Reduction Method. The runoff reduction method incorporates pollutant removal as well as runoff volume reduction as provided by stormwater Best Management Practices (BMPs).

The new stormwater regulations may be challenging for some of the existing large industrial and commercial facilities that have substantial amounts of impervious cover. The City should work with these facilities to determine what can be done to help them achieve these new standards.



Map 7-2: Chesapeake Bay Preservation Areas

FLOODPLAINS

Floodplains play a vital part of the City's ecosystem. Floodplains include all areas subject to inundation by waters of the 100-year flood. A 100-year flood has a 1% chance of occurring in any given year. These areas include the designated floodway and flood-fringe. The Federal Emergency Management Agency (FEMA) also designates areas as being in the 500-year flood plain, where there is a 0.2% chance of a flood occurring. Maps of the City's flood hazard areas can be viewed online at the FEMA website: www.rampp-team.com/va.htm.

The floodplain boundary along the Blackwater River was widened to more adequately reflect flood conditions that were observed during Hurricane Floyd in 1999.

The City's Floodplain District limits development within floodplain areas and/or provides design requirements in keeping with floodplain regulations. Additionally, the City has an emergency plan to evacuate residents during hurricane emergencies. The City manages development within the Coastal High Hazard Area to minimize flood and tidal impacts. FEMA and the National Flood Insurance Program have defined the Coastal High Hazard Area as areas within the 100-year coastal floodplain and additional hazardous areas associated with storm waves. Future impacts to floodplains will continue to be minimized through the building permit process. Structure improvements and removal from the floodplain are coordinated through compliance with floodplain regulations during redevelopment activities.

TIDAL AND NON-TIDAL WETLANDS

The protection of wetlands within the City of Suffolk is vital to the City's ability to regulate water levels within watersheds; improve water quality; reduce flood and storm damages; provide important fish and wildlife habitat; and support hunting, fishing, and other recreational activities.

Wetlands are either tidal or non-tidal. Tidal wetlands can be found along protected coastlines and are influenced by the motion of ocean tides. Tidal marshes include freshwater marshes, others that are brackish (somewhat salty), and still others that are saline (salty).

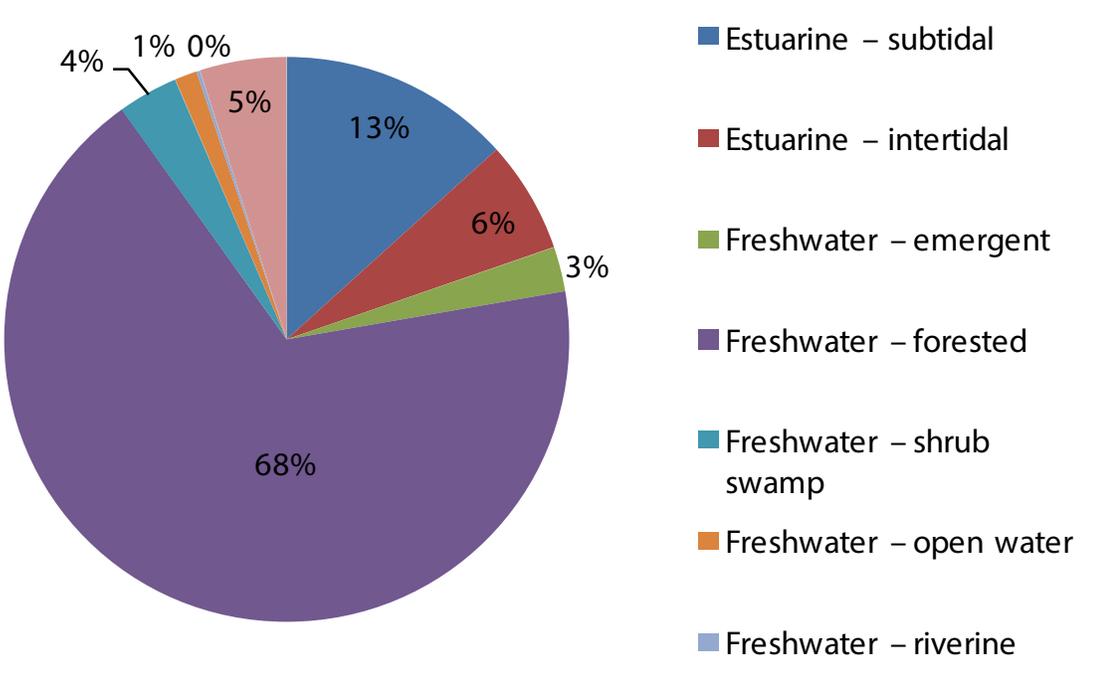
As illustrated in Figure 7-3 and Map 7-3, the City includes approximately 94,000 acres of wetland. Wetlands occupy tidal areas, stream corridors and broad flat swamps such as the Great Dismal Swamp. Figure 7-3 presents a relative breakdown of the various wetland types found in the City based on National Wetland Inventory data.

Wetlands are protected by federal, state and local regulations. The Army Corps of Engineers regulates all wetlands that are adjacent to or connected to navigable waters. Generally, this includes all wetlands associated with watercourses, both intermittent and perennial, as well as tidal wetlands. The Department of Environmental Quality and Marine Resources Commission regulate freshwater and tidal wetlands. The City regulates tidal wetlands through the Wetlands Board. All agencies require mitigation for proposed impacts in accord with the federal policy of "no net loss".

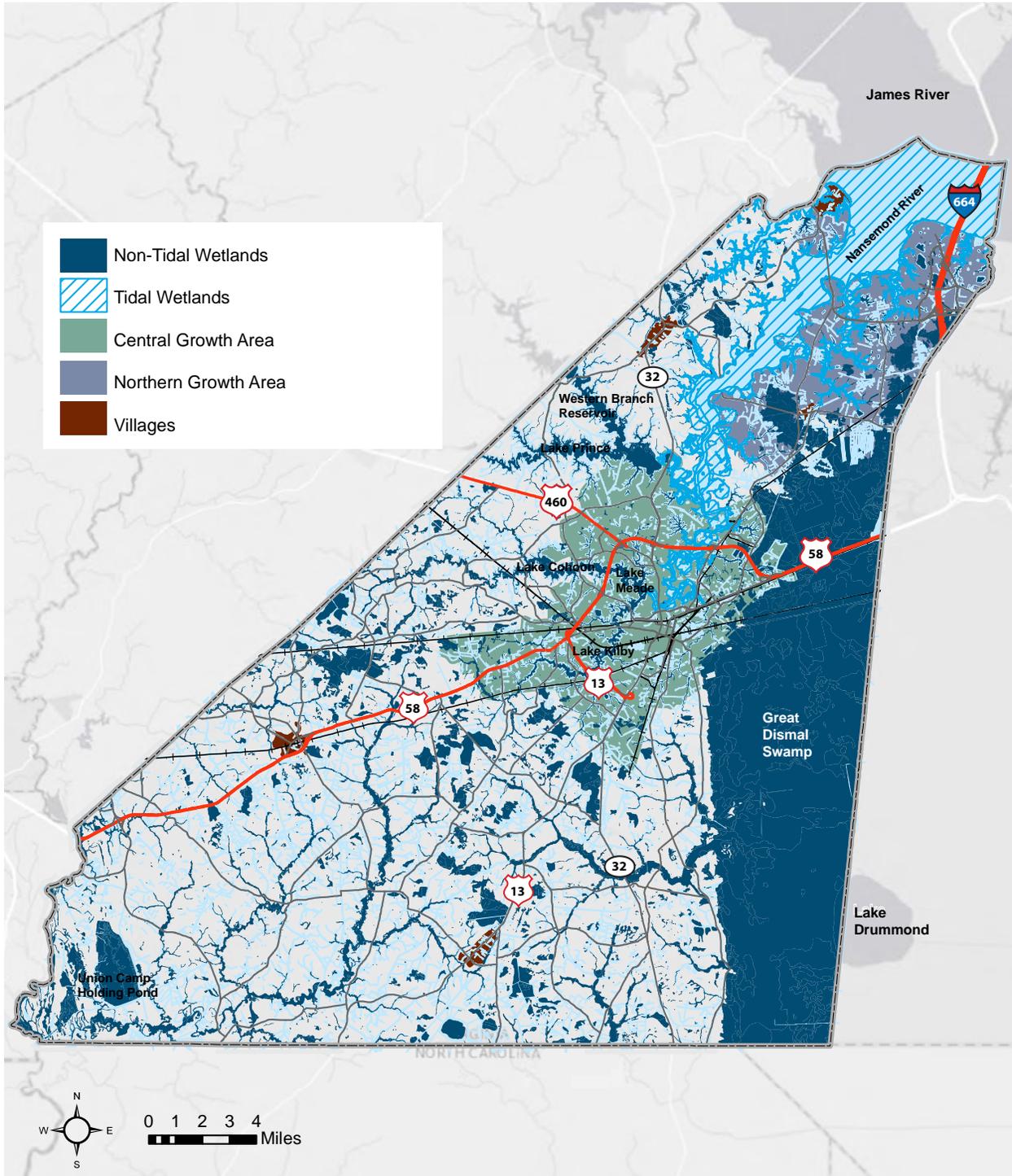
Human and natural actions have the potential to negatively affect the quality of wetlands. The City regularly receives and reviews permits for projects with tidal wetland impacts. Many of the wetland projects were for stabilization of shorelines necessary as a result of recent hurricanes. However, mitigation will now be required for routine projects.

Nevertheless, five non-tidal wetland restoration projects have been completed in the City, according to the Army Corps of Engineers, providing over 190 acres of restored or preserved wetlands designated as wetland banks. Through the wetland permitting process, wetland bank acreage can be used as mitigation for project impacts.

Figure 7-3: Wetlands by Type



Wetlands banks can be established in various areas of the City. The permitting agencies will give careful consideration to the ecological suitability of a site (i.e., that it possess the physical, chemical and biological characteristics to support establishment of the desired aquatic resources and functions). Size and location of the site relative to other ecological features, hydrologic sources (including the availability of water rights), and compatibility with adjacent land uses and watershed management plans are important factors for consideration. It also is important that ecologically significant aquatic or upland resources (e.g., shallow sub-tidal habitat, mature forests), cultural sites, or habitat for federally or state-listed threatened and endangered species are not compromised in the process of establishing a bank. Other significant factors for consideration include, but are not limited to, development trends (i.e., anticipated land use changes), habitat status and trends, local or regional goals for the restoration or protection of particular habitat types or functions (e.g., re-establishment of habitat corridors or habitat for species of concern), water quality and floodplain management goals, and the relative potential for chemical contamination of the wetlands and/or other aquatic resources.



Map 7-3: Wetlands

SHORELINE FEATURES AND EROSION CONTROL

The City waterfront contains approximately 150 miles of shoreline bordering the Nansemond and James Rivers, Chuckatuck and Bennett's Creeks, and their tributaries. Shoreline elevations in Suffolk average from three to eight feet, with some locations having higher elevations. Flooding is generally not considered to be a significant issue in most areas of the City as the Nansemond River is a low energy waterbody. Typically, storm surges are two feet or less above normal high tide, leaving only marshlands proximate to the river as flooded. Only the downtown area around North Main Street experiences flooding when strong northeast winds and tidal surges occur.

Shoreline areas often provide access to the local river systems and to the Chesapeake Bay through public and private piers. Shoreline areas along the lower Nansemond River, Chuckatuck Creek, Bennett's Creek, Knotts Creek and Hoffler Creek have extensive marshes. These marshes provide medium to high quality habitat for wildlife and fisheries, as well as buffering the shore from erosive forces.

In general, shoreline areas in the City remain in a natural condition, with short areas of artificial stabilization (approximately 3.75% of the City's Chesapeake Bay area shoreline is stabilized). In the northern portion of the City, shoreline areas along rivers and bays are prime sites for high-end development, particularly for residential properties. In this area, especially near the mouth of Chuckatuck Creek and the James River shoreline, up to 29% (4,075 feet) of the shoreline has been stabilized. Another 2,200 feet of James River shoreline is stabilized near Pig Point (Bridgeway Commerce Center) and 200 feet of shoreline is stabilized at the Tidewater Community College Campus.

The condition of existing shorelines with respect to erosion problems is not expected to have changed substantially in recent years. According to the previous plan, shoreline erosion was not a significant problem in the City. The bluffs at Eclipse (Barrel Point) and on the peninsula between Chuckatuck Creek and the Nansemond River were identified as having the greatest amount of erosion problems, accounting for approximately 2.3 feet/year. Existing shoreline erosion problems are most notable at the mouth of Bennett's Creek. Continued development along shorelines has the potential to increase erosion problems, as natural vegetation is removed and replaced by manicured landscapes. Enforcement of the Chesapeake Bay Preservation Area (CBPA) regulations, particularly grading and vegetative restrictions for the RPA, continue to minimize development impacts to shorelines. There are many small projects being implemented by land owners to improve shoreline stabilization. The City conducts appropriate compliance review to ensure that these projects are consistent with wetland and CBPA regulations. Further, the CBPA provides the following information on appropriate shoreline erosion mitigation measures, based on the extent of the problem.

Areas with a Low Erosion Rate (< 1 ft./year) 1 = most preferable

1. Vegetative stabilization with or without bank regrading (if applicable)
2. Revetment
3. Bulkhead

Areas with a Moderate Erosion Rate (1– 3 ft./year) 1 = most preferable

1. Vegetative stabilization (depending on site-specific conditions)
2. Beach nourishment

3. Revetment
4. Breakwaters
5. Groins
6. Bulkheads (depending on site-specific conditions)

Areas with a Severe Erosion Rate (> 3 ft./year) 1 = most preferable

1. Relocation
2. Beach nourishment
3. Revetments
4. Breakwaters
5. Groins
6. Seawall

The City of Suffolk Wetlands Board reviews and permits structures to ensure that shoreline projects are justified. Currently, the approval process is based on the environmental merits of each project individually, and does not take into consideration the cumulative effects of other shoreline control structures. The totality of impacts from erosion control structures along a river or creek is critical to making individual permit decisions. However, the Board does receive critical information and assistance from the Virginia Institute of Marine Science (VIMS) to assist in determining the cumulative impacts.

Within the CBPA, Intensely Developed Areas (IDAs) have been designated by the City to serve as areas in which development is concentrated and where little natural environment remains intact. Further, one of the following conditions must exist: (i) development has severely altered the actual state of the area such that it has more than 50% impervious cover; (ii) public sewer and water is constructed and currently serves the area; or (iii) housing density is equal to or greater than 4 dwellings per acre. Development and redevelopment within the IDAs can be permitted provided that water quality impact assessments are conducted and Best Management Practices are established to achieve a 10% reduction in non-point source pollution. The City also requires water quality improvements through the use of BMPs and buffer restoration where possible.

Boating activities and development of associated water access and use areas can also degrade water quality, exacerbate natural shoreline erosion rates, and potentially harm sensitive land and aquatic living resources found in those areas if not properly developed.

Through comprehensive shoreline planning, inventories of unaltered and altered shoreline features, sensitive living resources, and oceanographic characteristics, adjacent land use designations can be created and their interrelationships examined in both a pre- and post-erosion control structure placement context. In doing so, it can be determined whether or not an erosion problem truly exists and, if so, what factors are responsible for the problem and what measures are most appropriate to relieve the problem. In addition, any potential upstream or downstream impacts can be analyzed. In any case, it should be noted that erosion control structures are ultimately susceptible to extreme weather events. If such structures are not the most appropriate for a given situation, they can be extremely expensive

in the long-term to the property owner and, sometimes, even the community at large. Any shoreline activity should be done in a manner consistent with recommendations from the Virginia Institute of Marine Science (VIMS) and the Shoreline Advisory Service.

While existing land uses along the shoreline should work to control erosion, future development goals should be to direct development or redevelopment away from shoreline areas which are identified as critically-eroding, and to areas where suitable access can be developed without degradation of water quality or sensitive living resources through related construction, operation, or maintenance activities.

FISHERIES

Fish spawning areas for migrant fish species (anadromous) are located in the James River near the Suffolk shoreline from Pig Point east to Hoffer Creek. The marsh system along the Chesapeake Bay watershed shoreline in Suffolk, particularly along the Nansemond River, and the West, Streeter, and Hoffer Creek marsh complex are noted for being of a high resource value for marine life. As such they can be expected to be nursery areas for many of the species of finfish and shellfish in the Hampton Roads Region.

Many of the lakes and streams of the City have been stocked with a variety of finfish to support species restoration and recreational fishing. For example, the regional reservoir system has been stocked with striped bass, walleye, and other popular species. Area lakes support more than 20 different types of finfish and numerous species of reptiles and amphibians.

Shellfish restoration has been a significant issue in the Chesapeake Bay over the past several years. Shellfish are extremely susceptible to contamination from human activity especially from sewer and stormwater outfalls and failing septic systems. The Nansemond River has historically been a highly productive area for growing oysters. There are numerous private leases for shellfish beds along the bottom of the river. There are several large public oyster beds (Baylor Survey) off the shoreline of the City, and near the confluence of the Nansemond and the James River.

Table 7-2 lists the waters that are condemned for the taking of shellfish, as of January 2014. Condemnation of an area makes it illegal, except by permit, to take shellfish from these areas. It should be noted, however, that these condemnation notices can change from day to day depending on conditions.

Table 7-2: Waters in the City of Suffolk That Are Condemned for the Taking of Shellfish

Waterbody Name	Effective Date
Streeter and Hoffer Creeks	5/30/2008
Lower Nansemond River and Tributaries	8/26/2014
Chuckatuck Creek and Tributaries	10/6/2010
Upper Nansemond River and Tributaries	8/26/2014
Hampton Roads	1/8/2014

WATER QUALITY

As part of on-going evaluation and regulation of water quality, the Virginia Department of Environmental Quality (DEQ) has developed a list of impaired water bodies in Virginia. To be listed as impaired, a water body has to have documented pollutants that exceed normal tolerances for the designated use of the waterway. Table 7-3 provides the listing of impaired waters for the City of Suffolk.

Table 7-3: City of Suffolk Impaired Waters

Water Name	Cause Name	Cycle First Listed	TMDL Schedule
Chuckatuck and Brewers Creek	Fecal Coliform	1998	2010
	Oxygen, Dissolved	1998	2010
	PCB in Fish Tissue	2006	2018
Chuckatuck Creek and Mouth in James	Oxygen, Dissolved PCB in Fish Tissue	1998 2006	2010 2018
James River - Hilton Village to Craney Island	Chlorophyll-a	2008	2010
	Oxygen, Dissolved	1998	2010
	PCB in Fish Tissue	2006	2018
James River - Outside Chuckatuck Creek	Chlorophyll-a	2010	2010
	Oxygen, Dissolved	1998	2010
	PCB in Fish Tissue	2006	2018
James River - Outside Mouth Steeter and Hoffer Creeks	Chlorophyll-a	2010	2010
	Oxygen, Dissolved	1998	2010
	PCB in Fish Tissue	2006	2018
Jones Creek - Tributary to Pagan River	Oxygen, Dissolved	2006	2010
	PCB in Fish Tissue	2006	2018
Jones Creek - Tributary to Pagan River	Oxygen, Dissolved PCB in Fish Tissue	2006 2006	2010 2018
Lone Star Lake F (PWS)	Oxygen, Dissolved	2006	2018
Lone Star Lake G (PWS)	Oxygen, Dissolved	2006	2018
Lone Star Lake I (PWS)	Oxygen, Dissolved	2006	2018
	Phosphorus (Total)	2010	2022
Chuckatuck Creek	Benthic-Macroinvertebrate Bioassessments	2004	2016
Lake Cohoon (PWS)	Oxygen, Dissolved	2006	2018
Lake Kilby (PWS)	Oxygen, Dissolved	2006	2018

2035 SUFFOLK COMPREHENSIVE PLAN

Water Name	Cause Name	Cycle First Listed	TMDL Schedule
Lake Meade (PWS)	Oxygen, Dissolved Phosphorus (Total)	2006 2012	2018 2024
Speights Run - Lake (PWS)	Chlorophyll-a Oxygen, Dissolved	2010 2006	2022 2018
Eley Swamp tributary to Lake Cohoon (PWS)	pH		
Bennetts Creek - Tributary to Nansemond River [No TMDL]	Enterococcus Fecal Coliform Oxygen, Dissolved PCB in Fish Tissue	2004 1998 2006 2004	2016 2010 2010 2016
Bleakhorn Creek - Tributary to Nansemond River Mouth	Fecal Coliform Oxygen, Dissolved PCB in Fish Tissue	1998 2006 2006	2010 2010 2018
Burnetts Mill Creek - Tributary to Upper Nansemond River	Fecal Coliform Oxygen, Dissolved PCB in Fish Tissue	1998 2006 2006	2010 2010 2018
Knotts Creek - Tributary to East Shore Nansemond River	Fecal Coliform Oxygen, Dissolved PCB in Fish Tissue	1998 2006 2006	2010 2010 2018
Nansemond River - Upper	Enterococcus Fecal Coliform Oxygen, Dissolved PCB in Fish Tissue	1994 1994 2006 2006	2010 2010 2010 2018
Nansemond River - Upper Middle	Fecal Coliform Oxygen, Dissolved PCB in Fish Tissue	1994 2006 2006	2010 2010 2018
Nansemond River - Lower Middle	Fecal Coliform Oxygen, Dissolved PCB in Fish Tissue	1994 2006 2006	2010 2010 2018
Nansemond River - Lower [No TMDL]	Oxygen, Dissolved PCB in Fish Tissue	2006 2006	2010 2018
Nansemond River - Upper Lower [No TMDL]	Oxygen, Dissolved PCB in Fish Tissue	2006 2006	2010 2018
Nansemond River - Lower DSS Condemned at Knotts Creek	Fecal Coliform Oxygen, Dissolved PCB in Fish Tissue	2010 2006 2006	2022 2010 2018

Water Name	Cause Name	Cycle First Listed	TMDL Schedule
Willis Cover, Nansemond River - Lower Middle	Fecal Coliform	1994	2010
	Oxygen, Dissolved	2006	2010
	PCB in Fish Tissue	2006	2018
Shingle Creek - Tributary to Nansemond River	Enterococcus	1994	2010
	Fecal Coliform	1994	2010
	Oxygen, Dissolved	2006	2010
	PCB in Fish Tissue	2006	2018
	pH	2002	2014
Star and Oyster House Creeks - Tributary to Nansemond River	Fecal Coliform	1998	2010
	Oxygen, Dissolved	2006	2010
	PCB in Fish Tissue	2006	2018
Western Branch - Tributary to Nansemond River	Fecal Coliform	1998	2010
	Oxygen, Dissolved	2006	2010
	PCB in Fish Tissue	2006	2018
Unsegmented Estuaries - Upper Nansemond River	Fecal Coliform	1998	2010
	Oxygen, Dissolved	2006	2010
	PCB in Fish Tissue	2006	2018
Unsegmented Estuaries - Lower Nansemond River	Oxygen, Dissolved	2006	2010
	PCB in Fish Tissue	2006	2018
Lake Prince - Reservoir (PWS)	Oxygen, Dissolved	2006	2018
Hoffler Creek	Enterococcus	2008	2020
	Oxygen, Dissolved	2006	2010
	PCB in Fish Tissue	2006	2018
Streeter Creek	Oxygen, Dissolved	2006	2010
	PCB in Fish Tissue	2006	2018
Cypress Swamp	Escherichia coli	2012	2024
	Mercury in Fish Tissue	2008	2020
Unsegmented Tributary to Blackwater River	Benthic-Macroinvertebrate Bioassessments	2008	2020
	Mercury in Fish Tissues	2008	2020

2035 SUFFOLK COMPREHENSIVE PLAN

Water Name	Cause Name	Cycle First Listed	TMDL Schedule
Unsegmented rivers in K36R (not PWS area)	Mercury in Fish Tissue	2008	2020
Chapel Swamp	Oxygen, Dissolved pH	2004 2004	2016 2016
March Swamp	Escherichia coli Oxygen, Dissolved pH	2008 2004 2004	2020 2016 2016
Somerton Creek	Benthic-Macroinvertebrate Bioassessments Oxygen, Dissolved	2006	2018
Lake Drummond	Mercury in Fish Tissue pH	2006 2008	2018 2020
Unsegmented rivers in K39R	Mercury in Fish Tissue	2010	2022

Source: Virginia Department of Environmental Quality: 2012 Water Quality Assessment 305(b)/303(d) Integrated Report.

*TMDL = Total Maximum Daily Load

The most visible effects of the water body impairments recognized by the citizens of Suffolk are restrictions to fish consumption and shellfish harvesting. Fish restrictions are generally related to elevated levels of the carcinogen PCB or mercury. Shellfish restrictions are generally related to high fecal coliform bacteria levels from nonpoint sources, such as failing septic systems, wildlife and pet waste, or sanitary sewer overflows.

The 2012 Virginia Water Quality Assessment provides an overall assessment of quality conditions and trends in the navigable waters of the state between January 2005 and December 2010. Waters that have been determined to be impaired require a plan to restore water quality and associated designated use(s). The Virginia DEQ schedules each of these waters for development of a Total Maximum Daily Load (TMDL), which is a reduction plan that defines the limit of a pollutant(s) that waters can receive and still meet water quality standards. A TMDL Implementation Plan is developed after a TMDL is approved by the United States Environmental Protection Agency (EPA). Once fully completed, a TMDL Implementation Plan is intended to restore the designated uses of an impaired water body and maintain its water quality into the future.

The following activities by the City contribute to the improvement of stormwater quality:

- Chesapeake Bay Preservation Area (CBPA) regulatory compliance and enforcement
- Stream buffer requirements

- Provision of City sewer to residents with failing septic systems
- Grading and erosion control compliance and enforcement
- Stormwater management activities, including illicit Discharge Detection and Elimination, addressing SSOs, and adoption of VSMP minimum control measures
- Implementation of the Virginia Runoff Reduction Method (VRRM) for quantifying water quality and water quantity compliance

It is expected that meeting the TMDL goals will require a wide scale effort that includes installation of extensive best management practices, environmental cleanup to reduce the impairments from the listed water resource areas, and education of the public.

WATER QUALITY CHALLENGES

The biggest challenge facing the City related to stormwater management is developing strategies and programs to meet the Virginia Department of Environmental Quality Total Maximum Daily Load (TMDL) implementation plans for improving water quality. Meeting the requirements set by the various implementation plans may require the construction of additional water quality features to improve the quality of runoff leaving existing developed lands. Other actions might include increasing enforcement, increasing public education opportunities and programs, increasing maintenance of existing stormwater management features and systems, and improving agricultural and wildlife management programs.

Other challenges include administering the Virginia Stormwater Management Program General Permit for Discharges from Construction Activities, enforcing the Virginia Runoff Reduction Method (VRRM) for quantifying water quality and water quantity compliance, and updating the City of Suffolk MS4 Program Plan to comply with new state requirements. These challenges require the City to develop new programs as well as continue to enforce existing regulations and initiatives. The trend has been for the state to transfer more regulatory oversight responsibility to localities and the City will need to assume these responsibilities moving forward to remain compliant with state requirements.

WATERFRONT ACCESS

Access to the waterfront is important to the people of Suffolk due to the aesthetic, recreational, commercial and economic benefits that it provides. It is also an issue of concern for citizens, as evidenced by comments received on the update of this plan. Nevertheless, the development of shoreline access facilities may potentially impact water quality. The magnitude of the impact will depend on the type of access. The types of shoreline access generally include marinas, motorized and non-motorized boat access ramps, and piers and docks for fishing and pedestrian access. The type that presents the greatest impact to water quality is marinas. Marinas can impact water quality in the following ways:

- Re-suspension of bottom sediments by associated dredging and boating activities, increasing turbidity levels, and releasing pollutants.
- Stormwater runoff from impervious surfaces associated with marina development capable of transporting non-point source pollutants directly into receiving waters.
- Oil and fuel discharges associated with boat engines.
- Pollutants associated with boat maintenance activities such as paint, oil, and boat washing activities.

- Associated piers, docks, and bulkheads may decrease water circulation and decrease aquatic habitat by blocking available light.

The construction and operation of boat ramps will have many of the same impacts on water quality as marinas, but usually to a much lesser degree. Compared to marinas and boat ramps, non-motorized boating access, such as canoe/kayak access, presents few adverse impacts to water quality. Potential impacts from pier and bank fishing access are minimal, except perhaps for the installation and use of docks and piers and fish cleaning activities. Similarly, pedestrian shoreline access presents minimal impacts to water quality, except potential stormwater runoff associated with access facilities and the construction of piers and docks.

According to the Center for Coastal Resources Management's Shoreline Inventory Report, there are 360 docks in the City. This calculates to a density of 0.26 docks per 1,000 feet of shoreline. Nansemond River has the highest density in the City with more than 4 docks per 1,000 feet of shoreline. Further, there are seven marinas – two at Bennett's Creek, two at Chuckatuck Creek, and three at Nansemond River.

On a similar note, access to open waterways and rivers provides increased recreational activities that support the quality of life of Suffolk's residents. While fixed bridges currently block full access to many rivers and waterways in and around the City, the potential impacts of increased boat activities on the potentially delicate environments needs to be assessed. One option for the City is to encourage all marina operators to secure the "Clean Marina" designation awarded through the Virginia Department of Environmental Quality. Participation in this program requires marina operators to implement a variety of water quality protection techniques.

Coastal Resource Management for Tidewater Virginia Localities

Coastal ecosystems reside at the interface between the land and water and are naturally very complex. They perform a vast array of functions by providing shoreline stabilization, improved water quality, and habitat for fishes, from which humans derive direct and indirect benefits.

The science behind coastal ecosystem resource management has revealed that traditional resource management practices limit the ability of the coastal ecosystem to perform many of these essential functions. The loss of these services has already been noted throughout coastal communities in Virginia as a result of development in coastal zone areas coupled with common erosion control practices. Beaches and dunes are diminishing due to a reduction in a natural sediment supply. Wetlands are drowning in place as sea level rises and barriers to inland migration have been created by construction of bulkheads and revetments. There is great concern on the part of the Commonwealth that the continued armoring of shorelines and construction within the coastal area will threaten the long-term sustainability of coastal ecosystems under current and projected sea level rise.

In the 1980s, interest arose in the use of planted wetlands to provide natural shoreline erosion control. Today, a full spectrum of living shoreline design options is available to address the various energy settings and erosion problems found. Depending on the site characteristics, they range from marsh plantings to the use of rock sills in combination with beach nourishment.

Research continues to support that these approaches combat shoreline erosion, minimize impacts to the natural coastal ecosystem and reinforce the principle that an integrated approach for managing tidal shorelines enhances the probability that the resources will be sustained. Therefore, adoption of new guidance and shoreline best management practices for coastal communities is now necessary to

ensure that functions performed by coastal ecosystems will be preserved and the benefits derived by humans from coastal ecosystems will be maintained into the future.

Coastal Resource Management Policy Statement and Recommendations

In 2011, the Virginia Assembly passed legislation to amend §28.2-1100 and §28.2-104.1 of the Code of Virginia and added §15.2-2223.2, to codify a new directive for shoreline management in Tidewater Virginia. In accordance with §15.2-2223.2, all local governments shall include in the next revision of their comprehensive plan beginning in 2013, guidance prepared by the Virginia Institute of Marine Science (VIMS) regarding coastal resource management and, more specifically, guidance for the appropriate selection of living shoreline management practices. The legislation establishes the policy that living shorelines are the preferred alternative for stabilizing eroding shorelines.

This guidance, found within the Comprehensive Coastal Resource Management Portal, is being prepared by VIMS for localities within the Tidewater region of Virginia. It explicitly outlines where and what new shoreline best management practices should be considered where coastal modifications are necessary to reduce shoreline erosion and protect our fragile coastal ecosystems. This guidance will include a full spectrum of appropriate management options which can be used by local governments for site-specific application and consideration of cumulative shoreline impacts. The guidance applies a decision-tree method using a resource based mapping database that will be updated from time to time, and a digital geographic information system model created by VIMS.

- Refer to the guidance presented in the locality's Comprehensive Coastal Resource Management Portal (CCRMP) prepared by VIMS to guide regulation and policy decisions regarding shoreline erosion control.
- Utilize VIMS Decision Trees for onsite review and subsequent selection of appropriate erosion control/shoreline best management practices: <http://ccrm.vims.edu/decisiontree/index.html>.
- Utilize VIMS' CCRMP Shoreline Best Management Practices for management recommendation for all tidal shorelines in the jurisdiction.
- Consider a policy where the above Shoreline Best Management Practices become the recommended adaptation strategy for erosion control, and where a departure from these recommendations by an applicant wishing to alter the shoreline must be justified at a hearing of the board(s).
- Encourage staff training on decision making tools developed by the Center for Coastal Resources Management at VIMS.
- Follow the development of the state-wide General Permit being developed by VMRC. Ensure that local policies are consistent with the provisions of the permit.
- Evaluate and consider a locality-wide permit to expedite shoreline applications that request actions consistent with the VIMS recommendation.
- Seek public outreach opportunities to educate citizens and stakeholders on new shoreline management strategies including Living Shorelines.
- Follow the development of integrated shoreline guidance under development by VMRC.
- Evaluate and consider a locality-wide regulatory structure that encourages a more integrated

approach to shoreline management.

- Consider preserving available open spaces adjacent to marsh lands to allow for inland retreat of the marshes under rising sea level.
- Evaluate and consider cost share opportunities for construction of living shorelines.

Soils provide one of the underlying keys to the opportunities and constraints for site development. Constraints can range from high water tables that limit on-site sewage treatment to erosive conditions that require intensive management during site development. Some limitations include soils that have a high potential for shrinking or swelling are poorly suited for foundations, roadways, or other construction. On the other hand, other soils that have high organic content and are well drained make excellent soils for farming. Thus, knowing the type and characteristic of soils underlying the City are invaluable in making decisions about the future of development. The majority of the City has soils that are very limited for traditional on-site septic systems. Construction of traditional septic systems in such soils often results in failing systems that contribute bacteria and nutrients directly to surface waters that flow to sensitive resources such as the Chesapeake Bay and wetlands.

In the Growth Areas, soil suitability for septic systems is generally not a concern. In the Growth Areas public sewers are required and available in most instances. In the Rural Agricultural Conservation District, well-drained soils and lower housing densities support septic systems that are less likely to fail. However, septic system suitability is a primary concern in the Rural Villages and the Rural Conservation/ Low Intensity Residential District, where housing development is present or planned for the future. Soils with poor suitability are prevalent in these areas and require careful evaluation to identify appropriate sewage treatment systems. Alternative treatment systems, as approved by the Virginia Department of Health, should be utilized for building sites with moderate limitations. Severe soil limitations should not be used for any septic system.

In addition to the concerns for future development on unsuitable soils, there are likely many existing residential sewage treatment systems that are failing. Discussion during initial public meetings indicated that residential properties commonly have drain fields with “soggy conditions” and leakage in the spring or when rainfall is abundant. These conditions would equate with a failing sewer system and pose a threat to water quality. The City, in coordination with the Health Department, requires regular pumping of septic tanks, but does not have an inspection program to identify failing systems. The occurrence of failing systems is expected to continue to be an issue in the City with direct impacts to water quality. However, the extension of sewer service to cover the entire Growth Area should help alleviate some of these problems.

Soils suitable for agriculture are also prevalent in the City of Suffolk. Significant areas of the City are designated as Prime Farmland and farmlands of statewide significance. These soils are generally limited in their use for residential or commercial development. As such, development has been focused on the northern and central parts of the City.

The Comprehensive Plan for 2026 made changes in the size and location of the Rural Agricultural Conservation District. By making this change, there is a three-fold benefit to the natural environment in the City:

1. Reduces development potential within critical areas of the Chesapeake Bay watershed, thus reducing the potential for run-off from impermeable surfaces.
2. Protects farming on soils that are highly productive, assisting the agricultural community in the City.
3. Limits future development and runoff in the area surrounding the regional reservoir system.

HABITAT

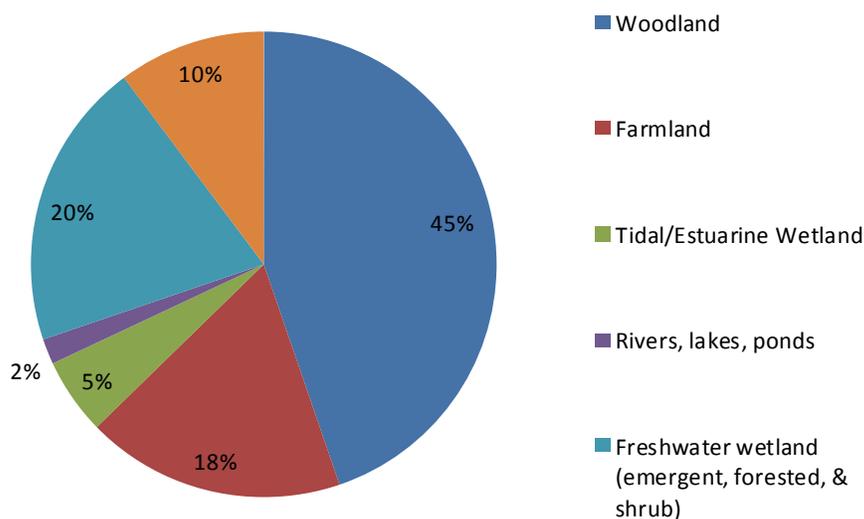
The preservation of habitat is broadly defined as the place where a plant or animal species naturally lives and grows; or consists of the characteristics of the soil, water, and biologic community (other plants and animals) that make this possible. Habitat enhancement and preservation is important, because it is necessary for the survival of native species, maintains natural ecological processes, sustains air and water resources, and contributes to the health and quality of life for Suffolk residents.

Certain vegetative types, such as forestland and farmland, also contribute to the economic vitality of the community. Figure 7-4, Vegetation Cover Types, illustrates the area of forestlands, farmlands and wetlands in the City of Suffolk. In general, the area with the most extensive forests and farms is in the southern portion of the City. Wetland habitats are primarily located along stream courses throughout the City, the Great Dismal Swamp, and in tidal areas of the northern portion of the City.

Woodlands - Forestry remains a vital part of the economy for southern Suffolk. Large acreage of forestlands, primarily pine plantations, are actively managed and harvested for wood products. These monotypic stands often include more diverse plant communities along stream corridors, drainageways and within hardwood swamps. The most sizeable natural forest community is located within the Great Dismal Swamp, which covers approximately 38,000 acres within the City.

Farmlands - Farmlands are used to produce commodities such as peanuts, cotton, corn, soybeans and wheat. As with managed forestlands, farmlands tend to include more diverse plant communities along

Figure 7-4: Vegetative Cover Types



Source: National Wetland Inventory GIS database

stream corridors, field borders and within wetlands. The overall acreage of land in farm production is slowly declining due to the struggling farm economy. However, farming is still a vital part of the economy of southern Suffolk and remains an extensive cover type.

Wetlands - Federal and state regulations (including CBPA regulations) minimize impacts and degradation to wetland habitats, though development pressures along these sensitive resources remain. Logging of forested wetlands, particularly hardwood swamps, is not specifically regulated by the City and is ongoing in the southern portion of the City. This activity is regulated by the State Department of Forestry.

Rivers, Lakes and Ponds - The City includes a great diversity of waterbodies, ranging from the tidal estuaries on the James and Nansemond Rivers, to drinking water reservoirs, to freshwater creeks. Of particular importance are the estuaries where spawning habitat is available for marine fisheries and shellfish. The quality of these waterbodies is directly impacted by nutrients and bacteria from surface water runoff.

Urban Land - Urban land includes areas developed for office, commercial, industrial and dense residential. These areas tend to have high coverage of impervious surface and increased surface water runoff. The vegetative component of the urban landscape is limited to manicured lawns and landscaping with invasive or weedy species present within unmaintained drainageways and idle lands. This cover type is steadily increasing as the City develops.

Wildlife Habitat - The cover types of forestlands, farmlands and wetlands, as well as rivers and waterbodies, combine to provide a wide range of habitats for fish and wildlife.

As the City continues to develop, the relatively large tracts of farmlands, woodlands and wetlands are converted to smaller parcels of residential property or urban lands. This development has resulted in "fragmented" habitat that supports a lower diversity of wildlife species. Wetlands and waterways tend to be preserved under existing regulations, providing essential corridors for wildlife. However, wetlands and waterways tend to have a lower overall quality because of disturbance, surface water impacts and fragmentation of the adjacent cover types. Development also results in an increase in wildlife nuisance problems, such as the current and increasing nuisance problem with the black bear population in the City when development infringes into habitat areas.

NATURAL HERITAGE RESOURCES

Natural heritage resources as defined by the Virginia Department of Conservation and Recreation – Division of Natural Heritage (DCR) are the habitat of rare, threatened, or endangered plant and animal species, unique or exemplary natural communities, and significant geologic formations such as caves and karst features. The City of Suffolk is currently home to 100 distinct types of natural heritage resources with 216 total occurrences throughout the City (see Appendix I). In addition, DCR has identified 17 terrestrial and three aquatic conservation sites as areas necessary for their survival.

DCR identifies and protects natural heritage resources statewide and maintains a comprehensive database of all documented occurrences of natural heritage resources in Virginia. DCR has developed conservation sites that contain known populations of natural heritage resources and include adjacent or surrounding habitat vital for their protection. Conservation sites do not represent protected lands. They are recommended for protection and stewardship because of the natural heritage resources and habitat they support, but are not currently under any official protection designation. Conservation sites are polygons built around one or more rare plant, animal, or natural community designed to include the element and, where possible, its associated habitat and adjacent land thought necessary for the element’s conservation. Conservation sites can be used to screen development projects for potential impacts to natural heritage resources, aid local and regional planning, identify targets for acquisitions and easements, and guide priorities for restoration activities.

Table 7-4: City of Suffolk Conservation Sites

Site Name	Biodiversity Rank	Legal Status	Type of Site
Dumpling Island	B3	NL	Conservation Site
Great Dismal Swamp: Northwest Section	B5	SL	Conservation Site
Route 618 Pine Barrens	B2	NL	Conservation Site
Manning Powerline	B5	NL	Conservation Site
Kilby Northwest Powerline	B2	NL	Conservation Site
Moss Swamp Powerline North Habitat Zone	B5	NL	Conservation Site
St. Mary’s Church Powerline	B5	NL	Conservation Site
Mt. Sinai House Habitat Zone	B5	SL	Conservation Site
Holy Neck House Habitat Zone	B5	SL	Conservation Site
Jones Swamp House Habitat Zone	B5	SL	Conservation Site
Piney Grove School Habitat Zone	B5	SL	Conservation Site
Adams Swamp House Habitat Zone	B5	SL	Conservation Site
Suffolk Airport Powerline Habitat Zone	B4	NL	Conservation Site

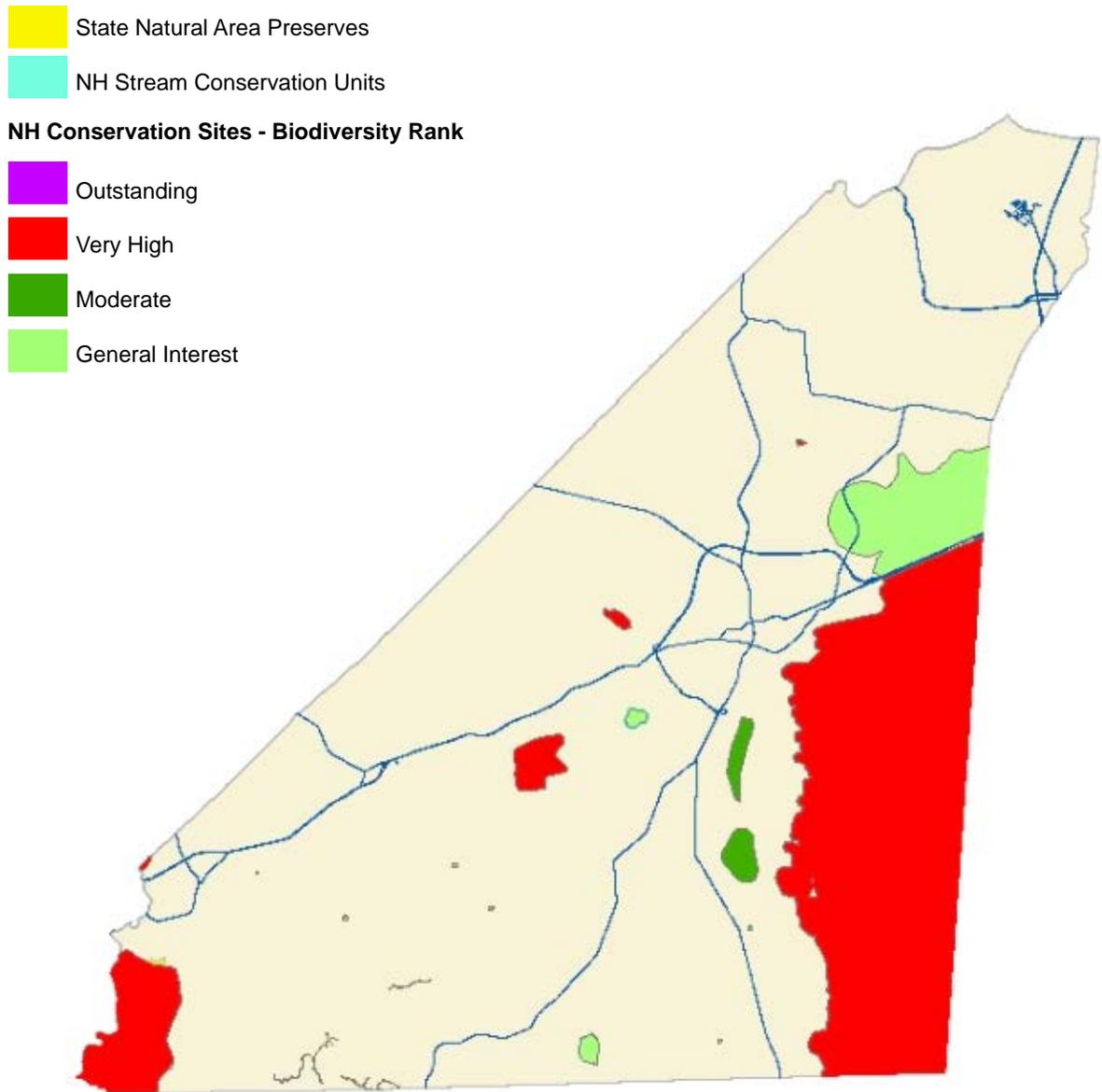
Site Name	Biodiversity Rank	Legal Status	Type of Site
South Quay	B2	NL	Conservation Site
Somerton Creek SCU	B5	BL	Stream Conservation Unit
Great Dismal Swamp	B2	SL	Conservation Site
Balm of Gilead Flatwoods	B4	SL	Conservation Site
Lummi Flatwoods	B2	NL	Conservation Site
Jones Swamp Tributary SCU	B2	NL	Stream Conservation Unit
Mill Swamp SCU	B2	NL	Stream Conservation Unit

An example of a conservation site in the City of Suffolk is the Great Dismal Swamp Conservation Site. In addition to multiple rare species and habitat types found here, the site/ecosystem is critically important because of the geographic location. Conservation sites are given a biodiversity significance ranking, based on the rarity, quality, and number of element occurrences they contain, on a scale of 1-5, 1 being most significant. Great Dismal Swamp Conservation Site has been given a biodiversity significance ranking of B2, which represents a site of very high significance. There are 19 natural heritage resources associated with this conservation site. A few of the rarer natural heritage resources at this conservation site are:

<i>Corynorhinus rafinesquii macrotis</i>	Big-eared bat	G3G4T3/S2/NL/LE
<i>Trillium pusillum var. virginianum</i>	Virginia Least Trillium	G3T2/S2/SOC/NL
	Non-Riverine Wet Hardwood Forest	G2/S1/NL/NL

Big-Eared Bat

The Eastern Big-eared bat (*Corynorhinus rafinesquii macrotis*, G3G4/S2/NL/LE), named for its enormous ears twice the length of its head, is extremely rare in Virginia and is currently known only in the southeastern portion of the state. Although widespread throughout the southeast, they are never found in large numbers. These bats roost singly or in small groups in hollow trees or abandoned buildings. They forage only after dark primarily in mature forests of both upland and lowland areas along permanent bodies of water (NatureServe, 2009). The details of this bat's feeding behavior and much of its natural history remain a mystery. Lack of information regarding the ecology of the eastern big-eared bat, and their sensitivity to disturbance, make them particularly vulnerable to destruction of roost sites and feeding areas where their presence goes undetected (Handley and Schwab 1991, Harvey 1992).



Map Date: 04/1

Map 7-4: City of Suffolk Natural Heritage Conservation Sites

Threats to this species include forest destruction, particularly hollow tree removal, decreasing availability of abandoned buildings, and possibly, insecticides. Please note that this species is currently classified as endangered by the Virginia Department of Game and Inland Fisheries (VDGIF).

Due to the legal status of the Eastern Big-eared bat, DCR recommends coordination with Virginia's regulatory authority for the management and protection of this species, the VDGIF, to ensure compliance with the Virginia Endangered Species Act (VA ST §§ 29.1-563 – 570).

Virginia Least Trillium

Virginia least trillium (*Trillium pusillum* var. *virginianum*, G3T2/S2/SOC/NL), a state rare perennial herb, primarily inhabits somewhat acidic, moist to saturated soils, although it does not grow in standing water. The plant is most often found on the margins of swamps, on high spots within swamps or in ground-water seepage areas. Direct destruction of individuals, loss of habitat, and alterations of water quality are the primary threats to this species (Clark and Potter, 1995). This herb species blooms from late March to May (Radford et. al., 1968). Surveys should be conducted during the earlier stages of the flowering period from late March to late April. Please note that this species is currently tracked as a species of concern by the United States Fish and Wildlife Service (USFWS), however this designation has no official legal status.

Non-Riverine Wet Hardwood Forest

The Non-riverine Wet Hardwood Forest (Embayed Region Type) occurs on extensive interstream flats with fine-textured mineral soils. Hydrology is seasonally to nearly permanently saturated, with occasional ponding, and is maintained by a high water table rather than riverine or estuarine flooding. This community generally occurs around the edges of large peatlands such as the Great Dismal Swamp, as well as on low, poorly drained terraces of the outer Coastal Plain in southeastern Virginia. The canopy is dominated by swamp chestnut oak (*Quercus michauxii*), cherrybark oak (*Quercus pagoda*), laurel oak (*Quercus laurifolia*), sweetgum (*Liquidambar styraciflua* especially in logged examples), water oak (*Quercus nigra*), and American beech (*Fagus grandifolia* on mesic microsites). Typical understory species are swamp bay (*Persea palustris*), American hornbeam (*Carpinus caroliniana*), pawpaw (*Asimina triloba*), American holly (*Ilex opaca* var. *opaca*), and red maple (*Acer rubrum*). The shrub layer is often dense and typically has species



Corynorhinus rafinesquii macrotis
Big-eared bat



Trillium pusillum var. *virginianum*
Virginia Least Trillium



Non-riverine Wet Hardwood Forest

such as giant cane (*Arundinaria gigantea* ssp. *tecta*), sweet-pepperbush (*Clethra alnifolia*) and coastal doghobble (*Leucothoe axillaris*) as dominants. Southern blueberry (*Vaccinium formosum*), Virginia sweetspire (*Itea virginica*), and swamp doghobble (*Leucothoe racemosa*), are minor shrub associates. Virginia least trillium (*Trillium pusillum* var. *virginianum*) sometimes occurs in this community.

This community and its composition and structure are dependent on local groundwater or sheet flow due to the saturated hydrology. This community was once extensive in southeastern Virginia but most stands were destroyed by extensive clearing, draining, and ditching for agricultural conversion. Few good examples remain, and only a small percentage of these are protected in managed areas. Unprotected examples are subject to ongoing threats by logging and changes to the hydrology which could disrupt groundwater volume and seasonality. The high value of the dominant trees, the typical failure of regeneration of the dominant trees after logging, the ease of drainage of the sites, and the relative fertility of the soil makes these communities among the most subject to loss of any wetland community type in the region. *Source: NatureServe 2012*

Natural Area Preserves

The City of Suffolk has one Natural Area Preserve protecting significant habitats. The Virginia Natural Area Preserves System was established in the late 1980s to protect some of the most significant natural areas in the Commonwealth. A site becomes a component of the preserve system once it is dedicated as a natural area preserve by the Director of the Department of Conservation & Recreation (DCR). Natural area dedication works in much the same way as a conservation easement by placing legally binding restrictions on future activities on a property. The Natural Area Preserve System includes examples of some of the rarest natural communities and rare species habitats in Virginia.

South Quay Sandhills

Most of South Quay (pronounced “key”) Sandhills Natural Area Preserve is located in the southwest corner of Suffolk bordering the Blackwater River and the North Carolina state line. A small portion of the preserve is situated across the Blackwater River in Southampton County. The preserve consists of 3,143 acres of bottomland forests and sandy uplands along the Blackwater River plus includes Virginia’s last remaining natural stand of longleaf pine. Seeds collected from this remnant forest at the northern range limit of longleaf pine present a unique opportunity for longleaf pine restoration efforts in the Commonwealth. Restoring longleaf pine to over 1,500 acres of sandy uplands at the preserve will be a primary management focus for DCR.

Habitat for rare species of plants and animals associated with frequently-burned longleaf forests will be enhanced, and rare wetland community types will be protected and restored. Prescribed burning will promote and maintain the development of diverse groundcover vegetation on the sandy pine uplands and wetland transition zones. In addition to prescribed burning, management activities will include conversion of upland loblolly pine/hardwood stands to longleaf pine, on-going biological inventory and



Image of South Quay Sandhills

monitoring, invasive species control, whitetail deer population management, boundary marking and maintenance, and developing public access opportunities. Successful long-term management will involve cooperation among the DCR's partners, including International Paper, Virginia Department of Forestry, U.S. Fish and Wildlife Service, and The Nature Conservancy.

Potential Threats to Natural Heritage Resources

A threat to this area and its bird species is the conversion of habitat to residential and commercial development or incompatible agricultural and forestry practices. Alteration of the local hydrology by land disturbance can change or eliminate habitat. Fragmentation of forests and the introduction of invasives, both flora and fauna, can have a direct effect on the survival of many native plants.



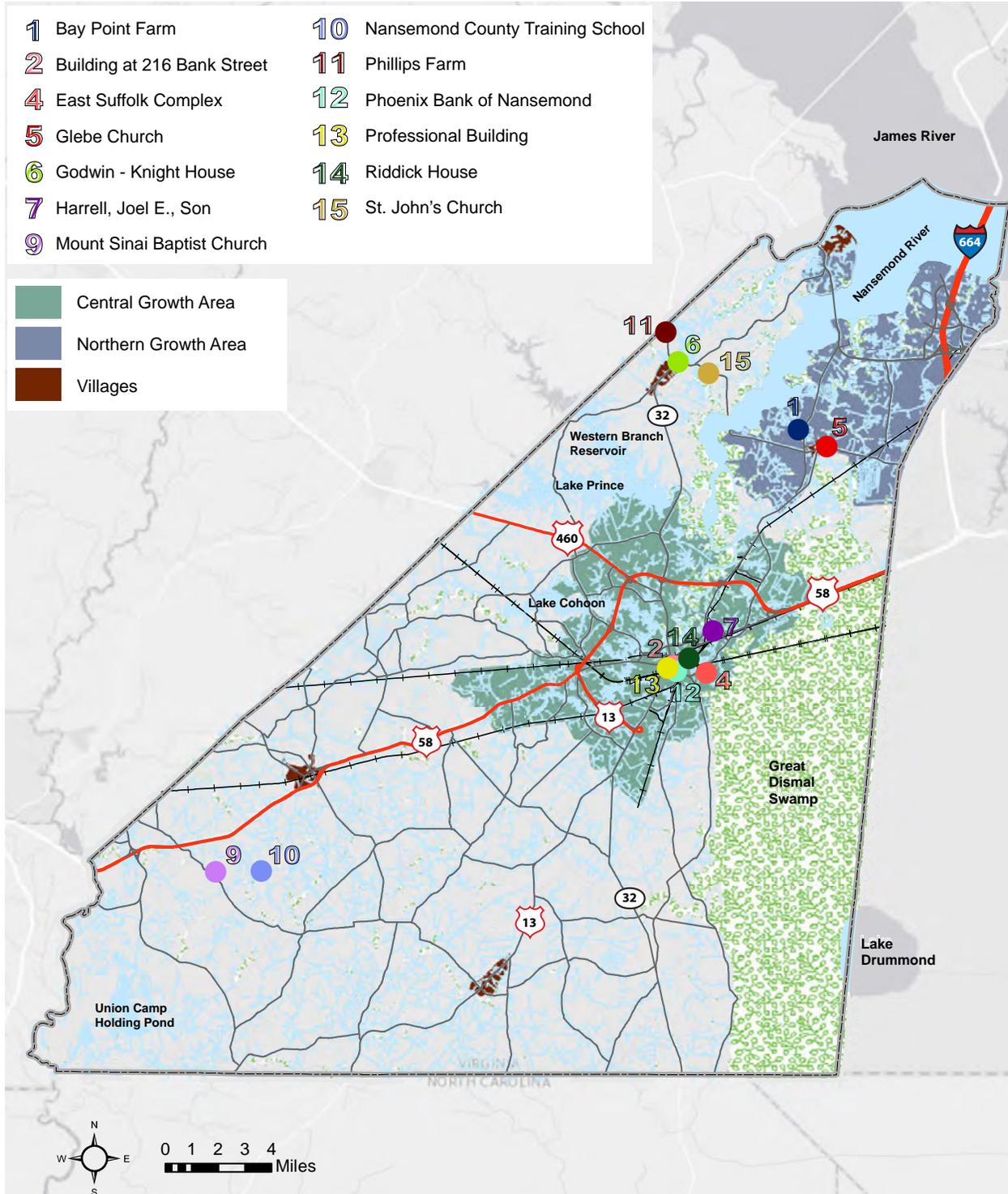
*Top: Bennett's Creek
Bottom: Egret*

HISTORIC RESOURCES

Suffolk's extensive cultural and historical resources are recognized at the state and national level. As shown in Tables 7-5 and 7-6 and Maps 7-5 and 7-6, Suffolk contains 13 individual historic buildings or building complexes, two archeological sites, and 12 historic districts that are listed on the National Register of Historic Places.

Table 7-5: City of Suffolk Historic Buildings

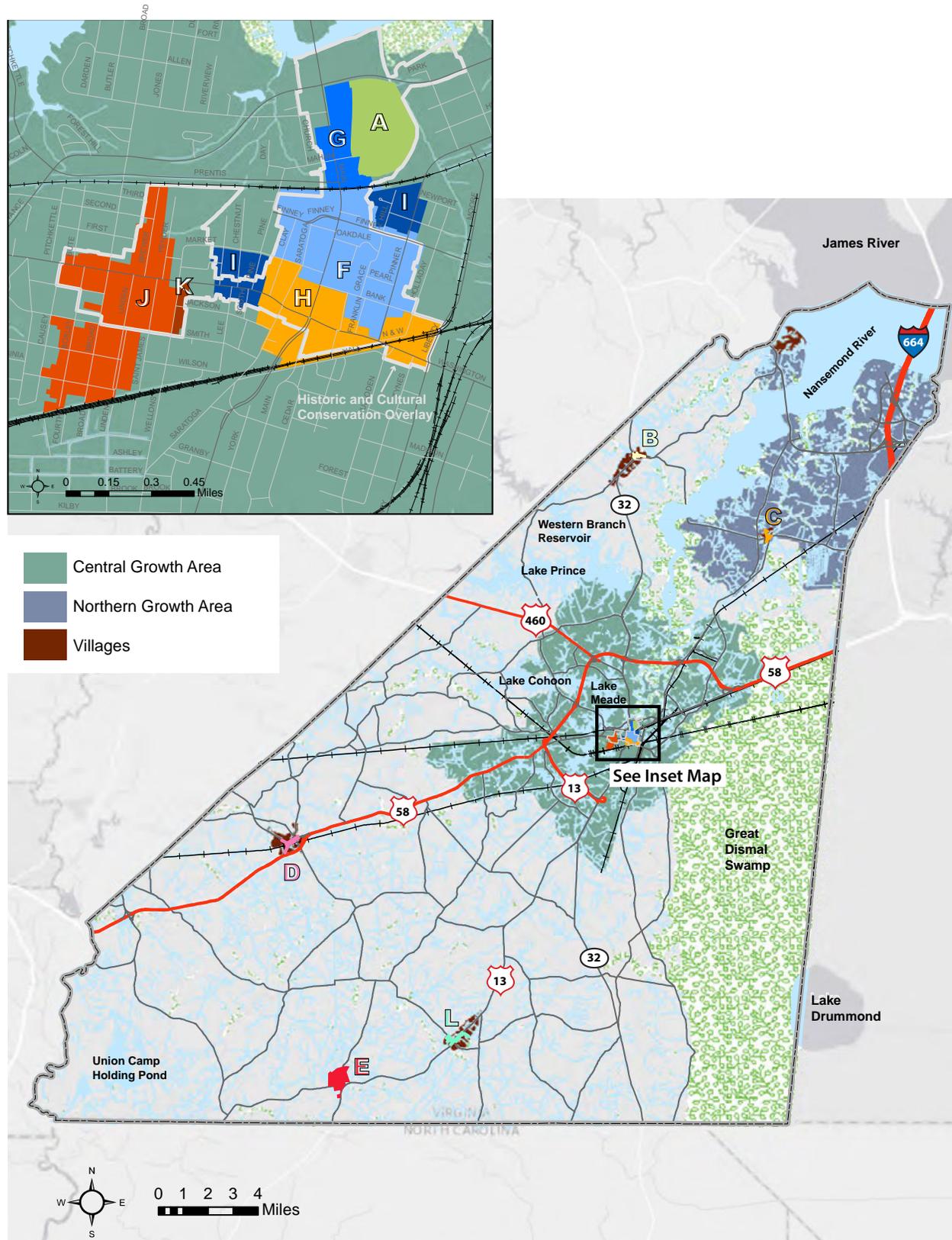
Natural Register Historic Buildings			
#	Resource Name	Address	Listed
1	Bay Point Farm	1400 Sleepy Hole Road	6/23/2003
2	Building at 216 Bank Street	216 Bank Street	11/7/1985
3	Dumpling Island Archeological Site	Address Restricted	2/10/1998
4	East Suffolk Complex	231 S. 7th Street	8/4/2003
5	Glebe Church	West of Chesapeake City on VA 337	5/25/1973
6	Godwin - Knight House	140 King's Highway	8/24/1992
7	Harrell, Joel E., Son	110 Virginia Ham Drive	2/1/2006
8	Knotts Creek - Belleville Archeological Site	Address Restricted	6/10/2008
9	Mount Sinai Baptist Church	6100 Holy Neck Road	3/20/2007
10	Nansemond County Training School	9307 Southwestern Boulevard	8/11/2004
11	Phillips Farm	6353 Godwin Boulevard	10/30/1998
12	Phoenix Bank of Nansemond	339 E. Washington Street	1/24/1991
13	Professional Building	100 N. Main Street	8/12/1999
14	Riddick House ("Riddick's Folly")	510 Main Street	5/2/1974
15	St. John's Church	E of Chuckatuck on VA 125	4/11/1973



Map 7-5: City of Suffolk Historic Buildings

Table 7-6: City of Suffolk Historic Districts

Natural Register Historic Districts			
#	Resource Name	Address	Listed
A	Cedar Hill Cemetery	South of E. Constance Road	2/1/2006
B	Chuckatuck Historic District	Jct. of VA 10/32 and VA 125	4/7/1995
C	Driver Historic District	Jct. of VA 125 and VA 629	4/7/1995
D	Holland Historic District	Jct. of U.S. 58 and VA 189 and VA 653	5/15/1995
E	Somerton Historic District	Arthur Drive, Pittmantown Road, Boonetown Road	12/31/2008
F	Suffolk Historic District	Roughly bounded by RR tracks, Hill Street, Central Ave, Holladay, Washington, N. Saratoga, and Pine Streets	6/22/1987
G	Suffolk Historic District (Boundary Increase I)	Roughly along N. Main Street, from Constance Road to Norfolk and Western railroad tracks	6/10/1999
H	Suffolk Historic District (Boundary Increase II)	Roughly bounded by N and W railroad tracks, County Street, and Liberty Street, Bank Street, Market Street, Clay Street, and Poplar Streets	9/14/2002
I	Suffolk Historic District (Boundary Increase III)	Pinner and Central Ave and W. Washington Street	12/3/2004
J	West End Historic District	Roughly bounded by Causey Ave, Seaboard Coast Lines railroad tracks, Pende Street, Wellons Street, Linden Ave, and railroad tracks	1/16/2001
K	West End Historic District (Boundary Increase)	Roughly bounded by Wellons, Washington, and Smith Streets	11/27/2004
L	Whaleyville Historic District	Jct. of U.S. 13 and VA 616	4/7/1995



Map 7-6: City of Suffolk Historic Districts

At the local level, the Unified Development Ordinance includes a Historic and Cultural Conservation Overlay District that encompasses most of the downtown National Register districts and adjacent areas. Design Guidelines for the district were adopted in 1990. The overlay district provides a procedure for review by the Historic Landmarks Commission of all external changes to buildings that are visible from any street or public way. The Commission may issue a Certificate of Appropriateness or require changes in compliance with the design guidelines. (Minor alterations such as replacement of building elements with matching elements may be approved administratively.)

The City is a Certified Local Government, making it eligible for funding assistance from the Virginia Department of Historic Resources. Grants can be used to survey architectural and archaeological resources, prepare nominations to the National Register of Historic Places, create preservation planning documents and programs, create public education programs, and rehabilitate publicly owned buildings listed on the national register. The City has received grants for historic resource surveys and educational efforts such as brochures.

Federal (income producing) and state (owner occupied) tax credits are available for certified renovations to historic buildings: a tax credit on 25% of eligible expenses through the Virginia Rehabilitation Tax Credit Program and an additional 20% through the Federal Rehabilitation Tax Credit Program. Recent projects such as the renovation of the 1919 Suffolk Professional Building into office and retail space, as well as the adaptive reuse of the Suffolk High School into the Cultural Arts Center, took advantage of these tax credits.

The Suffolk-Nansemond Historical Society was organized in 1966 to preserve and publicize the City's historic resources. The Society maintains a gift shop in the Riddick's Folly museum and is leasing space in the old Nansemond County Courthouse for additional exhibits. It sponsors a Candlelight Tour each December and periodic lectures and walking tours. Its parent company, Preservation of Historic Suffolk, Inc., purchased and restored the 1885 Seaboard Passenger Station on Main Street, with the help of federal transportation enhancement funds and private contributions.

The City of Suffolk has also been designated by the White House as a Preserve America community. Along with 10 other cities in Virginia and many others around the country, this designation provides opportunities for funding to support preservation efforts through heritage tourism, education and historic preservation planning.

THEMES, POLICIES, AND ACTIONS

Theme: Preserved and Enhanced Character

Policy 7-1: Preserve and protect Suffolk's agricultural heritage.

- Action 7-1A: Identify opportunities for the establishment of agricultural preservation programs.
- Action 7-1B: Continue to allow for the establishment of agricultural industrial uses in the Rural Agricultural Conservation area.
- Action 7-1C: Continue to actively support the plans and policies that limit residential development in the Rural Agricultural Conservation area.
- Action 7-1D: Support the development of alternative agricultural economic practices such as community supported agriculture (CSA), cooperative farms, and hobby farms.
- Action 7-1E: Maintain the subdivision and other development regulations that prevent the lining of rural roads with small residential lots.
- Action 7-1F: Consider amending land use regulations so that the design and location of minor subdivision lots avoid the most valuable agricultural lands and permeable soils.
- Action 7-1G: Actively promote the consideration of agricultural interest in economic development strategies.

Theme: Environmental Protection

Policy 7-2: Protect the City's natural resources from the negative impacts of development.

- Action 7-2A: Continue to implement and enforce the Chesapeake Bay Preservation Act.
- Action 7-2B: Preserve tidal marshes along City shorelines.
- Action 7-2C: Continue to enforce the provisions of the Floodplain Overlay District and associated Flood Insurance Rate Maps.
- Action 7-2D: Continue to support the implementation of shoreline protection measures.
- Action 7-2E: Promote coastal water quality improvement initiatives for the protection of spawning and nursery grounds.
- Action 7-2F: Encourage "Clean Marina" designation for all marinas.
- Action 7-2G: Assure the protection of ground water and well water quality and the water quality of areas draining to lakes and reservoirs.
- Action 7-2H: Continue to limit development within drinking water watersheds to low intensity and low density uses.

- Action 7-2I: Continue to explore and implement new and innovative techniques to apply water quality protection measures beyond those of the Chesapeake Bay Preservation Act and Regulations.
- Action 7-2J: Continue to identify, adopt, and implement appropriate measures to protect water quality in the Great Dismal Swamp Wildlife Refuge.
- Action 7-2K: Continue to work with the health department to update septic system regulations to better protect water quality.
- Action 7-2L: Cooperate with the Peanut Soil and Water Conservation District to promote the development and implementation of Farm Conservation Plans.
- Action 7-2M: Continue to work closely with neighboring jurisdictions in efforts to improve the effectiveness of the region's watershed management program.
- Action 7-2N: Continue to implement and enforce stormwater regulations related to pre and post-development activities.
- Action 7-2O: Continue to promote development activities that implement TMDL action plan requirements.

Policy 7-3: Promote the City of Suffolk as a destination for eco-tourism.

- Action 7-3A: Recognize eco-tourism as a method for continuing the preservation of the City's natural resources.
- Action 7-3B: Ensure that any future pathway system relates to and complements the eco-tourism initiative.
- Action 7-3C: Continue to work with City departments and adjacent jurisdictions to promote eco-tourism opportunities.
- Action 7-3D: Support opportunities for expanding the economic benefits of eco-tourism.

Policy 7-4: Preserve the City's Historic Resources.

- Action 7-4A: Continue to survey areas of the City for their contribution to the cultural heritage of the City and consider designating new historic districts as they are located.
- Action 7-4B: Maintain an up-to-date Historic District Design Guidelines for historic buildings.
- Action 7-4C: Promote the understanding and appreciation of the value of preserving historic architecture.
- Action 7-4D: Consider establishing development encroachment protection zones around the City's historical villages and individual properties to better protect and buffer these cultural resources from encroaching non-compatible development.
- Action 7-4E: Actively pursue funding and opportunities for historic preservation.

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Bennetts Creek Marina