

New Kent County Comprehensive Plan

Adopted October 9, 2012



NEW KENT COUNTY COMPREHENSIVE PLAN

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INTRODUCTION

This update to the New Kent County Comprehensive Plan is the result of the efforts of many individuals and organizations over a period of approximately three years. The Plan is based on both professional and public input. The plan includes professional studies and analyses that are available (see Appendices) as background material for this document. It is also the result of a series of public information sessions and work sessions designed to elicit the input of a cross-section of the County citizenry.

The central factor in this Comprehensive Plan is the widely-held desire of the citizens of New Kent County to maintain the County's attractive, rural character while providing opportunities for the creation of income and wealth in the community.

The Plan begins with a discussion of the historical context within which New Kent County has developed since colonial exploration began in 1607. This is followed by a discussion of existing conditions including: population and household growth, economic factors, natural resources, transportation, public utilities, public facilities, economic development, and land use.

A fiscal impact analysis follows the discussion of existing conditions. This analysis was performed to estimate the future budgetary impact of current development trends and to provide a quantifiable bases for future land use decisions.

The next element of the Plan is a discussion of goals, objectives, and implementation strategies. Goals constitute the vision of the future of New Kent County. These goals are a general statement of the ideals toward which the County strives. Objectives are specific subsections of the County goals, and implementation strategies are recommended actions that the County should take toward the realization of its vision.

A series of Land Use Definitions follows, and provides the basis for the generalized Future Land Use Map. The Future Land Use Map is intended to be a general guide to future development in the County. It is **not** a parcel specific zoning map, nor should it be viewed as such. A number of other maps supplement the text of this document and provide a visual representation of those key issues discussed in the text.

COMPREHENSIVE PLANNING PROCESS

In the summer of 2009, County staff and the Planning Commission were given direction from the Board of Supervisors to conduct an update to the Vision 2020 Comprehensive Plan (2003). The Board determined that this update should follow the same format as the Vision 2020 Plan, but should incorporate new data that has been collected since then, updated maps, items that have been passed by the General Assembly, and significant additions to the Transportation and Public Utility elements.

The County retained the services of Kimley-Horn & Associates to prepare the Transportation Element and Springstead, Inc. to prepare the Fiscal Impact Analysis.

Before a significant amount of work was completed on the update, a series of three Public Information Sessions were held in the fall of 2010. These sessions were duly advertised and a schedule was published in both the *Tidewater Review* and the *New Kent/Charles City Chronicle*. Citizens were afforded an opportunity to address staff, Planning Commissioners, and several members of the Board of Supervisors at these meetings which were used to gauge the public's satisfaction with the Vision 2020 Comprehensive Plan adopted in 2003.

The Planning Commission held a work session in November 2010 to review the public comment received at the information sessions and instructed staff on revisions to be made to the draft plan. Staff continued to update the draft text and maps and the Planning Commission held a follow-up work session in March of 2011. At this work session the Planning Commission determined that prior to a public hearing being held on the plan, two more public information sessions should be held.

Two Public Information Sessions were held in April 2011 and staff received several additional comments that were taken back to the Planning Commission's work session in May 2011. At this work session the draft was presented to the Planning Commission and they unanimously voted to hold a public hearing on the plan on June 20, 2011. At this hearing the Planning Commission voted 9:1:1 to forward the plan to the Board of Supervisors with a recommendation for approval.

On July 20, 2011 the Board of Supervisors held a duly advertised public hearing on the draft Comprehensive Plan, received public comment, and voted to defer action to a future work session or Board meeting.

The Board held a work session on August 17 and gave staff additional comments and edits to take back to the Planning Commission. The Planning Commission considered these edits at their meeting on October 17, 2011 and voted 9:0:1 to reject the majority of the Board's suggested edits.

Staff brought back the Planning Commission's motion to the Board at their November 30, 2011 work session and the Board voted to defer any action on the Comprehensive Plan update until after January of 2012, when the new Board took office.

At the Board's regular meeting on March 12, 2012, citizen comments were collected regarding the Comprehensive Plan Update, and the Board voted 4:1 to defer action on the Comprehensive Plan. On July 11, 2012, the Board held a work session on the Comprehensive Plan Update and suggested that all references to UDA's (Urban Development Areas) be taken out of the Plan, including 4 of the draft maps and Appendices C & D.

The Planning Commission considered these changes at a public hearing on August 20, 2012 and voted 8:0:1 to recommend approval of the Comprehensive Plan Update to the Board of Supervisors.

On August 9, 2012 the Board of Supervisors voted unanimously to adopt the New Kent County Comprehensive Plan.

Throughout the entire process a copy of the draft plan was made available for public review on the official New Kent County website and paper copies were available for review in the Planning Division in the Administration Building.

HISTORICAL AND REGIONAL SETTING

Colonial exploration of New Kent County began with Captain John Smith's visit to the Native American village of Cinquteck (the site of present West Point) in 1607. For the next several years, fighting between the English and the American natives occurred throughout the Pamunkey River area. After the Indian War of 1644, the Native Americans were driven out of the village and the English settlement of New Kent County began.

New Kent County, named for Kent County in England, was established from York County in 1654. The newly formed County encompassed territory that is now the Counties of King and Queen, King William, Caroline, Hanover, and portions of Spotsylvania, Louisa, and James City.

New Kent County became a prosperous community in Colonial times. Ferries traveling the Pamunkey and York Rivers were important transportation links that helped encourage economic growth in the area. People began to concentrate in what is now known as Eltham, where several plantations were established, and West Point developed as a port. The first town, called Brick House, was established in the vicinity of Eltham in 1680. Brick House itself housed the County Court and other government offices. Brick House's town center and a tobacco warehouse developed into the County's commercial center. Unfortunately, the County records burned when Bacon's Rebellion ended at Brick House in 1687. The County seat was moved to New Kent Courthouse in 1691. In 1748, the only other colonial town in the County, Cumberland, lost its bid to become capital of Virginia to Williamsburg, by only three votes. After the Revolutionary War, the settlers of Cumberland and Brick House either spread into the remainder of New Kent County or left altogether.

A new commercial center developed at Providence Forge. Canals for access to the town by ship were built by slave labor along the Chickahominy River, and still are evident today. A large forge and mill were located on Old Forge Pond. The forge was destroyed and buried by locals during Cornwallis' invasion, to prevent it from falling into enemy hands. The mill ground grain for both Revolutionary and Civil War troops until its use was discontinued, around the beginning of the 20th Century.

The 1800's were a dormant period for New Kent County. Plantation society did not develop significantly because of the relatively steep slopes of the land. Three Civil War engagements took place in the County in May of 1862. After the Civil War, another out-migration of inhabitants occurred.

In the late 1800's, people gradually started moving back into New Kent County. Polish immigrants settled in the area of Barhamsville. Shipping occurred along the Chickahominy River and sparked trade in Windsor Shades and Providence Forge. The placement of railroad tracks also helped establish Providence Forge as the commercial and industrial center of the County.

Transportation continued to assist in the development of New Kent County in the 1900's. Many people moved into the County as a result of new highway construction, particularly after 1950. U.S. Route 60 and Interstate 64 have led to growth by increasing accessibility to the Richmond and Hampton Roads urban centers.

New Kent County is located in the Virginia Coastal Plain, between Richmond and Hampton Roads. County boundaries lie within 15 miles of downtown Richmond and 45 miles of Newport News. The County is also the gateway to Virginia's Middle Peninsula, with bridges crossing the Pamunkey and Mattaponi Rivers at the Town of West Point. The only other bridge crossing to the Middle Peninsula is located approximately 28 miles east on the York River, at Gloucester Point.

New Kent County has a land area of about 212 square miles (135,680 acres) and is bounded by the Pamunkey and York Rivers to the north and east, and the Chickahominy River to the south and west. Surrounding New Kent County are the Counties of Hanover, King William, King and Queen, James City, Charles City, and Henrico. Regionally, New Kent County is part of the Richmond Regional Planning District and Richmond-Petersburg Metropolitan Statistical Area (MSA).

POPULATION AND HOUSEHOLD GROWTH

New Kent County has undergone rapid population fluctuations over its 350 year history. The population of the County increased steadily from 1950 to 1970, and then jumped 65.7% in the 1970's following completion of Interstate 64 eastward from Bottoms Bridge. The 1990's saw a 28.9% increase to 13,462 and by April 1, 2010, the population (per the Census Bureau) was 18,429. Since 1970 the County's population growth rate has been higher than those of the Richmond Regional Planning District, the Richmond - Petersburg MSA, and Virginia as a whole. New Kent County's growth is mostly due to in-migration.

Table 1				
Area Population Growth – 2000 & 2010				
	2000	2010	Numeric Change 2000-2010	Percent Change 2000-2010
Charles City County	6,926	7,256	330	4.33%
Chesterfield County	259,838	316,236	56,398	21.71%
Goochland County	16,863	21,717	4,854	28.78%
Hanover County	86,320	99,863	13,543	15.69%
Henrico County	262,210	306,935	44,725	17.10%
New Kent County	13,462	18,429	4,967	36.90%
Powhatan County	22,377	28,046	5,669	25.33%
Richmond City	197,790	204,214	6,424	3.25%
Richmond Regional PDC	872,405	1,009,921	137,516	15.77%
Dinwiddie County	24,533	28,001	3,468	14.14%
Prince George County	33,047	35,725	2,678	8.10%
Colonial Heights City	16,897	17,411	514	3.04%
Hopewell City	22,354	22,591	237	1.06%
Petersburg City	33,740	32,420	-1,320	-3.91%
Richmond-Petersburg MSA	1,002,976	1,146,069	143,193	14.28%
Virginia	7,078,515	8,001,024	922,509	13.03%

Source: U.S. Census Bureau

The data from Table 1 reflects the fact that between 2000 and 2010, New Kent County was the fastest-growing community, on a percentage basis, in the metropolitan area.

The largest numerical population gains were recorded in Chesterfield, Hanover, and Henrico. While development pressures are strongest in these suburban communities, new residents will continue to be attracted to New Kent due to such factors as the existence of approximately 7,000 vacant parcels on which homes can presently be constructed and the fact

that vacant land is still a relative bargain in the County, compared to land values in neighboring jurisdictions.

Table 2								
New Kent County Population Growth, 1930-2010								
1930	1940	1950	1960	1970	1980	1990	2000	April 1, 2010
4,300	4,092	3,995	4,504	5,300	8,781	10,445	13,462	18,429

Source: U.S. Census Bureau and New Kent County Planning Division

Table 2 clearly demonstrates the drastic increase in population, especially since 1990. New Kent County’s population grew by 76.44% between 1990 and 2010. Even with this population increase, the population density in 2010 was 86.93 persons per square mile, demonstrating that the County still maintains its rural nature.

The Virginia Employment Commission projects continued population increase in the County, to 23,671 by 2020 and 29,496 by 2030. These projected increases, while substantial, represent a slowing of the population growth rate. On the other hand, the number of new, single-family dwellings from 2001 through 2010 (as shown in Table 3) and the relative availability of land in the County (both “raw” and already approved as lots) suggest that perhaps these population projections may be overly conservative. The New Kent County planning staff projects a higher population increase in the County, as reflected in Table 4.

Table 3 – Net New Dwellings from 2000 – 2010			
Year	Residential Certificates of Occupancy	Demolition Permits	Net New Dwellings
2001	244	9	235
2002	212	8	204
2003	259	2	257
2004	261	6	255
2005	281	2	279
2006	337	9	326
2007	291	15	276
2008	260	15	245
2009	217	13	204
2010	156	4	152
		Total	2,433

Source: New Kent County Building Development Department

	2014	2016	2018	2020	2022	2024	2026	2028	2030	2032	2034
Estimated new homes per year	365	349	289	265	265	255	255	255	235	255	255
	-	-	-	-	-	-	-	-	-	-	-
	383	367	358	343	343	343	343	343	343	343	343
Estimated County Population	22,093	23,480	24,667	25,526	26,485	27,330	28,125	28,893	29,548	30,221	30,910
	-	-	-	-	-	-	-	-	-	-	-
	23,667	25,148	26,512	27,700	28,990	30,175	31,323	32,434	33,510	34,549	35,552

These projections are based off of current and proposed subdivision activity and data from the New Kent County Planning Division

The number of households in New Kent County increased by 38.33% from 2000 to 2010. This is reflective of the 36.9% increase in population from 2000 to 2010. The average family size in New Kent County in 2010 was 2.93, with the average household size being 2.62. The average household size has declined over the past few decades, while the number of households has increased over time.

	1970	1980	1990	2000	2010
New Kent County	3.51	2.95	2.77	2.65	2.62
Richmond metro area	3.11	2.70	2.51	2.48	2.50
Virginia	3.20	2.77	2.56	2.54	2.54

Sources: U.S. Census Bureau & New Kent Planning Division

The County population’s age distribution changed significantly since 2000. The 45 to 54 and 55 to 59 age brackets increased by 46% and 84%, respectively. At the same time, the 5-14 age cohort increased by 17.66%, and the 20 to 24 and 25 to 34 age cohorts had only a slight population gain. Taken together, these figures indicated that families with children are moving into the County, while young adults are moving out after graduating from high school. The age ranges associated with these parents indicate that most of them began to have children when they were in their thirties, probably after they became established in their careers. This is generally a well-educated and affluent segment of the population, one that tends to be employed in urban centers such as Richmond or Hampton Roads.

This pattern of in-migration of new families creates pressures not only for new housing opportunities, but also for increased spending on public education and other services. It also creates the potential for conflict between new suburban and traditional rural lifestyle and development patterns.

ECONOMIC FACTORS

INCOME

New Kent County is a fairly affluent locality within the Richmond Region. In 2010, the median household income (reported by the U.S. Census Bureau) was \$71,549. As reflected in Table 6, New Kent County had the fourth-highest median household income of the seven counties in the Richmond Region. The County's median household income of \$71,549 was 17% higher than the median household income for the Commonwealth of Virginia.

Table 6	
2010 Median Household Income	
	Median Household Income
Charles City County	\$50,958
Henrico County	\$61,300
Chesterfield County	\$71,327
New Kent County	\$71,549
Powhatan County	\$74,825
Goochland County	\$76,688
Hanover County	\$77,935
Virginia	\$61,210

Source: U.S. Census Bureau

The per capita income for New Kent County is shown in Table 7, below.

Table 7 - Per Capita Income	
1990	\$18,033
2000	\$27,339
2002	\$28,089
2005	\$30,189
2006	\$31,886
2007	\$32,808

Source: U.S. Census Bureau

Of 2,199 families living in New Kent with related children under the age of 18, 114 such families, or 4.4%, were living below the poverty line in 2010.

EMPLOYMENT AND UNEMPLOYMENT

New Kent County's unemployment rate has remained quite low over the years. It dropped at a steady rate between 1970 and 1990, and then decreased again until 2000, following most

state and national trends. Since 1995 it had been lower than the unemployment rates for the State and the surrounding region, however, since the beginning of the recent economic recession in 2008, it has climbed back up to around 7 percent. (Table 8)

1995	3.10%
2000	1.80%
2004	3.40%
2006	2.70%
2008	3.60%
2009	7.10%
2010	7.40%
2011	6.40%

Source: Virginia Employment Commission

CONSTRUCTION AND HOUSING

As indicated in Table 9, the County averaged 233 new single-family building permits annually for the period 2001-2010. Data compiled by the Richmond Regional Planning District Commission indicate that average single-family construction costs in the County rank near the bottom in the Metropolitan area. This is of particular concern given the cumulative, negative fiscal impact that a large amount of lower-priced housing creates for the County.

As can be noted from Table 9, the percentage of non-residential dollar values was below 19% since 2001, but with a promising value of 45% in 2007. A low proportion of taxable, non-residential development would indicate the potential for a high level of fiscal stress. This can occur as a greater share of the tax burden continues to fall on the residential real estate base if non-residential activity does not continue to increase. This has been a recent concern of the Board of Supervisors and they have promoted Economic Incentive Programs to increase non-residential activity.

**Table 9
New Construction – Building Permits 2001-2010**

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
New single-family dwelling building permits issued	192	221	254	278	341	294	232	235	138	146
Dollar value of permits	\$24,078,434	\$29,753,409	\$36,435,687	\$44,668,078	\$38,982,543	\$69,285,272	\$47,836,086	\$48,898,851	\$20,864,132	\$23,185,474
Average value per permit	\$125,409	\$134,631	\$143,447	\$160,677	\$114,318	\$235,664	\$206,190	\$208,080	\$151,189	\$158,805
New commercial building permits issued	30	47	46	30	32	18	32	12	27	17
Dollar value of permits	\$3,972,569	\$6,754,602	\$2,463,706	\$1,197,196	\$1,931,500	\$7,129,220	\$39,251,058	\$7,130,443	\$2,874,392	\$1,375,555
Total dollar value of new permits	\$28,051,003	\$36,508,011	\$38,899,393	\$45,865,274	\$40,914,043	\$76,414,492	\$87,087,144	\$56,029,294	\$23,738,524	\$24,561,029
Commercial as a percent of total	14.16%	18.50%	6.33%	2.61%	4.72%	9.33%	45.07%	12.73%	12.11%	5.60%

Source: New Kent County Department of Building Development

HOUSING AFFORDABILITY

The New Kent County Affordable Housing Advisory Committee has defined “Workforce Housing” as: decent, safe, and sanitary housing that is affordable for purchase or for rent by households whose income is between \$29,331 - \$46,930. Approximately 1,231 (19%) of New Kent County households fall within this income range, which includes teachers, firefighters, sheriff’s deputies, and administrative staff.

The average current total assessment value for homes in New Kent County in 2010 was \$266,893, whereas the average 2010 sales price was \$226,080. The average monthly cost of rental housing in New Kent County is approximately \$1,000.

	Single Family	Townhouse	
Average Sales Price	\$277,416	\$174,455	
Average Sales Price – New	\$370,879	\$197,086	
Average Sales Price – Resale	\$245,113	\$151,823	

Sources: Williamsburg MLS and Richmond MLS

The 2010 sales data indicates that re-sales of single family residences are generally more affordable than newly constructed/never occupied single family residences. Moreover, townhouses are generally more affordable than single family residences. Table 11 shows more specific information regarding the current pricing of townhouse residences. Provisions in the Farms of New Kent PUD ordinance allow for the construction of a minimum of affordable dwelling units. To date, no such units have been constructed.

Development	Asking Price	Bedrooms	Units Available
Cumberland Townhomes	\$205,000	3	9 (200 at build out)
Quinton Park Townhomes	\$125,000 - \$135,000	1-2	2
Oakmont Villas	\$180,000 starting \$200,000 average	2-3	120 (built after purchase)

Sources: Developers/Agents

Households whose annual incomes fall within the workforce housing range (\$29,331 - \$46,930) would qualify for a mortgage between \$90,000 - \$160,000. Approximately 13-15% of 2009 home sales in New Kent County fall within this price range. Households whose annual income falls within the starting salary range for county and school employees (\$35,178 - \$36,000) would qualify for a \$115,000 mortgage. The average sales price for single family residences is \$66,000 - \$136,000 higher than what can be afforded by the workforce housing population of the county. Two of the townhouse units available for purchase in the county can be afforded by the workforce housing population.

In the summer of 2010 a survey was administered by the Affordable Housing Advisory Committee to determine the preferred housing choices of respondents and to assess the unmet housing needs in the county. A total of 168 surveys were completed. The majority of respondents were employees of New Kent County government or schools and have family members that live in New Kent County. More than half of all respondents (56%) reported that more than 30% of their gross household income goes towards housing costs (including utilities). This is a strong indicator that existing housing is not affordable.

Over 1,200 households in New Kent County fall under the definition of workforce housing and survey results indicate a preference to own a single family residence. Based on income and mortgage underwriting standards, these households cannot afford the average priced single family residence in New Kent County, whether existing or newly constructed. Though generally more affordable, the vast majority of available townhouse units cannot be attained by workforce households either. The housing survey results further illustrate the unmet demand for affordable housing in New Kent County, which adversely affects the current and prospective residents and employees of the county.

RETAIL SALES

Annual retail sales are a good indication of a community's commercial viability. Retail sales typically provide the highest fiscal return to a community per acre of land use. This is because the Commonwealth of Virginia rebates one percent of the five percent retail sales tax back to the locality in which the tax was collected. Table 12 was derived from Virginia Department of Taxation retail sales.

As these figures indicate, New Kent County ranks near the bottom of the region's communities in terms of per capita retail sales. This is in spite of the fact that the County has one of the highest per capita incomes in the region.

New Kent County is very much in line with neighboring jurisdictions with regard to retail food sales. However, the County is under represented in the areas of apparel, furnishings, general merchandise, and per capita restaurant sales.

Table 12 – Per Capita Retail Sales

	2000 Population	2000 Sales	Per Capita Sales	Rank	2010 Population	2010 Sales	Per Capita Sales	Rank
Charles City County	6,926	\$15,044,382	\$2,172	13	7,256	\$23,349,288	\$3,218	13
Chesterfield County	259,838	\$2,623,908,606	\$10,096	4	316,236	\$3,363,333,027	\$10,636	4
Goochland County	16,863	\$102,848,725	\$6,099	8	21,717	\$175,093,605	\$8,063	7
Hanover County	86,320	\$1,005,512,673	\$11,649	3	99,863	\$1,459,792,135	\$14,618	3
Henrico County	262,210	\$3,902,579,679	\$14,878	2	306,935	\$4,717,139,312	\$15,369	2
New Kent County	13,462	\$55,337,091	\$4,111	9	18,429	\$88,965,724	\$4,828	10
Powhatan County	22,377	\$74,616,517	\$3,335	10	28,046	\$139,407,843	\$4,971	9
Richmond City	197,790	\$1,897,370,045	\$9,593	5	204,214	\$2,121,673,955	\$10,389	5
Dinwiddie County	24,533	\$66,631,327	\$2,716	11	28,001	\$92,401,711	\$3,300	12
Prince George County	33,047	\$87,217,837	\$2,639	12	35,725	\$135,818,071	\$3,802	11
Colonial Heights City	16,897	\$542,648,444	\$32,115	1	17,411	\$641,552,819	\$36,848	1
Hopewell City	22,354	\$143,150,751	\$6,404	7	22,591	\$165,536,216	\$7,328	8
Petersburg City	33,740	\$266,833,550	\$7,909	6	32,420	\$273,875,292	\$8,448	6
Richmond-Petersburg MSA	996,512	\$10,783,699,627	\$10,821		1,146,069	\$13,397,938,998	\$11,690	
James City County	48,102	\$638,692,335	\$13,278		67,009	\$779,388,132	\$11,631	
York County	56,297	\$461,360,068	\$8,195		65,464	\$869,224,276	\$13,278	
Virginia	7,078,515	\$68,725,289,188	\$9,709		8,001,024	\$86,420,963,842	\$10,801	

LODGING AND TOURISM

Lodging sales represent a significant revenue source in tourist-oriented communities that have enacted a lodging tax. Presently, lodging sales are virtually non-existent in the County.

Table 13 – 2010 Per Capita Travel Spending

	Estimated Population	Travel Expenditures	Per Capita Travel Expenditures
Charles City County	7,223	\$2,450,000	\$339.19 (7)
Chesterfield County	310,596	\$334,910,000	\$1078.28 (5)
Goochland County	21,232	\$17,790,000	\$837.89 (6)
Hanover County	98,509	\$166,380,000	\$1688.98 (3)
Henrico County	302,463	\$603,520,000	\$1995.35 (2)
New Kent County	17,932	\$26,340,000	\$1468.88 (4)
Powhatan County	27,479	\$7,070,000	\$257.29 (8)
Richmond City	203,572	\$494,770,000	\$2430.44 (1)

Source: Virginia Tourism Corporation

As shown in the table above, in 2010, New Kent County had the fourth highest incidence of per capita traveler spending of the eight cities and counties in the Richmond Regional Planning District.

Direct travel employment in New Kent has increased substantially from 110 employees in 1990 to 390 in 2010, for a net gain of 280 jobs in the County. The total payroll for these employees in 2010 was \$6,310,000.

AGRICULTURE AND FORESTRY

Year	Number of Farms	Acres in Farms
1954	279	63,391
1959	196	43,149
1964	147	34,017
1969	102	30,410
1974	97	30,327
1982	91	25,404
1987	72	not available
1992	67	18,367
1997	76	17,139
2002	100	19,303
2004	100	19,300
2007	121	20,361

Source: USDA Agricultural Census

As can be noted from Table 14, the trend had been consistently downward, both in the number of farms and in amount of acreage in farms in the County, but has increased since 1997 with the addition of small “hobby” and specialty farms within the County.

Given these statistics and the fact that production costs continue to increase in the face of declining crop prices, it is apparent that agriculture continues to be a viable economic activity in New Kent County.

Forests provide clean water, clean air, carbon sequestration, temperature abatement, wildlife habitat, and recreational opportunities, among other things. Forests are the dominant feature in the landscape of the County and represent the foundation of the County’s rural character. Forest cover, in New Kent County, consists of approximately 70% of the land mass. The Virginia Department of Forestry has operated the New Kent Forestry Center on Route 60 since 1952. The Center grew in the 1960s and 1970s to become the largest single-species nursery in the world. Due to budget cut back from the state, New Kent’s nursery was shut down in 2003. The property is being used for research and seed collection for future generations of Loblolly Pine trees. Today, pine production is split between two Virginia Department of Forestry nurseries. One is in Sussex County (Garland Gray), and the other in

Augusta County (Augusta Forestry Center). The value of timber harvesting in the County is reflected in Table 15.

Table 15		
Timber Harvest Value in New Kent County		
Year	Total Value	Total Acreage Cut
1996	2,373,788	3,334
1997	1,404,530	3,103
1998	2,177,649	5,934
1999	1,879,231	3,567
2000	1,631,438	2,399
2001	1,549,059	4,695
2002	1,967,724	3,378
2003	1,574,396	3,804
2007	1,224,986	Not reported
2008	836,905	Not reported

Source: Virginia Department of Forestry

A Forest Land Assessment Map prepared by the Richmond Regional Planning District Commission indicates that while there are still significant areas of rural forest land in New Kent County, population density in the western and southern parts of the County is expected to take large areas of forestry permanently out of timber production.

While agriculture and forestry contribute significantly to the community's rural character, economic changes in those industries have produced immense pressure on their continued economic viability.

NATURAL RESOURCES

TOPOGRAPHY

New Kent County is located in the Coastal Plain physiographic region, which runs north to south along Virginia's eastern seaboard. In general, the County has a gently rolling topography. However, extensive flat, low-lying areas are found along the Pamunkey River, with less extensive areas along the Chickahominy River. Overall, elevations average between 50 and 100 feet above sea level. The highest elevations are around 170 feet and the lowest are at sea level along the two major rivers.

WATER RESOURCES

The County lies within two major river basins – the York in the northeast and the James in the south. Within these two major river basins there are several subwatersheds that flow into smaller feeder rivers. The York basin contains the Pamunkey River, while the James contains the Chickahominy River. Approximately 1/3 of the County lies in the Pamunkey basin, slightly under 2/3 in the Chickahominy basin, and a small portion in the York basin. The only other streams in the County are small tributaries of these three rivers. These rivers all flow directly to the Chesapeake Bay and contribute directly to the overall health and well-being of the largest estuary in the world.

Surface Water

The County's rivers, streams, and water bodies provide opportunities for a variety of surface water uses. The water is soft, and therefore of excellent quality for municipal and industrial uses. The City of Newport News uses the Chickahominy River as a drinking water source, and the City owns and operates the Diascund Creek Reservoir, which can supply 30 million gallons of water a day. The Diascund Creek Reservoir is fed by Diascund Creek, Timber Swamp, Beaverdam Creek, Wahrani Swamp, and Barnes Swamp.

The Virginia Water Control Board (VWCB) has designated the Chickahominy River as a public water supply up to a point five miles upstream from Walkers Dam. Its water must meet stringent water quality standards. The VWCB requires all facilities discharging wastewater into the Chickahominy to meet stringent effluent standards.

The Chickahominy River is tidal below Walkers Dam, which is located 22 miles above the river's mouth. The tidal section of the river has varying salinity. The non-tidal portion is classified as fresh water. The Pamunkey River is an estuary in New Kent County, meaning that it is influenced by the ebb and flow of lunar cycles. From White House to the County line, the Pamunkey is classified as tidal freshwater. The York River is an estuary, classified in the County as a transition zone. The southern and eastern branches of Black Creek provides

the best, and perhaps the only, locations for additional surface impoundments in New Kent County. Albeit fraught with significant permitting roadblocks and costs, a future reservoir or reservoirs in this area could possibly be utilized for the collection of both surface runoff and as a storage site for pump-over from the upper, freshwater portion of the Pamunkey River.

Two surface water reservoirs and intakes exist in New Kent County: Diascund Reservoir on Diascund Creek, and Chickahominy Lake, above Walker's Dam on the Chickahominy River. Both reservoirs are located in the southeast corner of the County, and both are owned and operated by Newport News Water Works. Raw water is pumped from these reservoirs to the Harwood Mills Reservoir in Newport News for storage, and ultimately treatment and distribution at the Lee Hall Treatment Plant. Treated water from Newport News is distributed to several localities and utilities throughout the Hampton Roads region, including the City of Williamsburg, James City County, and York County, however, at this time, there are no agreements in place or in principle to allow New Kent to receive raw or treated water from either of these sources.

Wetlands

Wetlands are low lying areas with saturated soils that contain wetland plant species. Wetlands perform several important functions. They improve water quality by slowing the flow of water and allowing excess suspended solids, nutrients, and toxic substances to settle out. Some of these pollutants are used by wetland plants, while the rest are broken down by bacteria into less harmful substances. Wetlands act as natural barriers against floodwaters and wetland plants prevent erosion by binding the soil with their root systems. Wetlands also serve as points of discharge for groundwater, helping to maintain surface water flow during drought conditions. Wetlands also produce great amounts of food and habitat for many commercially and recreationally important birds, fish, and mammals.

New Kent County has extensive areas of tidal and non-tidal wetlands. Tidal wetlands are found along the major rivers and their tributaries in the tidal portions of the river. Non-tidal wetlands are typically low lying areas with a high water table that saturates the soil and are not influenced by the tides. These are found along the non-tidal areas of the Pamunkey and Chickahominy Rivers and their tributaries.

Groundwater

New Kent County is entirely dependent on groundwater for its potable water supply, and the County lies entirely within the Eastern Virginia Groundwater Management Area, regulated by the Virginia Department of Environmental Quality (DEQ). Any non-agricultural groundwater user withdrawing more than 300,000 gallons per month is required to have a groundwater withdrawal permit from the DEQ. If the DEQ determines that a proposed withdrawal will adversely affect the aquifer or existing groundwater users, the permit can be denied. Generally speaking, development of any type which may require large

quantities of groundwater is directed to the County's pre-established groundwater service areas where groundwater withdrawal allocation has been secured based on DEQ's review of expected growth rates and pattern within the County.

In response to the drought of 2002, the Governor proposed the development of a comprehensive statewide water supply plan. The General Assembly, during its 2003 session, approved this measure with the Local and Regional Water Supply Planning Regulation. The DEQ in conjunction with other state agencies, local governments, and public service authorities will prepare a plan that will analyze the availability of drinking water, protect drinking water, and promote incentives for the development of alternative water resources. In order to ensure the most efficient use of the potable and alternate water supplies, the County adopted its Water Conservation and Management Plan in November 2008. Per regulation, in November 2010, the County submitted its Water Supply Plan to DEQ, a non-binding document outlining the costs and benefits of New Kent's future water needs and potential water resources.

SOILS

New Kent County contains about 46,000 acres of land prime for agricultural uses. This represents about 1/3 of the County's land mass. While prime agricultural land can be found throughout the County, it is primarily concentrated along the Pamunkey and York Rivers.

Over 70% of the County contains soils that are rated as poor for septic system suitability. Less than 30% of the soils in the County have a fair or favorable rating.

NATURAL HAZARDS AND ENVIRONMENTALLY SENSITIVE AREAS

Areas with slopes over 25% are found throughout the County. These areas are highly erodible, tend to be rocky, and when disturbed, allow for increased sedimentation and pollution of surface waters. Most of these steeply sloped areas are found along the tributaries of the York, Pamunkey, and Chickahominy Rivers.

Flood plains are level land areas typically lying adjacent to or near a river or stream that become submerged by floodwaters during or after a storm. The 100-year floodplain shown on the 2009 Flood plan map delineates areas that will flood during storm events of the magnitude expected to occur once in a century, according to Federal Emergency Management Agency (FEMA) maps.

Chesapeake Bay Protection Areas (CBPA) include both Resource Protection Areas (RPAs) and Resource Management Areas (RMAs). RPAs include areas within 100 feet of perennial surface waters, tidal wetlands, and non-tidal wetlands connected by surface flow to tidal

waters in the CBPA. RMAs include areas that are non-tidal wetlands, have a high level of soil erodibility or permeability, have steep slopes, and are connected to RPAs.

Dams

The Virginia Department of Conservation and Recreation is responsible for administering The Virginia Dam Safety Act. All dams in Virginia are subject to the Dam Safety Act and Dam Safety Regulations unless specifically excluded. A dam is excluded if it:

- Is less than six feet high;
- Has a maximum capacity less than 50 acre-feet and is less than 25 feet in height;
- Has a maximum capacity of less than 15 acre-feet and is more than 25 feet in height;
- Is used primarily for agricultural purposes and has a maximum capacity of less than 100 acre-feet or is less than 25 feet in height;
- Is owned or licensed by the federal government;
- Is operated for mining purposes under 45.1-222 or 45.1-225.1 of the Code of Virginia;
- Is an obstruction in a canal used to raise or lower water levels;
- The height of the dam is defined as the vertical distance from the streambed at the downstream toe to the top of the dam;
- The maximum capacity of the dam is defined as the maximum volume capable of being impounded at the top of the dam.

Dams are classified with a *hazard potential* depending upon the downstream losses anticipated in event of a failure. Hazard potential is unrelated to the structural integrity of a dam. Rather, it is directly related to *potential* adverse downstream impacts *should* the given dam fail.

- *High* – dams that upon failure would cause probable loss of life or serious economic damage
- *Significant* – dams that upon failure might cause loss of life or appreciable economic damage
- *Low* – dams that upon failure would lead to no expected loss of life or significant economic damage. Special criteria: This classification includes dams that upon failure would cause damage only to property of the dam owner.

Dam break inundation zone maps shall be provided to DCR for all dams with *high* and *significant* hazard potentials. The Diascund Reservoir dam inundation zone maps from 2010 are included in this plan.

According to DCR's department of Dam Safety & Floodplain Management, there are no dams in New Kent County that have **new** inundation maps that meet the regulations.

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. New Kent County is currently home to 37 distinct types of natural heritage resources with 74 total occurrences throughout the county. In addition, DCR has identified 28 conservation sites as areas necessary for their survival. New Kent County also has one Natural Area Preserve, Cumberland Marsh.

Please see **Appendix A** for a full report from DCR, as well as the “Natural Heritage Resources” map.

TRANSPORTATION

INTRODUCTION

The transportation element of this plan defines the existing status of all modes of the County's transportation system and identifies projected future transportation needs necessary to balance mobility, access, and safety throughout the County. This chapter incorporates new requirements for state-maintained roadways which are intended to further balance the relationship between land use and transportation planning. These new requirements are outlined below and discussed in further detail as appropriate within this chapter:

- Traffic impact analysis regulations – 24VAC30-155 – sets forth procedures and requirements governing VDOT's review of and submission of comments regarding comprehensive plans and amendments to comprehensive plans, rezoning proposals, and subdivision plats, site plans and plans of development and the accompanying traffic impact analyses. While this regulation may promote the identification of existing or projected off-site transportation system deficiencies, it does not enforce the construction of off-site improvements by the development community.
- Access Management Regulations – 24VAC30-72 and 24VAC30-73 – which are intended to reduce traffic congestion, enhance public safety by reducing conflicting traffic movements, reduce the need for new highways and road widening by maximizing the performance of existing state highways, support economic development by promoting the efficient movement of goods and people, preserve the public investment in new and existing highways, and ensure that private property is entitled to reasonable access to the highways.
- Secondary Street Acceptance Guidelines – 24VAC30-92 – promotes increased street and pedestrian network connectivity while minimizing stormwater runoff and updating VDOT performance bonding and cost recovery fees.

BACKGROUND

New Kent County's transportation system has evolved from a water dependent system in Colonial times, to one dependent on railroads for commerce, to the present highway system. The County's earliest settlements were located along the Pamunkey and York Rivers, where the waterways served as trade routes. Over time a network of farm-to-market roads developed, and then the railroad arrived in the 1800s. The railroad was the best means for delivering products to market. In the 20th Century, the construction of Route 60 and Interstate 64 allowed for the convenient transport of goods, but also attracted new residents

who could easily drive to the Richmond and Hampton Roads areas for employment. Today, the highway system is by far the most important element of the County's transportation system; however, a renewed emphasis in recent years on multi-modal travel options has caused such modes as bicycling, walking, and transit to emerge as desired modes of travel for the County's citizens. In addition, New Kent County will likely see direct and possibly dramatic impacts from changes in global trade – most notably the proposed expansion of the Panama Canal (anticipated completion in 2014 or 2015). The Panama Canal expansion will position the Port of Virginia to become a dominant port on the east coast, which will drive further increases of highway and rail freight activity in and through the County for years to come.

East-West Corridor – New Kent's Corridor of Statewide Significance

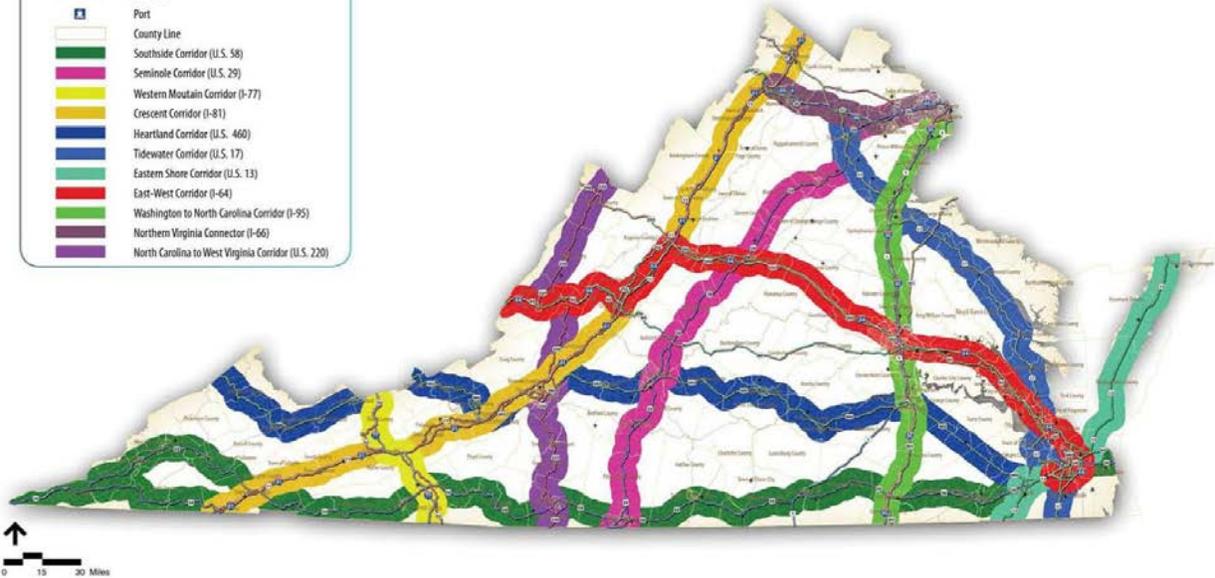
Virginia's Statewide Long-Range Multimodal Transportation Plan (VTrans 2035) further reiterates the importance of New Kent County's transportation system in the regional, national, and global economies. VTrans 2035 identifies the "East-West" Corridor, which is generally aligned with I-64, as one of eleven Corridors of Statewide Significance (CoSS). VTrans 2035 defines a CoSS as follows:

"An integrated multimodal network of transportation facilities that connect major centers of activity within and through the Commonwealth and promote the movement of people and goods essential to the economic prosperity of the state."

This definition highlights the following four key characteristics which must be possessed by a CoSS corridor:

- Multimodal – Carries multiple modes of travel or is an extended freight corridor
- Connectivity – Connects major regional or interstate activity centers
- High Volume – Carries a high volume of traffic
- Function – Provides a unique statewide function and/or addresses statewide goals

VTrans 2035 states that the East-West Corridor is primarily defined by the I-64 Corridor, which runs from Virginia to Missouri; however, the "East-West" name was specifically chosen to be unique from the Interstate's route number in order to be inclusive of other multimodal travel modes and facilities within the corridor. Within New Kent County, US 60, the CSX railroad alignment, and the Norfolk-Southern railroad alignment, and the Pamunkey River can be considered elements of the East-West Corridor. The eleven CoSS's reported by VTrans 2035 are shown below and illustrate the East-West corridor's overall connectivity to other CoSS's.



Virginia Corridors of Statewide Significance *Source: VTrans 2035*

HIGHWAYS

New Kent County’s public roads and highways are maintained by the Virginia Department of Transportation (VDOT), which divides the roads into categories based on their function. Interstate 64 runs on an approximate east-west alignment through the center of the County. The County is connected to the Interstate by way of the arterial and collector roadway network which runs through the County. I-64 has four grade-separated interchanges in the County at VA 249/30 (Exit 205), VA 106 (Exit 211), VA 155 (Exit 214), and VA 33(Exit 220). Because of the dominant transportation role played by roadways in the County, these interchanges are vital elements of the County’s transportation system. VDOT maintains an existing safety rest area along westbound I-64 (at mile marker 214) and an existing safety rest area/welcome center (in partnership with the Virginia Tourism Corporation (VTC)) along eastbound I-64 (also at mile marker 214). On an annual basis, these two facilities are among the top-10 most visited safety rest areas out of the entire forty-two facility program which VDOT maintains across the Commonwealth. The Virginia Department of Motor Vehicles (DMV) operates eastbound and westbound Motor Carrier Service Centers (formerly known as weigh stations) at I-64 mile marker 203 in neighboring Henrico County, to the west.

Functional Classifications

Functional classification refers to the federal system of classifying groups of highways according to the character of service they are intended to provide and classifications made by the VDOT Commissioner based on the operational characteristics of a highway. A roadway's functional classification defines the role a given facility plays in the overall transportation network. The functional classification also dictates how access points to residential and commercial development may be provided. The assignment of functional classifications to highways provides a guideline for how planners can manage a given roadway's intended purpose for serving through traffic versus providing access to property. Proper management of the functional classifications within a roadway network can provide safer and more efficient traffic movement within that network.

Major Thoroughfare Plan and Projects

The purpose of the County's Major Thoroughfare Plan is to prioritize and promote improvements to the appropriate major roadways to meet the County's current and projected travel needs. New Kent's Major Thoroughfare Plan can be found in the Maps section at the end of this plan and includes depictions of the functional classifications of New Kent's roadway system and the location of projects identified in the following table. The Major Thoroughfare Plan shall serve as a long-range plan that provides a functional hierarchy of major roads that permits and promotes efficient and safe travel between origins and destinations. Each of the recommended improvements in the plan is anticipated to be needed at some point in the future; however, funding realities and other constraints reduce the likelihood that these improvements can be built in the short term. As the implementation of individual projects moves closer to becoming a reality, the projects will need to be better defined. With this context, the plan identifies the County's key roadway-related transportation issues and provides a blueprint for future, more detailed studies. These future studies will address more specific engineering-related items such as corridor alignments, right-of-way needs, environmental and other impacts, and funding identification.

Major Thoroughfare Plan Project List									
Map ID	Route #	From	To	Length (mi)	Description	Plan Reference	Priority Level	Estimated Cost and (Source)	
	NK Bicycle Route Signage Project	Various Locations			Bicycle route signage and mapping project (PHASE I COMPLETE)	VDOT SYIP (1)	B	\$34,000 (SYIP)	
1	Parham Landing Road	Parham Landing Wastewater Treatment Plant	Pamunkey River	0.35	Extend Road (22' wide pavement)	New Kent Staff	B	\$2,100,000 (SPS)	
2	New connector road	VA 249 at Cumberland Road	Egypt Road through Government campus	0.8	Construct a new road in the designated Village to connect Courthouse/Government complex area	New Kent Staff	B	\$4,500,000 (SPS)	
3	I-64	Henrico County / New Kent County border	New Kent County / James City County border	20.65	I-64 Pavement rehab & widening (PE ONLY)	VDOT SYIP (1)	A	\$665,000 (SYIP)	
					Widen to 6 lanes and improve interchanges	VDOT SYIP (1)	A	\$276,000,000 (SPS)	
4	VA 30 (New Kent Highway)	at VA 273 (Farmers Drive – Barhamsville)	Intersection improvements (consider roundabout with advance warning)		High volume of crashes including 4 angle and 2 rear-end crashes on VA 30	RRPDC RL RTP (3)	C	\$1,800,000 (SPS)	
5	VA 30 (New Kent Hwy)	VA 273 (Farmers Drive)	VA 33 (Eltham Road)	3.43	Insufficient width and shoulder	Statewide Planning System	C	\$7,900,000 *	
6	VA 30 (New Kent Hwy)	VA 273 (Farmers Drive)	James City County line	0.78	Insufficient width and shoulder	RRPDC RL RTP (3)	C	\$1,800,000	
7	VA 33 (Eltham Road)	at VA 273 (Farmers Drive – Eltham)	Intersection improvements (consider roundabout with advance warning)		High volume of crashes including 8 angle and 8 rear-end crashes on VA 33. Sharp horizontal curve on northbound approach of Farmers Drive	RRPDC RL RTP (3)	B	\$1,800,000 (SPS)	
8	VA 33 (Eltham Road)	at VA 30/VA 249 (New Kent Hwy)	Intersection improvements (consider roundabout with advance warning)		High volume of crashes including 16 rear-end and 6 angle crashes on VA 30. Stop bar and right turn channelizing island pavement markings faded on southbound approach. Horizontal curve on southbound approach.	RRPDC RL RTP (3)	A	\$1,800,000 (SPS)	
9	US 60	Toe Ink Swamp			Bridge replacement over Toe Ink Swamp – WB direction	ARRA (2)	A	\$4,890,000	
10	US 60	VA 30/33 (New Kent Highway)	Rt 640 (Old Roxbury Rd)	3.8	Insufficient width and shoulder	Statewide Planning System	C	\$8,780,000 *	
11	US 60	Rt 629 (Carriage Rd. west intersection)	Rt 649 (Rockahock Rd)	4.3	Insufficient width and shoulder	Statewide Planning System	C	\$9,900,000 *	
12	VA 106 (Roxbury Rd)	Charles City County line	US 60	0.91	Insufficient width and shoulder	Statewide Planning System	C	\$2,100,000 *	
13	VA 155 (N. Courthouse Rd)	0.3 mile north of Charles City County line	0.7 mile south of east intersection Rt 629 (Boulevard Rd)	1.59	Safety shoulder and bicycle/pedestrian accommodations; part of Courthouse/Courthouse Connector in conjunction with Charles City County	VDOT SYIP (1)	A	\$3,450,000	
		0.2 mile north of US 60	Rt 1047 (Old Forge Road)						
14	VA 155 (N. Courthouse Rd)	Rt 1047 (Old Forge Road)	New Kent County Courthouse	6.75	VA 155 / VA 249 – Courthouse/Courthouse Connector	VDOT SYIP (1)	A	\$5,700,000	
15	VA 155 (S. Courthouse Rd)	Rt 629 (Boulevard Road)	US 60	0.12	Insufficient width and shoulder	Statewide Planning System	C	\$275,000 *	
16	VA 249 (New Kent Hwy)	I-64	VA 33 (Eltham Road)	18.6	Insufficient width	Statewide Planning System and RRPDC RL RTP (3)	C	\$42,800,000 *	
17	VA 249 (New Kent Hwy)	At Rt 612 (Tunstall/Airport Road)			VA 249 – construct roundabout at Rt 612	VDOT SYIP (1)	A	\$1,800,000	
18	VA 273 (Farmers Dr)	At Rt 636 (Plum Point Rd)	Intersection improvements (consider advance warning signage)		Crash frequency issue	New Kent Sheriff's Office	B		
19	VA 273 (Farmers Dr)	Rt 636 (Plum Point Rd)	VA 33 (Eltham Road)		Bridge over Eltham Creek is functionally obsolete with a sufficiency rating of 54.6	RRPDC RL RTP (3)	B	\$425,000 (TMPD)	
20	VA 273 (Farmers Dr)	VA 33 (Eltham Road)	VA 30 (New Kent Highway)	5.7	Insufficient width and shoulder	Statewide Planning System and RRPDC RL RTP (3)	C	\$13,100,000 *	
21	Rt 600 (Holly Fork Rd)	Rt 601 (Tabernacle Road)	James City County line	1.3	Reconstruct and provide safety improvements	Secondary Six-Year Plan FY09-FY14	B	\$3,100,000	
22	Rt 600 (Holly Fork Rd)	Rt 673 (Stewart Road)	Kirby's Farm Road		Bridge over Goddins Mill Pond is structurally deficient with a sufficiency rating of 65.8 (private ownership of bridge may complicate project)	RRPDC RL RTP (3)	B	\$100,000 (TMPD)	
23	Rt 606 (Old Church Road)	Hanover County Line	Rt 612 (Tunstall Road)	4.65	Reconstruct and provide safety improvements	Secondary Six-Year Plan FY09-FY14	B	\$10,700,000	
24	Rt 610 (Pine Fork Rd)	VA 106 (Vineyards Pkwy)	1.0 mile west of intersection with Rt 630 (GW Watkins Road)	1.7	Reconstruct and provide safety improvements	Secondary Six-Year Plan FY09-FY14	C	\$3,200,000	
25	Rt 613 (Dispatch Rd)	Norfolk-Southern RR Crossing	Hanover County line	2.51	Reconstruct and provide safety improvements	Secondary Six-Year Plan FY09-FY14	B	\$5,665,000	
26	Rt 617 (Criss Cross Rd)	VA 618 (Olivet Church Road)	Rt 604 (Poindexter Road)	0.61	Reconstruct and pave	Secondary Six-Year Plan FY09-FY14	B	\$1,400,000 *	
27	Rt 627 (Stage Road)	VA 249 (New Kent Highway)	Rt 627/632 intersection	1.41	Insufficient width and shoulder	RRPDC RL RTP (3)	A	\$3,250,000 *	
28	Rt 627 (Good Hope Rd)	Rt 632 (State Road)	Rt 627 (North Waterside Drive)	1.25	Insufficient width and shoulder	RRPDC RL RTP (3)	B	\$2,900,000 *	
29	Rt 627 (N. Waterside Dr)	Rt 627 (Good Hope Road)	US 60	3.75	Insufficient width and shoulder	RRPDC RL RTP (3)	C	\$8,600,000 *	
30	Rt 627 (S. Waterside Dr)	Rt 1010 (Colony Trail)	Marina Road	1.1	Reconstruct and provide significant drainage and safety improvements	Secondary Six-Year Plan FY 09-FY14	A	\$3,370,000	
31	Rt 627 (S. Waterside Dr)	US 60	Rt 1001 (West Riverside Drive)	2.2	Geometric deficiency – segment performs at LOS E at 2010 and 2035 conditions	RRPDC RL RTP (3)	C	\$5,000,000 *	
32	Rt 632 (Stage Road)	Rt 634 (Polishtown Road)	VA 30 (New Kent Highway)	3.2	Insufficient width, shoulder, pavement	RRPDC RL RTP (3)	B	\$7,300,000 *	
33	Rt 638 (Cosby Mill Rd)	Crossing over Black Creek			Reconstruct bridge and provide safety improvements at the crossing of Black Creek	Secondary Six-Year Plan FY09-FY14	C	\$6,700,000	

Notes

- (1) – Virginia Department of Transportation Six-Year Improvement Program (FY 2011-2016)
- (2) – Project information obtained from ARRA Tracking Spreadsheet located here: http://www.virginiadot.org/news/resources/Statewide/ARRA_Project_Tracking_Sheet.pdf
- (3) – Richmond Regional Planning District Commission Rural Long-Range Transportation Plan

Priority Column

A = highest priority
 B = higher priority
 C = high priority

“Source” notes

* = similar projects are running at \$2.3 million/mile to reconstruct, widen, safety, etc. a 2- lane road
 (TMPD) = 2009 Planning Level Cost Estimates Spreadsheet
 (SPS) = SPS cost estimation tool

The following definitions of functional classification are based on current VDOT functional classification definitions, and they outline the desired functions of the roadways shown on the County's Major Thoroughfare Plan.

Functional Classification Terminology

Interstate

- Serves higher-speed regional and inter-city through-traffic.
- Controlled access points prevent direct connection to abutting properties.
- Provides grade-separated interchanges with major roadways.
- Relieves existing major arterials of excessive traffic.

Interstate 64 is the only interstate facility in New Kent County.

Rural Principal Arterial

- Links cities, larger towns, and other traffic generators that potentially attract travel over long distances.
- Corridor movement with trip length and density suitable for greater than those predominantly served by rural collector or local system.
- Intended to move moderate to high volumes of traffic at higher speeds.
- Integrates interstate and inter-county service.
- Internal spacing consistent with inter-county service.
- Access is carefully controlled to preserve mobility and minimize congestion

VA 33 (Eltham Road) is the only rural principal arterial in New Kent County. However, for Access Management purposes, it is noted that US 60 (Pocahontas Trail) has been designated as a principal arterial by the Commissioner of VDOT and thus falls under the state regulations. For purposes other than access management, US 60 is identified (below) as a minor arterial.

Rural Minor Arterial

- Interconnects with and augments the principal arterial system and, in some instances, the interstate system.
- Distributes traffic to smaller geographic areas providing service between and within communities.
- Design should provide for relatively high overall speeds.
- Access is controlled to a lesser degree than principal arterials but to a greater degree than major collectors.

Within New Kent County, the following roadways are classified as minor arterials:

- VA 30/249 (New Kent Highway)
- US 60 (Pocahontas Trail)

- VA 106 (Roxbury Road / Emmaus Church Road – south of I-64)
- VA 155 (North Courthouse Road – south of I-64)

Rural Major and Minor Collectors

- Provide land access service and traffic circulation within residential, commercial, and industrial areas.
- Distribute trips from principal and minor arterials through the area to the ultimate destination.
- Collect traffic from local streets in residential neighborhoods and channel it into the arterial system.
- Designed for moderate traffic speeds over shorter distances and to encourage lower speeds on local streets.
- Serve more important intra-county travel corridors.

Within New Kent County, the following roadways are classified as rural major and minor collectors:

Rural Major Collectors

- VA 106 (Vineyards Parkway – north of I-64)
- VA 155 (Courthouse Road N. – north of I-64)
- VA 249 (New Kent Highway)
- VA 273 (Farmers Drive)
- VA 606 (Old Church Road – between VA 609 and 608)
- VA 609 (Old Church Road – between VA 249 and 606)
- VA 613 (Dispatch Road)
- VA 618 (Olivet Church Road)

Rural Minor Collectors

- VA 606 (Old Church Road – between VA 608 and Hanover County Line)
- VA 612 (Tunstall Road / Airport Road / Terminal Road)
- VA 640 (Old Roxbury Road)
- VA 665 (Henpeck Road)
- VA 627 (between VA 249 and VA 1010)
- VA 632 (between VA 627 and VA 33)

Local Road System

- Comprised of all facilities that are not interstate, arterials, or collectors
- Provides direct access to abutting land and to the collector system.
- Serves shorter travel needs, lower traffic speeds, and lower traffic volumes.
- Gives priority to local traffic and pedestrians through a design that encourages low-speed operation.

The table on the following page provides a summary of the existing and projected future 2035 traffic volumes for the Major Thoroughfare Plan roadways in New Kent Count. The table also indicates the anticipated right-of-way needs for each roadway link based on the expected facility cross-section needed to carry the projected future 2035 traffic volumes. The right-of-way needs shown below account for the presence of bicycle and/or pedestrian accommodations based on the routes identified in the Multimodal Transportation Network Map.

Levels of Service

In the field of transportation, level of service (LOS) is the basic unit of measurement for evaluating the performance of a given element of the transportation system. LOS metrics have been defined in the Highway Capacity Manual for such transportation elements as roadway links, conventional intersections, roundabouts, merge/diverge points (ramps) on interstates, bicycle facilities, and pedestrian facilities. Level of service (LOS) describes traffic conditions – the amount of traffic congestion – at an intersection or on a roadway. LOS ranges from A to F – A indicating a condition of little or no congestion and F a condition with 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. LOS A through D is generally considered acceptable at intersections. The establishment of appropriate LOS criteria is a useful tool for managing and preserving the functionality of the County’s roadways. The County’s desired LOS for roadways and intersections is outlined in the Transportation Goals and Objectives.

Right-of-Way Preservation

Obtaining adequate right-of-way for roadway improvements can be one of the most significant obstacles to providing and maintaining desired roadway LOS. The County Right-of-way Needs Map illustrates the projected right-of-way needs within the 2035 planning horizon for New Kent County’s roadway system. Projected right-of-way widths were determined by growing existing roadway traffic volumes using county-wide growth rates (based on population projections) along with known traffic demands from approved but unbuilt developments within the County. Right-of-way widths are based on facility types (including adjacent sidewalks and/or bicycle paths) defined in the Goals and Objectives which are required to maintain the County’s desired LOS goals for the collector and local roadway networks under projected 2035 horizon year traffic conditions shown in the following table.

Table 16 - Daily Traffic Volume Estimates: 2009 (VDOT) and Projected 2035

Route	Link Length	From	To	Classification	2009 AADT	Projected 2035 AADT ¹	Minimum ^{2,3} 2035 R/W (ft.)
I64	1.33	Henrico County Line	VA 33 & VA 249	Rural Interstate	69,000	113,000	150
I64, VA 33	5.32	VA 33 & VA 249	VA 106	Rural Interstate	61,000	98,400	150
I64, VA 33	3.47	VA 106	VA 155	Rural Interstate	61,000	94,200	150
I64, VA 33	5.69	VA 155	VA 33 Eltham Road	Rural Interstate	60,000	93,700	150
I64	4.18	VA 33 Eltham Road	James City County Line	Rural Interstate	54,000	85,300	150
VA 30, VA 33	4.65	King William County Line	VA 33 & VA 249 Angelview Church	Rural Principal Arterial	11,000	14,300	115
VA 30	3.43	VA 33 & VA 249 Angelview Church	VA 273 Farmers Drive	Rural Minor Arterial	3,100	5,700	115
VA 30	0.78	VA 273 Farmers Drive	James City County Line	Rural Minor Arterial	8,000	11,700	115
VA 33, US 60	0.91	Henrico County Line	US 60 Bottoms Bridge	Rural Minor Arterial	12,000	24,800	115
VA 33	0.22	US 60 Bottoms Bridge	I64	Rural Major Collector	13,000	30,800	115
VA 33	2.98	I64 East Interchange	VA 33 & VA 249 Angelview Church	Rural Principal Arterial	8,600	15,200	115
US 60	0.91	Henrico County Line	VA 33 Bottoms Bridge	Rural Minor Arterial	12,000	16,700	115
US 60	4.03	VA 33 Bottoms Bridge	VA 106	Rural Minor Arterial	9,000	24,900	115
US 60	2.62	VA 106	63—615 Mountcastle Road	Rural Minor Arterial	5,500	10,000	115
US 60	2.88	63—615 Mountcastle Road	VA 155 Providence Forge	Rural Minor Arterial	6,300	11,200	115
US 60	8.88	VA 155 Providence Forge	James City County Line	Rural Minor Arterial	4,700	7,700	115
VA 106	0.91	Charles City County Line	US 60	Rural Minor Arterial	5,000	8,600	75
VA 106	3.04	US 60	I64	Rural Minor Arterial	2,600	6,800	75
VA 106	1.68	I64	VA 249	Rural Major Collector	1,800	30,700	75
VA 155	1.09	Charles City County Line	US 60 Pocahontas Trail	Rural Major Collector	2,800	4,200	75
VA 155	3.83	US 60 Pocahontas Trail	I64	Rural Minor Arterial	3,000	6,200	75
VA 155	2.19	I64	VA 249	Rural Major Collector	2,200	5,700	75
VA 249	4.31	I64 East of Bottoms Bridge	63-612 Quinton	Rural Major Collector	4,700	13,400	75
VA 249	2.3	63-612 Quinton	VA 106 Talleyville	Rural Major Collector	2,400	10,500	75
VA 249	3.78	VA 106 Talleyville	VA 155 Cary's Corner	Rural Major Collector	2,100	6,500	75
VA 249	5.04	VA 155 Cary's Corner	63-626 Paige Road	Rural Major Collector	2,300	8,000	75
VA 249	3.00	63-626 Paige Road	VA 33 & VA 30 Angelview Church	Rural Major Collector	1,500	3,900	75
VA 273	5.33	VA 30 New Kent Highway	VA 30, VA 33	Rural Major Collector	4,100	5,400	75
Route 606	2.66	63—609 Talleyville Road; Old Church Road	63—612 Tunstall Road	Rural Major Collector	310	2,000	60
Route 606	0.64	63—612 Tunstall Road	63—608 Old River Road	Rural Major Collector	890	1,400	60
Route 606	4.10	63—608 Old River Road	Hanover County Line	Rural Minor Collector	390	800	60
Route 609	1.39	VA 106; VA 249	63—606 Old Church Road	Rural Major Collector	1,000	8,100	60
Route 612	1.08	63—640 Old Roxbury Road	63—686	Rural Minor Collector	1,800	3,100	60
Route 612	2.09	63—686	VA 249 New Kent Highway	Rural Minor Collector	1,300	2,400	60
Route 612	0.99	VA 249 New Kent Highway	63—680 South	Rural Minor Collector	1,500	2,700	60
Route 612	2.26	63—680 South	63—606 Old Church Road	Rural Minor Collector	710	1,700	60
Route 613	1.20	Hanover County Road	63—611 W. South Quaker Road	Rural Major Collector	790	1,800	60
Route 613	0.95	63—611 W. South Quaker Road	63—675 Arrowhead Road	Rural Major Collector	780	1,800	60
Route 613	1.51	63—675 Arrowhead Road	63—611 E. South Quaker Road	Rural Major Collector	1,200	2,300	60
Route 613	0.08	63—611 E. South Quaker Road	VA 249 New Kent Highway	Rural Major Collector	2,600	4,200	60
Route 618	0.74	Charles City County Line	US 60 W, Pocahontas Trail; Gap	Rural Major Collector	1,100	1,500	60
Route 627	1.12	63—1010	US 60 Pocahontas Trail	Rural Minor Collector	1,800	2,400	60
Route 627	3.80	US 60 Pocahontas Trail	63—603 Good Hope Road	Rural Minor Collector	720	1,500	60
Route 627	2.75	63—603 Good Hope Road	VA 249 New Kent Highway	Rural Minor Collector	780	1,600	60
Route 632	1.37	63—627 Stage Road	1.37 ME 63—627 Stage Road	Rural Minor Collector	800	1,100	60
Route 632	0.13	1.37 ME 63—627 Stage Road	VA 33 Eltham Road	Rural Minor Collector	870	1,200	60
Route 640	1.28	US 60 Pocahontas Trail	63—665, N Hen Peck Road	Rural Minor Collector	1,800	3,600	60
Route 665	2.60	63—640 Old Roxbury Road	VA 249 New Kent Highway	Rural Minor Collector	1,400	1,900	60

Notes:

1. Projected 2035 AADTs calculated using assumed 1% per yr background growth (compounded annually) plus the addition of anticipated new trips from developments identified in completed traffic impact studies.
2. Actual right-of-way width requirements will depend on future conditions and may exceed the noted minimum due to a variety of factors including (but not limited to) shoulder widths/buffers, presence of sidewalks/bike lanes/shared-use paths.
3. For local (or other) roadways not shown hereon, the minimum 2035 right-of-way is 50'.

Highway Safety

New Kent County desires to improve the safety of its roadway system. Crashes are typically most frequent at intersections; however, in rural counties where winding two-lane roadways are the dominant facility type, run-off-the-road crashes tend to happen more frequently. Opportunities exist in New Kent to improve safety for intersection-based and run-off-the-road crashes.

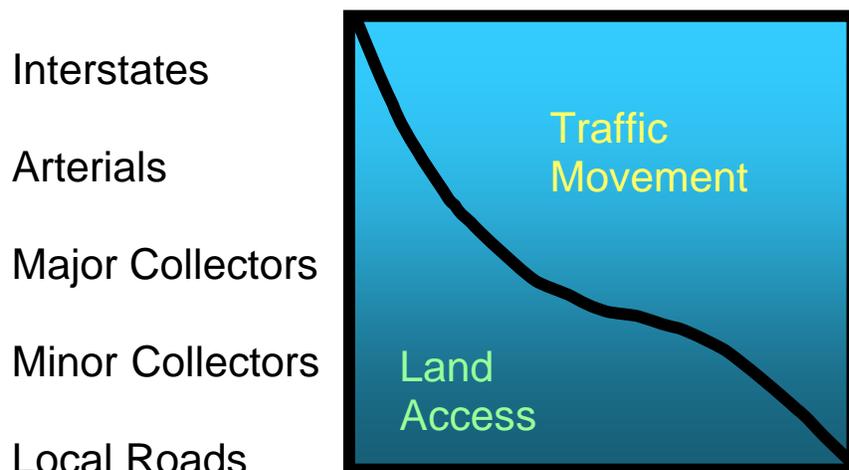
In certain instances, the construction of roundabouts is a suitable alternative to traditional signalized or stop-controlled intersections, as roundabouts represent an opportunity to maintain traffic flow while reducing the frequency and severity of crashes. Crash frequencies are reduced at roundabouts because driver speeds tend to be slower, and typical stopping and starting patterns which result in higher incident of rear-end collisions at signalized and unsignalized intersections are replaced with braking and merging operations. Crash severities are reduced because of the lower speeds and the reduction of higher-speed angle collisions. In cooperation with VDOT, New Kent County has served as a leader in the construction of roundabouts, with several installed throughout the County.

New Kent also desires to improve the safety of its two-lane roadway network; however, many of the County's primary and secondary roadways are winding, narrow facilities with little or no shoulder to protect vehicles from dangerous drop-offs into roadside ditches. The construction of paved "safety shoulders" is one option to improve the safety of these roads for all users. In doing so, New Kent may be able to enhance safety for the typical driver while also accommodating improved mobility of bicyclists and the occasional wide farm vehicle.

Access Management

In 2008 and 2009, new regulations took effect in Virginia to govern access and intersection spacing along all state-maintained roadways. As driveways and intersections increase along any of these roadways, the capacity of such roadways inevitably decreases.

How Transportation Relates to Land Use – *the transportation land use connection*



The previous figure illustrates how traffic volumes and land uses are interdependent. As traffic volumes and speed increase, access to those roadways decreases while less traffic can accommodate more access points. This connection between traffic and access is often called access management. Access management is a planning tool for regulating access to land development while preserving traffic flow. It focuses on managing existing roadways more efficiently and effectively; managing the location and placement of driveways, entrances and median openings, and enhancing the functional capacity of intersections on secondary, primary, and arterial roads. As the County continues to develop, it will be increasingly important to maintain roadway efficiency and traffic safety because road improvements and road network expansion are extremely costly.

Effective access management does more than preserve the safety and efficiency of travel. Well-designed access systems can help preserve community character, advance economic development goals, and protect the substantial public investment in roads and highways. As state and local governments strive to cope with traffic problems, limited rights-of-way, rising construction costs, and revenue shortfalls, more and more jurisdictions are recognizing the benefits of access management.

Poorly coordinated access systems force more trips onto the arterials, traffic conflicts multiply, and congestion increases. As the level of service declines, additional lanes, controlled medians, and other expensive retrofitting measures are needed to maintain the capacity of the corridor for regional traffic. Businesses also suffer as accessibility deteriorates. Heavy traffic, difficult left turns, and poor sight distances at corners deter customers. Businesses may relocate to areas where accessibility is less impaired, vacancies increase, and property values decline. Eventually, corridors with poorly planned or managed access are transformed into unattractive and confusing jumbles of signs, driveways, utility lines, and asphalt.

These are not inevitable results of development and growth. An effective access management program benefits a community by reducing accidents, increasing capacity, improving air quality, providing better access to businesses, and improving mobility. Overall, safety is improved, congestion is reduced, and the life of a roadway is extended, with little cost to taxpayers.

Secondary Street Acceptance Regulations

In March 2009, VDOT implemented its revised Secondary Street Acceptance Requirements (SSAR). The general premise of SSAR is that a transportation system with increased connectivity is more sustainable and provides benefits to the citizens and residents who use that system. Conversely, a disconnected local street network (i.e.: with “lollipop” style subdivisions and a high frequency of cul-de-sacs or other roads lacking multiple points of connectivity) reduces the effectiveness of the overall regional and local roadway system by

forcing local trips onto the regional network. The SSAR requirements promote increased street connectivity in order to improve traffic circulation. It also reduces the number of one entrance subdivisions. In some instances, enhanced emergency access to New Kent's communities will result from successful implementation of SSAR design principles. In addition, the SSAR regulations tend to conform well to the compact, new urbanist style of developments the County seeks in its village areas and which are envisioned in state-mandated Urban Development Areas.

A major feature of SSAR is the designation of "Area Types." Under SSAR, all areas of the County may be classified as either Compact (Urban), Suburban, or Rural. The area types define the level of connectivity and design standards required for public streets to be accepted by VDOT for maintenance. In some instances, these area types may not directly correspond with the land use categories identified in the Comprehensive Plan. The County and development community will work together with VDOT to define how roadway connectivity may be maximized to the extent possible within the respective guidelines for each area type within New Kent County.

Scenic Byways

The Major Thoroughfare Plan highlights scenic byways, as designated by VDOT. Virginia has nearly 3,000 miles of roads designated as scenic byways that lead to sites of natural, historic, or social significance. The scenic byway designation is not related to functional classification or roadway capacity, but serves as an important reminder of roads and corridors that have important significance and/or value for the county. The following roadways in New Kent County are designated as scenic byways:

- VA 249 (from VA 609 to VA 33)
- VA 606 (from VA 609 to VA 608)
- VA 608 (from VA 606 to VA 249)
- VA 609 (from VA 249 to VA 608)

MULTI-MODAL TRANSPORTATION FACILITIES

Bicycle and Pedestrian

The roads within New Kent County have limited or non-existent shoulder widths, which limits the use of the facilities to Class A (expert) bicycle riders only. Currently, the county roadway network is generally not conducive to multiple modes of transportation such as bicycle or pedestrian. However, the County has identified corridors for bicycle and pedestrian improvements and has installed signage to designate six bicycle routes throughout the County. The installation of paved safety shoulders along these routes would provide increased safety for drivers and bicyclists alike, while also providing additional room for the County's rural farm vehicles.

Park and Ride Lots

VDOT maintains one active park and ride lot in the County (Bottoms Bridge lot – see Multimodal Transportation Network map) with 50 spaces. The lot is paved and is located in the median of US 60 a short distance west of the US 60/VA 249/33 intersection. The lot is fully occupied on a regular basis and does not currently have transit service. The County desires to establish express transit service to/from downtown Richmond at this lot. Additional right-of-way which may accommodate park and ride spaces exists nearby at the former location of the US 60/VA 33 interchange (which was removed with construction of I-64). With cooperation by VDOT, the potential exists to add 50+ additional park and ride spaces at this location. Right-of-way for potential park and ride spaces also exists at the intersection of VA 249 and Angelview Lane.

Several commercial retail parking lots in New Kent County are serving as park and ride lots through the permission of the site owners. Also, the Richmond Regional Planning District Commission (RRPDC) is seeking to expand park and ride service in the Richmond metropolitan area, including New Kent County. Opportunities to expand or increase the number of park and ride facilities within New Kent County may be achieved through regional cooperation between the County, RRPDC, and VDOT.

Transit

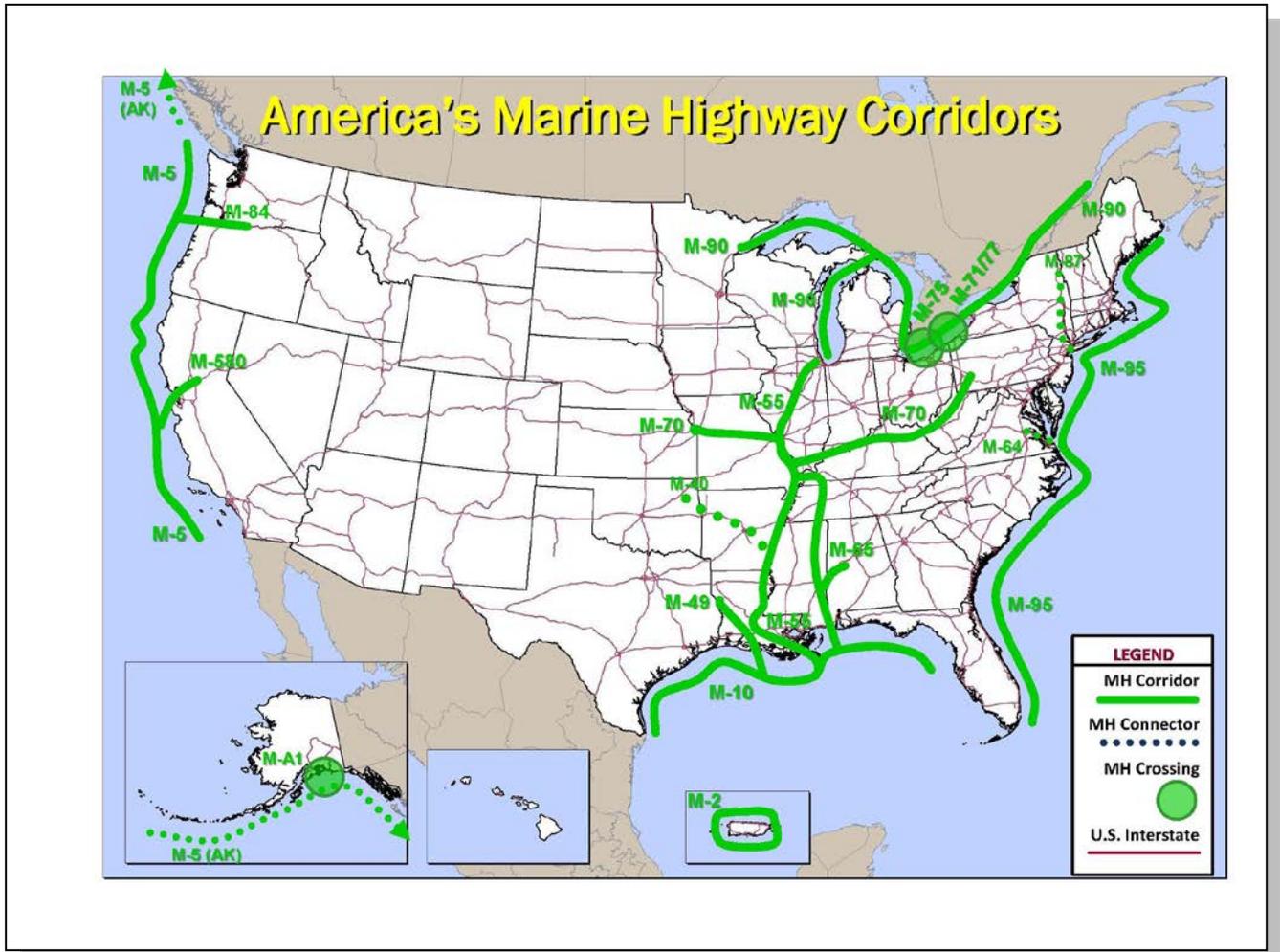
Bay Transit is a non-profit community paratransit service and is the only transit service provider in New Kent County. Routes are curb-to-curb as needed by the user. For New Kent residents, routes are limited to destinations within New Kent County and Charles City County on weekdays only (6 A.M. – 6 P.M.). Bay transit provides “Bay Aging” services, which are geared toward the mobility needs of the elderly and disabled.

Water Transport

The navigable rivers bordering New Kent County are today primarily used for recreation. There are two marinas along the Chickahominy River, as well as several boat ramps. The barge port at the Smurfit-Stone paper mill in West Point is used for industrial purposes and the County has identified a potential site for a deep-water port on the Pamunkey River at Parham Landing (see Multimodal Transportation Network Map). The New Kent County Barge Terminal Study was completed in 2008 and documents that barge service between Parham Landing and the port of Hampton Roads can be fiscally, physically and operationally feasible. The study also identifies constraints that currently limit the conceptual service from achieving economic competitiveness with the commercial trucking. The study notes that the economic advantage of the truck could be minimized by impact(s) of various real world scenarios (i.e.: the opportunity for backhaul cargos, having an on-site tenant, or the rising price of diesel). With its river connectivity to the Hampton Roads region and its ports, New Kent County’s waterways provide the potential to impact the County positively by tapping into regional, national, and global markets.

Marine Highway Connector (M-64)

On August 11, 2010, the United States Department of Transportation (USDOT) identified the M-64 Marine Highway Connector (M-64 Connector) as one of 18 national marine corridors for further development as part of the America's Marine Highway Program. The M-64 Connector spans from Norfolk to Richmond and includes Hampton Roads, the Chesapeake Bay, James River, and connecting commercial navigation channels, ports, and harbors. The figure below illustrates the overall context of how the M-64 Connector fits into America's Marine Highway Program.



The M-64 Connector is intended to serve as an extension of the surface transportation system and will reduce truck-borne freight demand on major parallel surface routes, including Interstate 64. To begin implementing the potential benefits of the M-64 Connector, the USDOT selected it for the James River Container Expansion Project, which is one of eight nationwide Marine Highway Projects. This project is being led by the USDOT in partnership with the Virginia Port Authority and the Richmond Regional Planning District Commission, and it will expand an existing container-on-barge service between Hampton Roads and Richmond by increasing service frequency.

The M-64 Connector and the James River Container Expansion Project present an opportunity to offer relief to landside corridors (such as I-64 in New Kent County) from existing and future traffic congestion, excessive air emissions and other environmental concerns and other challenges. For New Kent County, these initiatives are a step toward focusing public and private efforts to use the freight-carrying capacity of the James River to relieve landside congestion and attain other benefits that waterborne transportation can offer in the form of reduced greenhouse gas emissions, energy savings and increased system resiliency.

Railways

There are two railways in the County. The CSX railway traverses the southern edge of the County along an alignment which roughly parallels US 60 and which passes through Providence Forge. The portion of the CSX corridor between Providence Forge and Windsor Shades is double-track, with the remaining sections to the west and east being single track. A rail siding exists in Providence Forge. The Norfolk Southern railway is single-track and runs through the northwestern part of the County. It crosses the Pamunkey River at White House and continues to the Smurfit-Stone paper mill in West Point where it terminates. Currently, neither railway has a commercial role in the County, although if an industry could promise substantial freight volume, the railroad companies would be interested in serving it. The existing siding track in Providence Forge represents a strong opportunity for rail transit serving Richmond International Airport or downtown Richmond (Main Street Station).

Amtrak trains run daily along the CSX corridor but have no stops in New Kent County. In 1996, the US Department of Transportation added the Richmond-to-Norfolk corridor to the Southeast High-Speed Railroad (SEHSR) network (see Figure below), which is a part of the national high speed rail network. The Virginia Department of Rail and Public Transportation (DRPT) participated in the development of a Tier 1 Environmental Impact Statement for the Richmond/Hampton Roads Passenger Rail Project, which provided further evaluation of the feasibility of high speed rail along alternate corridors between the Richmond and Hampton Roads region. The evaluation included a review of the CSX line through New Kent County. On February 17, 2010, the Commonwealth Transportation Board (CTB) selected Alternative 1 (which includes the CSX line) as the preferred alternative for enhanced passenger rail service between Richmond and Hampton Roads. This creates a possibility that New Kent County could be directly connected to the SEHSR network. The potential for Main Street Station (downtown Richmond) to grow in influence as a multimodal hub provides the possibility of expanded regional commuting and travel options for New Kent residents.

Air Transport

Commercial air service is available at Richmond International Airport, located approximately 8 miles west of the New Kent County line. Several airlines provide passenger service. Nationwide and limited international connections are available on daily scheduled flights. Commuter service, air freight service, and maintenance facilities for many types of aircraft are also available. The existing east-west double-track CSX railroad corridor provides an opportunity for a rail transit connection between New Kent County and Richmond International Airport.

The New Kent County Airport is located in the western part of the County, next to the Woodhaven Shores subdivision, off VA 612. It is a general aviation airport with a 75-foot wide, 3,600 foot paved runway, full parallel taxiway, pilot controlled lighting, a VOR (very high omnidirectional range) approach, and GPS (global positioning system) approaches to both ends. Facilities include storage hangars, a maintenance hangar, a fuel farm, and a terminal building. A full-time airport manager is employed directly under the County Administrator. The County acquired the airport in 1982 and subsidizes its operation. Facilities on airport property also accommodate New Kent Aviation; a fixed base operator offering flight training, aircraft rental, sight-seeing tours, pilot supplies and maintenance. The Federal Aviation Administration and the Virginia Department of Aviation have periodically awarded grants to the airport for land acquisition, site improvements, maintenance, facilities and equipment, and promotions.

Hangar occupancy rates at the airport are consistently high and fuel flowage increases annually. Airport usage continues to grow and recent hangar development will help the airport meet the increased demands posed by the County's rapid growth. Future projects include airport master plan updates, pavement rehabilitation, taxiway lighting, obstruction removal and installation of an automated weather observation system.

TRANSPORTATION DEMAND MANAGEMENT

The FHWA defines transportation demand management (also known as "TDM," or travel demand management) as the application of strategies and policies to reduce travel demand by reducing the emphasis on single-occupant vehicles or redistributing transportation demand in space or in time. With the ever-increasing costs of acquiring right-of-way and constructing new roads (along with the enduring maintenance obligations for such projects), managing demand represents a cost-effective alternative to increasing capacity. Ultimately, the successful management of transportation demand has the potential to deliver positive environmental outcomes, benefits to public health, and communities which are healthier and more livable.

PROJECT TIMING

The timing of New Kent County's transportation improvements depends on many factors including the availability of adequate funding, governmental and environmental permits, actual vs. projected transportation demands, and project needs compared to priorities. The county's land use plan is intended to direct new growth and development in a deliberate manner in coordination with the timely provision of public services and facilities. To the extent practical, new transportation capacity (roads, widening projects, etc.) will be timed to coincide with the extension of development, public services and utilities. Furthermore, the county will distribute investments within the transportation system in a fair and equitable manner.

The Major Thoroughfare Plan Project List details each of the recommended transportation projects that are part of the Major Thoroughfare Plan and prioritizes each using a three-tiered prioritization approach (high, higher, and highest). The proposed three-tiered prioritization approach is important for future planning purposes to ensure that limited funding opportunities are directed to projects identified as having a highest need and/or greatest potential impact. Project priorities may be determined by a variety of factors including, but not limited to, anticipated need, projected impacts of nearer-term projects, projected impact of the project on the overall county transportation network, and potential funding sources. The prioritizations do not necessarily correlate to the size or anticipated cost of the given project.

PROJECT FUNDING

Identifying sufficient project funding for transportation projects in Virginia has perhaps never been more challenging. Transportation revenues for new construction or widening projects have been dwindling over recent years due to a variety of reasons. As Virginia's existing transportation infrastructure has expanded and aged, higher percentages of transportation funding have been diverted each year away from construction for new projects and allocated to increasing maintenance needs. Meanwhile, transportation revenues from the statewide gasoline tax have not risen due to the tax rate being held constant and the increase in fuel efficiency of today's automobiles. During economic downturns, funding from the state gas tax funding is even further hampered as personal and business travel is further reduced.

With increased competition for fewer transportation construction funds, New Kent County must be willing to explore every available option for advancing its numerous transportation priorities from project inception to construction completion. In light of the current transportation funding environment, the County should aggressively pursue funding from all available sources, including, but not limited to:

- VDOT Six-Year Improvement Program for Interstate and Primary Systems (SYIP) — determined through VDOT. Funding is based on the Code of Virginia formula and approved by the Commonwealth Transportation Board (CTB).
- VDOT Six-Year Improvement Program for Secondary System (SSYP) — determined by VDOT. Funding is based on the Code of Virginia formula and approved by the Board of Supervisors and the CTB.
- Regional Surface Transportation Program (RTSP) funds — federal funds allocated by RAMPO
- VDOT Revenue Sharing Program
- Legislative appropriations (others not currently programmed)
- Advance construction funds through VDOT
- Federal Highway Administration (FHWA) Bonus Obligation Funds
- Federal earmarks
- County general funds
- Debt issued by the County for road projects
- Recordation fees
- Transportation Impact Fees
- Developer funds and improvements
 - Proffers
 - Built directly
 - Securities, usually supplemented by other funds for projects abandoned or unfinished by developers.
- Transportation Enhancement Grants — federal grants allocated through the CTB
- Highway Safety Improvement Program (HSIP)
- Other grants — there are a wide variety of grant programs

PUBLIC UTILITIES

UTILITY SERVICE AREAS

The previous version of this plan (2003) identified seventeen Utility Service Areas throughout the County, in which the use of public utilities is mandated, but outside of which public utilities use is not allowed. The Service Area Maps are included in this plan. Of these service areas, thirteen are currently served by public utilities. Of the thirteen areas currently served, seven are exclusively for the supply of domestic water to existing residential developments. (The Colonies, Kenwood/Greenwood/Deerlake, Quinton Estates, Quinton Park, Sherwood Estates, Whitehouse Farms, and Woods Edge). One service area (Minitree Glen) provides water for residential use as well as limited commercial use. The remaining five service areas (Bottoms Bridge, Colonial Downs/Kentland, Farms of New Kent/Talleysville, New Kent Courthouse, and Parham Landing) are designed to accommodate the County's primary commercial, industrial, and institutional areas, providing sanitary sewer service as well as water service.

All water and wastewater infrastructure owned and operated by the Department of Public Utilities (DPU) is backed up by emergency generators, in order to minimize disruption and maintain level of service during electrical outages.

Any water or sewer infrastructure constructed in the County (whether by public or private funds) for ultimate ownership and operation by the Department of Public Utilities, must conform to the latest Utility Design Standards issued by New Kent DPU.

WATER SYSTEMS

New Kent County water systems are currently 100% groundwater-based. Due to the rural nature of the County, there are presently thirteen individual groundwater systems, consisting of 21 supply wells, owned and operated by New Kent County Department of Public Utilities. Of those 13 water systems, eight rely upon ground level storage tanks with pressure boosting stations, and are exclusively for the provision of water to residential subdivisions, with the exception of Minitree Glen mentioned above. The remaining water systems, corresponding to areas served by sanitary sewer and the County's selected commercial and industrial development areas, are served by elevated storage tanks with large diameter trunk lines.

The Virginia Department of Health requirements provide that for central water systems, whether public or privately operated, one well may serve up to 49 residential connections. The 50th lot triggers the need for a second, interconnected well. Virginia Department of Environmental Quality requirements provide that any water system within a Groundwater Management Area that is utilizing over 300,000 gallons of water per month shall apply for

groundwater withdrawal permits. All but two of the County-owned water systems (Sherwood Estates and Minitree Glen) are regulated under Groundwater Withdrawal Permits (GWWP) from the DEQ or have permit applications pending.

In addition to the County-owned public water systems, there are 5 privately-owned Community Water Systems (as defined by VDH) serving subdivisions in New Kent County. These are found in the following subdivisions: Woodhaven Shores, Brookwood Manor, Five Lakes #1, Windsor Park, and Wedgewood. Many other individual facilities within the County (Rockahock Campground, Cumberland Hospital, Long Acre Trailer Park, etc.) are also served by privately-owned Public Water Supplies (as classified by VDH).

All of the water systems mentioned above are supplied groundwater from wells of various depths, and are regulated by VDH and DEQ permitting requirements, as applicable. The water is of good quality and minimal treatment is required.

The County has recently adopted the Water Conservation and Management Plan (November 2008) and the Water Supply Plan (October 2010) in an effort to manage the County's existing water resources to the most effective degree possible, and to prepare for necessary water resource upgrades in the future. The documents were carefully prepared by the County's Department of Public Utilities, with assistance from the Department of Community Development, the County's water supply engineering consultant, and the DEQ.

WASTEWATER AND SANITARY SEWER

The Department of Public Utilities currently operates five sanitary sewer service areas within the County. The service areas generally correspond to the areas selected for commercial, industrial and institutional development, and are located at Bottoms Bridge, the Farms of New Kent/Talleysville, Colonial Downs/Kentland (including the I-64 Safety Rest Areas), New Kent Courthouse, and Parham Landing/Eltham. Provision of sanitary sewer also allows higher density residential development adjacent to these areas, where approved.

As of January 1, 2011, all sanitary waste is treated at the Parham Landing Wastewater Treatment Plant. Wastewater will be delivered to the treatment plant via force main sanitary sewer and a series of sewer pumping stations. The Parham Landing Wastewater Treatment Plant has recently been upgraded to receive up to 2,000,000 gallons per day, and treat to permit standards established by the Clean Water Act and the Chesapeake Bay Protection Act. The plant is permitted to discharge treated effluent into the Pamunkey River at Lee Marsh, which ultimately flows to the Chesapeake Bay, under a NPDES permit from DEQ.

RECLAIMED WATER

The Department of Public Utilities also operates a reclaimed water system within the New Kent County. With the assistance of federal American Reinvestment and Recovery Act (ARRA) Funding, and in response to the Environmental Protection Agency's concerns over nutrient discharge to the Chesapeake Bay, the New Kent DPU has been able to construct a 16-inch reclaimed water transmission line. Level I treated effluent produced at the Parham Landing WWTP is pumped via force main to the Colonial Downs/Kentland area. The former site of the Chickahominy WWTP has been renovated to serve as the storage and distribution point for reclaimed water to be used as irrigation water for commercial enterprises in the area, including Colonial Downs Racetrack as well as the Brickshire and Royal New Kent Golf Courses.

The reclaimed water program reduces the County's dependence on potable groundwater, and extends the horizon for which the County must develop increased water supply capacity. As the County develops and more wastewater is produced, more reclaimed water will be available to meet the County's commercial and industrial non-potable water needs. DPU anticipates this will coincide with the review and amendment of DEQ's reclaimed/reuse water regulations, allowing more practical application and operation of the reclaimed water program. It is the goal of the Department of Public Utilities to ultimately operate a "zero-discharge" wastewater treatment facility to the greatest extent possible, where close to 100% of the WWTP effluent is reused for non-potable needs. As the reuse of treated effluent represents a unit rate cost savings to DPU customers and prolongs the need for expensive water supply upgrades, it is also the goal of DPU to utilize the reclaimed water program as an economic asset for New Kent County.

STORM SEWER AND COMBINED SEWER

The Department of Public Utilities does not maintain storm sewer infrastructure in New Kent County. Storm sewers are typically the responsibility of the property owner, property developer, or VDOT. DPU does not permit storm drainage of any kind (including roof gutters) to be dumped to the sanitary sewer system.

NATURAL GAS

There is a 16-inch natural gas trunk line owned by Virginia Natural Gas that traverses the southwestern corner of the County and the southern part, east of Providence Forge. There are currently natural gas distribution lines in Five Lakes and Patriot's Landing. Development of a significant natural gas infrastructure is underway and will require a concentration of residential and/or industrial users in order for such distribution to be cost-effective. There is also a Transmission line (construction completed in October 2012) from Lanexa to West Point.

ELECTRICITY

Dominion Virginia Power is the electrical supplier for New Kent County. There are major transmission lines in the southeastern and eastern portions of the County. One of these lines serves the Route 33 industrial corridor, and three-phase power is available in this area.

TELECOMMUNICATIONS

Verizon and Cox Communications provide telephone service in the County. Such service is customer-driven, and companies will provide the infrastructure that the County needs at their cost. The modem speed over conventional telephone lines is at a maximum of 56K. The Federal Communications Commission defines broadband at 200K and above. Cable modems can provide substantially higher speeds.

Fiber optic lines are along all the major roads in the County, and delivery to individual properties can be accomplished within 60-90 days if easements and rights-of-way are in place.

The County is being called upon to host a growing number of cellular telephone towers to serve this burgeoning industry. These towers must be sited not only to minimize visual blight, but so as not to interfere with communications equipment or become a hazard to air navigation at the New Kent County Airport, as well.

SOLID WASTE DISPOSAL

There are four convenience centers in the County where solid wastes and recyclable items are collected. These facilities are located along Route 612 near the New Kent County Airport, on Route 618 in the center of the County, on Route 634 across from the Regional Jail, and at the Intersection of Routes 60 and 647. Each site accepts household waste as well as newspaper, mixed paper, glass, cardboard, plastics, aluminum, and bimetal cans for recycling, as well as used motor oil and oil filters. The main waste disposal facility on Route 618 also accepts batteries and appliances.

Solid waste disposal is handled regionally. The County is a member of the Central Virginia Waste Management Authority, and all of the County's solid waste goes to the Charles City County landfill.

Water and Sewer Service Area Maps are included in this plan.

PUBLIC FACILITIES

LIBRARY

Heritage Public Library serves citizens of New Kent and Charles City counties out of 2 temporary locations. The New Kent Library is located at 6215-D Chesapeake Circle, on Route 155, directly opposite the entrance to Colonial Downs Race Track. The Charles City Library is located in that county's courthouse, 10780 Courthouse Road, Charles City.

Patrons can use either or both libraries and can request items be brought to the library location most convenient for them.

The New Kent County collection totals about 24,350 items including books, recorded books, movies, instructional videos, large-print books, and recorded music. The library also provides computers, a copier and fax machine for public use, internet access, and a wide array of programs for children and adults.

Relocation to a permanent library building (or buildings) will require more space to house the collection, to provide for additional public use computer stations, and to allow for adequate meeting and program space, and community activities. Currently the County is planning on relocating the library to the Historic School.

DEPARTMENT OF FIRE, RESCUE, & EMERGENCY MANAGEMENT

The Department of Fire & Rescue is responsible for emergency medical services, rescue, fire suppression, and fire prevention. The department currently has four stations: Company 1 – Providence Forge Volunteer Fire & Rescue, Company 2 – Quinton Volunteer Fire & EMS, Company 3 – Weir Creek Volunteer Emergency Services, and Company 4 in Lanexa. Each department maintains fire engines, brush fire equipment, rescue trucks, and ambulances, to help the citizens of New Kent. The departments are manned by volunteers, but augmented by a paid staff, including a Chief, an administrative assistant, and 6 firefighter/EMTs that operate out of Station 1 and/or the Human Services Building during the day, Monday through Friday. There is also a Volunteer Rescue Squad in Providence Forge that serves both New Kent and Charles City County.

In addition to operations, the department provides fire prevention activities through education, inspection, and a free smoke detector program. In 2004, the New Kent Department of Fire & Rescue was one of three localities that received a grant for the installation of 1000 smoke detectors through the state's "Get Alarmed Virginia!" program. County citizens need only call the fire department and set up an appointment to have trained personnel come into their home, perform an inspection, and install smoke detectors for free.

The Department of Fire & Rescue answers over 1,800 calls each year and strives to provide the best service to the people who live in and visit New Kent County. This involves a great deal of resources – both monetarily and in personnel. While the County provides much of the money needed to support the volunteer stations, they still need help through donations and volunteers.

The Fire Marshall's Office is responsible for enforcement of the 2000 edition of the Virginia Statewide Fire Prevention Code (VSFPC) in New Kent County. Inspections of all nonresidential uses are made pursuant to the requirements of the VSFPC. All state and county fire prevention laws are enforced and permits are issued as required. A fire prevention permit is required for burning brush in reference to land clearing operations, except for burns that are specifically exempt by state law. Permits are required for sale of fireworks by authorized dealers. Permits are required for clubs, organizations, groups, or businesses to conduct public displays of fireworks.

Emergency Management is responsible for all planning and response activities relating to natural and technological disasters. Plans are maintained that address response activities to emergencies including storms, tornadoes, hurricanes, drought, hazardous materials, and incidents involving radiological materials. Weather systems are monitored continuously via a direct link to current radar and satellite information. New Kent County serves as a host jurisdiction for evacuees from the City of Williamsburg and the County of York regarding emergency events that occur at the Dominion Energy Surry Nuclear Power Station. All major emergency incidents are coordinated from the Emergency Operations Center at the New Kent County Station 1.

The County has written mutual aid agreements with the Town of West Point, James City County, Hanover County, Henrico County, and honors a verbal agreement with Charles City County.

Disaster aid and other services to victims of New Kent County are covered by the Greater Richmond Chapter of the American Red Cross. Currently, Colonial Downs serves as an equine evacuee center.

NEW KENT SHERIFF'S OFFICE

The New Kent Sheriff's Office, a Constitutional Officer's department, consists of approximately 60 members. The sections include Administration, Patrol, Investigations, Court and Civil Process, Animal Control, and Emergency Communications. There are currently three facilities occupied by members of the Sheriff's Office: the Sheriff's Office, the Courthouse (both facilities located on Courthouse Circle), and the Animal Shelter on Route

618. The Courts and Civil Process section is stationed in the Courthouse, along with an expanded short-term prisoner holding section.

In addition to the County's agency, the New Kent Sheriff's Office is a surrogate home base for approximately 18 Area III Virginia State Troopers, the Virginia Game Commission, and the New Kent Magistrates Office.

The Sheriff's Office provides the following special services for New Kent County residents, their own department needs, and statewide law enforcement assistance: Accreditation Training & Audits, Motorcycle Patrol, Marine Patrol, Bicycle Patrol, Advanced Crime Scene Response, Emergency Response Team, Drug/Narcotics Task Force, Gang & Internet Crimes Investigation, School Safety Program, certified Child Safety Seat instruction and installation, Traffic Safety Services, Community Crime Prevention, Sex Offender Registry, CrimeStoppers, VALID & HEAT (stolen car locator), Traffic Speed Trailer, Seniors Telephone Answering Response (STAR), Project Lifesaver (lost-elderly locator), certified Firearms Range, Police Firearms practice, training, and certification, Civilian Firearms Safety Training, VCIN/NCIC instruction and certification, 911 Wireless (cell phone 911 locator), Animal Adoption Program, Spanish Interpreter, Chaplain Program, and Color Guard.

The New Kent dispatchers manage to handle phone calls, incoming visitors, and radio traffic for their own agencies, as well as for: the I-64 corridor 911 Wireless calls, Area III Troopers, Game Wardens, Magistrates Office, Probation & Parole – Adult and Juvenile services, Social Services/Child Welfare, all New Kent Fire & Rescue services, VDOT crews, Norfolk Southern and C & O Railroad calls, after-hours New Kent County water utilities, after-hours New Kent County Board of Supervisors, mutual aid radio assistance for neighboring counties, and radio assistance to any law enforcement personnel traveling through the County along I-64. The Sheriff's Office has written law enforcement mutual aid agreements with the Counties of Henrico, Hanover, King William, Charles City, and James City, and the Town of West Point. The County uses the Henrico Jail East facility, which is managed by Henrico County Sheriff's Office, but located in New Kent County, to house local inmates.

COUNTY OFFICES AND COURTS

Most County offices are located at New Kent Courthouse. The main Administration building houses the Switchboard, the Departments of the County Administrator, County Attorney, Financial Services, Information Technology, Commissioner of Revenue, Treasurer, Community Development (Planning and Environmental), Building Development, General Services (Buildings & Grounds, Parks & Recreation, Housekeeping), Geographic Information Systems, and Human Resources. The Sheriff's Office is located behind the Courthouse, in the F.W. Howard Jr, Law Enforcement Office Building. The Circuit Court, General District Court, Juvenile and Domestic Court, Victim-Witness Assistance Program, and

Commonwealth Attorney offices are located in the Courthouse. The Historic Courthouse houses the Registrar's Office and is currently proposed to be renovated as conference space and a New Kent Museum. The School Board and Administration office is currently across the street from the Historic Courthouse, but is proposed to be moved into the Historic School. The Fire, Rescue, and Emergency Management main office is located in the Human Services Building, along with the Department of Social Services, Court Services Unit, and New Kent Department of Comprehensive Services. The Department of Public Utilities is housed in an office on Poindexter Road, and the Department of Economic Development is located in the newly constructed Visitor's and Commerce Center, on State Route 106. The Virginia Cooperative Extension Office is currently housed in the Historic School. The School and County vehicle maintenance facility is housed in a new building off of Egypt Road, near the High School.

SCHOOLS

New Kent County operates four public schools: two elementary schools, one middle school, and one high school. The County has a dual enrollment agreement with Rappahannock Community College, which supplements the high school curricula with college-level courses. In addition, the County sends forty high school students to the Richmond Technical Center for two-hour vocational classes. The school division has nearly 430 employees. There are currently 202 licensed teachers, six guidance counselors, four media specialists, four principals, five assistant principals, and a central office staff. In addition, there are administrative support, transportation, and custodial staffs.

The elementary school program currently covers kindergarten through fifth grade and emphasizes reading, writing, and math at grade levels, along with instruction in science, social studies, art, music, physical education, and health. The middle school curriculum incorporates grade level teaching, interdisciplinary instruction, and an exploratory program. It covers sixth through eighth grade. In addition to the standard curriculum, New Kent High School offers honors and advanced placement course work. A vocational education program presents many opportunities for students, as do elective programs in music, visual arts, drama, and foreign languages. Gifted and enriched services are offered throughout the K-12 program. A comprehensive special education program is available to provide specialized services to students with identified disabilities.

The elementary schools had been converted to K-5 schools just before the 2007-08 school year. The school board has set County Attendance Zones for the first time. Elementary students who live in the "Western Zone" go to G.W. Watkins Elementary School. Elementary students who live in the "Eastern Zone" go to New Kent Elementary School.

The school division also supports adult education and Parks and Recreation activities. It has an agreement with the New Kent Parks and Recreation Department for joint use of school facilities. Table 17 provides information on the County’s four schools.

Table 17 – School Facilities					
School	Year Built, Renovated	Square Footage	Site Acreage	Capacity without Trailers	Current Enrollment
Elementary	1973, 1993, 2006	81,790	15.8	700	563
G.W. Elementary	1950, 1960, 1966, 1974, 2007	68,000	37.5	700	635
Middle	1989	110,000	50	768	678
High	2008	215,000	75	1,400	916

Source: New Kent County Public Schools

A new 1,400 student capacity high school opened in September of 2008. At that time, the New Kent middle school students moved to the existing high school. The historic middle school facility is proposed to be used to meet a number of important needs. The school board’s needs can be summarized as follows:

- Move the school board office and eliminate the cost of renting the existing school board facility.
- Move and expand the Preschool program, which will free up space in New Kent Elementary School.
- Move the Community that Cares alternative program and eliminate the rent being paid to cover this program.
- Use the four existing computer labs for adult education and an additional SOL (Standard of Learning) on-line testing site.
- Maintain four to five classrooms that can be used as a “stop-gap” measure to serve additional elementary students, as plans to build a third elementary school are incorporated in the schools Capital Improvement Plan.
- The existing cafeteria would provide a back-up freezer facility. In addition, the catering/food service program at the High School could use this facility for operating a small restaurant that could provide students with practical work experience. The restaurant could be operated by the High School business program.
- The existing gymnasium could serve both Parks and Recreation and New Kent’s expanding high school and middle school athletic programs.

Table 18 – Total Enrollment for School District		
	Number of students	Percent Increase
2001-2002	2,363	-0.04%
2002-2003	2,477	4.6%
2003-2004	2,504	1.1%
2004-2005	2,583	3.1%
2005-2006	2,581	-0.1%
2006-2007	2,666	3.2%
2007-2008	2,733	2.5%
2008-2009	2,737	0.15%
2009-2010	2,792	2.0%

Source: New Kent County Public Schools

As shown in Table 18, with the exception of 05-06, the total enrollment for the New Kent Schools has been steadily rising over the past 8 years, and will continue to climb, with the addition of the new developments planned in the County.

The School Division’s adopted Six-Year Plan sets the following targets for the pupil to teacher ratios at each of the following grade levels:

Kindergarten	15:1
First Grade	18:1
Grades 2-8	20:1
Grades 9-12	25:1

The Superintendent has advised that the following are targeted maximum capacities for each school type:

Grades K-5	700 students
Grades 6-8	800 students
Grades 9-12	1,400 students

PARKS AND RECREATION

In 2000, the County established a Parks and Recreation Department with a full-time Parks and Recreation Coordinator and a full-time Recreation Program Assistant. The Parks and Recreation Department offers a variety of activities for youth, adults, and seniors. There were 1,400 participants in the department’s first year of offerings.

Programs are held in the New Kent County School facilities during non-school hours based on a shared use agreement between the New Kent County School Board and the New Kent County Board of Supervisors. Activities are also held at the New Kent County Airport in a

1,600 square foot multi-use area in the Terminal Building, as well as the County's Community Centers.

In addition, the County owns and operates the Wahrani Nature Trail, on Route 33. Chesapeake Corporation proffered the 138-acre park to the County as part of a 2001 rezoning. New boundary lines were created in a transfer of land between the Department of Parks and Recreation and the Industrial Development Authority, which benefited both groups. The new land provided opportunities for new trails for the park. The master plan for this property included trail mapping. The trail was opened to mountain bikes in the Spring of 2007, to increase the use of the trail system.

More recently, another rezoning proffer resulted in the County receiving the title to a 10-acre park site located at the front of the Quinton Park subdivision in the western portion of the County. This park includes a playground, a baseball/softball field, a multi-purpose field, picnic pavilion with restrooms, and an area set aside for future basketball courts.

Also, as a condition of the 1993 Newport News Water Agreement, Newport News has a parcel of land adjacent to the Diascund Creek Reservoir that is in the process of being transferred from Newport News to New Kent County for recreational use.

With the Farms of New Kent approval, the County has also been proffered a 100-acre parcel on Criss Cross Road, behind the rest area on the westbound side of I-64. The parcel is to be developed as a County park and is in the master planning phase.

There are also privately-owned golf courses, meeting halls, community recreation facilities, and boat ramps located in the County.

HUMAN SERVICES

Human services in New Kent County are provided by many active service providers. The five major direct service providers are the Department of Social Services, Quinn Rivers Community Action Agency, the Department of Health, New Kent/Charles City Mental Health and Mental Retardation, and the Office of Comprehensive Services.

The primary point of access for County residents is the New Kent Department of Social Services. The Department offers some of the following state and/or federally-funded temporary assistance programs:

- Employment Services Program
- Food Stamps
- Temporary Assistance for Needy Families (TANF)

- Medicaid to include Community Based and Long Term Care
- IV-E Foster Care
- State and Local Hospitalization
- Auxiliary Grants
- Energy Assistance

Additionally, Social Services staff review and/or investigate allegations of the following:

- Public Assistance Fraud
- Child Abuse, Neglect, and Exploitation
- Adult Abuse, Neglect, and Exploitation

Social Workers also handle cases of Adoption, Foster Care, Court-Ordered Home Studies, and Visitations, in addition to a number of other state and federal requirements.

Social Services, Quinn Rivers, and the Health Department are now housed in the new Human Services Center to allow County residents to receive the highest quality of services in a professional, efficient, and fiscally responsible manner. This building also houses Bay Transit and the New Kent Fire & Rescue main office.

A Public Facilities / Parks & Recreation Map is included in this plan.

ECONOMIC DEVELOPMENT

NATIONAL SITUATION

U.S. economic activity declined sharply following the global financial crisis in the fall of 2008. Efforts by the Federal Reserve, the Treasury Department, and other U.S. authorities to stabilize the financial system, together with highly stimulative monetary and fiscal policies, helped slow the decline and are supporting an emerging economic recovery.

The U.S. economy expanded at about a 4 percent annual rate during the second half of 2009. A significant portion of that growth was due to the progress firms made in working down unwanted inventories of unsold goods, which left them more willing to increase production. As the growth provided by the inventory cycle is temporary, and as the fiscal support for economic growth likely will diminish, a sustained recovery will depend on continued growth in private-sector final demand for goods and services.

Private final demand does seem to be growing at a moderate pace, supported in part by a general improvement in financial conditions. In particular, consumer spending has recently picked up, reflecting gains in real disposable income and household wealth and tentative signs of stabilization in the labor market. Business investment in equipment and software has risen significantly. And international trade--supported by a recovery in the economies of many of our trading partners--is rebounding from its deep decline of a year ago. However, starts of single-family homes, which rose noticeably this past spring, have recently been flat, and commercial construction is declining sharply, reflecting continued difficulty in obtaining financing.

The job market has been hit especially hard by the recession, as employers reacted to sharp sales declines and concerns about credit availability by deeply cutting their workforces in late 2008 and in 2009. Some recent indicators suggest the deterioration in the labor market is improving: Job losses have slowed considerably. Initial claims for unemployment insurance have continued to trend lower, and the temporary services industry, often considered a leading indicator for the employment outlook, has been expanding steadily since October 2009. Although these are positive signs the job market remains quite weak, with the unemployment rate near 10 percent and job openings scarce.

Increases in energy prices resulted in a pickup in consumer price inflation in the second half of 2009, but oil prices have flattened out over recent months, and most indicators suggest that inflation likely will be subdued for some time. Slack in labor and product markets has reduced wage and price pressures in most markets, and sharp increases in productivity have further reduced producers' unit labor costs. The cost of shelter, which receives a heavy weight in consumer price indexes, is rising very slowly, reflecting high vacancy rates. In

addition, according to most measures, longer-term inflation expectations have remained relatively stable.

The improvement in financial markets that began in the spring of 2009 continues. Short-term funding markets have returned to near pre-crisis levels. Many (mostly larger) firms have been able to issue corporate bonds or new equity and do not seem to be hampered by a lack of credit. In contrast, bank lending continues to contract, reflecting both tightened lending standards and weak demand for credit amid uncertain economic prospects.

THE VIRGINIA SCENE

Over the years the Virginia economy has outperformed that of the nation in the broad categories of employment, income, and population growth. The economic diversity of the Commonwealth has much to do with this record. No one sector dominates the Virginia economy. The presence of federal government activity, both military and civilian, tends to moderate any cyclical swings. Federal spending for consultants and contractors has resulted in a heavy concentration of these valuable jobs in Northern Virginia and around military installations. Virginia's manufacturing sector, no longer the employer of dominance, is still strong and competitive with a heavy concentration of technologically advanced industries, such as bio-sciences, chemicals, and transportation equipment.

The communications, internet, and technological industries of Northern Virginia have added economic strength to the Virginia economy over the last ten to fifteen years, becoming one of the leading centers for such activity in the world. Third party logistics and import distribution centers are now commonly found across Virginia, adding a new wave of diversity and economic strength.

The Richmond area has continued to be a magnet for major corporate activity: new corporate headquarters include Genworth Financial, Philip Morris USA, and MeadWestvaco. In 2007 Philip Morris completed a \$350 million research and development laboratory in Richmond. Virginia is the headquarters for thirty Fortune 1000 firms.

To New Kent's east, the Hampton Roads Economy has remained solid during this economic downturn. Some Hampton Roads businesses scrapped or postponed projects. Some laid off employees. The region, however, has weathered the recession better than many parts of the country. In a series of 2009 reports on economic activity in the nation's 100 largest metro areas, the Brookings Institution, a think tank based in Washington, D.C., said the Virginia Beach-Norfolk-Newport News region ranked among the top 20 areas in performance. The Brookings program evaluates the strength of metro areas according to changes in their employment and jobless rates, output of goods and services, and home prices. Hampton

Roads ability to fair well in this economy is largely contributed to heavy federal spending in the region including spending for the military and government contracted services.

In 2009, Virginia ranked seventh among the states in per capita personal income, with \$43,874 per capita income (adjusted to 2009 dollars). Relative to its peers, Virginia's per capita income was lower than Maryland (\$48,285) in 2009, but higher than North Carolina (\$34,453) and Tennessee (\$34,089). National per capita income stood at \$39,138. Between 2000 and 2009 Virginia's per capita income grew at a rate of 1.2 percent, compared to the national average of 0.4 percent over the same period. Regional employment growth data in 2008 indicate that the Northern region (1.82 percent) had the fastest growing rate in the state over the previous year. The Eastern region exhibited the second highest employment growth at 1.59 percent. Virginia's remaining regions all saw rates at or below 1.05 percent. In 2009, Virginia's unemployment rate was 6.7%, significantly better than the U.S. rate of 9.3%. In short, Virginia's economy has continued to grow, evolve, and strengthen relative to the United States.

NEW KENT COUNTY

New Kent's fortunate geographic location between two major metropolitan areas with excellent transportation access places the County in a position as a natural target for growth. The western edge of the County is only twenty minutes from downtown Richmond, a quick ten minutes to the Richmond Airport, and within three miles of Interstate 295. Interstate 64 runs on an east-west axis the length of New Kent, and gives direct access to Williamsburg, all of Hampton Roads, and the rich opportunities associated with the Virginia Ports and the other economic activity of the area.

There can be no doubt that New Kent County has been "found" as an attractive place to live. Between 1990 and 2010, the population increased by approximately 77%. As a comparison, in the first half of the previous decade, Virginia had an annual average population growth of 1.3%, while New Kent's was approximately 4.0%.

The development of water and sewer infrastructure along the Interstate 64 corridor, has been a priority over the previous decade, and is critical to economic growth. By the end of 2010, an integrated sewer system has been completed within the Parham Landing treatment plant, having the capacity of 2 to 3 MGD, and a reclaimed waste water line will be extended to the Kentland Planned Unit Development area for irrigation at Colonial Downs and two golf courses.

At Bottoms Bridge, the commercial sites associated with the Patriot's Landing development are prepared, with one already sold for a family fitness center, which is currently under construction. Other commercial sites are under various stages of development with

commitments or interest for medical offices, fast food restaurants, sit-down restaurants, branch banks, and similar retail or personal services operations. Natural gas service is now available in Bottoms Bridge, and extends along Route 60 eastward to Route 106, and from there to the New Kent Vineyards Planned Unit Development.

At the Route 106/New Kent Vineyards interchange, commercial interest remains strong. The commercial space at the "Farms" site is being actively marketed to "big box" anchors and other users. On Route 106 South, active interest from both commercial and industrial users is being exhibited.

At Weir Creek Industrial Park, the first phase of the project is complete which consist of three pad sites. The Parham Landing Commerce Park building is complete, with several tenants occupying suites, and others in negotiations. The entire Route 33 corridor is receiving considerable interest and is being marketed as a site for import distribution centers as well as other heavy commercial or industrial purposes. The County received a multimodal transportation planning grant from VDOT to study the potential for using barge transportation of containers up the Pamunkey River to help relieve congestion in the Hampton Roads Port area. The results of the study indicated that a barge import and export facility would be financially feasible, and would significantly reduce tractor trailer traffic on Interstate 64. As the economy improves and port activity picks back up at the Hampton Roads ports, staff will continue to work with state agencies to explore opportunities to develop an inland port facility.

New Kent County is well on its way to being a community prepared for economic development. Certainly planning, utility extension, and development work remains; however, New Kent has sufficient product and resources in place to be reasonably considered for many types of economic activity that just several years ago would have been impossible.

EXISTING LAND USE PATTERNS

Several patterns of land use are evident in New Kent County. There are commercial centers at Bottoms Bridge, Providence Forge, and Eltham, all of which are complemented by nearby residences. There are smaller clusters at Lanexa, Barhamsville, Cary's Corner, Davis Crossroads, Kentland, and Quinton. New Kent Courthouse is currently emerging as the County's first "Village" area, with the Maidstone development providing mixed-use opportunities. New Kent Courthouse is also the center for government and institutional uses. Other mixed-use centers, on larger scales, are emerging at the Kentland development surrounding Colonial Downs, in the area of the Patriot's Landing development in Bottoms Bridge, and in the area of the Farms of New Kent development off Route 106.

Residential development is clustered in a number of subdivisions of various types, but is also widely scattered along rural roads. Clearly, the bulk of residential development is located in the western and center sections of the County. Areas around Lanexa and the Diascund Creek Reservoir have the greatest concentration in the eastern part of the County.

When asked, most residents say they enjoy the rural character of the County, and want it to largely remain. Yet, the concept is difficult to define in a useful way. Low density is often suggested as the key defining feature of rural character. While this is true, it is not the only feature that creates rural character. A more comprehensive analysis would consider the various forms that development can take and determine whether they are traditionally found in a rural environment or not. If the planning effort is to effectively address the issue of preserving rural character, it is essential to understand which forms of development fit and which do not.

Traditional rural forms were a response to local conditions and arose during a time when travel was difficult and time consuming. Non traditional forms arose during the automobile era and are also heavily influenced by land use regulations. The following land use forms are identified in New Kent County and are presented here to create a common vocabulary.

TRADITIONAL RURAL FORMS

Woodland

Approximately 70 percent of the County's land mass is comprised of woodlands. Woodlands can be actively managed or not. Woodlands may include both single species and multiple species forests. Woodlands provide an environmentally beneficial land use with no local service requirements.

Tree Farms

The term tree farm is a designation by the American Forest Foundation which recognizes the practice of forestry on private lands. The Tree Farm program requires certified forests to adhere to standards that ensure the sustainability of forests as well as the multiple uses of forests. They have standards and guidelines for reforestation, water quality, wildlife habitat, aesthetics, biodiversity, utilization, and protection of historic or geological sites among other areas.

Open Farmland

Open farmland is characterized by crops, pastureland, barns, and other storage structures. Farmland is income producing and is visually appealing. As is the case with woodlands, farmland generates virtually no demands for local public services.

Roadside Meadows

Roadside meadows are typically characterized by old farm fields no longer in active crop production. Meadows can provide excellent wildlife habitat and are generally visually appealing.

Farm Clusters

Farm clusters are characterized by houses and farm related outbuildings such as barns, sheds, and coops. Farm clusters are typically set back from the road in the middle of fields with shade trees and long road frontages.

Rural Crossroads

Rural Crossroads are characterized by a tight cluster of small commercial establishments such as general stores, banks, restaurants, gas stations, convenience stores, etc. They typically occur at intersections and serve a local population.

Hamlets

Hamlets are a smaller version of a village. Like a village, they are characterized by a mix of structures and uses, including residential and commercial. They are compact in size. They are not intended to be served by public utilities through the year 2040.

Villages

Villages are characterized by a mix of structures and uses, including residential, commercial, and institutional. They are typically compact in size and pedestrian oriented. They have historically functioned as social centers. They are served or intended to be served by public utilities.

NON TRADITIONAL FORMS

Small Road Front Lots

These land forms are characterized by the subdivision of existing road frontage into individual home lots, usually close to the road, with individual driveways. Such road front lots are easy and inexpensive to subdivide, do not convey a sense of planning, and can create or contribute to safety and capacity concerns along once rural roads.

Large Road Front Lots

These land forms are characterized by houses set further back from the road, on larger parcels, often with the home hidden from view of the street. These lots have less visual impact than small road front lots, but still have individual driveways onto existing roads with their attendant concerns.

Large Lot Subdivisions

These subdivisions are characterized by an internal road system, often privately maintained. These subdivisions usually do not have public utilities.

Medium Density Subdivisions

These subdivisions are also characterized by an internal road system, usually with state maintained roads. Their higher density often dictates the provision of public utilities, though this is not always the case. They typically represent a more affordable alternative to large lot subdivisions.

Mobile Home Parks

Mobile home parks are usually of a compact size with small lots which may be rented or owned. They often feature common amenities and the small size of the lot typically requires the provision of public utilities.

Strip Commercial Sites

This type of development is characterized by individual commercial establishments along major highways with individual driveways and parking lots. While highly visible, this type of development does not convey a sense of planning and can often impede highway efficiency due to multiple points of access.

Shopping Centers

Shopping centers are characterized by a collection of stores and occasionally offices, usually housed within the same structure. Larger centers typically have commercial outparcels located along the highway frontage. Access is usually controlled, although outparcels may or may not have individual entrances onto the highway, depending on local ordinances.

Industrial Sites

Industrial sites are typically characterized by individual industrial establishments, usually located along highways. They are usually incrementally developed with individual highway entrances, which can impede highway safety, depending on the amount and type of traffic entering and exiting these sites.

To summarize, the traditional rural landscape of New Kent County consists of scenic highway corridors; villages/hamlets at Providence Forge, Lanexa, Barhamsville, Eltham, and New Kent Courthouse, and scattered rural crossroads. Non traditional forms consist of the various subdivision types, plus strip residential and strip commercial areas. Subdivisions tend to be concentrated in areas close to arterial highways, but it is apparent that strip residential growth can appear anywhere, from the fringe of villages to along the most rural roads.

FISCAL IMPACT ANALYSIS

BACKGROUND

Fiscal impact analysis is a tool for estimating the long-term financial consequences likely to result from new development. New developments have the potential to generate additional revenues, but also will result in additional expenditures to provide both governmental services and infrastructure to support the development.

The process of fiscal impact analysis involves the allocation of revenues and expenditures related to the provision of services to residential and employment land uses. Revenues and expenditures are allocated based on their source or use, demographic, geographic, economic, and financial data. Those revenues and expenditures that can clearly be identified with a particular source or use are allocated to that source or use. For example, expenditures for social services and parks and recreation are allocated to residential uses. Revenues and expenditures whose source or use cannot be clearly identified with either residential or employment land uses are allocated based on factors including:

- Data related to population, employees, households, school enrollment, median income, and other available demographic data
- The number, type, and market value of land parcels in the County

SUMMARY

Springsted Incorporated was retained by New Kent County as a component of this Comprehensive Plan update to assist in estimating the fiscal impacts likely to result from new residential and commercial/industrial development. The process of fiscal impact analysis involves the allocation of revenues and expenditures related to the provision of services to residential and employment land uses. Revenues and expenditures are allocated based on their source or use, demographic, geographic, economic, and financial data. For New Kent County's cost of services study, Springsted relied upon a process which included an initial meeting with various County staff members to obtain a thorough understanding of the rationale for the analysis and subsequent meetings to review their methodology and information which was gathered. The full report can be found in **Appendix B**.

It is important to understand that this cost of services study relies on significant amounts of demographic, geographic, economic, and financial data provided by the County and from other various sources (as referenced in the full report).

Demographic data was obtained from the New Kent County Community Development Department (*2010 Data Summary*). Economic data was obtained from a variety of sources,

including the United States Bureau of Labor Statistics, the Virginia Department of Taxation and the Virginia Tourism Corporation. Financial data was obtained from the County (*Comprehensive Annual Financial Report for Fiscal Year Ended June 30, 2010*). The number, type, and market value of land parcels in the County were provided by the Commissioner of Revenue.

Geographic property data, obtained from the County, was used to allocate annual revenues and expenditures to either residents or employees except those revenue sources and expenditures that could clearly be allocated to a particular land use type or where a different allocation method would provide a more equitable distribution.

The cost allocations, based on geographic property data, resulted in estimated revenues generated, with the exception of sales taxes, Business Professional and Occupational License (B.P.O.L.) taxes, and property taxes, of \$2,132.20 per resident and \$336.38 per employee and estimated expenditures per resident of \$3,034.64 and per employee of \$476.85.

Annual revenues from sales taxes and B.P.O.L. taxes were calculated to provide a more accurate estimated amount. This resulted in estimated annual sales tax revenue of \$35.05 per resident and \$73.91 per employee and B.P.O.L. tax revenue of \$9.01 per resident and \$76.60 per employee to the County being generated using recognized methodology.

Annual real property tax revenues generated by a new resident were estimated based on an average residential property value of \$218,860 and the County's FY 2010 real property tax rate of \$0.73/\$100. This resulted in projected real property tax revenue of \$624.09 per resident.

Annual real property tax revenues resulting from a new employee were estimated using the average assessed commercial/industrial property value per employee, determined to be \$198,315. This resulted in estimated real property tax revenue of \$1,447.70 per employee.

Springsted's analysis estimated that, on average, a new resident in New Kent County generated revenues of \$2,800.36/year and required estimated services costing \$2,789.21/year resulting in net revenues of \$11.15/year. Their analysis also estimated that, on average, a new employee provided the County with revenues of \$1,934.59/year and required services costing \$448.53/year resulting in net revenues of \$1,486.06/year.

The provision of these services will require capital assets, including land, buildings, equipment, and other assets. The cost of these assets was estimated based on the assets currently owned by the County. These assets were allocated to residents and to employees based on their applicability and their original cost. This resulted in a capital asset cost of \$6,253 per resident and \$2,200 per employee.

The total estimated fiscal impact for New Kent County is the sum of the allocated revenues and expenditures related to the provision of services and the allocated capital assets. The total fiscal impact for an average New Kent County family with median income of \$73,245 is negative (\$6,242) the first year of residency based on the net cost of providing services and the cost of required capital assets. The total fiscal impact for a new employee is also negative (\$714) the first year as the cost of capital assets exceeds the excess revenues resulting from each new employee. Negative impacts are reduced over time as revenues accrue to identified uses and capital project costs are spread over new uses. This summary is shown in the table below.

Revenues	Resident	Employee
County Funds Excluding Schools	\$ 776.65	\$ 336.38
School Funds	\$ 1,355.55	-
Property Tax	\$ 624.09	\$ 1,447.70
Sales Tax	\$ 35.05	\$ 73.91
B.P.O.L.	\$ 9.01	\$ 76.60
Total Revenues	\$ 2,800.36	\$ 1,934.59
Expenditures	\$ 2,789.21	\$ 448.53
Revenues Over (Under) Expenditures	\$ 11.15	\$ 1,486.06
Capital Assets	\$ 6,253.01	\$ 2,200.15
First Year Net	\$ (6,241.86)	\$ (714.09)

It is important to understand the assumptions that generated these results. These include:

- Median family income is typically less than average (or mean) family income. Median family income is the point where half the families by number have lower income and half the families by number have greater income.
- The analysis assumes an average number of residents per housing unit of 2.56. Housing units with lesser residents per unit would most likely result in positive fiscal impacts while those with more residents per unit would result in greater negative impacts.
- The analysis used an average cost methodology. The average cost method calculates the cost of providing services based on the current population, number of employees working in the County and the number and value of assessed real property. These costs were assumed to represent the costs of providing services and capital assets to new residents and new employees.
- The analysis assumed there are neither excess nor deficient capacities in existing assets or services. Excess capacity would result in a lesser cost per resident and per employee while a deficient capacity would result in a greater cost.

- The costs of providing services determined were based on the County's FY 2010 financial data and capital assets. These costs should be updated in the future to reflect the changes that will occur in revenues, expenditures, and assets.

The actual cost will depend on the unique circumstances related to the development.

Including fiscal impact analysis as part of the comprehensive planning process enables the County decision-makers to gain a better understanding of the likely financial impacts resulting from different development alternatives.

The County will need a mix of land use and development as it grows; however, it should be careful to provide a balance of land uses understanding that its ability to encourage any particular land use depends on many factors outside its control.

The fiscal impact analysis provides the County with one piece of information that, while valuable, needs to be taken in the total context of its comprehensive planning process. Other factors used in land-use decision making include economic factors such as housing affordability, environmental/quality of life, social including jobs/housing balance, and political and are all typically part of the planning process.

GOALS, OBJECTIVES, AND IMPLEMENTATION STRATEGIES

INTRODUCTION

Goals constitute the vision of the future of New Kent County. These goals are a general statement of the ideals toward which the County strives. Objectives are specific, measurable subsets of these generalized goals. Finally, implementation strategies are recommended, concrete actions that the County should take toward the realization of its stated goals and objectives.

OVERARCHING GOALS

Throughout the public process, the following four overarching goals came to the forefront of discussions time and time again. As a consequence, they are the guiding principles that form the foundation upon which the entire Plan is built.

- **Preserve the County's existing rural character**
- **Protect the natural environment**
- **Encourage responsible economic development with a target of realizing thirty percent of local tax revenues from business sources by the year 2040.**
- **Maintain as low a real property tax rate as possible into the future.**

RESOURCE PROTECTION

The first element considered in the development of the Comprehensive Plan was the protection of the County's natural resources. New Kent County is blessed with a relatively unspoiled natural environment, and the protection of both the natural environment and the County's existing visual appeal is of foremost concern to County residents.

In 1998, the County completed a Water Resources Element. The basic concepts are still relevant today and are hereby incorporated into this Comprehensive Plan.

In 2009, the County collaborated with the Green Infrastructure Center to develop a series of maps that identify and provide information for the County's key green infrastructure assets, such as critical forests, watersheds and wetlands, working lands, and areas important for wildlife conservation. This information, several maps, and associated strategies are hereby incorporated into this Comprehensive Plan.

The Virginia Department of Conservation and Recreation, along with the Center for Watershed Protection, published a document called "Better Site Design – An Informational Brochure for Virginia Communities Implementing the Chesapeake Bay Preservation Act" and the practices and principals from that document are hereby incorporated into this Comprehensive Plan.

Goal 1: Conserve, protect, and preserve the quality of the County's air, water, soil, wildlife habitat, and scenic views through responsible stewardship of the land.

Objective A: Ensure that current Commonwealth of Virginia Chesapeake Bay Act requirements are incorporated into appropriate County ordinances, policies, and practices.

Strategies:

1. Update the New Kent County Code to reflect recent and any future revisions to Chesapeake Bay Act requirements.
2. Participate in the York Watershed Roundtable to develop tributary strategies.
3. Seek out and participate in groups centered on the Lower James River Watershed.
4. Improve the RPA (resource protection area) mapping information in the County GIS (geographic information system) and keep the data current thereafter.
5. Continue to require water quality management for all developments where the proposed impervious cover exceeds the County average.

Objective B: Encourage innovative, alternative storm water management practices.

Strategies:

1. Investigate the creation of regional storm water management facilities with provision for individual projects to contribute a proportional share of the construction and maintenance of such shared facilities.
2. Encourage the use of bio-retention storm water management and other low impact development techniques; keep the County's Low Impact Development Design manual up to date.
3. Provide stormwater treatment for parking lot runoff using bioretention areas, filter strips, and/or other practices that can be integrated into required landscaping areas and traffic islands.
4. As new technologies become available for sustainable management of storm water, incorporate their use into revisions of the County's storm water management ordinances.
5. Encourage stormwater harvesting and reuse.
6. Evaluate the effectiveness of structural BMPs (best management practices) over time and based on those evaluations, develop enforceable guidelines for their maintenance that ensures continued effectiveness.
7. Investigate programs for the trading of nutrient credits between agricultural and industrial uses.

Objective C: Control erosion and runoff by preserving existing, natural vegetation to the greatest extent possible.

Strategies:

1. Consider the implementation of ordinances and policies requiring that only the least amount of clearing occurs for development.
2. Discourage clearing in natural drainage courses except in unusual situations.
3. Regulate and provide incentives for the maintenance of vegetative buffers around new development projects.
4. Discourage speculative land clearing activities in the County.
5. Where density, topography, soils, and slope permit, vegetated open channels should be encouraged in the street right-of-way to convey and treat stormwater runoff instead of the use of piped drainage systems.
6. Conserve trees and other vegetation at each site by planting additional vegetation, clustering tree areas, and promoting the use of native plants. Wherever practical, manage community open space, street rights-of-way, parking lot islands, and other landscaped areas to promote natural vegetation.
7. Clearing and grading of forests and native vegetation at a site should be limited to the minimum amount needed to create building sites, allow access, and provide fire protection. A fixed portion of any community open space should be managed

as protected green space; such spaces should be sufficiently large to provide recreational and habitat values/functions.

Objective D: Develop practical and realistic zoning and regulatory controls that protect the natural environment while recognizing and considering private property rights.

Strategies:

1. Ensure that new zoning and regulatory controls have a demonstrated and balanced environmental benefit.
2. Develop and implement watershed protection standards for lands proximate to surface drinking water impoundments.
3. Solicit input of the engineering and business community in the development of new zoning and regulatory controls.
4. Periodically inventory existing dams in the County, assess their hazard potential, and seek funding for preparation of dam inundation zone maps for those dams with a hazard potential of *high* or *significant*.

Goal 2: Promote and encourage environmentally responsible and conservation based land use planning.

Objective A: Provide incentives for conservation land use planning and protect the County's environmental assets.

Strategies:

1. Encourage clustering and open space development techniques as the primary option for residential developments and provide incentives for their use.
2. Promote the use of tax credits for open space protection.
3. Promote the County's PDR (purchase of development rights) program and continue to seek funding for the program.
4. Promote the use of conservation easements on private property.
5. Consider adopting a TDR (transfer of development rights) ordinance.
6. Provide funding to allow for public purchase and private trading of development rights to the extent permitted by the Code of Virginia.
7. Develop and maintain a continuing dialogue with organizations such as the American Farmland Trust, Virginia Outdoors Foundation, and local land conservancies and trusts.
8. Act as a clearinghouse for information on available government and private conservation programs.
9. Encourage the use of agricultural and forestal districts or land use taxation to allow rural lands to remain in an undeveloped state.
10. Utilize the green infrastructure asset maps to analyze opportunities to maximize the economic and environmental benefits provided by the county's working lands (farms and forests).

Objective C: Minimize noise and light pollution in the County.

Strategies:

1. Promote the use of landforms in industrial areas to minimize noise from such operations.
2. Establish noise standards that require that site-generated noise from industrial and similar high-noise producers is trapped or baffled or otherwise prevented from disturbing neighboring properties.
3. Require the use of exterior lighting fixtures that protect the dark night sky, keep the light on site, and do not impact neighboring uses.
4. Require that streetlights, where installed, must use fixtures that direct illumination downward and avoid reflected illumination of the sky.

Objective D: Utilize the services of the Colonial Soil and Water Conservation District, the Virginia Department of Forestry, and the New Kent branch of the Virginia Cooperative Extension Office.

Strategies:

1. Identify opportunities and strategies that support land use performance measures that protect and improve local natural resources.
2. Seek out and collaborate on grant funding opportunities.
3. Solicit assistance in homeowner education.
4. Solicit assistance in reviewing site plans and development plans; review the efficiency and appropriateness of landscaping plans.
5. Utilize and collaborate in preparing nutrient management plans, agriculture and forestry Best Management Practices (BMP's), and stormwater and turf management.
6. Cooperate in ensuring that agricultural and forestry BMP's are implemented and properly maintained, and that Urban Forestry concepts are utilized in more built-up areas of the County.

Objective E: Promote environmentally responsible waterfront development in the County.

Strategies:

1. Carefully consider stream bank erosion issues by encouraging the use of non-structural shoreline stabilization techniques that ensure connectivity between the marine and near-shore environment.
2. Ensure that waterfront redevelopment projects do not degrade and, if possible, enhance existing water quality through the use of such techniques as French drains, mulch, and vegetative buffers, etc.

Objective F: Support and promote sustainable alternative energy sources and production.

Strategies:

1. Encourage the production and refining of biomass fuels, especially those which do not utilize food and feed crops; allow such uses as a matter of right in appropriate areas subject to meeting reasonable performance standards.
2. Consider developing policies and regulations that allow for small-scale wind and solar energy projects as a matter of right subject to meeting reasonable performance standards.
3. Consider developing policies and regulations that allow for designated parking areas for electric vehicle (EV) charging.

Objective G: Consider the environmental impacts of development in the review and approval process in a manner that promotes environmentally sustainable development.

Strategies:

1. Require an environmental impact analysis, paid for by the applicant, as a part of all rezoning applications and for larger subdivisions and land development proposals.
2. Continue to use the threshold of land clearing as set by the state Chesapeake Bay Act requirements to trigger the requirement for a land disturbance activity permit.
3. Continue to require that in subdivisions minimum lot size must be satisfied without inclusion of RPA and environmentally sensitive lands.
4. Provide and encourage a preliminary, courtesy staff review for new development proposals in order to encourage a positive dialogue with regard to upfront land planning.
5. Consider developing and implement policies and regulations that discourage road and utility crossings of ravines and other environmentally sensitive areas whenever possible.
6. Discourage excessive grading and significant changes to the natural land forms during the development process.
7. Establish reasonable performance standards for development including preservation and establishment of vegetative buffers and use of greenbelts along designated scenic byways and other rural roads.
8. Maintain and enhance the capabilities of the GIS, including detailed (1-foot contour interval) topographic mapping and aerial photography coverage.
9. Ensure compliance of County ordinances with Commonwealth of Virginia silvicultural regulations.
10. Establish within the development ordinances of the County a general policy of clearing no more land than necessary to support the desired development.
11. Continue to review development proposals for water dependent uses for compliance with the Virginia Institute of Marine Science (VIMS) and Virginia Marine Resources Commission (VMRC) siting and design criteria.

12. Continue to require site plan review and approval for all commercial access sites and sites with areas zoned for Conservation.
13. Maintain floodplain protection ordinances and policies that allow the County to fully participate in the National Flood Insurance Program and Community Rating System.

Objective H: Implement the Cool Counties Resolution (R-46-07), adopted by the Board of Supervisors.

Strategies:

1. Create an inventory of components of County operations that contribute to the production of greenhouse gases and develop a plan to achieve a measurable and sustainable reduction of greenhouse gases attributable to those operations.
2. Work closely with local, regional, state, and federal governments to establish policies and regulations that achieve long-term greenhouse gas emissions reductions.
3. Through the RRPDC bring together the local governments in the Richmond and Hampton Roads regions to identify the regional climate change impacts and to develop plans to prepare for and protect our citizens from those impacts.

Goal 3: New Kent County's water resources should be of the highest possible quality.

Objective A: Continue to guide development so that the capacity of the soil to absorb septic tank effluent is not compromised.

Strategies:

1. Continue to review, and periodically update, the density allowances for development in all zoning districts such that density is concentrated where the land and infrastructure is most capable of sustaining it.
2. Continue to require, as part of the Subdivision Ordinance, that land to be subdivided for which public sewer is not proposed must be tested for percolation and adequate absorption.
3. Continue to guide commercial development toward areas already served by public sewer.
4. Continue to require 100 percent reserve drainfields to assure adequate system function in the event the primary drainfield fails.
5. Where alternative on-site septic systems are utilized, require that their presence and the requirements for their maintenance and use be fully disclosed to owners of the property through recording the location and maintenance requirements upon the land records of the County.

Objective B: Protect wetlands, natural habitat, and other environmentally sensitive areas from loss or degradation by development.

Strategies:

1. Develop and map an inventory of Natural Heritage Areas for review when processing development applications. Require developers to provide assurances that these areas are adequately protected or that mitigation plans are adequate.
2. Continue to require developers to delineate wetlands and other environmentally sensitive features as part of development proposals.
3. Continue to administer wetlands protection regulations through the local Wetlands Board.
4. Continue to require floodplain mapping on plans; determine base flood elevations as a part of site plans in A zones.
5. Continue to administer the Chesapeake Bay Preservation Ordinance and the performance standards for development within the Resource Management and Resource Protection Areas.
6. Continue to coordinate the efforts of New Kent County with those of the Chesapeake Bay Local Assistance Board and those state and federal agencies concerned with water quality protection.

Objective C: Protect the groundwater supply in the various aquifers within New Kent County from overuse and from pollution generated by above ground activities.

Strategies:

1. Continue to monitor septic tanks with emphasis on encouraging replacement or repair of failing systems and possibly extending public sewer to areas with concentrations of failing systems.
2. Support Virginia Department of Environmental Quality efforts in locating and replacing leaking underground storage tanks.
3. Continue to require that storage tanks, both above and below ground, be installed with appropriate building permits.
4. Delineate wellhead protection areas for active public water supply wells and establish limitations on the types of land uses allowed in these protection areas.
5. Continue to require that septic tanks be pumped out every five years.
6. Consider requiring the use of effluent filters and observation ports in all newly installed conventional septic tanks.
7. Prohibit the development or expansion of landfills, junkyards/salvage yards, radiological, and nuclear uses in order to protect groundwater.
8. Utilize the county's water conservation and management plan to protect and conserve both public and private water supplies.

Objective D: Protect New Kent County's surface water resources from all sources of pollution.

Strategies:

1. Require, to the extent permitted by law, the use of nutrient management plans and Best Management Practices in agricultural operations.
2. Continue to provide a coordinated response to hazardous materials and waste spills.
3. Continue to regulate the location and development of large commercial and industrial facilities through the site plan review process and application of the Zoning Ordinance and performance requirements.
4. Monitor the Virginia Department of Environmental Quality's (DEQ) granting of Virginia Pollutant Discharge Elimination Systems (VPDES) permits for potential impacts to New Kent County.
5. Prepare to operate the Virginia Stormwater Management Program (VSMP) permitting process locally.
6. Continue to rigorously apply the performance standards of the Virginia erosion and sediment control and storm water management statutes and regulations.
7. Continue to require that commercial and industrial developments undergo site plan review, including environmental review.
8. Require the use of Forestry Best Management Practices in connection with timber harvesting in the County.
9. Promote native and drought-tolerant grass species and landscaping as an alternative to traditional fescue-based lawns.
10. Provide public education about the necessity of preventing excessive fertilizer use and allowing oils and hazardous materials from being deposited in storm water runoff and storm drains.
11. Provide public education about the necessity of cleaning up pet waste so it is not deposited in storm water runoff and storm drains.
12. Require fencing all surface water resources adjacent to livestock and kennel operations.
13. Use enhanced GIS topographic mapping capabilities to map slopes greater than 15 percent and establish clear requirements to prevent development on slopes greater than 20 percent.
14. Ensure land use development and stormwater controls are designed to be consistent with all applicable Total Maximum Daily Load (TMDL) and tributary strategies.
15. Encourage developers to use rain gardens, porous pavement, green roofs and other stormwater management controls in their designs.

Goal 4: Protect and enhance the County's historic, cultural, and scenic resources.

Objective A: Continue to utilize the historic resources inventory to identify historic places in the County.

Strategies:

1. Identify potential sources of funding for updating and enhancing the County's historic resources inventory.
2. Work closely with the Virginia Department of Historic Resources to identify methods and policies to implement historic resource protection based on the inventory.
3. Guide preservation efforts and protect valuable historic and cultural resources, including their setting when appropriate to the interpretation, using the results of the inventory and other surveys and studies.
4. Continue to utilize and update GIS technology to locate, identify, and manage the results of the County's historic inventory.

Objective B: Promote the preservation of historic structures that contribute to the overall setting of the County and encourage the adaptive reuse of those historic structures that are suitable as tourist attractions, such as ordinaries and bed & breakfast establishments.

Strategies:

1. Adopt flexible zoning that allows adaptive reuse either by right or by conditional use permit.
2. Discourage the demolition or inappropriate use of cultural and historic resources through regulatory and voluntary techniques.
3. Promote and encourage the protection of grave sites and historic structures.

Objective C: Develop cultural and tourist oriented areas within the County.

Strategies:

1. Inventory cultural and tourist resources within each of the County's designated villages to determine their potential.
2. Work with private developers to provide the necessary capital to develop a cultural and tourism industry.
3. Utilize and expand tourism marketing programs, including a web site, developed and maintained by the County's Economic Development Department.
4. Utilize the GIP asset maps to inform efforts to expand and locate heritage tourism opportunities.
5. Continue to seek Historic District Designation in New Kent Courthouse.

Objective D: Encourage the development of eco- and agri- tourism.

Strategies:

1. Work with the Virginia Tourism Corporation to establish realistic tourism development policies and techniques.
2. Investigate the possibility of working cooperatively with neighboring jurisdictions in developing and marketing eco- and agri- tourism, and if feasible, enter into joint marketing programs with these neighboring jurisdictions.
3. Review other successful eco- and agri- tourism programs and adapt for use within the County.
4. Provide flexible zoning tools to allow agricultural operations to accommodate tourists and tourist-related activities, festivals, and events.
5. Promote and encourage existing County eco- and agri- tourism activities, such as the Farm Tour, bike tours, farmer's markets, and Fall Festival.
6. Work collaboratively with local wineries to promote and expand agri-tourism.

Objective E: Provide incentives for public access to historic sites.

Strategies:

1. Develop and implement tools such as density bonuses in exchange for public access to historic sites.
2. Investigate the availability of and seek grant funding for the construction of public improvements that serve and enhance historic sites.
3. Investigate the availability of and seek grant funding to create driving/bike tours of historic routes within New Kent County (Washington-Rochambeau, J.E.B. Stewart's ride around McClellan's Army, etc).
4. Encourage cooperative tourism promotion from the Economic Development Department for historic sites.

Objective F: Require appropriate historic resource surveys and recovery where development impacts are otherwise unavoidable.

Strategies:

1. Continue to require Phase I archaeological surveys for new developments located on properties with documented, potential historic significance. If the Phase I study indicates the desirability for additional studies, require a Phase II study of the site. If warranted, a Phase III may also be required. The recommendation of such studies shall be incorporated into the plan of development and any clearing, grading, or construction activities.
2. Strengthen collaboration with the New Kent Historic Commission, the New Kent Historical Society, the Association for the Preservation of Virginia Antiquities/"Preservation Virginia", and the National Trust for Historic Preservation.

Objective G: Explore the expansion of the Civil War Trails program throughout the County.

Strategies:

1. Seek potential funding opportunities for this program.
2. Review other successful Civil War Trails programs and adapt for use within the County.
3. Work with the Virginia Tourism Corporation and other federal, state, and local agencies to assist in development.
4. Obtain historic expertise to determine possible sites and routes for inclusion in the Civil War Trails program.

Objective H: Investigate strategies for the County to assist owners in listing their properties on historic registers.

Strategies:

1. Develop a compendium of federal and state financial assistance available for such use.
2. Develop a priority list for nominating eligible properties for the state and federal registries in cooperation with private property owners.

Objective I: Consider implementing policies to protect the viewsheds along the following routes in the Virginia Byways System.

- Route 249, from the intersection with Route 106/Route 609 to the intersection with Route 33.
- Route 608, from the intersection with Route 249 to the intersection with Route 606.
- Route 606, from the intersection with Route 608 to the intersection with Route 609.
- Routes 609 and 676 between Route 608 and Route 609 and the intersection with Route 249.

TRANSPORTATION

At present, transportation in New Kent County is almost entirely dependent on the automobile. This means that the County must plan for a desired level of growth without compromising either the safety or the carrying capacity of the existing highway system. At the same time, the County should explore methods to encourage multiple transportation modes to lessen this over-reliance on the automobile. All of this needs to be accomplished in a manner that does not compromise the citizens' stated objective of maintaining the County's pleasant, rural quality of life.

Level of service (LOS) is a quality measure describing operational conditions within a traffic stream, generally in terms of such service measures as speed and travel time, freedom to maneuver, traffic interruptions, and comfort and convenience. Six LOS are defined for each type of facility that has analysis procedures available. Letters designate each level, from A to F, with LOS A representing the best operating conditions and LOS F the worst. Each level of service represents a range of operating conditions and the driver's perception of those conditions. Safety is not included in the measures that establish service levels.

Transportation LOS standards are defined as follows:

- A = Free flow and unimpeded maneuverability
- B = Free flow and maneuverability is slightly restricted
- C = Stable flow and maneuverability is noticeably restricted
- D = Unstable flow and maneuverability is severely restricted
- E = Flow is extremely unstable and maneuverability is extremely poor
- F = Forced stoppages and there is no maneuverability

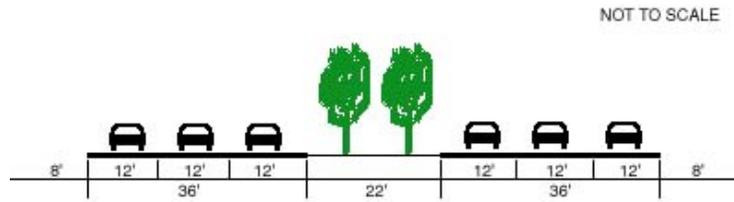
Similar LOS and/or quality of service standards are available for other modes of transportation (i.e. bicycle and pedestrian) and should be used as appropriate to guide new developments and transportation infrastructure investments.

Goal 1: Promote the expansion of I-64 while preserving its present aesthetic appeal.

Objective A: Encourage the preservation of a wooded median or comparable landscaping along I-64.

Strategies:

1. Work closely with both the Virginia Department of Transportation (VDOT) and the Richmond Regional Metropolitan Planning Organization (MPO) to ensure that a minimum of a 22-foot median is maintained to allow adequate area for trees and landscaping, as shown below (Typical Section A):



Typical Section A

2. Considering requiring an additional wooded setback from the I-64 right-of-way for all new development to help maintain the rural character of the County, while preventing the need for acoustic barriers. 100 feet is the recommended width of the additional setback but may need to be greater or less depending on topography and existing development.
3. While maintaining the existing aesthetic appeal and rural character of the roadway, continue to encourage the maintenance of existing shoulders to enhance vehicular safety.

Objective B: Ensure that I-64 provides a very good to excellent level of service for through traffic so that there is no reason for through traffic to explore alternative routes through the County.

Strategies:

1. Maintain close coordination with VDOT and the General Assembly to ensure that widening of I-64 through New Kent County proceeds along with I-64 widening projects in other jurisdictions to avoid six to eight lanes channeling down to four lanes through the County.
2. Strive to achieve and maintain an average Level of Service D or better during peak season peak hours along the I-64 corridor and have no individual segments operate below a Level of Service E during normal peak hour operations.
3. Explore the possibility of constructing an interchange at I-64 and SR 612 (Airport Road).

Objective C: Preserve and enhance the I-64 interchanges within the County to ensure adequate future levels of service and access to the County's thoroughfare network.

Strategies:

1. Conduct a study of each interchange to identify projected future traffic demands and necessary right-of-way and infrastructure improvements to maintain adequate levels of service and access at each interchange.
2. Work with the development community to dedicate (or reserve) future right-of-way at interchanges as appropriate.
3. Work closely with VDOT to include provisions for hurricane evacuations plans in any future interchange modifications.

Objective D: Plan for and manage an increased volume of heavy truck traffic in and through the County.

Strategies:

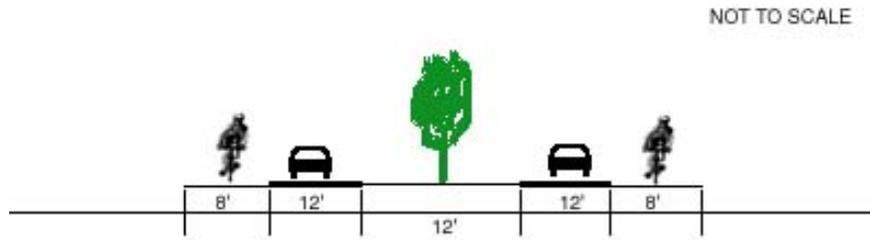
1. Work closely with VDOT to ensure adequate commercial truck parking is provided at existing VDOT safety rest area/welcome center facilities in order to discourage illegal parking of commercial vehicles on interchanges or thoroughfare shoulders.
2. Work with the Virginia Department of Motor Vehicles (DMV) to explore the possible use of existing Motor Carrier Service Centers (formerly known as weigh stations) at I-64 mile marker 203 (to the west in Henrico County) for overnight commercial truck parking.
3. Work with Virginia State Police to enforce existing parking regulations related to commercial vehicles while balancing the protection of the overall safety of the County's roadways.
4. Work with the development community to construct appropriately located commercial facilities which support the needs of commercial vehicles, including adequate parking.
5. Continue to analyze the potential of establishing a barge port on the Pamunkey River at Parham Landing to divert heavy truck volumes from I-64 east of Exit 220.

Goal 2: Promote transportation safety throughout New Kent County.

Objective A: While maintaining the existing aesthetic appeal and rural character of New Kent Highway encourage the construction of adequate shoulders, or maintenance of existing shoulders, to enhance vehicular safety along with safety for other travel modes.

Strategies:

1. Work closely with VDOT and the MPO to ensure that roadway improvements meet New Kent County Comprehensive Plan goals.
2. Consider using roundabouts to bracket the villages, hamlets, and rural crossroads.
3. Evaluate all collector and higher order roads in New Kent County for safety shoulders to provide improved safety for all vehicles and users of the road.
4. Consider implementing the following design (Typical Section B) at approaches to existing and designated villages, and seek transportation funding, if feasible, to implement this design to accomplish the following:
 - Increase aesthetic appeal near villages.
 - Announce to users of New Kent Highway that they are approaching a village.
 - Incorporate safer bicycle transportation into the roadway design.



Typical Section B

Objective B: Investigate reductions in the present speed limit, especially in the vicinity of existing villages.

Strategies:

1. Work closely with VDOT and the MPO to study the potential for speed limit reductions in and around the designated villages, hamlets, and rural crossroads in the County.
2. Involve the members of the County business community and village residents in discussions concerning speed limit reductions.
3. If feasible, enact speed limit reductions within villages and along approaches to villages.
4. Perform road safety audits and focus on the use of self-enforcing speed reduction techniques.

Objective C: Discourage the use of traffic lights and avoid large, multi-lane intersections.

Strategies:

1. Continue to support the use of modern roundabouts as the preferred alternative to traffic signals.
2. In order to promote traffic calming, investigate, and if feasible, seek transportation funding for the use of raised intersections that contain a transition from plain asphalt or concrete to a paver material that is placed directly on top of the existing road surface.

Objective D: Encourage the Transportation Safety Commission to seek funding for and promote proactive safety engineering, encouragement, and enforcement programs.

Strategies:

1. Support the use of selective speed/safety enforcement at key locations and times along New Kent roadways.
2. Continue to provide free child seat safety education and checks.
3. Develop and implement pedestrian and bicycle safety education programs in the community and in the schools and child care facilities.

Goal 3: Promote traffic calming in village and residential areas.

Objective A: Use tools such as roundabouts instead of traffic signals.

Strategies:

1. Investigate roundabouts as focal points within and at entrances to villages.
2. Investigate such traffic management and self-enforcing speed reducing features as:
 - a. The use of neck-downs where low traffic roadways intersect with the main street running through a village.
 - b. The use of speed tables at intersections for use as crosswalks.
 - c. The use of refuge islands in the center of a village's main street to enhance pedestrian safety.
 - d. The use of raised intersections as a means to encourage drivers to reduce speeds through villages.
3. Design traffic calming into new transportation projects at the project inception stage; maximize the use of self-enforcing techniques.

Objective B: Use access management tools such as shared entrances.

Strategies:

1. Work closely with VDOT to continue to leverage existing state Access Management regulations to enforce the following access management strategies:
 - Regulation of driveway location and spacing
 - Require joint entrances whenever possible
 - Promote internal connections between adjacent land uses and parking lots
 - Discourage the location of private driveways along acceleration and deceleration lanes and tapers at street entrances and interchanges.
 - Optimize driveway location and overall access in subdivision and site plan review
 - Encourage the use of service drives to enhance access management

Goal 4: Establish acceptable levels of service for all public roads in the County.

Objective A: Base the acceptable roadway link level of service on the functional classification of the roadway:

Roadway Functional Classification	Minimum Acceptable Level of Service *
Urban Principal Arterial	D
Urban Minor Arterial	D
Rural Principal Arterial	C
Rural Minor Arterial	C
Urban Major Collector	D
Urban Minor Collector	D
Rural Major Collector	C
Rural Minor Collector	C
Local Street	C

* Level of Service methodology for calculations must match current edition of the Highway Capacity Manual (Transportation Research Board). "Minimum acceptable level of service is what is acceptable during the peak hour in the peak direction of flow."

Objective B: For intersections, pursue transportation solutions which allow for all intersections to operate at overall LOS D or better and for all intersection approaches to operate at LOS E or better under designated horizon analysis years and/or peak hour scenarios.

Objective C: Allow design exceptions and lower levels of service on individual streets within villages where on-street parking is present provided that the entire network average meets the minimum levels of service established above.

Goal 5: Maintain, to the extent possible, the County's secondary road system as a safe, two-lane highway system.

Objective A: Manage future development so as not to exceed the secondary system's design capacity within the level of service guidelines established.

Strategies:

1. Work with VDOT to enforce access management regulations to manage the operational efficiency and safety of County roadways.
2. Base allowable residential densities, in part, on the carrying capacity of existing roads and without creating the need to add lanes to secondary roads.
3. Continue to require internal connections between adjacent land uses and parcels, creating an integrated transportation network and reducing the need for internal trips to utilize external roads.

4. Use traffic impact analyses as one of the decision tools for rezoning applications and recommend denial of rezoning requests that push existing secondary roads below the level of service guidelines or require the addition of lanes to existing secondary roads.

Objective B: Direct secondary road funds toward safety improvements, managing stormwater, drainage, and paving unpaved roads rather than toward capacity increases.

Strategies:

1. Develop and utilize evaluation criteria to provide a logical and consistent approach to prioritizing transportation improvements.
2. Ensure that such evaluation criteria support the goals and objectives of the Comprehensive Plan.

Goal 6: Base transportation decisions on professional analysis and operational factors.

Objective A: Use traffic impact analysis – either development-specific or prepared in conjunction with a small area plan – as the basis for requiring and obtaining appropriate transportation infrastructure.

Strategies:

1. Continue to require that traffic impact analyses are prepared by qualified professionals.
2. Include transportation improvements in an updated proffer and/or impact fee study for the County.
3. Continue to make transportation needs a decision factor in the review of conditional use permits, planned unit development, and rezoning applications.
4. Continue to require traffic analyses for all development proposals that will have a demonstrable impact on adjacent and nearby public roads.
5. Amend the development ordinances of the County to require developers to provide the transportation improvements shown as necessary to support their development proposals or contribute a proportional (pro-rata) share in certain circumstances.

Objective B: Develop a prioritization system for road improvements based on functional classification, traffic volume to capacity ratios, emergency response requirements, crash history, and similar data.

Strategies:

1. Work with VDOT to prepare a road inventory database containing data on road surfaces, road and right-of-way width, traffic counts, driveway counts/density, and similar data elements.

2. Encourage the Transportation Safety Commission to prepare an annual safety report analyzing crashes and other available data.

Objective C: Design the transportation network in villages at a pedestrian scale and emphasize pedestrian access and safety.

Strategies:

1. Utilize traffic calming techniques.
2. Continue to seek funding sources to construct sidewalk improvements and install street lighting in villages.
3. Continue to require new developments within villages to include illuminated pedestrian facilities.
4. Maintain low posted speed limits within confines of villages.
5. Continue to work with neighboring jurisdictions and regional planning entities to ensure that transportation improvements will be effective to all jurisdictions.
6. Consider establishing a Safe Routes to School (SRTS) Program in the Courthouse Village area.

Goal 7: Encourage the development of “Complete Streets” that support all modes of transportation.

Objective A: Promote the development of an integrated transportation system through a coordinated pedestrian and bicycle system throughout the County in order to both improve transportation efficiency and to promote public health and fitness.

Strategies:

1. Work with the VDOT to ensure that any public or private road classified minor collector or higher includes bicycle lanes and other “Complete Streets” concepts.
2. Require illuminated sidewalks in villages.
3. Seek funding for the addition of bicycle lanes and or/paved shoulders along existing County secondary roads, incorporating historic and/or scenic routes whenever possible.
4. Seek federal and state safety grant funding to add pedestrian and bicycle safety units to the core curriculum in elementary and middle schools.
5. Enhance the on-going efforts of the Sheriff’s Office in the area of encouraging and enforcing bicycle and pedestrian safety.
6. Seek federal and state grant funding to fund improvements and programs, including:
 - Highway Construction Funds
 - Transportation Enhancement Program
 - Recreation Access Program
 - Hazard Elimination Program
 - Revenue Sharing Program

- Regional and MPO Surface Transportation Funds
 - Highway Safety Improvement Program
7. Encourage large employers to consider bicycle, pedestrian, and car pool commuting options.
 8. Consider recommending safe and secure bicycle parking as part of commercial, office, and multifamily residential development, especially in proximity to villages.
 9. Continue to require that all new streets constructed in the County conform fully to the public road standards of VDOT; and continue to require that all new streets not dedicated for public maintenance are fully covered by a perpetual and irrevocable street maintenance agreement with mandatory participation of all land owners fronting or benefitting from such street.

Goal 8: Develop realistic options for mass transit services within the County.

Objective A: Encourage the development of a passenger rail stop in New Kent County.

Strategies:

1. Work closely with the MPO High-Speed Rail Committee and VDRPT to ensure the inclusion of a passenger stop in New Kent County in any enhanced passenger rail plans along the Peninsula.
2. Inventory potential rail stop sites in New Kent County if higher speed, light, and/or commuter rail becomes a reality and consider pursuing federal and state funding for the designation of a passenger rail stop.
3. In conjunction with the MPO, investigate the possibility for establishing a rail linkage between the Newport News and Richmond airports with stops in Williamsburg and New Kent County.

Objective B: Pursue new and aid in the marketing of existing bus transit options.

Strategies:

1. Seek to create additional formal and informal park and ride facilities in the County.
2. Investigate establishing commuter express bus service from Bottoms Bridge, Talleyville, and Providence Forge to downtown Richmond and Main Street Station.
3. Investigate establishing commuter express bus service from Providence Forge, Eltham, Barhamsville, and Lanexa to downtown Williamsburg.
4. Continue to support rural on-call and limited fixed route service provided by Bay Transit.
5. Assist Bay Transit in marketing transit services as a viable travel option, not only in New Kent County but in the entire Bay Transit service area. Incorporate transit facilities in village development plans, including park and ride options, where feasible.

Goal 9: Improve vehicular access to the New Kent County Airport.

Objective A: Enhance access to the County Airport for all users and further the Airport's economic development potential by improving vehicular access between the Airport and the County's arterial and interstate roadway network.

Strategies:

1. Conduct a comprehensive analysis of access to the New Kent County Airport.
2. Seek funding for such a study from sources such as:
 - Richmond Regional Planning District Commission
 - Richmond Area MPO
 - Virginia Department of Aviation

Goal 10: Pursue alternative funding strategies to develop transportation improvements.

Objective A: Identify and pursue all available opportunities for transportation funding, including non-traditional and innovative approaches.

Strategies:

1. Maintain regular dialogues with MPO and VDOT staff to discuss new or alternative funding strategies which may be available for use by the County.
2. Consider developing a transportation impact fee ordinance using a County-wide or transportation district approach.
3. Conduct a County-wide proffer study to develop suggested proffer contribution levels (by development type/size) for use in evaluating zoning reclassification proposals by the private sector.
4. Use available funding streams (i.e. VDOT Revenue Sharing) to advance projects to shovel-ready status.
5. Pursue VDOT Enhancement grants and other grants suitable for County transportation priorities.

Objective B: Develop a public-private transportation program and committee to allow for public-private transportation initiatives in the County.

Strategies:

1. Adopt a public-private transportation ordinance to allow for new transportation projects to be delivered through the Public-Private Transportation Act (PPTA).
2. Form a transportation review committee to evaluate PPTA proposals. Committee will:
 - Develop a County-specific process for evaluating PPTA proposals
 - Meet as needed with the County Board of Supervisors to establish a dialogue with them on PPTA activities in the County

PUBLIC UTILITIES

Recent utility system expansions have brought the County's previous goal of providing water and sewer to four Interstate 64 interchanges within reach. Water and sewer services are currently available at the I-64 interchanges with Routes 249, 106 and 155, and force main sewer lines are routed through the Route 33 interchange. Preliminary engineering plans for water supply and sewage collection services have been prepared for the Route 33 interchange.

Regulatory and policy changes at the state and federal levels have highlighted the County's need for environmental stewardship as a primary focus for Public Utilities infrastructure, supply, and disposal. Groundwater permitting efforts have only yielded a 10-year planning window for essential use. Non-essential water use (particularly irrigation) has largely been removed from the permitted groundwater amounts. Lower limits on nutrient discharge to the Chesapeake Bay are forcing the eventual closure of the Chickahominy Wastewater Treatment Plant (WWTP) in 2011; all infrastructure is in place to route wastewater to the upgraded Parham Landing WWTP. Stricter regulations on both water and wastewater have provided the impetus to expand the existing reclaimed water program. Through American Reinvestment and Recovery Act Funds, the County has been able to contract construction of a reclaimed water line from the upgraded Parham Landing WWTP to two irrigation customers previously served by reclaimed water from the Chickahominy WWTP. In addition, a third irrigation customer in the area will be added. Interest from potential irrigation customers inside as well as outside New Kent County proves that the reclaimed water is a highly sought commodity, at a fraction of the cost of potable water. Over time, with the Parham Landing WWTP located where industrial activity is being promoted, the County anticipates reaping benefits from providing reclaimed water as industrial process water, lowering costs for the industry and improving the County's competitiveness in attracting such industrial users.

Looking forward, future development must be guided by the limitations of the permitted groundwater resources and the cost of an eventual connection to a finished water provider from outside the County. Innovative groundwater solutions and concerted water conservation efforts may extend the short-term viability of groundwater use, and the County should maintain groundwater data collection systems and consultation to gain the most advanced insight into our current groundwater situation. At the same time, the County should develop a mandatory connection policy which promotes economic growth within the existing Groundwater and Sewer Service Areas, and maintain development policies which deter small community water systems outside existing service areas. Consolidation of water systems, wherever possible, will help minimize operation and maintenance costs, while preparing the County for interconnection and an outside finished water supply.

The Water Supply Plan, the Master Utility Plan, the Water Conservation and Management Plan and the Reclaimed Water Management Plan should be maintained and utilized as the instruments to direct the water, sewer and reclaimed water planning for the County. These documents should incorporate the flexibility to allow the County to respond to changing markets, technologies, regulations and policies regarding the provision of water and sewer services. Additional development within the County should be considered with respect to the eventual provision of utility services, particularly finished water, from a regional provider. The County should also utilize and market the reclaimed water program as an incentive for “green”-minded industry and development, and stay abreast of the regulations and technologies that will guide the market for reclaimed water.

Goal 1: Promote the extension of water and sewer to designated growth priority areas.

Objective A: Extend public water and sewer to and within the designated economic development priority areas (I-64 interchanges with state Routes 249, 106, 155, and 33) of the County.

Strategies:

1. Prioritize economic development areas for provision of water and sewer based on cost-to-benefit analysis of projected County revenues per dollar of public expenditure.
2. Develop general plans (up to and including Preliminary Engineering Reports) for routing of water and sewer to and within priority areas.
3. Investigate appropriateness of using County General Funds, County Utility Funds and/or private funding sources for water and sewer extensions to and within priority areas.
4. Incorporate the publicly - funded portion of water and sewer extensions to priority economic development areas within the County’s Capital Improvement Plan.
5. Develop and implement a water and sewer connection policy which encourages economic development.
6. Develop a cost-share policy for overseeing privately funded extensions to accommodate future economic development growth.

Objective B: Extend public water and sewer to designated villages within the County.

Strategies:

1. Prioritize villages for provision of water and sewer based on cost-to-benefit analysis of projected County revenues per dollar of public expenditure.
2. Develop general plans (up to and including Preliminary Engineering Reports) for routing of water and sewer to villages.
3. Investigate appropriateness of using County General Funds, County Utility Funds and/or private funding sources for water and sewer extensions to villages.

4. Incorporate the publicly funded portion of water and sewer extensions to prioritized villages within the County's Capital Improvement Plan.
5. Develop and implement a water and sewer connection policy which encourages economic development.

Objective C: Establish Water and Sewer Service Area boundaries outside of which water and sewer services will not be made available, and using all means available, ensure that the County investment in water and sewer does not fuel undue residential growth.

Strategies:

1. Limit water and sewer extensions to those designated service areas shown on the Water and Sewer Service Area Maps, and those planned developments approved by the Board of Supervisors, and require connection of all new development within those designated areas.
2. Review the designated water and sewer service areas shown on the Groundwater and Sewer Service Area Maps contemporaneously with the review of the Comprehensive Plan, at least once each five years but no more frequently than a three-year interval.
3. Use the County's Capital Improvement Plan to direct water and sewer services to specific areas, providing sufficient capacity for those areas and reserving the capacity exclusively for those areas.
4. Authorize privately-funded or developer-driven water and sewer expansions only through a legislative permit process that ensures that the County's policies are maintained.
5. Prevent public water and sewer connections in areas designated for rural development.
6. Develop and implement a Public Utilities policy that determines when central water and sewer systems are required.
7. Promulgate a clear policy that stipulates that the availability of public utilities alone is not sufficient reason to approve residential rezoning requests that increase residential densities.

Objective D: Revise and update the Master Utility Plan and dedicate funding in the County Capital Improvement Program for implementation.

Strategies:

1. Prioritize the extension of water and sewer to villages and economic development priority areas based on a cost-to-benefit model.
2. Prioritize the extension of water and sewer to existing residential developments based on the incidence of septic system failure.
3. Correlate the Master Utility Plan priority areas with the designated water and sewer service areas shown on the Service Area Maps.

4. Incorporate the reclaimed water program as an integral component of the Master Utility Plan, addressing the balance between the demand for water and sewer services and the demand for reclaimed water.
5. Identify a combination of local and private funding for the extension of public utilities to villages and economic development areas.
6. Seek state and federal grant funding, in conjunction with local funding, for the extension of water and sewer to existing residential areas with failing systems.
7. Review the Master Utility Plan at least once each five years but no more frequently than a three-year interval.

Goal 2: Explore creative and innovative approaches to the provision of water and sewer.

Objective A: Compare local and regional approaches to the provision of water and sewer.

Strategies:

1. Utilize the Master Utility Plan and the Water Supply Plan to evaluate the local and regional options for each existing water and sewer system as well as the growth priority areas.
2. Begin dialogue with neighboring jurisdictions and/or regional providers of water and/or sewage treatment to explore the possibility of New Kent County participating in cooperative or regional efforts.
3. Prepare cost-to-benefit analyses of both local and regional approaches to determine the most cost effective path for New Kent County.
4. When financially feasible, enter into cooperative agreements with other jurisdictions and/or regional water or sewer providers for the provision of those public utilities best provided on a regional basis.

Objective B: Minimize County water and sewer operating impact on natural resources.

Strategies:

1. Investigate the cost-to-benefit ratio of economic incentives for new, reclaimed water-based industrial development.
2. Maintain and enforce the County's industrial wastewater pre-treatment ordinance.
3. Encourage industrial development which minimizes water use and utilizes water recycling.
4. Market the Route 33 Corridor to emerging "green" industries.
5. Identify strategies to balance the seasonal demands for reclaimed water.
6. Identify and maintain the balance between the demand for water and sewer services and the demand for reclaimed water.

Goal 3: Promote economic development and maintain County revenues and level-of-service while minimizing the perceived and actual impacts on the potable groundwater aquifer.

Objective A: Continue to study the short-term and long-term viability of groundwater resources and make the best use of the resources available.

Strategies:

1. Work closely with the Virginia Department of Environmental Quality, the State Water Control Board and contracted groundwater professionals to stay abreast of the latest research into aquifer quality and capacity.
2. Collect and catalog DEQ-required groundwater data in a manner that provides the most accurate and complete information, in order to protect the County's interests in regional groundwater models.
3. Investigate treatment alternatives (such as reverse osmosis) from existing groundwater supplies, in anticipation of deteriorating groundwater quality from existing sources.
4. Identify funding for groundwater alternatives and data collection from a combination of public and private sources.
5. Identify existing privately-owned groundwater systems which may alternately be supplied bulk water from the County to reduce and consolidate groundwater withdrawal within New Kent County.
6. Develop policies and strategies which encourage interconnection of existing privately-owned community water systems to existing County-owned water systems for bulk water supply.
7. Implement development policies and strategies which discourage the construction of additional small, groundwater-based community water systems.
8. Evaluate provision of a finished water supply from a regional or neighboring source outside the County.

Objective B: Reduce overall irrigation demand, particularly residential, from the potable groundwater system.

Strategies:

1. Review and revise the Water Conservation and Management Plan at least once each five years but no more frequently than a three-year interval.
2. Prohibit new irrigation systems using potable water sources except for agricultural irrigation.
3. Encourage efficient residential irrigation from existing systems through a robust public education effort.
4. Evaluate the provision of separate, non-potable, water system infrastructure for new developments.

5. Evaluate various financial incentives and deterrents as applied to water consumption for non-potable use.
6. Evaluate funding sources for expansion of the reclaimed water program.

Objective C: Reduce overall water system operating costs.

Strategies:

1. Evaluate energy consumption and identify areas for increased efficiency.
2. Identify areas where alternate, renewable energy supplies may be applicable.
3. Evaluate interconnecting small water systems with larger ones to consolidate costs.
4. Provide a cost/benefit analysis of a finished water supply from a regional or neighboring source outside the County.
5. Implement development policies and strategies which prevent the construction of additional small, groundwater-based community water systems.

Objective D: Work with New Kent Fire and Rescue to provide an equitable and appropriate level of fire protection for all County water customers.

Strategies:

1. Seek grants and other funding sources for engineering evaluation of fire flow capabilities at small water system.
2. Evaluate appropriate fire flows based on structure size and density.
3. Prioritize water systems for fire flow upgrades.
4. Investigate appropriateness of using County General Funds, County Utility Funds or private funding sources for fire flow upgrades to priority areas.
5. Incorporate the publicly funded portion of fire flow upgrades within the County's Capital Improvement Plan.

Goal 4: Promote economic development and maintain County revenues and level-of-service, while minimizing or eliminating nutrient discharge to the Chesapeake Bay.

Objective A: Operate and maintain a wastewater system which produces "zero discharge" to the Chesapeake Bay.

Strategies:

1. Promote water efficient industrial, commercial and residential development.
2. Promote the County's reclaimed water program for industrial applications and commercial and residential irrigation.
3. Identify potential existing markets within the County for the reclaimed water program.
4. Seek markets outside the County, if necessary, for the reclaimed water program.
5. Identify markets and customers to balance seasonal reclaimed water demand.
6. Stay abreast of regulatory changes and the latest technology regarding the cost and feasibility of utilizing reclaimed water for groundwater recharge.

7. Review and revise, if necessary, the Reclaimed Water Management Plan at least once each five years, but no more frequently than a three-year interval.

Objective B: Investigate alternatives for water reclamation and recycling and encourage creative approaches to wastewater treatment.

Strategies:

1. Explore the possibility of piping reclaimed water to industrial users, both within and, if necessary, outside the County, for reuse in industrial applications.
2. Utilize New Kent County's use of reclaimed water for irrigation as a model for future planned developments and consider expanding the concept to include a dual water system to facilitate using treated wastewater for private irrigation.
3. Implement those wastewater effluent alternatives that are determined to be the most environmentally beneficial and cost-effective through a combination of public and private funding sources.

Objective C: Seek new, innovative reclaimed water markets.

Strategies:

1. Update and maintain the Reclaimed Water Management Plan to allow maximum flexibility in providing reclaimed water to potential customers.
2. Promote the reclaimed water program as an Economic Development tool.
3. Investigate the cost-to-benefit ratio of economic incentives for new, reclaimed water-based industrial development.
4. Explore the possibility of piping reclaimed water to industrial users, both within and, if necessary, outside the County, for reclaimed water in industrial applications.
5. Develop general plans (up to and including Preliminary Engineering Reports) for routing of reclaimed water lines to potential new or existing markets.
7. Investigate appropriateness of using County General Funds, County Utility Funds or private funding sources for reclaimed water line extensions to potential new or existing markets.

Goal 5: Promote the responsible extension of telecommunications, broadband, and other technologies in the County.

Objective A: Develop a County-wide "needs assessment" in conjunction with individual telecommunications, broadband, and other technologies providers.

Strategies:

1. Create a telecommunication tower plan with an emphasis on minimizing the need for new towers by encouraging new telecommunications antennas to be located on existing buildings, towers, poles, water tanks, and other tall structures wherever possible.

2. Ensure that co-location opportunities are fully met before permitting new wireless communication towers.
3. Centralize and maintain a countywide telecommunication tower inventory.
4. Coordinate co-location opportunities with existing cellular carriers to obtain tower antenna access to remove 'holes' of radio communication where they exist and where cellular towers are either presently available or planned construction.
5. Coordinate with the Department of Fire & Rescue/Public Safety to determine their needs for improved public safety radio coverage.
6. Develop a high speed communication strategy to introduce a system of broadband and high-speed wireless technology to the county, with key emphasis on service areas for business and schools.

PUBLIC FACILITIES

Public facilities involve the planning and construction of buildings and grounds to serve the needs of the County population. They include recreational facilities, schools, libraries, fire and life safety and general governmental administration. These facilities not only perform a specific function, but also serve as a means to bring people together, enhancing the concept of community. Because they are funded with taxpayers' money, while such public facilities must be designed and constructed in the most cost-effective manner possible, they also should be durable, functional and attractive. An overall goal relating to Public Facilities is that they should be designed to be of high quality and functional to meet the current and future needs of the citizens of the County, while being constructed to comply in all ways with County codes, regulations, and policies. Public facilities should be designed to be energy efficient in meeting the cool counties goals and install green infrastructure when feasible (i.e., rain gardens, porous pavement, etc.).

Level of Service Standards (LOSS) for Public Facilities and Services

Pursuant to Section 15.2-2223 of the Code of Virginia, New Kent County may adopt Level of Service Standards (LOSS) for public facilities and services, to assist in identifying which existing lands, facilities, or services should be extended, widened, removed, relocated, vacated, narrowed, abandoned, or changed in use as the case may be. Individual department ownership of the LOSS is a must to ensure necessary improvements are constructed at the appropriate time. LOSS and goals/policies are designed to articulate clearly the expectations of the County with decisions related to staffing and the construction/improvement of public facilities. The locations, size, and timing of needed improvements are directly related to the development patterns identified in the Comprehensive Plan.

Goal 1: Promote the development of greenways and blueways throughout the County to enhance recreational opportunities and to promote public health and fitness.

Objective A: Provide incentives for the creation of pedestrian, bicycle, and equestrian trails and connections.

Strategies:

1. Develop a comprehensive trail plan for the County.
2. Create trail interconnections between bike paths and neighborhoods and between adjacent neighborhoods.
3. Monitor the development of mountain bike trails at Wahrani Park.
4. Seek transportation and grant funding for trail construction.
5. Encourage trail systems in areas designated for flexible Economic Opportunity land uses.

6. Work with the Virginia Department of Forestry to develop a kayak/canoe launch and trails at Crawford State Forest and explore urban forestry grants.
7. Ensure that public parks and spaces are served by trail systems and interconnected by trails to the extent possible.
8. Consider utilizing utility rights of way for trails, especially during rezoning applications.

Objective B: Work with the Department of Parks and Recreation and the Virginia Department of Forestry (VDOP) as well as other public entities and public-private partnerships to provide enhanced recreation opportunities.

Strategies:

1. Identify recreational opportunities on lands owned by the Commonwealth of Virginia.
2. Seek grant opportunities to fund recreational improvements.

Objective C: Investigate the possibility of providing public access to the County's waterways.

Strategies:

1. Inventory potential waterfront access points in the County and establish budget costs for the acquisition of a number of such sites.
2. Survey private, waterfront property owners to determine what incentives would be required for them to provide public access.
3. Develop a system of public incentives based on the results of this survey research.

Objective D: Acquire and develop a waterfront park.

Strategies:

1. Inventory potential waterfront park sites in the County.
2. Contact Newport News Waterworks concerning the possible donation of funds for park development on the Diascund Reservoir.
3. Set aside funding in the County's Capital Improvement Program (CIP) for land acquisition allowing the County to be prepared should a unique opportunity to purchase appropriate land arise.
4. Investigate funding waterfront park improvements through concessionaire fees and rentals.

Objective E: Increase access to waters of the Commonwealth.

Strategies:

1. Request that the Commonwealth of Virginia Department of Game and Inland Fisheries increase the number of public boat ramps in New Kent County.
2. Consider providing funding in the County budget to acquire land that provides public access to navigable waters.

3. Consider facilities that support bank and pier fishing and canoe/kayak launching separate and apart from power boat ramps and launching facilities.

Goal 2: Increase and enhance the County's recreational opportunities.

Objective A: Provide for the development of public parks with good vehicular access and proximity to public services.

Strategies:

1. Identify potential park sites throughout the County that are proximate to public services and have good vehicular access.
2. Explore the private sector donation of park land as part of future rezoning requests.
3. Revise the Parks and Recreation Master Plan to include a range of parks based on anticipated service areas and to provide an adequate variety of active and passive options designed to meet the needs of all members of the New Kent community.
4. Develop comprehensive site master plans and construction drawings for all county parks.
5. Develop comprehensive site master plans and construction drawing documents for all County parks; include logical phases for which grant opportunities can be sought.

Objective B: Site park facilities in close proximity to designated villages.

Strategies:

1. Identify potential public park sites in or near designated villages.
2. Coordinate with other County departments and agencies to promote the development of joint-use sites.
3. Provide incentives for the private sector development of new park facilities.
4. Develop multi-purpose parks whenever feasible.
5. Place parks in locations where nearby residents can safely and conveniently walk or bike to and from the park.

Objective C: Co-locate both indoor and outdoor recreational facilities, accessible to the public, with school sites.

Strategies:

1. Work closely with the New Kent County School Board to identify co-location opportunities for community needs and recreation.
2. Coordinate both the County and the School Board Capital Improvement Plans to fund such opportunities.
3. Offer assistance in the design of new schools to ensure that multi-purpose capabilities are included.

4. Improve the opportunities for school sites containing public recreation facilities to be safely and conveniently accessed by pedestrians and bicyclists.

Objective D: Provide for more parking in the County Government and Schools Campus.

Strategies:

1. Identify funding in the County's Capitol Improvement Plan for such parking.
2. Utilize grass overflow parking areas for special events.
3. Provide safe and secure parking options for bicycles as well as motor vehicles.

Objective E: Continue and expand the provision of recreational programs in the County.

Strategies:

1. Coordinate facility activity planning between the Department of Parks and Recreation and local recreational facilities, community members, and potential partners in providing recreational opportunities in the County.
2. Consider conducting an annual survey of citizens to determine their recreational programming preferences.

Objective F: Utilize volunteer labor in the construction and maintenance of park facilities in accordance with individual park master plans.

Strategies:

1. Publicize the need for such volunteer labor.
2. Coordinate with County public service organizations.
3. Coordinate with County private businesses.

Objective G: Make efforts to ensure that the siting of park facilities does not negatively impact existing residences.

Strategies:

1. Provide for the use of land forms as noise barriers from neighboring communities.
2. Develop lighting plans for park facilities to ensure that lights do not negatively impact neighboring communities and sound propagation plans for outdoor amplified sound systems.
3. Control hours of park operation.
4. Enforce and review the adopted Park Ordinance.

Goal 3: Promote the development of public facilities in or proximate to existing villages and transportation nodes, including schools, libraries, parks, fire and rescue, and satellite local government offices.

Objective A: Create small area plans for each identified village in the County, designating appropriate areas for public facilities.

Strategies:

1. Utilize transportation and other grant funds whenever possible for the development of village plans.
2. Hold extensive public meetings with the residents of each village and surrounding area to ensure that citizen concerns are met.
3. Seek a combination of grant and Capital Improvement Program funding to implement public improvements identified in adopted village plans.
4. Acquire adequate land areas proximate to villages to meet the future school construction needs of the County based on estimated build-out populations.
5. Develop and adopt a school master plan that sets forth steps to ensure that adequate school facilities are available in advance of the need for them, if at all possible.

Objective B: Design all new public facilities as multi-use or shared facilities to the greatest extent possible.

Strategies:

1. Encourage infill development of existing facilities.
2. Co-locate recreational facilities with schools.
3. Integrate community meeting rooms into public safety and other public buildings.
4. Implement electronic government initiatives to permit citizens to access government services from home during whatever hours they may choose. Should local government satellite offices be deemed advisable, they should only be established within shared facilities.
5. Establish community college and other adult education programs within the New Kent County public schools.
6. Involve County staff and departments in the design of new facilities to ensure that multi-purpose capabilities are included.
7. Design buildings when possible to be energy efficient, promote the use of natural light, use recycled materials, green roofs, porous pavement and other measures that go toward meeting the cool county goals.

Objective C: Promote volunteerism within the County.

Strategies:

1. Institute a volunteer recognition program.
2. Investigate, and if feasible, implement the creation of memorial gardens or community gardens where plantings can be dedicated to volunteers and others who positively impact the County.

Goal 4: Consider establishing Level of Service Standards for County facilities and services that coincide with current studies and development patterns, in direct cooperation with the specific agencies/departments that provide these services.

ECONOMIC DEVELOPMENT

Economic Development involves the creation of income and wealth within a community. This involves public as well as private economic gain. On the private side, economic development provides job and investment opportunities for County citizens who can, in turn, reinvest this income and wealth in the community. On the public side, economic development is usually associated with non-residential types of development that return County tax revenues in excess of their public service costs. In fact, not all non-residential development provides a positive tax benefit and not all residential development constitutes a tax burden. The challenge is to provide opportunities for and to promote those projects that provide a positive fiscal return to the County while not negatively impacting on the quality of life that makes New Kent County a special place to live, work, and play.

Goal 1: Focus economic development efforts into designated areas.

Objective A: Focus on and promote the economic development priority areas so they will have the highest likelihood of success. These areas are located at the County's Interstate 64 interchanges, including:

- Route 33 Interchange
- Route 155 Interchange
- Route 106/Talleysville Interchange
- Bottoms Bridge Interchange

Strategies:

1. Encourage new development to contribute to the capital needs of the County.
2. Direct new development toward areas with adequate public facilities.

Goal 2: Promote the expansion of retail sales opportunities in the County.

Objective A: Expand retail sales opportunities within existing villages and in close proximity to neighboring jurisdictions.

Strategies:

1. Prioritize and extend public utilities to existing villages.
2. Build on the Courthouse Development District to create a mixed-use zoning district that marries flexible land use with specific performance standards in landscaping, design, parking, and access control that can be used in village areas.
3. Conduct an aggressive promotional campaign, both to attract new retailers and to encourage citizens to shop in the County.

Objective B: Increase tourist-related and niche-oriented retail sales.

Strategies:

1. Identify and maintain an inventory of available properties.

2. Promote tourism in the County through the Virginia Tourism Corporation.
3. Establish links from the County's website to tourist and niche-oriented retailers.
4. Create and distribute maps of eco- and agri – tourism opportunities including bicycle routes, greenways, historic trails and attractions, permitting tourist-oriented and niche retailers to advertise and their location to be shown on the maps.
5. Assist in the production of fairs, festivals, and events that have the potential of showcasing New Kent County attractions and products.

Objective C: Ensure that “Big Box” retail development is attractive and reflects the character of the community.

Strategies:

1. Develop design and landscaping guidelines for big box retail type uses.
2. Develop pedestrian improvement guidelines that accommodate and encourage safe pedestrian movements within the site and to adjacent properties.
3. Develop future land use designations and zoning classifications that encourage big box retail in locations that have suitable access and do not take away from the designated village areas that are intended for small retail and office type uses.
4. Target those retailers with a proven track record of attractive development.

Objective D: Encourage the adaptive reuse of existing, especially historic, structures for retail and tourist-oriented development.

Strategies:

1. Develop flexible zoning tools and policies that encourage the adaptive reuse of existing buildings, especially historic structures, as opposed to building new structures.
2. Identify sources of grant and low-cost loan funding for historic preservation and reuse.
3. Develop an aggressive retail and tourism marketing campaign.

Goal 3: Promote the location of clean commerce and industry in the County.

Objective A: Encourage capital intensive, clean industry.

Strategies:

1. Provide flexible zoning techniques to attract clean industries.
2. Extend public utilities to economic development priority areas.
3. Coordinate with regional manpower training efforts to ensure a source of available, skilled labor.
4. Require industries with a high potential for negative, external impacts to obtain a conditional use permit.
5. Encourage traditional and non-traditional forest products industries.

6. Protect the County's existing rail sidings for clean, rail-dependent uses such as agribusiness, passenger stops, and related commercial enterprises.
7. Incentivize the development of "ready to build" sites within industrial and office parks to attract new development.
8. Incentivize the construction of shell buildings within industrial and office parks to attract new development.

Objective B: Support entrepreneurialism and small business development.

Strategies:

1. Review recently revised home based business regulations within 5 years from adoption to determine how effective they are in supporting home based businesses while protecting the character of neighborhoods.
2. Allow options within the development regulations for phased development that permits certain site development requirements for targeted commercial, office, and industrial development to be accomplished over a reasonable period of time.
3. Assist in establishing a small business support network in the County.
4. Host and sponsor events that provide access to the State and regional agencies that help businesses.
5. Explore opportunities for the development of a business incubator in the County.
6. Encourage the development of small office space for lease.
7. Provide assistance for home-based businesses to grow into appropriately zoned commercial and industrial space.

Objective C: Promote lodging and conference related enterprises.

Strategies:

1. Develop and maintain an inventory of local opportunities.
2. Provide flexible zoning to allow hotels and conference centers in appropriate locations.
3. Work closely with the Virginia Tourism Corporation in the development of a cooperative public-private tourism marketing campaign.

Objective D: Support the development of timeshare, golf, and resort communities.

Strategies:

1. Develop and maintain an inventory of potential locations for timeshare, golf, and resort communities.
2. Provide flexible zoning to allow timeshares, golf courses, and resort communities in appropriate locations.
3. Work closely with the Virginia Tourism Corporation in the development of a cooperative public-private marketing campaign.

Objective E: Provide opportunities for retirement communities and elder-care facilities.

Strategies:

1. Provide flexible zoning to allow retirement communities and elder-care facilities in both mixed-use and residential zoning districts.
2. Provide allowable density levels sufficient to make such development financially feasible or classify such uses as commercial rather than residential.
3. Provide flexible zoning that allows for close proximity to a mixture of uses.

Objective F: Enact economic development strategies designed to attract high-tech employment opportunities.

Strategies:

1. Promote the private sector development of high quality business parks with interstate access.
2. Work with the New Kent County public schools and regional manpower training efforts to ensure a supply of available, skilled labor.
3. Facilitate community college classes and opportunities in the County.
4. Develop a specific strategy to establish broadband capabilities in the designated village and economic opportunity areas of the County.
5. Promote the development of a fiber-optic network within the County's village and economic development areas to enhance the County's competitiveness through the availability of high-speed telecommunications and broadband Internet access.

Goal 4: Enhance and encourage sustainable agriculture and equine industries

Objective A: Develop and maintain programs designed to enhance opportunities for sustainable agriculture and equine industries.

Strategies:

1. In partnership with the agricultural community, research programs and incentives that will help maintain viable agricultural businesses.
2. In partnership with agricultural industries, promote the economic value of agriculture through education and marketing endeavors.
3. In partnership with the Virginia Cooperative Extension Service, provide education, information, and resources to businesses in the agricultural field to help sustain the industry.
4. In partnership with equine interests, promote the economic, recreational, and cultural value of the equine industry and related activities.
5. Support and promote equestrian activities and special events within the County as a means of generating public interest, promoting tourism, and fueling the local economy.

Goal 5: Explore economic development incentives that involve a high positive return on public investment and promote high quality projects.

Objective A: Develop and maintain a fiscal impact model for use in analyzing proposals.

Strategies:

1. Develop a fiscal impact model for use in analyzing all proposals for new development, expansions, and improvements.
2. Utilize this model in staff analysis of all major rezonings and development proposals.

Objective B: Tie pecuniary development incentives to economic performance over a period of time commensurate with the payback period for the incentives provided.

Strategies:

1. Develop a financial analysis model for use in analyzing proposals that request public incentives.
2. Develop a listing of possible public incentives for use in attracting desired business investment.
3. Identify local funding sources for such incentives.
4. Implement additional economic development incentives that do not involve the investment of public funds, such as fast-track permitting processes for priority projects.

Objective C: Tie flexible zoning tools to specific performance standards in the areas of:

- a. Landscaping
- b. Building materials
- c. Architecture
- d. Signage
- e. Physical arrangement

Strategies:

1. Review the effectiveness of the newly adopted Economic Opportunity zoning classification within 5 years from the date of adoption. The review shall determine whether this zoning classification has been effective in attracting the desired businesses that are permitted within this classification.
2. Review the effectiveness of the newly adopted performance standards for business and industrial uses within 5 years from the date of adoption.

Objective D: Provide expedited review and approval processes for targeted economic development.

Goal 6: Encourage the development of a higher quality workforce

Objective A: Establish programs that encourage development of a high quality workforce, including retention of local students, and that provide housing opportunities that will be suitable for the County's workforce.

Strategies:

1. Identify workforce education strategies that support New Kent County businesses.
2. Evaluate and advocate for educational, vocational, and technical training opportunities to match needs of new and existing employers and employees.
3. Meet periodically with representatives of educational institutions and workforce development organizations to discuss long-range planning for improving education and training opportunities for the benefit of New Kent businesses.
4. Provide input for the design of programs to increase the availability of suitable housing that is priced appropriately for the County's workforce.
5. Evaluate and advocate for creating programs that assist New Kent employers to assist their employees with housing costs.

HOUSING

Housing policies within a community necessarily need to be inclusive and to provide safe and sanitary housing opportunities for all County citizens, regardless of income. The types of housing that are to be encouraged are based largely on community need. For example, certain types of homes generate more in local tax revenues than they demand in public services, either as a result of their tax assessment level or due to the types of services they do not require. However, such dwelling units serve only a small fraction of the market for housing in New Kent County. Unmet needs in the County include affordable starter homes for the County's young citizens and public employees, smaller, maintenance-free communities for those citizens who want to age in place, and appropriate rental options.

Goal 1: Provide decent, safe and sanitary housing opportunities for all citizens of the County.

Objective A: Increase the availability of workforce housing in the County. Workforce housing has been defined in New Kent County as "decent, safe, and sanitary housing that is affordable for purchase or rent by households whose income is at least 50% and no more than 80% of the median household income for the Richmond Metropolitan Statistical Area (RMSA)."

Strategies:

1. With the aid of the New Kent County Affordable Housing Advisory Committee, develop and adopt a workforce housing policy or ordinance that will serve the unmet housing needs of the County and the region. Such policy or ordinance may include the use of housing unit density bonus incentives in return for the provision of workforce housing units.
2. Actively explore efforts to develop workforce housing units that require no continuing governmental intervention in the development or ownership process, including the negotiation of proffers for workforce housing units in private developments.
3. Promote the development of mixed-income, mixed-density developments in which a variety of housing unit types, including multi-family units and residential units above commercial uses, are dispersed throughout the developments, are available for households of diverse income levels, and are in harmony with the scale of existing developments in the community.
4. Explore the implementation of the waiving or reducing of Land Development, Public Utilities, and Zoning and Subdivision Fees as an incentive for the provision of workforce housing.
5. Target publicly funded or publicly sponsored housing programs for the provision of housing services to County residents and persons employed in the County.

6. Continue efforts to attract funds from Federal and State sources for the development, preservation, and rehabilitation of workforce housing.
7. Explore partnerships with non-profit housing organizations in order to promote workforce housing development and services in New Kent County.

Objective B: Concentrate suburban housing in proximity to village centers and major transportation corridors.

Strategies:

1. Continue to designate specific areas for suburban or medium density housing in the land use plan and resist expanding it outside of the growth boundary.
2. Require that suburban or medium density housing be developed with public utilities or community systems.
3. Those suburban housing areas designated outside village centers should be phased such that more outlying areas are developed only after all of the inner areas are fully developed.
4. Continue to require all new housing developments in the County to be accessible from public roads and that all new roads are constructed to public road standards.
5. Require that suburban housing developments contain interconnected roadways and appropriate facilities for pedestrian and bicycle travel both within the development and between developments and the village centers.
6. Extend public water to provide fire protection for County citizens.

Objective C: Require the use of innovative approaches to rural housing development, including, but not limited to, clustering and open space techniques.

Strategies:

1. Establish a local task force on sustainable rural development.
2. Study successful, innovative rural housing techniques in other areas and adapt for New Kent.
3. Develop new zoning classifications as appropriate.
4. Implement flexible and voluntary approaches to rural development that serve to preserve rural values and character.
5. Continue to require the provision of open space and encourage recreational areas within new subdivisions.
6. Create and implement a Transfer of Development Rights program; consider providing a density bonus within such program to encourage its use.
7. Evaluate the cluster subdivision provisions in the subdivision ordinance and update, if necessary, to make the technique more useful and a primary development technique in the rural areas of the County.

Goal 2: Create livable communities by achieving high quality in design and construction of all residential development and neighborhood design.

Objective A: Require the use of a “complete streets” approach to residential development.

Strategies:

1. Ensure that all new streets in the County are built to the standards and design requirements of the VDOT Secondary Street Acceptance Requirements whether public or private.
2. Work with developers and VDOT to retrofit existing collector and arterial roadways with safe and appropriate facilities to accommodate transit, bicycles, and pedestrians.
3. Ensure that street design used in new development is context sensitive and accommodates all roadway users safely and reasonably.

Objective B: Ensure that all new residential, commercial, and mixed-use development has trails and both active and passive recreation options appropriate to the market orientation and intent of the development.

Strategies:

1. Require the provision of adequate street lighting, safe and convenient pedestrian circulation, and appropriate interconnections between residential developments.
2. Promote residential development that provides a balance of unit types and price ranges, open space preservation and recreational amenities, and supports walkability and bicycle travel both internally and to nearby destinations.

Objective C: Encourage the use of “green” building techniques.

Strategies:

1. Promote energy conservation measures and green building techniques in rehabilitation projects and new residential developments by encouraging participation from builders in green certification programs such as EarthCraft, LEED ND, LEED for Homes, or the National Association of Home Builders’ National Green Building Program.
2. Encourage consideration of solar access (both active and passive) in the design of residential communities.

Objective D: Encourage the use of “universal design” or “visitability” in new residential development to enhance ability of citizens to age in place.

Strategies:

1. Provide an annual workshop on “universal design” for builders and developers.
2. Establish performance measures as a part of new residential zoning districts. These measures should include such “basic visitability features” as:

- a. One no-step entry; it can be at the front, side, or rear or accessible through a garage.
- b. Thresholds of $\frac{1}{4}$ to $\frac{1}{2}$ inch.
- c. Doorways with openings at least 32 inches wide.
- d. Hallways at least 36 inches wide.
- e. Access to at least a half-bath on the main floor.
- f. Reinforced walls near toilets, for future installation of grab bars.
- g. Light switches and electrical outlets installed between 15 to 48 inches from the floor.

LAND USE

A delicate balance should exist in optimizing the use of scarce land resources within a community. This balance lies between the maximization of the economic potential of the land and minimization of negative environmental and social impacts. Great care must be taken to ensure that new land development does not exceed the carrying capacity of the land. Carrying capacity involves such factors as water and wastewater treatment, the impact of storm water runoff on the County's waterways, air and noise pollution, and traffic impacts. In order to maximize the economic potential of the County, opportunities must be provided for commerce in areas with adequate utility and transportation infrastructure. In addition, zoning and land use controls must be flexible enough to respond to the changing needs of the marketplace while encouraging standards of development that are commensurate with citizens' expectations of quality and cleanliness.

Goal 1: Concentrate housing, commerce, recreation, and public facilities in a mixed-use environment within village centers.

Objective A: Encourage a mixture of uses within villages in a pedestrian – oriented and pedestrian friendly manner.

Strategies:

1. Develop, with extensive outreach to the citizenry, small area plans for each of the County's designated villages that focus on design, arrangement, and infrastructure while maximizing flexibility of uses.
2. Develop a mixed use zoning classification which incorporates flexible land use guidelines, allowing residential densities of 4 dwelling units per acre or greater and commercial floor area ratios of 0.4 per acre or greater in villages, with specific performance standards in the areas of:
 - Access management
 - Shared parking
 - Landscaping
 - Architecture
 - Pedestrian and bicycle access
 - Low impact storm water management
3. Ensure that village centers promote pedestrian activity through such tools as:
 - a. Making automobile related uses secondary to pedestrian activity
 - b. Creating on-street parking
 - c. Placing structures such that parking areas are located to the rear of structures
 - d. Providing that the area between buildings and the street be used for outdoor dining and other, similar pedestrian and public oriented uses
4. Consider the use of form-based codes within designated villages.

5. Within all or along access ways of significance, allow any combination of residential, office, and retail structures and use within the same structure, provided the structure meets design and building code requirements.
6. Adopt regulations requiring that sidewalks be kept clear of obstructions and be cleared of obstructions within a reasonable but relatively short period of time.

Objective B: Arrange land use designations such that villages have distinct and discernable boundaries and engender a sense of place.

Strategies:

1. Utilize the existing transportation network and landforms as the basis for developing village boundaries.
2. Promote infill development, including higher density development, within villages as opposed to the expansion of existing village boundaries.
3. Resist leapfrog development and discourage strips from evolving incrementally over time.
4. Encourage the reuse of existing structures.

Goal 2: Continue to designate and market approximately 9-12,000 acres of land for future business and industrial development to lessen the fiscal burden on residents and residential property.

Objective A: Establish the Route 33 corridor as the primary focus for industrial use in the County.

Strategies:

1. Encourage clean industry and ancillary uses along the Route 33 Corridor.
2. Use the Economic Opportunity zoning district as a buffer between industrial, village, and residential areas.
3. Develop automobile and truck access management policies for the Route 33 corridor that are conducive with attracting quality industrial development.

Objective B: Protect designated business and industrial lands from encroachment by residential development.

Strategies:

1. Ensure that designated business, economic opportunity, and industrial lands are zoned either for their ultimate use or in holding zones that prevent by-right residential development.
2. Resist rezoning properties adjacent to business and industrial lands to uses that will hinder future development of economically beneficial uses.

Goal 3: Periodically review the Business, Economic Opportunity, and Industrial zoning districts to meet the changing needs of the economic development marketplace.

Objective A: Ensure that economic development-oriented zoning districts are as flexible as possible and consistent with the need to protect adjacent existing residential communities.

Strategies:

1. Consider expanded buffers adjacent to residentially zoned property.
2. Use transitional buffers and periodically review transitional buffer requirements.
3. Restrict noise generation and light propagation to the extent possible.

Objective B: Use development performance standards to ensure that the uses developed are a positive addition to the community.

Strategies:

1. Require landscaping for both structures and parking lots.
2. Regulate the use of exterior building materials that are in public view.
3. Implement access management and shared parking standards.
4. Ensure coordination of signage.
5. Develop a guide signage program.

Goal 4: Create standards for the Hamlet and Rural Crossroads land use classifications to assist in meeting the needs of the rural economic development marketplace.

Objective A: Provide for a limited range of uses within these classifications to encourage patronage from the nearby, local populations, while not taking away from the rural nature of the area.

Strategies:

1. Allow small scale office, retail centers, and “general stores”.
2. Allow automobile dependent uses such as gas and service stations.
3. Keep all uses at a scale that does not detract from the rural character of the area.

Goal 5: Adopt new development policies, regulations, and ordinances to implement the recommendations contained in this Comprehensive Plan.

Objective A: Periodically review the County’s Subdivision Ordinance.

Strategies:

1. Streamline the subdivision process consistent with the State Code while ensuring that inappropriate divisions are avoided.
2. Strengthen the Cluster Subdivision provisions to provide enhanced flexibility and consider allowing bonus density for greater open space reservation.
3. Continue to require that new subdivisions be served by public roads or private roads built to public road standards.
4. Focus on density rather than lot sizes.

5. Continue to require that all newly created lots avoid negative environmental impacts.
6. Continue to require that all parcels created or adjusted are buildable unless a permanent conservation easement is established over the parcel.

Objective B: Continue to revise and adopt sections of the County's Zoning Ordinance.

Strategies:

1. Improve the user-friendliness and accessibility of the Zoning Ordinance.
2. Use a performance-based approach to avoid the need for extensive legislative permits to the extent possible.
3. Require impact analyses, including fiscal, environmental, historic, and transportation analyses for large developments, even those permitted as a matter of right.
4. Focus on impacts rather than uses to enhance flexibility.
5. Encourage the use of Planned Use Developments (PUDs) while ensuring that the preponderance of uses within approved PUDs are in accordance with the underlying comprehensive plan designation.
6. Avoid making the PUD process overly difficult, time consuming, or onerous.
7. Consider adopting a form-based code approach, especially in villages, hamlets, rural crossroads, and economic opportunity areas.

Objective C: Continue to review and implement a robust capital improvement program to plan for all future capital investments in public infrastructure, services delivery, and facilities.

Strategies:

1. Create a consolidated and coordinated multi-year Capital Improvement Plan (CIP) development process separate from the annual budget to prioritize needs and recommend capital investments.
2. Use the CIP as a planning tool to guide future development.
3. Encourage or require new development to contribute to the capital needs of the County.
4. Direct new development to locations within the county that have adequate public facilities, thus reducing the County's capital expenditures.

Objective D: Encourage and practice the principles of "Smart Growth" when making land use decisions. These principals are:

- a. Mix land uses
- b. Take advantage of compact building design
- c. Create a range of housing opportunities and strategies

- d. Create walkable neighborhoods
- e. Foster distinctive, attractive communities with a strong sense of place
- f. Preserve open space, farmland, natural beauty, and critical environmental areas
- g. Strengthen and direct development towards existing communities
- h. Provide a variety of transportation choices
- i. Make development decisions predictable, fair, and cost effective
- j. Encourage community and stakeholder collaboration in development decisions

LAND USE DEFINITIONS

Based on the sum of goals, objectives, and implementation strategies in this Plan, the following land use classifications have been used to develop the Future Land Use Map:

Conservation – Land not intended for development, which is set aside for open space, environmental protection, and wildlife habitat. Conservation areas include tidal wetlands, streams and other surface waters, steep slopes, and Chesapeake Bay Resource Protection Areas (RPA's). The Conservation designation also includes existing park facilities and facilities such as the Virginia Department of Forestry's tree farm near Providence Forge. This designation is not necessarily intended to preclude all use of these areas, but instead to explicitly ensure that any use that may be undertaken occurs only with a very deliberate recognition of the environmental qualities and constraints present.

Agriculture and Forestry - Land whose primary use is the production of food and grain crops, livestock, and timber. It is anticipated that lands designated for Agriculture and Forestry will be protected from development into other land uses through protective zoning. For example, the construction of new homes or commercial structures would only be allowed when they are part of and incidental to the operation of farming or timber operations, or when they are done as part of cluster (or open space) subdivisions. In this situation, densities would be expected to approximate those permitted in Rural Lands.

Rural Lands – The designation of Rural Lands is the most extensive designation on the Land Use map, representing the majority of land contained within the County. Rural Lands incorporate traditional rural development patterns including agriculture and silviculture. Rural Lands contain historic sites, including historic commercial sites such as general stores, mills, etc. and the preservation and perpetuation of these sites and activities is allowed and encouraged. Rural Lands are also intended to include very low density housing in cluster or open space developments or on very large lots. The intensity of development in Rural Lands as a whole is to be kept at low levels; however, the spot intensity of a particular development in a specific location may be greater than in other areas because of density trades or the use of open space development techniques. Rural Lands are not intended to be served by public utilities and the existence of utilities along a corridor is not to be viewed as sufficient reason for increasing the intensity of use.

Suburban Housing – Single-family, detached dwellings with approximate densities ranging from two units per acre to one unit per two acres, within planned subdivisions that utilize public water or a community water system, and public sewer. Areas designated for Suburban Housing are concentrated in proximity to existing County villages. This is intended to ensure the efficient delivery of public services and to provide the critical mass of

people and purchasing power necessary to ensure the success of the County's villages to be viable centers of commerce, recreation, and other social activity.

Village – Villages are intended to involve a mixture of land uses on a smaller, pedestrian scale. The creation of viable villages requires the availability of public water and sewer to allow for the compact nature of development necessary to ensure that the entire village can easily be traversed by foot. The scale, design, and attention to detail of structures within village areas are critical to carrying out the vision of the Plan. The speed of automobile traffic within villages will be controlled with the use of such tools as roundabouts, raised medians, and the recapture of travel lanes into parking aisles.

Allowable land uses would include the following:

- Single-family detached and attached dwellings on smaller lots to provide opportunities for a more affordable housing option
- Apartments and condominiums, both free-standing and in upper floor space above street level commercial uses
- Retail stores of a modest scale (i.e., big box retailers are not considered an appropriate use in villages)
- Services
- Professional and general offices, both free standing and in multi-tenant structures
- Institutional uses such as churches, schools, and libraries

Villages are intended to be subject to fairly stringent design standards including the following types of requirements:

- Structures to be located close to the street with all parking located either on-street or behind structures in shared parking lots
- Sidewalks and sitting areas to be located between streets and buildings
- Controlled access to public streets
- Architectural, building material, and landscaping controls
- Provision of public plazas, parks, and other gathering places

Hamlet – Hamlets are a smaller version of a village. Like a village, they are characterized by a mix of structures and uses, including residential and commercial. They are compact in size. They are not intended to be served by public utilities through the year 2040.

Rural Crossroads - Rural Crossroads are characterized by a tight cluster of small commercial establishments such as general stores, banks, restaurants, gas stations, convenience stores, etc. They typically occur at intersections and serve a local population.

Commercial – This designation is intended for areas proximate to transportation systems that are sufficient to accommodate more intensive commercial uses. Allowable uses would include:

- Retailers, both large and small
- Offices
- Hotels and motels
- Sit-down restaurants
- Fast food restaurants
- Institutional
- Gas stations and convenience stores
- Commercial recreation facilities

Design criteria within Commercial areas would be less stringent than those proposed for the designated Village areas. Emphasis would be placed on:

- Vehicular access management
- Landscaping along public rights-of-way
- Screening and landscaping of parking lots
- Control over lighting and noise

Economic Opportunity – Economic Opportunity refers to mixed use centers of commerce, including retail, office, lodging, research and development, distribution, recreational and resort-type uses, and possibly also including age-restricted housing where it would complement the other uses and not conflict with them. Economic Opportunity areas are primarily envisioned along the Interstate 64 interchanges and as buffer areas between the heavier industrial uses along Route 33 and the Village of Eltham.

Industrial – This designation is intended to include concentrations of manufacturing, warehousing and distribution, research and development, and related offices. These areas would need to be served by public utilities and located in close proximity to major transportation corridors. These areas should include provision for access management, primarily for heavy truck traffic, and be adequately screened from existing and proposed residential areas.

Environmental Buffer – This designation corresponds loosely with the area encompassed by the Chesapeake Bay Preservation Area Resource Protection Area buffer and is intended as a clear policy statement that development within such buffer areas is to be precluded and that any uses will be substantially limited and tightly controlled.

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