

October 2019

Anne Arundel County Land Use Market Analysis

Anne Arundel County, Maryland



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Prepared For:



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Table of Contents

Chapter 1 INTRODUCTION	
A. Study Overview.....	1-1
B. Study Contents	1-1
Chapter 2 DEMOGRAPHIC TRENDS	
A. Introduction	2-1
B. Regional Demographic Trends and Existing Conditions	2-1
C. Anne Arundel County Submarket Conditions & Trends (2010-2018).....	2-12
Chapter 3 HOUSING SUBMARKET CHARACTERISTICS AND AFFORDABILITY ANALYSIS	
A. Introduction	3-1
B. Methodology	3-1
C. Anne Arundel County Housing Characteristics	3-3
D. Housing Affordability Analysis	3-9
E. Housing Supply Analysis.....	3-11
F. Housing Income Analysis	3-13
G. Housing Projections (2018-2035).....	3-13
H. Future Housing Implications	3-20
Chapter 4 DEVELOPMENT TRENDS ANALYSIS	
A. Introduction	4-1
B. Methodology and Data Sources	4-2
C. County-wide Development Activity	4-2
D. Anne Arundel County Submarket Development Activity (1980-2017)	4-10
E. Implications	4-18
F. Appendix Tables	4-20
G. Appendix Maps.....	4-32
Chapter 5 REDEVELOPMENT POTENTIAL ANALYSIS	
A. Introduction	5-1
B. County-wide Assessed Value Ratio Analysis	5-1
C. Top Redevelopment Opportunity Areas	5-4
D. Implications	5-11
Chapter 6 REAL ESTATE MARKET ANALYSIS	
A. Introduction	6-1
B. Multi-family Market Overview	6-2
C. Retail Market Overview	6-7

D. Office Market Overview	6-9
E. Industrial/Flex Market Overview	6-11
F. Real Estate Broker/Developer Interviews	6-13
G. Implications	6-16
Chapter 7 LAND USE AND LAND CAPACITY ANALYSIS	
A. Introduction	7-1
B. Methodology and Data Sources	7-1
C. Submarket Area Land Use Patterns	7-2
D. Developable Land Capacity	7-5
E. Implications	7-7
F. Appendix Maps	7-8
Chapter 8 LAND DEMAND PROJECTIONS	
A. Introduction	8-1
B. Population, Household and Employment Projections	8-1
C. Land Demand Projections	8-5
D. Implications	8-8
Chapter 9 POLICY RECOMMENDATIONS	
A. Introduction	9-1
B. Housing Conditions, Development and Affordability.....	9-1
C. Urban Redevelopment	9-2
D. Land Use Regulations and Development Review	9-3

1 INTRODUCTION

A. STUDY OVERVIEW

In conjunction with Anne Arundel County’s update of its General Development Plan which began in 2017, the Office of Planning & Zoning retained the services of RKG Associates, Inc., to develop a land use market analysis of the entire County. The purpose of the market analysis was to evaluate the supply and demand of land for various uses (employment, retail, residential), assess future growth potential of each market, and identify strategies to address any challenges or imbalances in the market in order to assist the County in future land use and economic development planning. In addition, the study’s results were intended to inform the County’s long-range planning goals and land development policies contained in the 2019 Anne Arundel County General Development Plan.

In order to complete this study, the consultants analyzed the past and future supply and demand for major land use segments in Anne Arundel County. This market-based growth analysis provides technical support to guidance on future land use policy initiatives. The General Development Plan (GDP), which is a comprehensive land development plan and policy document, must be prepared in compliance with Maryland State planning requirements. The GDP policy recommendations will guide land use decisions over the next 20-year planning horizon, and the land use market analysis will provide a market-based framework for those decisions.

B. STUDY CONTENTS

RKG Associates and its consulting partner, Kimley Horn, undertook a comprehensive approach to examining the market and regulatory factors driving Anne Arundel County’s growth patterns. The analysis focused on ten submarket areas comprising the County, except for the City of Annapolis, which has adopted its own land use and development policies. The consultants prepared a series of integrated analyses to examine development trends going back to 1980 and using these trends as a baseline for making future growth projections relative to new population conditions, household formations, and employment. The main contents of the Land Use Market Analysis include:

Chapter 1 INTRODUCTION

Chapter 2 DEMOGRAPHIC TRENDS

The demographic analysis examines regional demographic trends from 1970 to the present and places Anne Arundel County in the context of the Greater Baltimore-Washington Metropolitan Area. It also includes a similar analysis of the ten submarket areas that comprise Anne Arundel County and presents comparative trend data for each.

Chapter 3 HOUSING SUBMARKET ANALYSIS

The housing analysis includes a comparative analysis of the County’s existing housing stock in each of the ten submarkets. This section also includes a housing affordability analysis that highlights housing gaps at various price points and household income levels.

- Chapter 4 DEVELOPMENT TRENDS ANALYSIS**
RKG Associates documented real estate development trends by decade, beginning in 1980 and ending in 2017 (1st QTR). The analysis establishes metrics for measuring new development activity by various residential and non-residential building types and creates a baseline from which to project future growth.
- Chapter 5 REDEVELOPMENT POTENTIAL ANALYSIS**
The redevelopment analysis combined field observations with a building assessment value ratio analysis. This analysis created an index value for all residential and non-residential structures in the County and calculated a ratio between the per square foot values of each building and the median value of all other “like” properties. This resulted in the mapping of County building values falling above and below the median building values. This was used to highlight the location of potential redevelopment properties, which were field verified by RKG Associates.
- Chapter 6 REAL ESTATE MARKET ANALYSIS**
The real estate market analysis section provides an overview of 5-year trends in the County’s multi-family apartment, retail, office and industrial/flex market segments to provide a context for future land demand projections.
- Chapter 7 LAND USE AND LAND CAPACITY ANALYSIS**
Chapter 7 is an analysis of land capacity in each of the County’s submarket areas based on existing major land use categories. Land capacity was measured as the number of developable land acres currently undeveloped and free of natural constraints (e.g., steep slopes, wetland areas, stream buffers, etc.). The land capacity was then compared to future land demand (in acres) as presented in Chapter 8 – Land Demand Projections.
- Chapter 8 LAND DEMAND PROJECTIONS**
The land demand projections were derived from a methodology based on future population, household and employment growth for Anne Arundel County between 2018 and 2035. The growth projections were converted into the demand for new residential and non-residential building space and the land acres required to support that development. The resulting land demand projections were then compared against submarket-level land capacity to judge land supply and demand balances over the next 17 years.
- Chapter 9 POLICY RECOMMENDATIONS**

2 DEMOGRAPHIC TRENDS

A. INTRODUCTION

Anne Arundel County is located in Central Maryland, which lies within the Greater Baltimore-Washington Metropolitan Statistical Area (MSA) and benefits from its proximity to both metropolitan areas, as well as its location along the Mid-Atlantic I-95 corridor. It is home to the historic City of Annapolis that has served as the State Capital since 1694. The County contains suburban neighborhoods, small waterfront communities, large economic hubs, and areas of agricultural and scenic rural and forested lands. Additionally, the County is home to major institutions including the U.S. Naval Academy, Maryland State Government, Fort Meade Military Installation and the National Security Agency (NSA) as well as the Baltimore Washington International Airport (BWI), one of the busiest hub airports in the eastern United States.¹

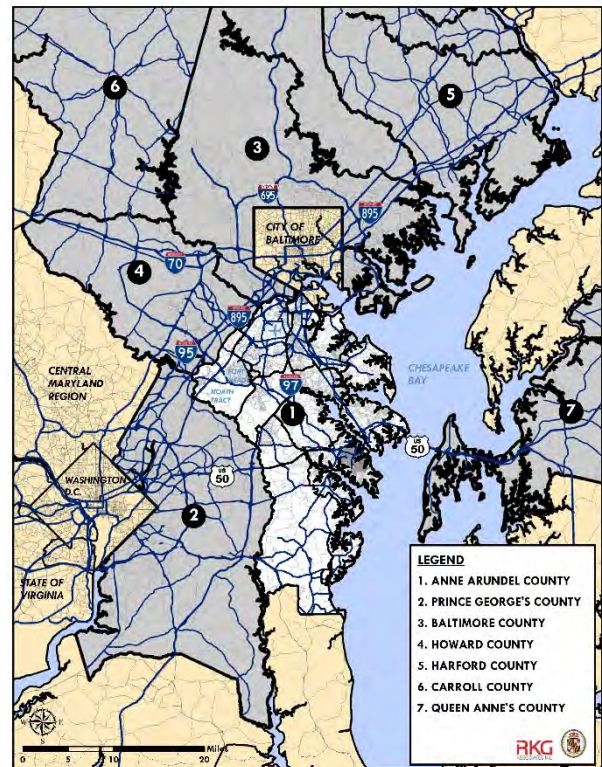
The purpose of the land use market analysis is to analyze the past and future supply and demand for major land use segments in Anne Arundel County. This market-based growth analysis will provide technical support to the County's efforts to update the General Development Plan (GDP), which is a comprehensive land development plan and policy document prepared in compliance with Maryland State planning requirements. The GDP policy recommendations will guide land use decisions over the next 20-year planning horizon, and the land use market analysis will provide a market-based framework for those decisions.

B. REGIONAL DEMOGRAPHIC TRENDS & EXISTING CONDITIONS

1. Methodology and Data Sources

This section is to quantify the County's population growth rate in comparison to other central Maryland Counties that Anne Arundel County competes against for new residents and jobs. RKG analyzed 40-year population trends from 1970-2010 for the following counties that comprise the competitive region for Anne Arundel County. Those surrounding counties include: (1) Prince George's County, (2) Baltimore County, (3) Howard County, (4) Harford County, (5) Carroll County, (6) Queen Anne's County (Map 2-1). To complete the population trend analysis, the consultant used data obtained from Woods & Poole Economics, Inc., a national data

Map 2-1 Anne Arundel County Competitive Region



¹ Anne Arundel County General Development Plan (2009) - <https://www.aacounty.org/departments/planning-and-zoning/forms-and-publications/GDP2009.pdf>

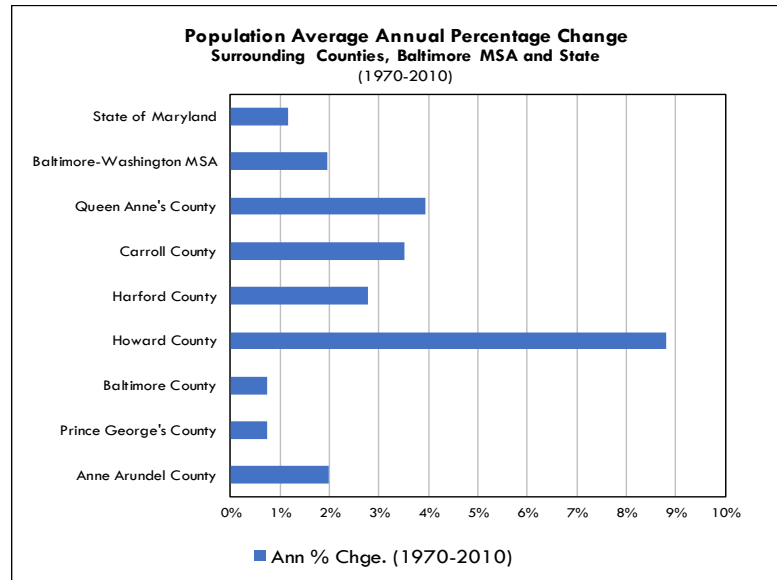
analytics firm. It should be noted that the term “market share” in this report refers to Anne Arundel County’s percentage share in the MSA region under each demographic characteristic. For example, “market share” in this chapter refers to Anne Arundel County’s percentage share in the Baltimore-Washington MSA in terms of population.

2. Regional Population Growth Trends (1970-2010)

- Location Contributes to Strong Population Growth within the Baltimore-Washington MSA

Located along the Interstate 95 corridor between Baltimore City and the suburbs of Washington DC, the Central Maryland region is comprised of the most populated counties in the State. The Baltimore-Washington MSA experienced a 2% annual population growth between 1970 and 2010, which exceeded the State’s growth rate (1.2%) during the same period. Anne Arundel County kept pace with the MSA during this 40-year period (Table 2-1/Figure 2-1).

Figure 2-1



Source: Woods & Poole Economics and RKG Associates, Inc., 2018

- Anne Arundel County Enjoys Competitive Economic Advantages that Attract Growth
 Historically, Anne Arundel County has been the location for several of the State’s largest economic engines, which drive demand for an educated and skilled workforce. The County is home to Maryland State Government, Anne Arundel County Government and the Naval Academy within proximity to the City of Annapolis – one of the State’s most popular tourist destinations. Maryland’s largest employment cluster is located at the Fort Meade Military Installation where more than 54,000 workers are employed in various government and private sector jobs related to the National Security Agency (NSA) and the nation’s Cyber Security Headquarters. Finally, BWI Airport and Arundel Mills, the state’s largest shopping mall with over 2 million SF of retail shops, entertainment, restaurants, and the Maryland Live! Casino spin off millions in economic activity.
- Anne Arundel County Experiences Slowing Growth Rates
 Anne Arundel County has kept pace with the Baltimore-Washington MSA in terms of average annual population growth since 1970 (2%/yr.). However, since 1980, the County has consistently lagged behind the MSA’s average annual growth rate (Table 2-1).
- Anne Arundel County has Maintained its Share of Regional Population and Growth
 Despite its slowing population growth, Anne Arundel County has remained at roughly 10% of the Baltimore-Washington MSA’s population over the past 40 years. Since the 1980s, the County has lost some market share to other smaller and faster-growing counties such as Howard, Harford and Carroll Counties. However, Anne Arundel County has continued to grow, while larger counties like

Table 2-1
Population Trends
Surrounding Counties, Within Baltimore-Washington MSA and State (1970 - 2010)

Jurisdiction	Decades					Num Chge. (1970-2010)	Ann % Chge. (1970- 2010)
	1970	1980	1990	2000	2010		
Anne Arundel County	300,215	372,453	428,877	491,670	539,310	239,095	2.0%
Prince George's County	666,873	665,642	725,896	803,111	865,821	198,948	0.7%
Baltimore County	623,284	656,010	694,782	755,598	806,241	182,957	0.7%
Howard County	63,731	119,849	189,367	249,590	288,674	224,943	8.8%
Harford County	116,379	146,440	183,717	219,797	245,240	128,861	2.8%
Carroll County	69,457	96,912	124,086	151,454	167,210	97,753	3.5%
Queen Anne's County	18,532	25,687	34,082	40,763	47,835	29,303	4.0%
Baltimore-Washington MSA	3,177,944	3,440,945	4,173,328	4,863,388	5,666,655	2,488,711	2.0%
State of Maryland	3,943,164	4,226,189	4,799,770	5,311,034	5,788,584	1,845,420	1.2%

Population Change by Decade
Surrounding Counties, Within Baltimore-Washington MSA and State (1970 - 2010)

Jurisdiction	% Change '70-'80		% Change '80-'90		% Change '90-'00		% Change '00-'10	
	Actual Change	Avg. Ann % Chge.	Actual Change	Avg. Ann % Chge.	Actual Change	Avg. Ann % Chge.	Actual Change	Avg. Ann % Chge.
Anne Arundel County	72,238	2.4%	56,424	1.5%	62,793	1.5%	47,640	1.0%
Prince George's County	(1,231)	0.0%	60,254	0.9%	77,215	1.1%	62,710	0.8%
Baltimore County	32,726	0.5%	38,772	0.6%	60,816	0.9%	50,643	0.7%
Howard County	56,118	8.8%	69,518	5.8%	60,223	3.2%	39,084	1.6%
Harford County	30,061	2.6%	37,277	2.5%	36,080	2.0%	25,443	1.2%
Carroll County	27,455	4.0%	27,174	2.8%	27,368	2.2%	15,756	1.0%
Queen Anne's County	7,155	3.9%	8,395	3.3%	6,681	2.0%	7,072	1.7%
Baltimore-Washington MSA	263,001	0.8%	732,383	2.1%	690,060	1.7%	803,267	1.7%
State of Maryland	283,025	0.7%	573,581	1.4%	511,264	1.1%	477,550	0.9%

Source: Woods & Poole Economics, Inc., 2018

Prince George's and Baltimore Counties have lost a significant percentage of the MSA population (Table 2-2).

- **Anne Arundel County's Share of Regional Growth is Highest Among Surrounding Counties**
 Since the 1970s, Anne Arundel County (239,095 added population) has captured 9.6% of the Baltimore-Washington MSA's total population growth of 2,488,711. This is the largest share among the seven adjacent counties (Table 2-2).

Table 2-2
Population and Growth Share
Surrounding Counties as a Percent of Baltimore-Washington MSA (1970-2010)

Jurisdiction	1970	1980	1990	2000	2010	Growth Share (1970-2010)
Anne Arundel County	9.4%	10.8%	10.3%	10.1%	9.5%	9.6%
Prince George's County	21.0%	19.3%	17.4%	16.5%	15.3%	8.0%
Baltimore County	19.6%	19.1%	16.6%	15.5%	14.2%	7.4%
Howard County	2.0%	3.5%	4.5%	5.1%	5.1%	9.0%
Harford County	3.7%	4.3%	4.4%	4.5%	4.3%	5.2%
Carroll County	2.2%	2.8%	3.0%	3.1%	3.0%	3.9%
Queen Anne's County	0.6%	0.7%	0.8%	0.8%	0.8%	1.2%
Other Jurisdictions in Baltimore-Washington (MSA)	41.5%	39.5%	43.0%	44.2%	47.8%	--

Source: Woods & Poole Economics, Inc., 2010

3. Age Distribution of Population Trends (1970-2010)

RKG Associates analyzed the change in population by different age cohorts between 1970 to 2010. This data was then arranged into an age cohort grouping that roughly approximated the age ranges for each generation. The results of the analysis show a shifting of the population and the emergence of new generations. RKG’s analysis examined these changes for each of the seven surrounding communities and compared them to the Baltimore-Washington MSA and the State of Maryland.

- **Baby Boomers Still the Dominant Generation**

According to RKG’s analysis, the Baby Boomer generation is still prominent in Anne Arundel County, comprising over 28% of the total population in 2010. This generational group is slightly more represented in Anne Arundel County (102.5%), meaning Anne Arundel’s Baby Boomer population is proportionally 1.025 times the share at the State level. This is important because this generation has reached its peak earning years and many boomers are entering retirement age (Table 2-3). The City of Annapolis has become an attractive tourist and retirement location for Baby Boomers seeking a high quality, high amenity lifestyle.

- **Boomers Being Replaced by Gen X, Millennials and Gen Z**

As a percentage of the total population, the Baby Boomer generation has dropped from 40.6% in 1970 to 28.4% in 2010. They have been replaced in large measure by Generation X, the Millennial generation and Generation Z, or those people born between 1995 and 2012. Generation X (101.9%) is one of three generational groups that represent a greater share of the local population than they do at the state level.

- **Millennials Under-represented in Anne Arundel County**

The Millennial Generation is projected to become the largest generation in U.S. history. Millennials are expected to overtake Boomers in population in 2019 as their numbers swell to 73 million and Boomers decline to 72 million. Generation X is not projected to pass the

**Table 2-3
 Age Distribution of Population
 Anne Arundel County, MD (1970 - 2010)**

Age Cohort	ANNE ARUNDEL COUNTY				
	1970	1980	1990	2000	2010
Under 5 Years	26,345	25,233	32,679	33,125	34,715
5 to 9 Years	32,138	26,935	30,067	34,912	34,348
10 to 14 Years	33,071	32,000	27,174	35,925	34,863
15 to 19 Years	28,268	36,531	29,297	31,926	34,649
20 to 24 Years	28,413	36,743	33,579	28,134	35,613
25 to 29 Years	23,234	32,992	39,756	32,106	37,210
30 to 34 Years	19,964	34,204	40,327	39,948	35,093
35 to 44 Years	38,094	50,847	72,241	88,419	75,468
45 to 54 Years	33,788	39,812	50,605	72,314	86,349
55 to 64 Years	20,845	31,752	35,016	45,770	66,881
65 Years +	16,055	25,404	38,136	49,091	64,121
Total Population	300,215	372,453	428,877	491,670	539,310
Median Age	25.4	29.4	32.7	36.1	38.3

Source: Woods & Poole Economics, Inc. and RKG Associates, Inc., 2018

**Share of Population by Generational Age Cohorts
 Anne Arundel County, MD (1970-2010)**

Yr. Range	Generation	ANNE ARUNDEL COUNTY				
		1970	1980	1990	2000	2010
1995-2012	Generation Z	0.0%	0.0%	0.0%	6.7%	19.3%
1980-1994	Millennial Generation	0.0%	0.0%	14.6%	20.9%	19.9%
1965-1979	Generation X	8.8%	22.6%	21.0%	20.4%	20.5%
1946-1964	Baby Boomers	40.6%	37.7%	35.5%	32.7%	28.4%
1925-1945	Silent Generation	27.1%	24.3%	20.0%	19.3%	11.9%
1910-1924	The Greatest Generation	18.2%	15.3%	8.9%	0.0%	0.0%
1901-1913	Interbellum Generation	5.3%	0.0%	0.0%	0.0%	0.0%
Totals		100.0%	100.0%	100.0%	100.0%	100.0%

Local Share as a Percent of Maryland Share

Anne Arundel County, MD (1970-2010)						
1995-2012	Generation Z	0.0%	0.0%	0.0%	101.3%	100.4%
1980-1994	Millennial Generation	0.0%	0.0%	99.8%	97.3%	96.4%
1965-1979	Generation X	100.6%	103.7%	102.7%	101.7%	101.9%
1946-1964	Baby Boomers	106.3%	104.3%	101.5%	103.4%	102.5%
1925-1945	Silent Generation	106.6%	105.5%	104.4%	95.3%	96.7%
1910-1924	The Greatest Generation	90.7%	80.9%	82.4%	0.0%	0.0%
1901-1913	Interbellum Generation	70.0%	0.0%	0.0%	0.0%	0.0%

Source: Woods & Poole Economics, Inc. and RKG Associates, Inc., 2018

Boomers in population until 2028.

The analysis shows that Millennials made up roughly 19.9% of the County's population in 2010, but their share of the total population was 96.4% of the State's population share (20.7%). Only Baltimore County (100.9%) and Prince George's County (113.2%) had Millennial population shares greater than the State. Millennials in 2010 were not fully independent adults with 65.4% being between the ages of 15 and 24 years old. As they age and become more independent, their numbers will shift to different communities that they deem attractive for lifestyle reasons. Historically, those have been more urban areas such as major cities and first-ring suburbs such as Baltimore County and Prince George's County.

4. Household Formation Trends (1970-2010)

The following section examines changes in the number of Anne Arundel County households over time. This is often referred to as the household formation rate or the rate at which the number of households changes over time in a given jurisdiction.

- **Regional Household Formations Exceeding Population Growth Rates**
 Between 1970 and 2010, the rate of new household formations in Anne Arundel County and surrounding counties outpaced population growth rates. While this was similar to national trends, it is primarily due to a steady decline in the average size of new households (Table 2-4).

Table 2-4

Demographic Characteristics - Total Households

Counties Within the Baltimore-Washington MSA and State (1970 - 2010)

Jurisdiction	Decade					Actual Change	Avg. Ann. % Chge (1970-2010)
	1970	1980	1990	2000	2010		
Anne Arundel County	82,136	121,724	149,721	179,422	199,980	117,844	3.6%
Prince George's County	195,448	226,082	259,145	287,104	304,698	109,250	1.4%
Baltimore County	186,120	238,736	269,587	300,638	317,106	130,986	1.8%
Howard County	17,434	40,219	68,604	90,659	105,263	87,829	12.6%
Harford County	32,416	46,815	63,426	80,054	90,359	57,943	4.5%
Carroll County	19,817	30,807	42,387	52,746	59,831	40,014	5.0%
Queen Anne's County	5,861	8,901	12,533	15,399	18,045	12,184	5.2%
Balt.-Wash (MSA)	994,053	1,239,254	1,547,361	1,824,325	2,104,318	1,110,265	2.8%
State of Maryland	1,184,957	1,469,266	1,756,637	1,986,485	2,160,996	976,039	2.1%

Source: Woods & Poole Economics, Inc., 2018

Average Household Size

Counties Within the Baltimore-Washington MSA and State (1970 - 2010)

Jurisdiction	1970	1980	1990	2000	2010	Actual Change
Anne Arundel County	3.40	2.95	2.76	2.65	2.63	-0.77
Prince George's County	3.31	2.88	2.74	2.74	2.78	-0.53
Baltimore County	3.26	2.69	2.53	2.45	2.48	-0.78
Howard County	3.57	2.95	2.73	2.71	2.72	-0.85
Harford County	3.41	3.05	2.85	2.73	2.68	-0.73
Carroll County	3.20	3.02	2.86	2.80	2.74	-0.46
Queen Anne's County	3.10	2.85	2.69	2.61	2.63	-0.47
Balt.-Wash (MSA)	3.09	2.71	2.63	2.61	2.64	-0.45
State of Maryland	3.22	2.81	2.67	2.61	2.61	-0.61

Source: Woods & Poole Economics, Inc., 2018

- Anne Arundel County’s Household Growth has Outpaced the MSA and State Growth Rate Since 1970

Anne Arundel County added new households at an average annual rate of 3.6%, while its population has grown at a rate of 2.0% between 1970 and 2010. The County’s household formation rate during that time frame has outpaced the MSA (2.8%/yr.) and the State of Maryland (2.1%/yr.). Howard County’s average annual household growth has far exceeded the State and regional rate at 12.6% per year.

- Average Household Size in Anne Arundel County Continued to Decline While Other Counties Have Started to Reverse Course

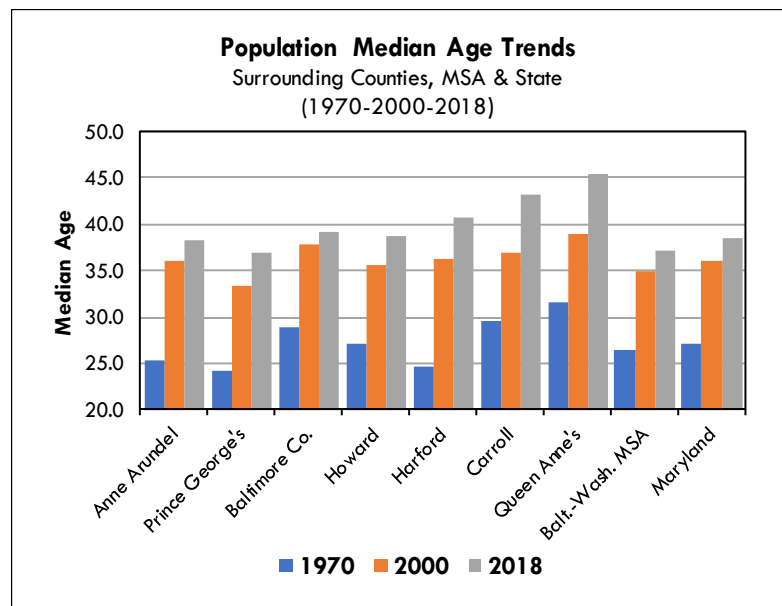
Since the 1980s, Anne Arundel County has continued to experience a decline in household size while the surrounding counties such as Prince George’s, Howard, Queen Anne’s, Baltimore and the Baltimore-Washington MSA have started to experience a slight increase in household size. This could reflect the emergence of the Millennial Generation during the mid-1990s, and the greater share of their population within some of the surrounding counties within the Baltimore-Washington MSA and the State.

5. Population Median Age Trends (1970-2000-2018)

- Regional Population is Aging Rapidly

Anne Arundel County has experienced a 51% increase in its median age from 25.4 years in 1970 to 38.3 years in 2018 (est.). This trend mirrors national population changes as the population ages and longevity has increased over time (Figure 2-2).

Figure 2-2



Source: Woods & Poole Economics, Inc. and RKG Associates, Inc., 2018

- Anne Arundel’s Population Among the Region’s Youngest

Only Anne Arundel (38.3 years) and Prince George’s (37.0 years) counties have median ages that are lower than the State of Maryland (38.6 years) in 2018. Given Anne Arundel

County’s ability to attract retirees, RKG believes that young households with children are being drawn to the area’s growing employment base and relatively more affordable housing as compared to other competitive communities. Baltimore, Howard, Harford, Carroll and Queen Anne’s Counties all have older populations. Older population characteristics throughout the region can be explained in part by a growing number of retirees; an outmigration of younger workers seeking employment and the predominance of higher-priced housing that limits entry to younger, less established households.

6. Racial/Ethnic Distribution of Population (1970-2010)

- Anne Arundel County's Population is Becoming More Diverse
 Over the past several decades, the County's population has begun to diversify with the white population becoming a smaller share of the total. From 1990 to 2010, the white population dropped from 84.6% to 73.6%, while African American, Asian and people of Hispanic origin increased in number.
- Regional Hispanic Population is Growing Rapidly but Slower in Anne Arundel County
 The County's Hispanic population has grown by an average annual rate of 20.4% over the past 40 years. However, the Baltimore-Washington MSA has experienced a more rapid growth rate of 24.4% annually, as the Hispanic population increased from 72,844 in 1970 to over 783,000 in 2010. During the same period, Anne Arundel County's Hispanic population increased from 3,645 in 1970 to 33,323 in 2010.

**Table 2-5
 Racial & Ethnic Population Trends
 Anne Arundel County & Surrounding Region, MD (1970 - 2010)**

	ANNE ARUNDEL COUNTY				
	1970	1980	1990	2000	2010
White	n/a	n/a	362,935	395,990	397,135
Black/African American	n/a	n/a	50,232	68,115	86,113
Native American	n/a	n/a	1,228	1,561	1,652
Asian/Pacific Islander	n/a	n/a	7,605	12,895	21,087
Hispanic Origin	3,645	3,697	6,877	13,109	33,323
PERCENT DISTRIBUTION					
White	n/a	n/a	84.6%	80.5%	73.6%
Black/African American	n/a	n/a	11.7%	13.9%	16.0%
Native American	n/a	n/a	0.3%	0.3%	0.3%
Asian/Pacific Islander	n/a	n/a	1.8%	2.6%	3.9%
Hispanic Origin	1.2%	1.0%	1.6%	2.7%	6.2%

Source: Woods & Poole Economics, Inc., 2010

**Hispanic Population Growth Trends
 Anne Arundel County & Surrounding Region, MD (1970 - 2010)**

Jurisdiction	1970	1980	1990	2000	2010	Actual Change	Avg. Ann. % Change
Anne Arundel County	3,645	3,697	6,877	13,109	33,323	29,678	20.4%
Prince Georges County	14,834	12,101	30,016	58,001	129,877	115,043	19.4%
Baltimore County	5,072	4,191	8,203	14,036	34,135	29,063	14.3%
Howard County	632	1,296	3,765	7,585	16,947	16,315	64.5%
Harford County	942	1,624	2,819	4,203	8,696	7,754	20.6%
Carroll County	393	469	879	1,505	4,402	4,009	25.5%
Queen Annes County	243	206	172	443	1,466	1,223	12.6%
Subtotal - Surrounding Counties	25,761	23,584	52,731	98,882	228,846	203,085	19.7%
Balt.-Wash. MSA	72,844	81,923	230,539	436,830	783,727	710,883	24.4%
State of Maryland	54,911	55,593	126,350	231,155	475,308	420,397	19.1%

Source: Woods & Poole Economics, Inc., 2010

7. Regional Household Income (2018)

- Anne Arundel County Household Incomes Among the Highest in the Region

As of 2018, Anne Arundel County mean household personal income was estimated at \$170,510/yr., which put it second only to Howard County (\$198,774) (Table 2-6). Mean personal income considers all elements of household income including: (1) wages and salaries, (2) supplements to wages and salaries, (3) proprietors' income, (4) dividends, interest and rental income, (5) personal current transfer receipts and (6) contributions for government social insurance. The number also represents the statistical average of all households, including very rich households that skew the average higher. While not an accurate measure of typical household income levels, it is a good indicator of relative household wealth across all households and all counties. The County's ability to attract high net worth households is one of its competitive advantages.

- Local Household Incomes Distributed Similar to the Baltimore-Washington MSA, which is One of the Most Affluent Metro Regions in the U.S.

According to the Woods & Poole Economics, approximately 14.1% of the County's population had household incomes that fell below \$30,000/yr. in 2018 and over 41% that fell above \$100,000/yr. These percentages were consistent with the greater MSA region and second only to Howard County.

Table 2-6
Household Income Comparison
Anne Arundel County, Surrounding Counties, MSA and State (2018)

HH Income Range	Anne Arundel County	Baltimore County	Carroll County	Harford County	Howard County	Prince Geo. County	Q. Anne's County	Surrounding Counties	Balt-Wash MSA	State of Maryland
Less Than \$10,000	3.4%	5.0%	3.5%	4.9%	2.7%	4.0%	3.2%	3.8%	4.2%	5.3%
\$10,000 to \$19,999	4.9%	7.2%	5.8%	5.9%	3.0%	5.0%	6.6%	5.0%	4.8%	6.8%
\$20,000 to \$29,999	5.8%	7.8%	7.0%	6.6%	4.4%	6.1%	6.4%	5.9%	5.3%	7.1%
\$30,000 to \$44,999	9.6%	12.8%	10.0%	10.2%	7.0%	12.0%	9.3%	11.0%	9.3%	11.2%
\$45,000 to \$59,999	9.7%	12.1%	9.9%	10.9%	9.0%	12.3%	11.4%	11.3%	9.7%	11.1%
\$60,000 to \$74,999	10.0%	11.3%	9.1%	9.7%	8.2%	11.0%	8.8%	10.6%	9.2%	10.2%
\$75,000 to \$99,999	15.3%	15.3%	16.3%	16.8%	13.2%	16.5%	15.5%	16.0%	13.9%	14.3%
\$100,000 to \$124,999	12.2%	9.9%	12.8%	12.1%	11.8%	11.3%	13.2%	11.7%	11.3%	10.5%
\$125,000 to \$149,999	9.5%	6.5%	9.2%	8.7%	10.1%	7.8%	8.4%	8.5%	8.8%	7.5%
\$150,000 to \$199,999	9.8%	6.3%	10.2%	8.3%	13.7%	8.3%	9.7%	8.9%	10.8%	8.1%
\$200,000 or more	9.9%	5.7%	6.2%	6.0%	16.9%	5.7%	7.4%	7.3%	12.7%	8.0%
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Mean HH Personal Income (Current \$)	\$ 170,510	\$ 148,234	\$ 148,437	\$ 140,216	\$ 198,774	\$ 137,056	\$ 142,674	--	\$ 183,203	\$ 155,600
Under \$30,000	14.1%	20.0%	16.4%	17.3%	10.1%	15.1%	16.3%	14.7%	14.4%	19.2%
Over \$100,000	41.4%	28.4%	38.4%	35.2%	52.5%	33.1%	38.7%	36.5%	43.5%	34.1%

Source: Woods & Poole Economics, Inc. and RKG Associates, Inc., 2018

8. Industry Employment Trends (1970-2010)

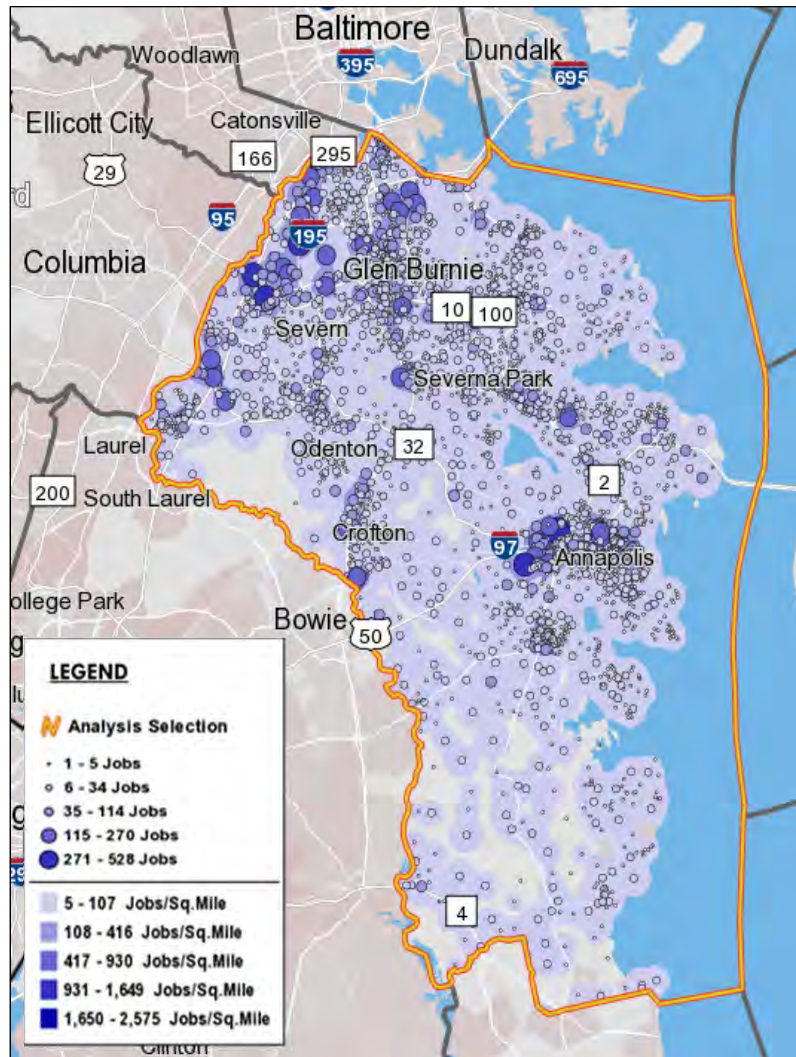
- Much of the County's Employment is Clustered in the Upper Tier Defined by the Baltimore-Washington Parkway

Anne Arundel County's employment base is clustered between Maryland Highway 295, Interstates 97 and 695 and Maryland Highway 100. This area is largely defined by BWI Airport and the Fort Meade Military Installation and the Arundel Mills development (Map 2-2).

- Anne Arundel County Has Added Jobs at a Faster Rate than the MSA Since 1970

Anne Arundel County experienced new job growth at an average annual growth rate of 4.2% over the 40-year study period, which was greater than the Baltimore-Washington MSA at 3.4%. This growth occurred at more than twice the rate of population growth (2.0%) during the same period (Table 2-7).

Map 2-2 Anne Arundel County Employment Clusters



Source: OnTheMap, U.S. Census Bureau, Center for Economic Studies and RKG Associates, Inc., 2018

Table 2-7

Industry Employment Trends

Anne Arundel County and Baltimore-Washington MSA (1970-2010)

	ANNE ARUNDEL COUNTY						BALTIMORE-WASHINGTON, MD (MSA)						
	1970	1980	1990	2000	2010	Actual Avg. Ann Chge. % Chge.	1970	1980	1990	2000	2010	Actual Avg. Ann Chge. % Chge.	
	130,014	175,706	250,069	298,003	345,913		215,899	1,635,993	2,096,831	2,930,899	3,402,917		3,876,724
TOTAL EMPLOYMENT						4.2%						3.4%	
FARM	927	894	658	532	456	-1.3%	18,088	17,101	12,566	12,042	10,876	(7,212)	-1.0%
FORESTRY, FISHING, RELATED ACTIVITIES	64	106	201	289	345		612	1,130	2,269	2,806	3,086	2,474	10.1%
MINING	252	291	331	244	400		1,776	2,370	3,538	3,101	5,783	4,007	5.6%
UTILITIES	181	246	532	695	300		6,656	6,826	10,181	11,710	9,215	2,559	1.0%
CONSTRUCTION	5,486	9,066	16,404	17,516	19,389		97,509	116,054	185,663	200,113	203,222	105,713	2.7%
MANUFACTURING	17,237	19,934	22,463	16,851	14,865	-0.3%	45,341	61,213	83,460	81,032	60,105	14,764	0.8%
WHOLESALE TRADE	1,208	3,611	7,330	9,647	12,065	22.5%	37,244	50,300	68,326	72,823	70,625	33,381	2.2%
RETAIL TRADE	11,950	18,353	28,238	33,026	36,327	5.1%	145,968	195,813	280,128	305,905	306,278	160,310	2.7%
TRANSPORTATION and WAREHOUSING	3,520	4,777	10,347	14,315	11,355	5.6%	43,039	47,237	71,259	86,888	81,482	38,443	2.2%
INFORMATION	1,516	2,284	3,876	5,339	4,534	5.0%	39,189	58,679	99,791	142,465	97,452	58,263	3.7%
FINANCE and INSURANCE	1,909	3,715	6,256	8,041	11,347	12.4%	64,021	89,387	120,032	125,149	150,988	86,967	3.4%
REAL ESTATE and RENTAL and LEASING	2,532	4,927	8,300	10,925	15,802	13.1%	64,459	90,220	120,568	126,258	176,675	112,216	4.4%
PROFESSIONAL and TECHNICAL SERVICES	4,001	7,634	14,947	23,950	31,112	16.9%	120,138	189,283	324,305	470,983	608,532	488,394	10.2%
MANAGEMENT of COMPANIES and ENTERPRISES	151	288	563	811	1,451	21.5%	6,137	11,278	21,743	30,968	41,403	35,266	14.4%
ADMINISTRATIVE and WASTE SERVICES	3,062	5,471	10,901	16,848	19,416	13.4%	63,904	94,531	159,484	220,798	240,410	176,506	6.9%
EDUCATIONAL SERVICES	532	1,016	1,988	3,184	4,607	19.1%	33,225	44,839	67,658	81,708	121,307	88,082	6.6%
HEALTH CARE and SOCIAL ASSISTANCE	3,616	6,898	13,505	20,574	27,828	16.7%	70,495	108,506	185,999	250,457	323,928	253,433	9.0%
ARTS, ENTERTAINMENT, and RECREATION	1,350	2,311	4,066	6,011	7,847	12.0%	19,128	28,481	46,582	64,821	83,132	64,004	8.4%
ACCOMMODATION and FOOD SERVICES	4,661	7,979	14,041	19,062	24,937	10.9%	68,540	97,017	154,593	200,734	241,755	173,215	6.3%
OTHER SERVICES, EXCEPT PUBLIC ADMINISTRATION	2,740	5,207	10,182	15,143	17,539	13.5%	73,566	109,590	182,299	233,900	265,177	191,611	6.5%
FEDERAL CIVILIAN GOVERNMENT	20,833	32,024	35,372	33,577	38,433	2.1%	342,237	385,345	388,023	338,480	395,596	53,359	0.4%
FEDERAL MILITARY	27,548	17,891	17,009	15,294	15,774	-1.1%	117,921	82,849	97,955	80,091	72,523	(45,398)	-1.0%
STATE and LOCAL GOVERNMENT	14,738	20,783	22,559	26,129	29,784	2.6%	156,800	208,782	244,477	259,685	307,174	150,374	2.4%

Source: Woods & Poole Economics and RKG Associates, Inc., 2018

- Despite the Expansion of Government Sector Employment, the County Has Become Less Dependent on the Public Sector as the Private Economy Has Diversified
In 1970, local, state and federal (including military) government employment accounted for 63,119 jobs or 48.5% of Anne Arundel County's total employment base. By 2010, the number of government jobs had grown to over 83,000 jobs, but only represented 24.3% of total employment. This has occurred due to a loss of military jobs, but more directly from the rapid expansion of private-sector employment opportunities since 1970.
- Twelve of 23 Industry Sectors in Anne Arundel County Experienced Employment Growth Rates more than 10% During the 1970-2010 Period
Professional and Technical Services (27,111 jobs), Health Care and Social Assistance (24,212 jobs) and Accommodation & Food Services (20,276 jobs) have added the most employment among fast-growing sectors. Retail Trade employment has added 24,377 new jobs since 1970, but at a much slower growth rate of 5.1% annually.
- Anne Arundel County Employment Growth is Proportional to its Regional Market Share
With 345,913 jobs in 2010, the County accounted for 8.9% of all jobs within the Baltimore-Washington MSA. This was up from 7.9% in 1970. However, over the 40-year study period, Anne Arundel captured 9.6% of total job growth within the MSA, which is greater than its market share of total jobs. The most impressive example was in the Wholesale Trade sector, where the County accounted for 17.1% of the MSA's wholesale trade jobs in 2010 but captured 32.5% of all new job growth in this sector since 1970. Retail Trade, Transportation and Warehousing and all levels of Government added a disproportionate number of new jobs during the study period.

9. Implications

Anne Arundel County sits within one of the most affluent and economically prosperous regions of the United States and thus enjoys a number of economic and demographic advantages. Employment and population growth have been strong for the past 40 years as the Baltimore-Washington Metropolitan Area has grown rapidly. The completion of the region's state and interstate highway system and regional rail service has helped the population commute to and from the region's major employment centers. The County population continues to grow, but at a reduced annual rate of less than 1%, however, average household sizes are starting to increase. The County employment base was robust (4.2%/yr.) between 1970 and 2010 and exceeded the Baltimore-Washington MSA. Anne Arundel County enjoys many economic advantages, including the presence of several of the state's largest employment centers, including: BWI Airport, Fort Meade Military Installation, Maryland State Government, Arundel Mills development, U.S. Naval Academy and Anne Arundel County Government. These historic growth pressures will continue to bring opportunities for future economic and population growth.

Anne Arundel County's strong economic and employment growth, especially in the private sectors has attracted younger, more diverse and higher-income households over the past several decades, most likely young working professionals in their prime age (30-44 years old) with young children. These people started to increase in numbers in Anne Arundel County because of the new employment opportunities, and it may also be due to the more affordable housing options compared to large adjacent urban areas including Washington D.C. and Baltimore City. However, as the County's economy and the population continue to grow, the local housing market may become less affordable over time. Another factor that may drive up the housing costs in the County is Anne Arundel's attraction to retirees, as indicated by the population age analysis.

As these new characteristics of the County's residents continue to strengthen, it will most likely generate a rising demand for land use types that meet the needs and lifestyles of young families, working professionals, and retirees. These land use types may include mom and pop retails, community services, entertainment, dining and drinking, parks and open spaces, education and etc., especially near residential communities.

C. ANNE ARUNDEL COUNTY SUBMARKET CONDITIONS AND TRENDS (2010-2018)

1. Anne Arundel County Submarket Areas

RKG Associates, Inc, in cooperation with Anne Arundel County's Office of Planning & Zoning, parsed the County into ten distinct submarket areas. These ten submarket areas were identified as having similar real estate market and land use characteristics and shared boundaries with past small area plans. Map 2-3 shows the ten submarket areas and their references their place names as follows:

- Submarket 1 Jessup-Maryland City
- Submarket 2 Linthicum-Severn
- Submarket 3 Brooklyn Park-Glen Burnie-Pasadena
- Submarket 4 Lake Shore
- Submarket 5 Odenton
- Submarket 6 Severna Park-Crownsville
- Submarket 7 Annapolis Neck-Broadneck
- Submarket 8 Crofton
- Submarket 9 South County
- Submarket 10 Edgewater-Deale-Shady Side.

2. Methodology and Data Sources

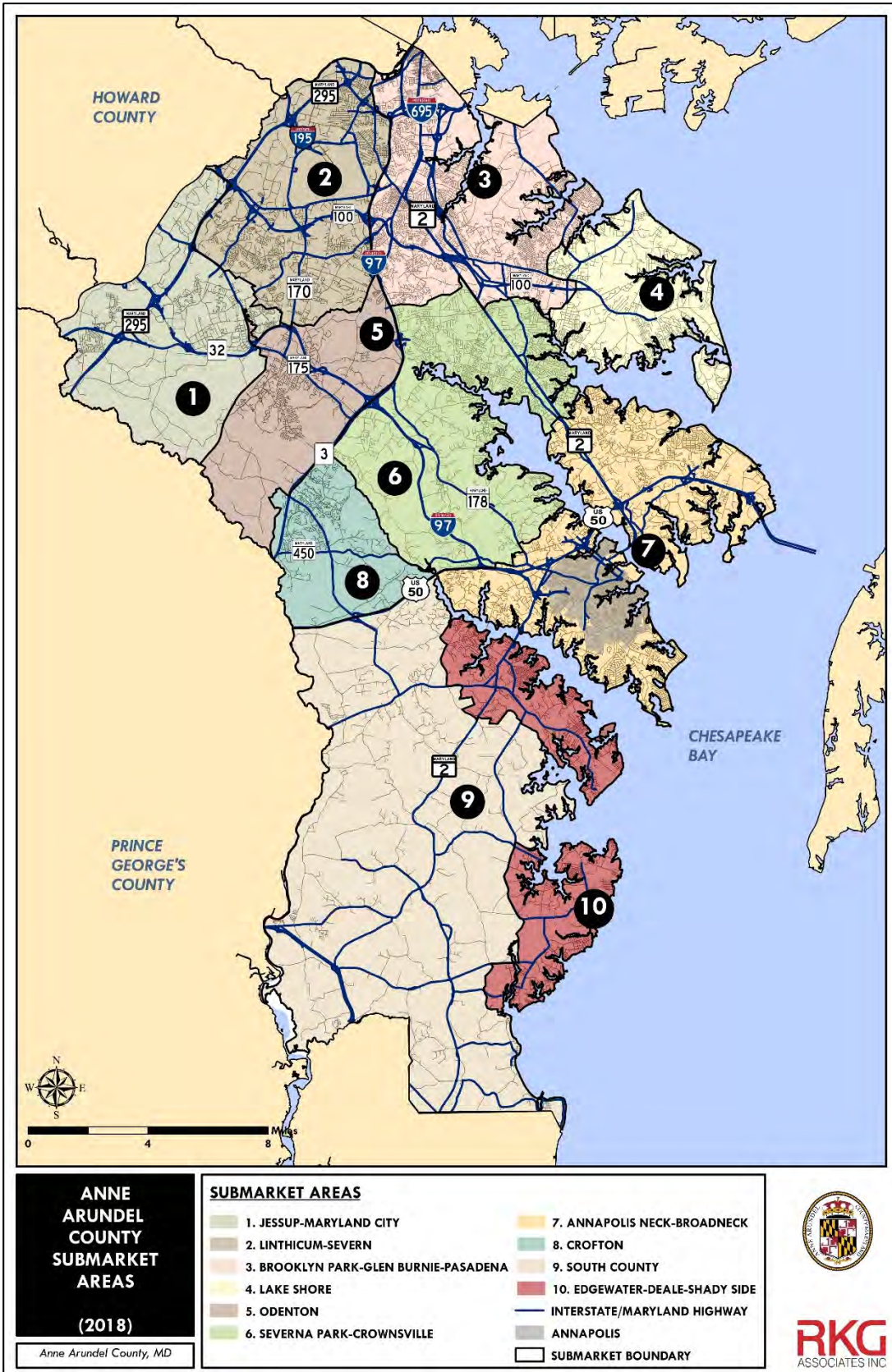
The following section details the recent population and demographic trends in Anne Arundel submarkets between 2010 and 2018. The demographic characteristics presented in this section was obtained from ESRI, a data analytics and Geographic Information Systems (GIS) company. Using the County Traffic Analysis Zone (TAZ) population, household and employment estimates, RKG assembled non-Census-based population estimates for the ten submarket areas described in this section. This was done by RKG by assembling the County's 240 TAZ into the boundaries of the ten submarkets. This was done at the request of the County in order to utilize its TAZ-based population, household and employment projections out to the year 2035. These estimates are used by the County in its transportation demand modeling activities and for long-range planning purposes. However, the reader should note that the 2010 and 2018 population estimates for each submarket differ from other estimates provided by ESRI. However, some ESRI data was used to apply submarket level characteristics to the basic TAZ population estimates, including the distribution of the population by age cohorts, racial/ethnic characteristics, education attainment and distribution of household income.

RKG has presented the data for all submarkets in a side-by-side comparison to establish a demographic profile for each submarket. The reader should note that the data presented in this section does not include the City of Annapolis, which was not part of the study. This is important in that data totals shown for Anne Arundel County do not match known U.S. Census totals, but rather the cumulative total for the ten submarket areas, not including the City of Annapolis.

3. Anne Arundel County Population Trends (2010-2018)

- County's Average Annual Growth Rate is Slowing
Population Growth averaged roughly 0.7% annually between 2010 and 2018, which is slower than the 1% annual growth rate achieved during the 2000-2010 period (Table 2-8). The County has a maturing population of over 530,000, but the 2% annual growth rates achieved during the 1970-2010 period, are not likely to be approached in the future.

Map 2-3



- **Population Growth Occurring in all Ten Submarkets**
 All Anne Arundel County submarkets experienced population gains during the 2010-2018 study period, with the greatest increases occurring in the Brooklyn Park-Glen Burnie-Pasadena submarket (8,258 new pop.).
- **Anne Arundel (Submarkets 1, 2, 3 and 5) Have Captured 73% of Recent Population Gains**
 The (1) Jessup-Maryland City, (2) Linthicum-Severn, (3) Brooklyn Park-Glen Burnie-Pasadena and (5) Odenton submarkets captured 73% (21,571 people) of recent County population gains since 2010 (29,638 people). This is driven in part by access to the County's highway network that connects residents to the region's employment centers, including nearby employment clusters at Fort Meade, BWI Airport and Arundel Mills. This has attracted new residential development to these submarkets.
- **Three Submarkets are Growing at Nearly Twice the County Growth Rate**
 The Jessup-Maryland City (1.3%), Odenton (1.3%) and Linthicum-Severn (1.2%) submarkets have experienced annual population growth rates that far exceed the County annual rate (0.7%) since 2010.

Table 2-8
Population Trends by Submarket
Anne Arundel County, MD (2010 - 2018)

Submarket	2010	% of Total	2018	% of Total	Change '10 - '18		
					Persons	% of Tot. Chge	Ann % Chge
Anne Arundel County	508,164	100.0%	537,802	100.0%	29,638	100.0%	0.7%
SM 1 - Jessup-Maryland City	31,896	6.3%	35,221	6.5%	3,325	11.2%	1.3%
SM 2 - Linthicum-Severn	59,375	11.7%	64,877	12.1%	5,502	18.6%	1.2%
SM 3 - Brooklyn Park-Glen Burnie-Pasadena	128,679	25.3%	136,937	25.5%	8,258	27.9%	0.8%
SM 4 - Lake Shore	27,392	5.4%	27,867	5.2%	475	1.6%	0.2%
SM 5 - Odenton	42,109	8.3%	46,595	8.7%	4,486	15.1%	1.3%
SM 6 - Severna Park-Crownsville	53,822	10.6%	56,355	10.5%	2,533	8.5%	0.6%
SM 7 - Annapolis Neck-Broadneck	79,493	15.6%	81,085	15.1%	1,592	5.4%	0.3%
SM 8 - Crofton	30,521	6.0%	31,540	5.9%	1,019	3.4%	0.4%
SM 9 - South County	24,142	4.8%	24,825	4.6%	683	2.3%	0.4%
SM 10 - Edgewater-Deale-Shady Side	30,735	6.0%	32,500	6.0%	1,765	6.0%	0.7%

Source: ESRI and RKG Associates, Inc., 2018

4. Population Age Distribution Trends (2010-2018)

- **County's Population Growth is Driven by People Over the Age of 55**
 According to ESRI age cohort estimates, recent population growth since 2010 has been driven by an increase in population over the age of 55, which has grown as a percentage of the total population from 24.2% in 2010 to 29.2% in 2018. The submarkets with the highest concentrations of the older population are South County (38.3%), Annapolis Neck-Broadneck (35.6%), Severna Park-Crownsville (35.6%) and Edgewater-Deale-Shady Side (34.3%) (Table 2-9).
- **Growth in Older Population Mirrored by a Loss of Population Under the Age of 55 in Some Submarkets**
 Some submarkets such as Annapolis Neck-Broadneck (4,062 people) and Severna Park-Crownsville (1,652 people) have experienced significant declines in population cohorts under the age of 55 while experiencing increased population over the age of 55.

**Table 2-9
 Population Age Distribution
 Anne Arundel County and Submarket Areas (2010 - 2018)**

	Anne Arundel County		SM 1 - Jessup-Maryland City		SM 2 - Linthicum-Severn		SM 3 - Brooklyn Park-Glen Burnie-Pasadena		SM 4 - Lake Shore		SM 5 - Odenton		SM 6 - Severna Park		SM 7 - Annapolis Neck-Broadneck		SM 8 - Crofton		SM 9 - South County		SM 10 - Edgewater-Deale-Steady Side	
	2010	2018	2010	2018	2010	2018	2010	2018	2010	2018	2010	2018	2010	2018	2010	2018	2010	2018	2010	2018	2010	2018
0-4 years	32,522	30,655	2,839	2,747	4,136	4,022	8,879	8,490	1,397	1,310	3,032	2,889	2,691	2,536	4,034	3,649	2,106	1,892	1,111	1,018	1,783	1,625
5-9 years	32,522	33,344	2,233	2,606	3,919	4,282	7,849	8,490	1,616	1,477	2,906	3,122	2,821	3,663	4,051	4,216	2,289	2,208	1,593	1,316	1,906	1,950
10-14 years	33,031	34,957	1,850	2,219	3,800	4,347	7,849	8,216	1,917	1,756	2,779	3,122	4,360	4,396	4,849	4,784	2,411	2,492	1,762	1,688	2,029	2,178
15-24 years	66,061	64,536	4,689	5,001	7,600	7,007	17,500	16,159	3,451	3,065	4,421	5,219	6,028	5,917	12,998	12,082	3,479	3,722	2,800	2,731	3,350	3,250
25-34 years	68,094	72,065	7,177	7,009	8,134	9,018	20,074	21,910	2,657	3,456	6,358	6,477	3,768	4,396	7,949	8,433	4,303	3,879	1,738	2,284	3,166	3,445
35-44 years	71,651	71,528	5,646	6,093	8,609	9,018	17,629	18,897	3,780	3,205	6,906	6,849	7,320	6,594	9,698	8,676	4,853	4,826	2,945	2,433	4,364	4,003
45-54 years	81,306	73,679	4,146	4,403	9,619	8,888	20,074	17,802	5,122	4,208	6,148	6,616	9,957	8,791	12,321	10,379	4,944	4,636	4,708	3,848	5,717	4,843
55-64 years	63,012	73,141	2,041	2,959	7,303	8,888	14,155	17,391	3,972	4,487	4,716	5,638	8,127	9,299	10,891	11,919	3,479	3,974	3,935	4,444	4,518	5,363
65-74 years	35,063	51,091	861	1,479	3,681	5,904	8,107	11,503	2,219	3,121	2,906	4,007	4,521	6,594	6,598	9,649	1,709	2,492	2,197	3,252	2,397	3,640
75-84 years	18,294	23,663	351	528	1,900	2,530	4,761	5,614	959	1,365	1,474	1,957	2,261	2,987	3,975	4,946	641	1,041	1,014	1,365	1,106	1,593
85+ years	6,606	9,143	64	176	653	973	1,802	2,465	301	418	463	699	969	1,183	1,749	2,351	305	378	338	447	400	553
Median Age	38.2	39.5	30.8	32.0	37.5	38.9	36.2	37.6	42.2	44.1	37.3	38.6	43.7	45.8	41.0	42.6	36.4	38.2	45.2	47.8	42.4	44.4

Actual Population Change by Age Cohort (2010-2018)

	Anne Arundel County		SM 1 - Jessup-Maryland City		SM 2 - Linthicum-Severn		SM 3 - Brooklyn Park-Glen Burnie-Pasadena		SM 4 - Lake Shore		SM 5 - Odenton		SM 6 - Severna Park		SM 7 - Annapolis Neck-Broadneck		SM 8 - Crofton		SM 9 - South County		SM 10 - Edgewater-Deale-Steady Side	
	10 - '18	% '10 - '18	10 - '18	% '10 - '18	10 - '18	% '10 - '18	10 - '18	% '10 - '18	10 - '18	% '10 - '18	10 - '18	% '10 - '18	10 - '18	% '10 - '18	10 - '18	% '10 - '18	10 - '18	% '10 - '18	10 - '18	% '10 - '18	10 - '18	% '10 - '18
0-4 years	(1,868)	-5.7%	(92)	-3.2%	(1,34)	-3.2%	(389)	-4.4%	(87)	-6.2%	(143)	-4.7%	(155)	-5.8%	(403)	-10.0%	(214)	-10.1%	(93)	-8.3%	(158)	-8.8%
5-9 years	821	2.5%	374	16.7%	363	9.3%	641	8.2%	(139)	-8.6%	216	7.4%	(158)	-4.1%	(394)	-8.5%	(81)	-3.6%	(278)	-17.4%	44	2.3%
10-14 years	1,926	5.8%	369	19.9%	547	14.4%	367	4.7%	(152)	-8.4%	343	12.3%	36	0.8%	(65)	-1.3%	81	3.3%	(74)	-4.2%	149	7.3%
15-24 years	(1,525)	-2.3%	313	6.7%	(593)	-7.8%	(1,342)	-7.7%	(356)	-11.2%	797	18.0%	(111)	-1.8%	(717)	-5.6%	242	7.0%	(70)	-2.5%	(100)	-3.0%
25-34 years	3,971	5.8%	(1,68)	-2.3%	884	10.9%	1,836	9.1%	798	30.1%	118	1.9%	628	16.7%	484	6.1%	(424)	-9.9%	546	31.4%	279	8.8%
35-44 years	(1,23)	-0.2%	448	7.9%	409	4.7%	1,268	7.2%	(575)	-15.2%	(56)	-0.8%	(726)	-9.9%	(1,022)	-10.5%	(27)	-0.6%	(512)	-17.4%	(302)	-6.9%
45-54 years	(7,627)	-9.4%	256	6.2%	(731)	-7.6%	(2,272)	-11.3%	(914)	-17.9%	469	7.6%	(1,166)	-11.7%	(1,943)	-15.8%	(308)	-6.2%	(860)	-18.3%	(874)	-15.3%
55-64 years	10,129	16.1%	917	44.9%	1,585	21.7%	3,236	22.9%	515	13.0%	922	19.5%	1,171	14.4%	1,029	9.4%	495	14.2%	509	12.9%	844	18.7%
65-74 years	16,028	45.7%	618	71.8%	2,223	60.4%	3,396	41.9%	902	40.7%	1,102	37.9%	2,072	45.8%	3,051	46.2%	782	45.8%	1,055	48.0%	1,243	51.8%
75-84 years	5,369	29.4%	177	50.6%	630	33.2%	853	17.9%	407	42.4%	483	32.8%	726	32.1%	972	24.4%	400	62.4%	351	34.7%	486	43.9%
85+ years	2,537	38.4%	112	17.6%	320	49.0%	663	36.8%	117	38.7%	236	50.9%	215	22.2%	603	34.5%	73	24.0%	109	32.2%	153	38.3%

Population Distribution by Age Cohort (2010-2018)

	Anne Arundel County		SM 1 - Jessup-Maryland City		SM 2 - Linthicum-Severn		SM 3 - Brooklyn Park-Glen Burnie-Pasadena		SM 4 - Lake Shore		SM 5 - Odenton		SM 6 - Severna Park		SM 7 - Annapolis Neck-Broadneck		SM 8 - Crofton		SM 9 - South County		SM 10 - Edgewater-Deale-Steady Side	
	2010	2018	2010	2018	2010	2018	2010	2018	2010	2018	2010	2018	2010	2018	2010	2018	2010	2018	2010	2018	2010	2018
0-4 years	6.4%	5.7%	8.9%	7.8%	7.0%	6.2%	6.9%	6.2%	5.1%	4.7%	7.2%	6.2%	5.0%	4.3%	5.1%	4.5%	6.9%	6.0%	4.1%	4.1%	5.8%	5.0%
5-9 years	6.4%	6.2%	7.0%	7.4%	6.6%	6.6%	6.1%	6.0%	5.3%	5.3%	6.9%	6.7%	7.1%	6.5%	5.8%	5.2%	7.5%	7.0%	4.6%	4.1%	6.2%	6.0%
10-14 years	6.5%	6.5%	5.8%	6.3%	6.4%	6.7%	6.1%	6.0%	7.0%	6.3%	6.6%	6.7%	8.1%	7.8%	6.1%	5.9%	7.9%	7.9%	7.3%	6.8%	6.6%	6.7%
15-24 years	13.0%	12.0%	14.7%	14.2%	12.8%	10.8%	13.6%	11.8%	12.6%	11.0%	10.5%	11.2%	11.2%	10.8%	16.1%	14.9%	11.4%	11.8%	11.6%	11.0%	10.9%	10.0%
25-34 years	13.4%	13.3%	22.5%	19.9%	13.7%	13.9%	15.6%	16.0%	9.7%	12.4%	15.1%	13.9%	7.0%	7.8%	10.0%	10.4%	14.1%	12.3%	7.2%	9.2%	10.3%	10.6%
35-44 years	14.1%	13.3%	17.7%	17.3%	14.5%	13.9%	13.7%	13.8%	13.8%	11.5%	16.4%	14.7%	13.6%	11.7%	12.2%	10.7%	15.9%	15.3%	12.2%	9.8%	12.5%	12.5%
45-54 years	16.0%	13.7%	13.0%	12.5%	16.2%	13.7%	15.6%	13.0%	18.7%	15.1%	14.6%	14.2%	18.5%	15.6%	15.2%	12.8%	16.2%	14.7%	19.5%	15.5%	14.2%	14.9%
55-64 years	12.4%	13.6%	6.4%	8.4%	12.3%	13.7%	11.0%	12.7%	14.5%	16.1%	11.2%	12.1%	15.1%	16.5%	13.7%	14.7%	11.4%	12.6%	16.3%	17.9%	14.7%	16.5%
65-74 years	6.9%	9.5%	2.7%	4.2%	6.2%	9.1%	6.3%	8.4%	8.1%	11.2%	6.9%	8.6%	8.4%	11.7%	8.3%	11.9%	5.6%	7.9%	9.1%	13.1%	7.8%	11.2%
75-84 years	3.6%	4.4%	1.1%	1.5%	3.2%	3.9%	3.7%	3.4%	3.5%	4.9%	3.5%	4.2%	4.2%	5.3%	5.0%	4.2%	2.1%	3.3%	3.6%	5.5%	3.6%	4.9%
85+ years	1.3%	1.7%	0.2%	0.5%	1.1%	1.5%	1.4%	1.8%	1.1%	1.5%	1.1%	1.5%	1.8%	2.1%	2.2%	2.9%	1.0%	1.2%	1.4%	1.8%	1.3%	1.7%

Source: ESRI and RKG Associates, Inc., 2018.

- Anne Arundel County's Population is Aging, and Key Younger Age Cohorts are not Growing
The County's 2018 median age (39.5 years) is increasing due to gradual aging of the population as well as the County's ability to attract retirement age households. The Baby Boomer generation, people ages 54 to 72, grew in numbers during the decade. The County's high quality of life and great cultural and natural amenities has made it an attractive retirement location. The loss of people in the Generation X age cohorts (people age 39 to 53 years), is counter to historical trends where the County's Gen X population has exceeded the MSA average as a percentage of the total population (Table 2-9).

5. Household Formation Trends (2010-2018)

- Household Formations Rate Slightly Exceeds Population Rates
According to ESRI estimates, annual household formation growth (0.7%) in Anne Arundel County since 2010 has mirrored population growth (0.7%) during the same period. The term 'household formation' is referring to the formation of new households in the County over the 8-year study period. Simply put, 10,115 new households have been created in the County since 2010. Similar to population growth, the four submarkets of Jessup-Maryland City, Linthicum-Severn, Brooklyn Park-Glen Burnie-Pasadena, and Odenton account for roughly 4.5% (7,529 households) of the total net change in households (10,115 households).
- Average Household Size on the Rise in Anne Arundel County
Despite a steady decline in average household size over the past 40 years, ESRI reports that household size increased in all ten submarkets between 2010 and 2018. Anne Arundel County saw an increase from 2.63 persons to 2.65 for a .01% annual change during the period. While the change is not overly significant, the reversal of a long-term trend is and may speak to changing demographics in the community and the U.S. that could impact growth patterns in the future.

6. Racial/Ethnic Distribution of Population (2010-2018)

- Anne Arundel County's Population is Becoming More Diverse
According to the ESRI, the County's population over time is becoming more diverse and is being driven by increases in African American, Hispanic and Other non-classified racial/ethnic groups. Between 2010 and 2018, the County experienced an increase of 13,810 African Americans, 11,548 Hispanic and 8,475 people classified as two or more races or other races.
- The County's White Population has Grown Since 2010 but has Continued to Decline as a Percentage of the Total Population
With the diversification of the population, the share of the white population has declined as a percentage of the total population from 75.4% in 2010 to 71.7% in 2018. This has occurred despite an increase of 2,583 people in this racial group.
- Population Diversity is Clustering in the Jessup-Maryland City, Linthicum-Severn, and Brooklyn Park-Glen Burnie-Pasadena submarkets
The most diverse submarkets in Anne Arundel County are the Jessup-Maryland City and the Linthicum-Severn area, where non-white populations account for roughly 50% to over 70% of the total population in those areas in 2018. The presence of more diverse housing choices in proximity to major employment clusters is a partial explanation.

During the study period, the Brooklyn Park-Glen Burnie-Pasadena submarket experienced the greatest increase in African American (4,022 people), Hispanic (3,574 people) and Other or multi-racial populations (2,825 people). The new Asian population has clustered in the Linthicum-Severn submarket since 2010.

- Bayfront Submarkets are Less Diverse and Growing at a Slower Pace
Lake Shore, Severna Park-Crownsville, Annapolis Neck-Broadneck, South County and Edgewater-Deale-Shady Side are less diverse populations, with more than 80% of the submarkets' population classified as white in 2018. With the addition of Crofton, six of the 10 submarkets are predominantly white and each of these areas is experiencing population growth rates at or below the County average since 2010.

7. Education Attainment of Population (2018)

- County Education Attainment is High but Varies by Submarket
In 2018, education attainment levels in the County were high, similar to the Baltimore-Washington MSA. Over 40% of residents 25 years or older had a 4-year degree or higher. The highest levels of college education attainment are seen in Crofton (60.2%) and Severna Park-Crownsville (59.2%) (Table 2-10).
- Submarkets 1, 2, 3 and 4 have Lower Education Levels
The Brooklyn Park-Glen Burnie-Pasadena (45.7%), Lake Shore (37.3%) Jessup-Maryland City (36.5%) and Linthicum-Severn (34%) submarkets have higher percentages of persons 25 years and older that possess a high school diploma or less education.

8. Distribution of Household Income (2018)

- Nearly Half of all County Households Exceed \$100,000 in Median Household Income
Like the rest of the Baltimore-Washington MSA, Anne Arundel County median household income is very high, as 48% of households had median incomes of at least \$100,000 in 2018. According to Sentier Research and the U.S. Census Bureau, the U.S. median household income was \$62,172 in May of 2018; approximately 35% lower than the County median of \$95,598 (Table 2-11).² According to ESRI, the highest median household incomes occur in the Severna Park-Crownsville (\$124,293) and Crofton (\$109,749) submarkets.

The reader should note the difference between “mean household personal income” presented earlier in this section and “median household income” presented here. Mean household personal income is the statistical average of all households in the County and all components of household income, including: (1) wages and salaries, (2) supplements to wages and salaries, (3) proprietors' income, (4) dividends, interest and rental income, (5) personal current transfer receipts and (6) contributions for government social insurance. The median income is the middle value of all household incomes and typically is much lower because it removes the influence of very high-income households.

- The County's Fastest Growing Submarkets have the Lowest Median Income Levels
The upper-tier submarkets of Jessup-Maryland City (\$90,898), Linthicum-Severn (\$96,570) and Brooklyn Park-Glen Burnie-Pasadena (\$72,191), which have attracted much of Anne Arundel's new population and development activity, have the lowest median household incomes in the County. These submarkets also possess the lowest education attainment.

9. Implications

Anne Arundel County has experienced strong growth in terms of population and employment over the past 50 years, and the County is well-positioned to capture its fair share of regional growth in the future. While the pace of growth has slowed over that period, the County continues to

² Household Income Trends, May 2018, Sentier Research, June 2018.

urbanize its targeted growth areas. The development in the County will need to be well-managed to protect the area's great amenities, including the County's waterfront and water access, natural open space, and historic and cultural attractions.

Of the County's ten submarket areas, not all of them are experiencing strong growth pressures. In fact, much of the County's population growth is fairly confined to 4 of the 10 submarkets, primarily those comprising the submarkets of Jessup-Maryland City, Linthicum-Severn, Brooklyn Park-Glen Burnie-Pasadena and Odenton, which has captured 72% of population gains since 2010. The majority of these new residents are racially diverse and have lower educational attainment levels and lower median household incomes compared to other submarkets. This may be due to the attraction of these submarkets' proximity to major highway connections to employment centers in the County, and the subsequent reductions in commute time and costs. In comparison, Crofton and Severna Park-Crownsville population have higher education attainment levels and median household incomes. In addition to commute costs, housing costs may be another factor that draws residents with different socioeconomic characteristics to different submarkets.

The increasing growth of the population aged 55 and older since 2010 may be partly due to the natural aging trend of the existing population in general. It may also be due to an addition of new retiree residents relocating to Anne Arundel County from elsewhere because of the favorable living conditions. These relocated retiree residents most likely are more financially established and capable of purchasing homes or renting in traditionally established retirement communities that are close to the shore, including Lake Shore, Severna Park-Crownsville, Annapolis Neck-Broadneck, South County and Edgewater-Deale-Shady Side. According to RKG's analysis, these lakefront submarkets are also the least racially diverse with slower growths, which may be due to the high housing costs in these established retirement communities that are comparatively more difficult to enter.

The aging of the County's population may continue as the Baby Boomers continue to retire but the County must be mindful of strategies to continue to attract younger people and households and that may require different types of development. Encouraging more compact, urban mixed-use development may be possible at certain locations where density is possible and desired while redirecting new development from areas less suited for growth.

Table 2-10
Education Attainment
Anne Arundel County and Submarket Areas (2018)

Education Attainment Level	Anne Arundel County		SM 1 - Jessup-Maryland City		SM 2 - Linthicum-Severn		SM 3 - Brooklyn Park-Glen Burnie-Pasadena		SM 4 - Lake Shore		SM 5 - Odenton		SM 6 - Severna Park		SM 7 - Annapolis Neck-Broadneck		SM 8 - Crofton		SM 9 - South County		SM 10 - Edgewater-Deale-Shady Side	
	Count	% Total	Count	% Total	Count	% Total	Count	% Total	Count	% Total	Count	% Total	Count	% Total	Count	% Total	Count	% Total	Count	% Total	Count	% Total
Total Population 25 Years+	374,310	100.0%	22,647	100.0%	45,219	100.0%	95,582	100.0%	20,259	100.0%	37,462	100.0%	39,843	100.0%	56,354	100.0%	21,226	100.0%	18,073	100.0%	23,498	100.0%
Less than High School Degree, No School	27,699	7.4%	2,491	11.0%	3,663	8.1%	10,610	11.1%	1,479	7.3%	1,611	4.3%	1,434	3.6%	2,141	3.8%	722	3.4%	1,265	7.0%	1,245	5.3%
High School Degree or Equivalent	91,332	24.4%	5,775	25.5%	11,712	25.9%	33,071	34.6%	6,078	30.0%	7,193	19.2%	6,176	15.5%	8,284	14.7%	3,035	14.3%	5,187	28.7%	6,227	26.5%
Some College, Associate's Degree	102,935	27.5%	6,205	27.4%	13,204	29.2%	29,726	31.1%	6,605	32.6%	10,677	28.5%	8,646	21.7%	14,201	25.2%	4,691	22.1%	4,753	26.3%	7,049	30.0%
Bachelor's Degree	86,840	23.2%	4,575	20.2%	10,039	22.2%	14,624	15.3%	3,647	18.0%	10,040	26.8%	12,750	32.0%	16,568	29.4%	7,238	34.1%	3,849	21.3%	5,310	22.6%
Graduate/ Professional Degree	65,504	17.5%	3,601	15.9%	6,602	14.6%	7,551	7.9%	2,451	12.1%	7,942	21.2%	10,837	27.2%	15,159	26.9%	5,540	26.1%	3,018	16.7%	3,666	15.6%
High School Diploma or Less	119,031	31.8%	8,266	36.5%	15,375	34.0%	43,681	45.7%	7,557	37.3%	8,804	23.5%	7,610	19.1%	10,426	18.5%	3,757	17.7%	6,452	35.7%	7,472	31.8%
Bachelor's Degree or Higher	152,344	40.7%	8,176	36.1%	16,641	36.8%	22,175	23.2%	6,098	30.1%	17,982	48.0%	23,587	59.2%	31,727	56.3%	12,778	60.2%	6,868	38.0%	8,976	38.2%

Source: ESRI and RKG Associates, Inc., 2018

Table 2-11
Distribution of Household Income
Anne Arundel County and Submarket Areas (2018)

Household Income	Anne Arundel County		SM 1 - Jessup-Maryland City		SM 2 - Linthicum-Severn		SM 3 - Brooklyn Park-Glen Burnie-Pasadena		SM 4 - Lake Shore		SM 5 - Odenton		SM 6 - Severna Park		SM 7 - Annapolis Neck-Broadneck		SM 8 - Crofton		SM 9 - South County		SM 10 - Edgewater-Deale-Shady Side	
	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent
<\$15,000	9,641	4.9%	256	2.5%	1,094	4.6%	3,712	7.2%	452	4.4%	822	4.6%	458	2.3%	1,114	3.7%	258	2.2%	406	4.5%	440	3.6%
\$15,000 - \$24,999	9,050	4.6%	308	3.0%	999	4.2%	3,506	6.8%	308	3.0%	840	4.7%	518	2.6%	1,204	4.0%	117	1.0%	370	4.1%	440	3.6%
\$25,000 - \$34,999	9,837	5.0%	544	5.3%	1,022	4.3%	3,816	7.4%	432	4.2%	590	3.3%	618	3.1%	993	3.3%	270	2.3%	460	5.1%	599	4.9%
\$35,000 - \$49,999	15,740	8.0%	1,128	11.0%	1,973	8.3%	5,414	10.5%	678	6.6%	1,251	7.0%	976	4.9%	1,836	6.1%	622	5.3%	776	8.6%	819	6.7%
\$50,000 - \$74,999	29,512	15.0%	1,703	16.6%	3,614	15.2%	10,158	19.7%	1,418	13.8%	2,162	12.1%	2,232	11.2%	3,732	12.4%	1,596	13.6%	920	10.2%	1,772	14.5%
\$75,000 - \$99,999	28,528	14.5%	1,682	16.4%	3,543	14.9%	8,095	15.7%	1,408	13.7%	2,913	16.3%	2,292	11.5%	4,093	13.6%	1,643	14.0%	1,164	12.9%	1,821	14.9%
\$100,000 - \$149,999	44,661	22.7%	2,585	25.2%	5,564	23.4%	10,106	19.6%	2,538	24.7%	4,342	24.3%	4,802	24.1%	7,404	24.6%	3,450	29.4%	1,778	19.7%	2,835	23.2%
\$150,000 - \$199,999	23,806	12.1%	1,221	11.9%	3,257	13.7%	4,176	8.1%	1,469	14.3%	2,698	15.1%	3,029	15.2%	4,154	13.8%	1,854	15.8%	1,038	11.5%	1,552	12.7%
\$200,000+	25,970	13.2%	831	8.1%	2,711	11.4%	2,578	5.0%	1,572	15.3%	2,252	12.6%	5,002	25.1%	5,568	18.5%	1,925	16.4%	2,112	23.4%	1,943	15.9%
Totals	196,746	100.0%	10,258	100.0%	23,777	100.0%	51,561	100.0%	10,275	100.0%	17,870	100.0%	19,927	100.0%	30,098	100.0%	11,735	100.0%	9,024	100.0%	12,221	100.0%
Under \$35,000/yr.	28,528	14.5%	1,108	10.8%	3,115	13.1%	11,034	21.4%	1,192	11.6%	2,252	12.6%	1,594	8.0%	3,311	11.0%	645	5.5%	1,236	13.7%	1,479	12.1%
\$100,000 +/yr.	94,438	48.0%	4,637	45.2%	11,532	48.5%	16,860	32.7%	5,579	54.3%	9,292	52.0%	12,833	64.6%	17,126	56.9%	7,229	61.6%	4,927	54.6%	6,330	51.8%
Median Household Income	\$95,598	100.0%	\$90,898	100.0%	\$96,370	100.0%	\$72,191	100.0%	\$105,871	100.0%	\$102,453	100.0%	\$124,293	100.0%	\$109,749	100.0%	\$113,877	100.0%	\$108,512	100.0%	\$102,555	100.0%

Source: ESRI and RKG Associates, Inc., 2018

3 HOUSING SUBMARKET CHARACTERISTICS AND AFFORDABILITY ANALYSIS

A. INTRODUCTION

The following section examines the residential market climate within Anne Arundel County, detailing market trends, indicators, and conditions related to the overall health and performance of the for-rent and for-sale housing stock. Anne Arundel's proximity to both the City of Baltimore and Washington D.C. metro areas has translated into consistent housing demand and residential market growth. These market forces have resulted in the consistent population and economic base growth throughout the County, as reported in the Demographic Trends Analysis section. This section focuses on both Anne Arundel County and the submarket areas identified for this effort. The issue of housing affordability is addressed at the end of this section and looks at Anne Arundel County as a whole.

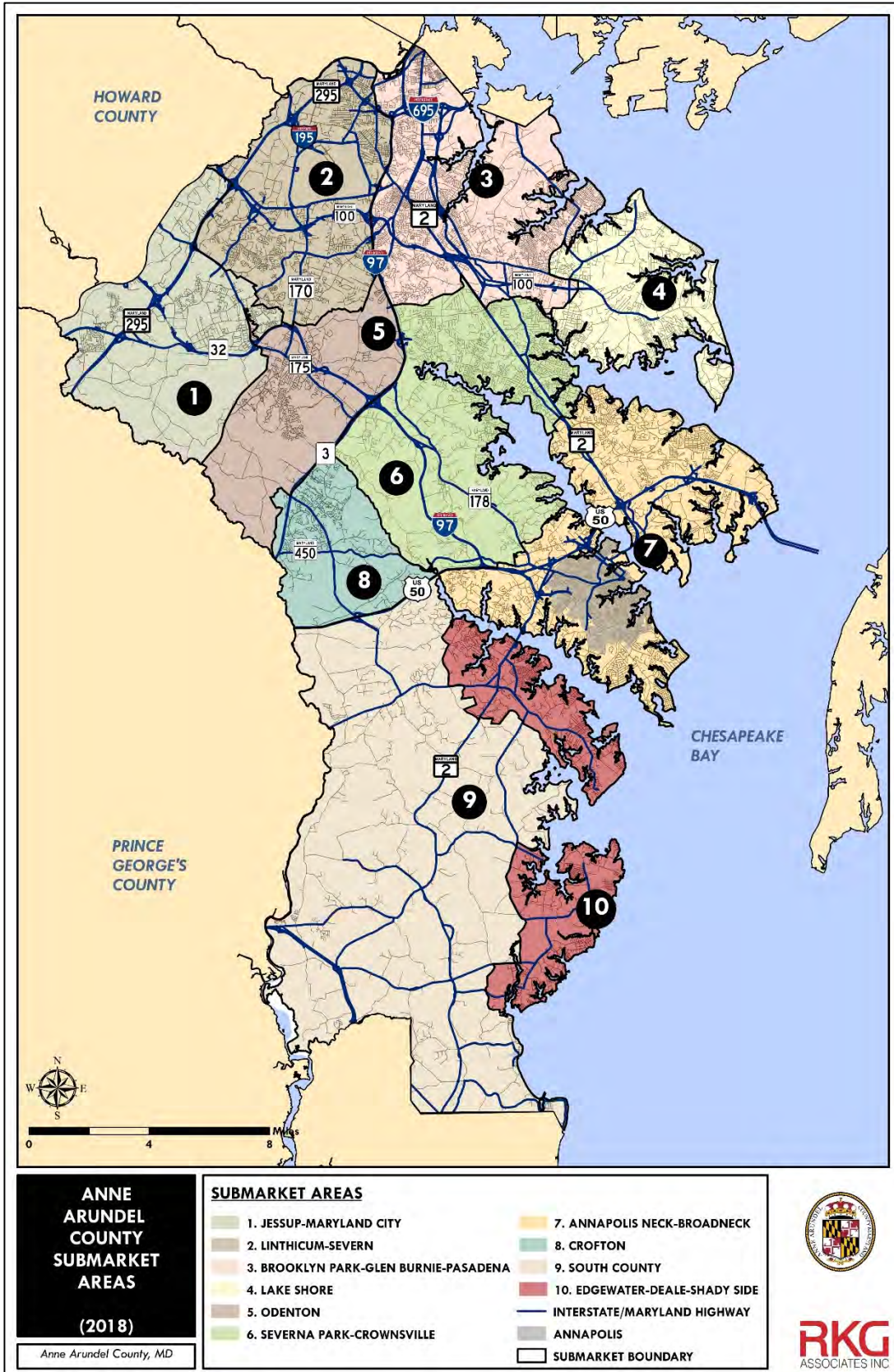
B. METHODOLOGY

To put the Anne Arundel County housing market into better context, RKG Associates divided the County into ten submarket areas. Those submarket areas include: (1) Jessup-Maryland City, (2) Linthicum-Severn, (3) Brooklyn Park-Glen Burnie-Pasadena, (4) Lake Shore, (5) Odenton, (6) Severna Park-Crownsville, (7) Annapolis Neck-Broadneck, (8) Crofton, (9) South County, (10) Edgewater-Deale-Shady Side (Map 3-1). These submarkets were assembled, in part, to cluster similar housing markets for ease of analysis. That said, the analysis revealed that these respective geographic areas have distinct markets in terms of the housing stock, age, value, and growth patterns. Socioeconomic and market projections also indicate much different future growth patterns.

The U.S. Census through ESRI Business Analyst and the (2012-2016) American Community Survey estimates were used for the housing inventory data regarding the distribution and age of housing stock, tenure and value of owner-occupied/renter-occupied housing units. RKG conducted data verification using the Maryland property assessment data and aerial maps from Google Maps. In the process, RKG discovered some anomalies in ESRI's data allocation methods when census block groups are split. In several instances, Anne Arundel County's submarket areas include split census block groups. In these cases, ESRI creates a centroid in each census block group and attributes all the census data in the block group that contains the centroid. As such, there are instances where the data for one submarket, is represented in another census block group in an adjacent submarket. RKG was not able to adjust ESRI's data allocation methods but identified two instances where this happened.

For example, RKG believes ERSI reported more mobile homes in the South County submarket and more multi-family units in the Lake Shore submarket than the actual totals. In the Lake Shore submarket, RKG believes the number of units reported in structures with 10 or more units should be 344 instead of ESRI's 478. Chesterfield Garden Condominiums is the only known property within the submarket that meets this definition and has only 344 units. For South County, RKG believes there should be no multifamily units and the number of mobile homes/other units in this submarket should be 1,453 instead of 1,630. The following tables and discussions of data are based on the ESRI-reported census results and cannot be changed. This is largely

Map 3-1



because RKG has used this data source to report on the age, tenure and value characteristics of submarket housing stock and we had no alternative method for characterizing units that were in the wrong submarket. In conclusion, these changes affect very few housing units and do not change the outcome of the Land Use Market Analysis.

C. ANNE ARUNDEL COUNTY HOUSING CHARACTERISTICS

1. Housing Units by Type

The predominant housing type in Anne Arundel County is single-family detached homes. These units constitute 63.0% of the County's total housing supply (Table 3-1). There is a noticeable inventory gap between single-family housing units (detached and attached) and Anne Arundel County's supply of multifamily housing units, with multifamily units accounting for 16.1% of the County's housing supply. Specific findings of note include:

- According to the American Community Survey (ACS) estimates, single-family units (both detached and attached) account for 81.8% of Anne Arundel County's housing inventory or 164,788 out of the 201,363 total units.¹
- Anne Arundel County has been a popular suburban marketplace for Baltimore and Washington DC for decades, resulting in a higher concentration of older single-family units throughout the County. Furthermore, single-family housing development activity has slowed recently compared to other housing types. The effects of this finding are discussed in detail in the next chapter.
- Submarkets that are near major employment centers and along transportation corridors (i.e. Interstate 97, Ritchie Highway Corridor/Route 2 and Maryland Highway 100) contain higher concentrations of single-family housing units. 26.8% or 54,026 of the County's total housing units are within submarket 3, which also has the highest concentration of single-family units.
- Comparatively, only 16.1% of the total housing inventory (32,389 units) are classified as multifamily units in the County. Smaller multifamily developments (9 units or smaller) comprise only 4.1% (8,180 units) of the County's housing stock. Smaller apartment buildings will continue to lose market share in the County because they are less efficient than more modern multi-family complexes/communities. All things being equal, future development most likely will seek to maximize the yield of development (or redevelopment) parcels to offset acquisition and construction costs.
- The submarkets with the largest number of housing units (Linthicum-Severn, Brooklyn Park-Glen Burnie-Pasadena, Severna Park-Crownsville, and Annapolis Neck-Broadneck submarkets) offer a more diverse housing supply due to stronger growth pressures resulting from their proximity to employment and transportation access (Table 3-1). Multifamily and mixed-use development are more prevalent in these areas, reflecting the marketplace trying to maximize the efficiency of well-located properties along the Baltimore-Washington Parkway corridor, Ritchie Highway (Maryland Highway 2) and Ridge Road. These corridors give residents convenient access to the regional shopping center (Arundel Mills Shopping Mall) and BWI Airport. Additionally, the increase in jobs and expansion have given these areas opportunities for new development and revitalization.

¹ American Community Survey (2012-2016) data series

**Table 3-1
 Housing Characteristics by Unit Type
 Anne Arundel County and Submarket Areas (2012-2016 ACS Estimates)**

Submarket Areas	HOUSING TYPES						Total Inventory
	Single Family (Detached)	Single Family (Attached)	2 to 4 Units	5 to 9 Units	10 or More Units	Mobile Home/Other	
SM 1 - Jessup-Maryland City	3,452	5,960	174	617	2,830	452	13,485
SM 2 - Linthicum-Severn	16,249	4,761	330	466	2,192	860	24,858
SM 3 - Brooklyn Park-Glen Burnie-Pasadena	30,152	10,326	1,403	2,531	9,177	437	54,026
SM 4 - Lake Shore	9,113	1,047	50	0	478	15	10,703
SM 5 - Odenton	5,905	4,233	139	390	4,122	404	15,193
SM 6 - Severna Park-Crownsville	18,535	358	120	29	718	236	19,996
SM 7 - Annapolis Neck-Broadneck	18,737	5,359	304	996	3,694	61	29,151
SM 8 - Crofton	5,993	4,717	189	342	734	0	11,975
SM 9 - South County	6,450	65	0	11	26	1,630	8,182
SM 10 - Edgewater-Deale-Shady Side	12,310	1,066	89	0	238	91	13,794
Total	126,896	37,892	2,798	5,382	24,209	4,186	201,363
PERCENT DISTRIBUTION							
SM 1 - Jessup-Maryland City	2.7%	15.7%	6.2%	11.5%	11.7%	10.8%	6.7%
SM 2 - Linthicum-Severn	12.8%	12.6%	11.8%	8.7%	9.1%	20.5%	12.3%
SM 3 - Brooklyn Park-Glen Burnie-Pasadena	23.8%	27.3%	50.1%	47.0%	37.9%	10.4%	26.8%
SM 4 - Lake Shore	7.2%	2.8%	1.8%	0.0%	2.0%	0.4%	5.3%
SM 5 - Odenton	4.7%	11.2%	5.0%	7.2%	17.0%	9.7%	7.5%
SM 6 - Severna Park-Crownsville	14.6%	0.9%	4.3%	0.5%	3.0%	5.6%	9.9%
SM 7 - Annapolis Neck-Broadneck	14.8%	14.1%	10.9%	18.5%	15.3%	1.5%	14.5%
SM 8 - Crofton	4.7%	12.4%	6.8%	6.4%	3.0%	0.0%	5.9%
SM 9 - South County	5.1%	0.2%	0.0%	0.2%	0.1%	38.9%	4.1%
SM 10 - Edgewater-Deale-Shady Side	9.7%	2.8%	3.2%	0.0%	1.0%	2.2%	6.9%
Total	63.0%	18.8%	1.4%	2.7%	12.0%	2.1%	100.0%

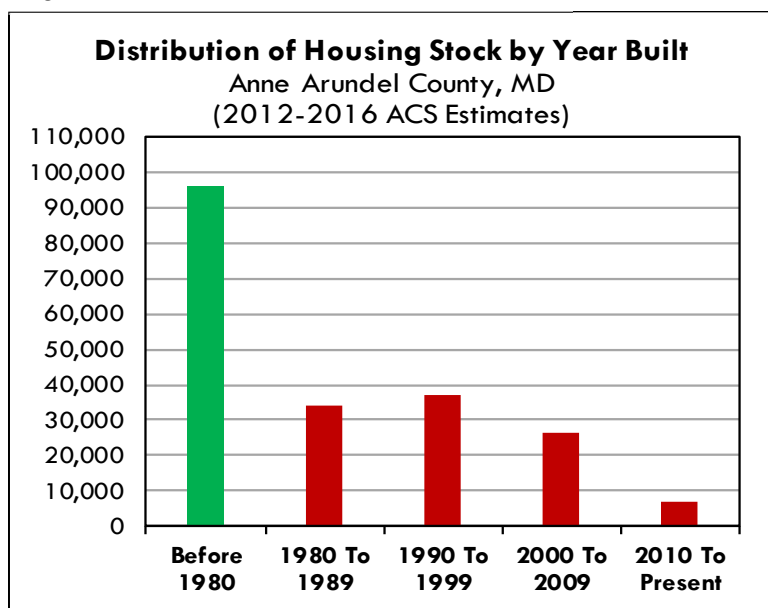
Source: U.S. Census American Community Survey Estimates 2012-2016 and RKG Associates, Inc., 2018

2. Age of Housing Stock

Almost half of the residential development in Anne Arundel County occurred before 1980 (Figure 3-1). Growth since 1980 has occurred in clusters of new construction, primarily concentrated in areas that are considered as activity centers and are more densely developed. More specific housing age findings include:

- Anne Arundel County has been an attractive suburban community for decades. Almost 48% of the County's housing stock was built prior to 1980.
- All but two (Jessup-Maryland City and Odenton) submarkets have concentrations of housing built before 1980. This older

Figure 3-1



Source: U.S. Census ACS Estimates & RKG Associates, Inc., 2018

housing supply constitutes more than 40% of all units in the other eight submarkets. The Odenton submarket has the lowest concentration of older housing at 26.8%.

- Since 2000, the pace of residential development has slowed in Anne Arundel County. Between 1980 and 2000, the County’s housing supply increased by approximately 3,500 housing units annually. Since then, construction of new housing development throughout the County exhibited trends at a slower rate (approximately 2,700 units annually between 2000 and 2010; and 900 units annually since 2010). This slowdown is due to several factors including the economic recession of 2007, adequate public facility requirements, particularly for schools, and the diminishing amount of undeveloped land.
- The 3.8% of the County’s total housing inventory built since 2010 has been concentrated in areas where regulatory controls and growth pressures have justified more densely developed communities (Table 3-2). This activity has been concentrated in the Jessup-Maryland City, Linthicum-Severn and Brooklyn Park-Glen Burnie-Pasadena submarkets (4,779 of the 7,612 built during this period). Of the total housing units within Anne Arundel County 70.9% are owner-occupied and 22.8% are renter-occupied.

Table 3-2
Distribution of Housing Units by Age
Anne Arundel County and Submarket Areas (2018)

	SUBMARKET AREAS										County Inventory
	SM 1 - Jessup-Maryland City	SM 2 - Linthicum-Severn	SM 3 - B.Park-Glen Burnie-Pasadena	SM 4 - Lake Shore	SM 5 - Odenton	SM 6 - Severna Park-Crownsville	SM 7 - Annapolis Neck-Broadneck	SM 8 - Crofton	SM 9 - South County	SM 10 - Edgewater-Deale-Shady Side	
NUMBER OF UNITS											
Before 1980	3,702	11,298	31,852	6,032	4,072	10,987	12,494	5,028	3,397	7,008	95,870
1980-1989	800	3,649	9,743	2,481	972	3,556	7,479	1,990	1,644	1,616	33,930
1990-1999	4,660	4,130	6,604	1,135	4,732	2,797	5,516	3,522	1,648	2,547	37,291
2000-2009	3,360	4,197	3,595	871	4,599	1,962	3,196	1,239	1,283	2,358	26,660
2010-Present	963	1,584	2,232	184	818	694	466	196	210	265	7,612
Total	13,485	24,858	54,026	10,703	15,193	19,996	29,151	11,975	8,182	13,794	201,363
PERCENT DISTRIBUTION											
Before 1980	27.5%	45.5%	59.0%	56.4%	26.8%	54.9%	42.9%	42.0%	41.5%	50.8%	47.6%
1980-1989	5.9%	14.7%	18.0%	23.2%	6.4%	17.8%	25.7%	16.6%	20.1%	11.7%	16.9%
1990-1999	34.6%	16.6%	12.2%	10.6%	31.1%	14.0%	18.9%	29.4%	20.1%	18.5%	18.5%
2000-2009	24.9%	16.9%	6.7%	8.1%	30.3%	9.8%	11.0%	10.3%	15.7%	17.1%	13.2%
2010-Present	7.1%	6.4%	4.1%	1.7%	5.4%	3.5%	1.6%	1.6%	2.6%	1.9%	3.8%
Total	6.7%	12.3%	26.8%	5.3%	7.5%	9.9%	14.5%	5.9%	4.1%	6.9%	100.0%

Source: U.S. Census, ESRI Community Profile Reports, and RKG Associates, Inc., 2018

3. Housing Unit Occupancy and Tenure

According to the U.S. Census Bureau, approximately 6.4% of total housing units in Anne Arundel County are considered vacant or seasonal. This is common for a County with waterfront access where second homeownership is more prevalent. This level of vacancy is quite low and points to a healthy housing market in high demand. The percentage of vacant/seasonal housing has been largely attributed to submarkets 7 and 10, which have the highest vacancy rates (Table 3-3).

Table 3-3
Tenure of Owner-Occupied vs Renter-Occupied Units
Anne Arundel County and Submarket Areas (2018)

	SUBMARKET AREAS										County Inventory
	SM 1 - Jessup-Maryland City	SM 2 - Linthicum-Severn	SM 3 - B.Park-Glen Burnie-Pasadena	SM 4 - Lake Shore	SM 5 - Odenton	SM 6 - Severna Park-Crownsville	SM 7 - Annapolis Neck-Broadneck	SM 8 - Crofton	SM 9 - South County	SM 10 - Edgewater-Deale-Shady Side	
Total Units	13,485	24,858	54,026	10,703	15,193	19,996	29,151	11,975	8,182	13,794	201,363
Owner-Occupied Units	6,302	17,848	33,389	9,005	10,474	16,824	21,540	9,260	7,034	11,043	142,719
Renter-Occupied Units	6,317	5,694	16,933	1,000	3,814	1,845	5,572	2,344	705	1,627	45,851
Vacant Units	866	1,316	3,704	698	905	1,327	2,039	371	443	1,124	12,793
PERCENT DISTRIBUTION											
Share of County Total	6.7%	12.3%	26.8%	5.3%	7.5%	9.9%	14.5%	5.9%	4.1%	6.9%	100.0%
Owner-Occupied Units	46.7%	71.8%	61.8%	84.1%	68.9%	84.1%	73.9%	77.3%	86.0%	80.1%	70.9%
Renter-Occupied Units	46.8%	22.9%	31.3%	9.3%	25.1%	9.2%	19.1%	19.6%	8.6%	11.8%	22.8%
Vacant Units	6.4%	5.3%	6.9%	6.5%	6.0%	6.6%	7.0%	3.1%	5.4%	8.1%	6.4%

Source: U.S. Census, ESRI Community Profile Reports, and RKG Associates, Inc., 2018

4. Value of Housing Stock and Rent Levels

a. Owner-Occupied Units

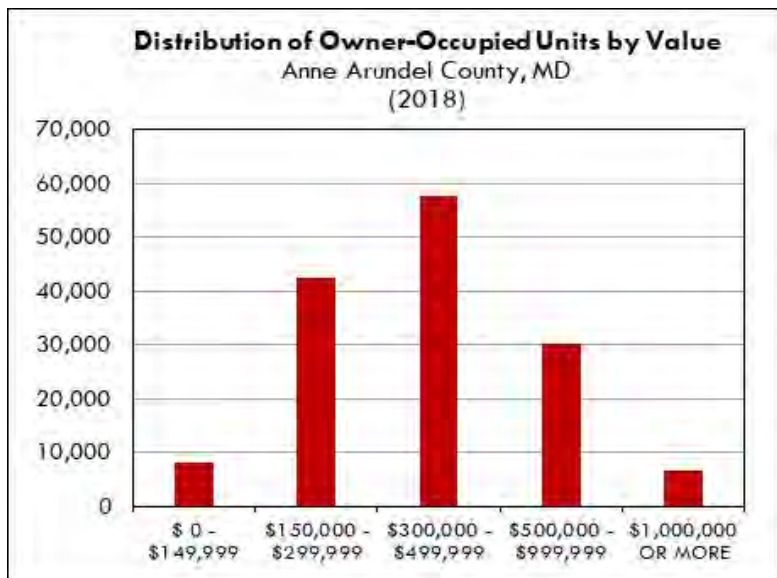
The 2018 ESRI data indicate there are fewer than 8,000 owner-occupied properties throughout Anne Arundel County with a home value under \$150,000 (approximately 5.5% of the total residential property count). This indicates that Anne Arundel County and its submarket areas have a much larger concentration of mid-level and higher value homes (Figure 3-2).

The data indicate there is no correlation between housing value and location in the County. The highest percentage of lower-value homes and higher-value homes reside in South County (Submarket 9).

However, the higher value homes are most common in the lower density areas, on the peninsulas and rural areas (Severna Park-Crownsville and South County submarkets) in the County. New residential development typically is priced in the higher value cohorts discussed in more detail in the development trends analysis. Specific findings regarding owner-occupied housing value include:

- Based on the U.S. Census data, owner-occupied homes valued between \$300,000 and \$499,999 comprise the largest share of the County’s housing stock at 39.0% followed by homes valued between \$150,000 and \$299,999 (28.5%). (Table 3-4). Compared to the greater Metro region, these values are the mid-range.
- The County’s lower value owner-occupied units are concentrated in Submarkets 1, 2 and 3. Submarkets 2 and 3 have the highest concentration of older homes. Approximately 54% of the County’s owner-occupied housing valued below \$150,000 are located within these two

Figure 3-2



Source: ESRI and RKG Associates, Inc., 2018

submarkets. In comparison, these same submarkets account for approximately 45% of all units built prior to 1980. This finding is consistent with other regional housing markets. These submarkets could be a focus area for the County when looking at housing rehabilitation and affordability.

Table 3-4
Value of Owner-Occupied-Units
Anne Arundel County and Submarket Areas (2018)

	SUBMARKET AREAS										County Inventory
	SM 1 - Jessup-Maryland City	SM 2 - Linthicum-Severn	SM 3 - B.Park-Glen Burnie-Pasadena	SM 4- Lake Shore	SM 5 - Odenton	SM 6 - Severna Park-Crownsville	SM 7 - Annapolis-Neck-Broadneck	SM 8- Crofton	SM 9 - South County	SM 10 - Edgewater-Deale-Shady Side	
NUMBER OF UNITS											
\$0 - \$149,999	492	1,249	2,972	180	356	404	345	176	1,463	210	7,846
\$150,000 - \$299,999	1,935	5,051	18,397	2,188	3,058	1,481	3,554	2,139	443	2,385	40,632
\$300,000 - \$499,999	3,346	8,995	10,150	3,350	4,986	5,922	9,198	3,473	1,400	4,881	55,700
\$500,000 - \$999,999	510	2,445	1,636	2,846	1,906	7,184	6,677	3,260	2,898	2,827	32,189
\$1,000,000 OR MORE	19	107	234	441	168	1,834	1,766	213	830	740	6,352
TOTAL	6,302	17,848	33,389	9,005	10,474	16,824	21,540	9,260	7,034	11,043	142,719
PERCENT DISTRIBUTION											
\$0 - \$149,999	7.8%	7.0%	8.9%	2.0%	3.4%	2.4%	1.6%	1.9%	20.8%	1.9%	5.5%
\$150,000 - \$299,999	30.7%	28.3%	55.1%	24.3%	29.2%	8.8%	16.5%	23.1%	6.3%	21.6%	28.5%
\$300,000 - \$499,999	53.1%	50.4%	30.4%	37.2%	47.6%	35.2%	42.7%	37.5%	19.9%	44.2%	39.0%
\$500,000 - \$999,999	8.1%	13.7%	4.9%	31.6%	18.2%	42.7%	31.0%	35.2%	41.2%	25.6%	22.6%
\$1,000,000 OR MORE	0.3%	0.6%	0.7%	4.9%	1.6%	10.9%	8.2%	2.3%	11.8%	6.7%	4.5%
TOTAL	4.4%	12.5%	23.4%	6.3%	7.3%	11.8%	15.1%	6.5%	4.9%	7.7%	100.0%

Source: U.S. Census, ESRI Community Profile Reports, and RKG Associates, Inc., 2018

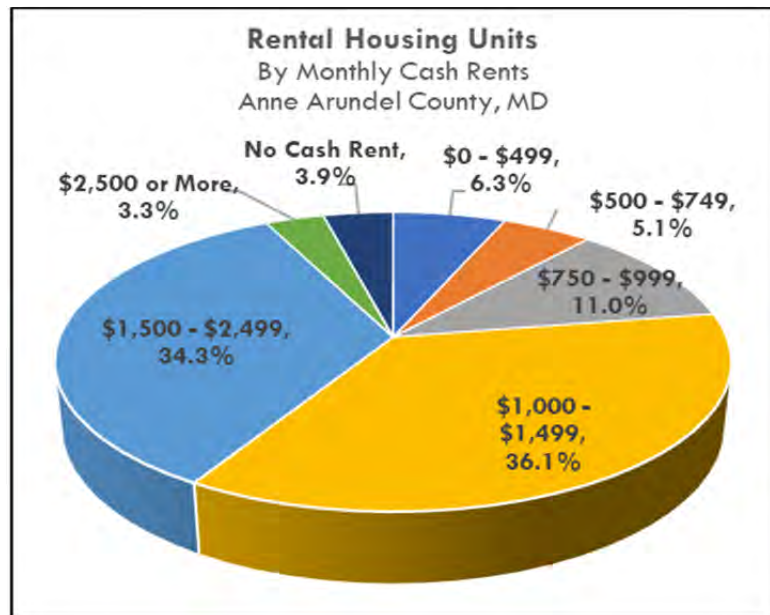
b. Renter-Occupied Units

According to ACS estimates, more than two-thirds of renter-occupied units are priced between \$1,000 and \$2,500 per month (Figure 3-3). The ACS breakout of rents reflects the County's diverse rental housing supply. As for the State's competitive region, approximately 63% of the rental supply in the Baltimore-Washington MSA, as well as the State (54% of the total rental supply), contain values with similar rent ranges.

It is interesting to point out that less than 4% of the rental supply is priced above \$2,500 per month, a value that is commensurate with the region's urban centers and inner suburbs. To this point, only 2% of rental supply throughout the Baltimore-Washington MSA is priced above \$2,500 per month, except for Howard County which has over 4% of the rental supply valued within the same rent range (Table 3-5).

The Brooklyn Park-Glen Burnie-Pasadena submarket accounts for more than 35% of Anne Arundel County's rental housing supply with 16,933 units (Table 3-6). This submarket accounts for almost as many rental units as the next three submarkets combined (Jessup-Maryland City, Linthicum-Severn, and

Figure 3-3



Source: ACS Estimates 2012-2016 and RKG Associates, Inc., 2018

Annapolis Neck-Broadneck). This finding is consistent with the submarket's concentration and diversity of employment as well as strong transportation access (including BWI airport). This submarket also has the most urban development patterns in Anne Arundel County (not including the City of Annapolis).

Table 3-5
 Monthly Rental Rates of Rental Occupied Units
 Anne Arundel County and Submarket Areas

	BALTIMORE-WASHINGTON MSA							COMPETITIVE REGION	
	Anne Arundel County	Prince George's County	Baltimore County	Howard County	Harford County	Carroll County	Queen Anne's County	Baltimore-Washington MSA	State of Maryland
NUMBER OF UNITS									
With Cash Rent	44,058	114,670	102,777	28,413	19,182	10,573	3,046	322,719	702,031
\$0 - \$499	2,883	5,168	6,252	1,093	2,620	1,409	514	19,939	75,033
\$500 - \$749	2,320	3,563	9,415	1,318	2,418	2,100	466	21,600	81,073
\$750 - \$999	5,054	18,180	31,392	1,680	4,979	2,716	390	64,391	132,823
\$1,000 - \$1,499	16,551	59,418	40,625	11,642	6,221	3,023	899	138,379	244,582
\$1,500 - \$2,499	15,691	26,780	13,234	11,417	2,690	1,074	766	71,652	149,606
\$2,500 or More	1,505	1,561	1,859	1,263	254	251	11	6,704	18,914
No Cash Rent	1,791	2,957	4,127	804	1,050	764	356	11,849	27,678
TOTAL	45,795	117,627	106,904	29,217	20,232	11,337	3,402	334,514	729,709
PERCENT DISTRIBUTION									
With Cash Rent	96.2%	97.5%	96.1%	97.2%	94.8%	93.3%	89.5%	96.5%	96.2%
\$0 - \$499	6.3%	4.4%	5.8%	3.7%	12.9%	12.4%	15.1%	6.0%	10.3%
\$500 - \$749	5.1%	3.0%	8.8%	4.5%	12.0%	18.5%	13.7%	6.5%	11.1%
\$750 - \$999	11.0%	15.5%	29.4%	5.8%	24.6%	24.0%	11.5%	19.2%	18.2%
\$1,000 - \$1,499	36.1%	50.5%	38.0%	39.8%	30.7%	26.7%	26.4%	41.4%	33.5%
\$1,500 - \$2,499	34.3%	22.8%	12.4%	39.1%	13.3%	9.5%	22.5%	21.4%	20.5%
\$2,500 or More	3.3%	1.3%	1.7%	4.3%	1.3%	2.2%	0.3%	2.0%	2.6%
No Cash Rent	3.9%	2.5%	3.9%	2.8%	5.2%	6.7%	10.5%	3.5%	3.8%
% TOTAL of B-W MSA	13.7%	35.2%	32.0%	8.7%	6.0%	3.4%	1.0%	45.8%	100.0%

Source: U.S. Census, ESRI Community Profile Reports, and RKG Associates, Inc., 2018

Table 3-6
 Monthly Rental Rates of Rental-Occupied Units
 Anne Arundel County and Submarket Areas

	SUBMARKET AREAS										County Inventory
	SM 1 - Jessup-Maryland City	SM 2 - Linthicum-Severn	SM 3 - B.Park-Glen Burnie-Pasadena	SM 4 - Lake Shore	SM 5 - Odenton	SM 6 - Severna Park-Crownsville	SM 7 - Annapolis Neck-Broadneck	SM 8 - Crofton	SM 9 - South County	SM 10 - Edgewater-Deale-Shady Side	
NUMBER OF UNITS											
With Cash Rent	6,221	5,507	16,388	934	3,705	1,811	5,323	2,254	538	1,377	44,058
\$0 - \$499	33	456	1,651	102	216	53	294	13	8	57	2,883
\$500 - \$749	116	234	917	71	76	251	329	8	192	126	2,320
\$750 - \$999	39	393	3,803	36	113	215	200	25	86	144	5,054
\$1,000 - \$1,499	1,261	2,508	8,127	311	1,003	598	1,417	944	51	331	16,551
\$1,500 - \$2,499	4,305	1,786	1,867	403	2,255	537	2,691	1,149	111	637	15,691
\$2,500 or More	468	129	23	11	40	156	392	115	90	82	1,505
No Cash Rent	95	188	545	66	111	35	249	90	167	250	1,791
TOTAL	6,317	5,694	16,933	1,000	3,814	1,845	5,572	2,344	705	1,627	45,795
PERCENT DISTRIBUTION											
With Cash Rent	98.5%	96.7%	96.8%	93.4%	97.1%	98.2%	95.5%	96.2%	76.3%	84.6%	96.2%
\$0 - \$499	0.5%	8.0%	9.8%	10.2%	5.7%	2.9%	5.3%	0.6%	1.1%	3.5%	6.3%
\$500 - \$749	1.8%	4.1%	5.4%	7.1%	2.0%	13.6%	5.9%	0.3%	27.2%	7.7%	5.1%
\$750 - \$999	0.6%	6.9%	22.5%	3.6%	3.0%	11.7%	3.6%	1.1%	12.2%	8.9%	11.0%
\$1,000 - \$1,499	20.0%	44.0%	48.0%	31.1%	26.3%	32.4%	25.4%	40.3%	7.2%	20.3%	36.1%
\$1,500 - \$2,499	68.1%	31.4%	11.0%	40.3%	59.1%	29.1%	48.3%	49.0%	15.7%	39.2%	34.3%
\$2,500 or More	7.4%	2.3%	0.1%	1.1%	1.0%	8.5%	7.0%	4.9%	12.8%	5.0%	3.3%
No Cash Rent	1.5%	3.3%	3.2%	6.6%	2.9%	1.9%	4.5%	3.8%	23.7%	15.4%	3.9%
TOTAL	13.8%	12.4%	37.0%	2.2%	8.3%	4.0%	12.2%	5.1%	1.5%	3.6%	100.0%

Source: U.S. Census, ESRI Community Profile Reports, and RKG Associates, Inc., 2018

It should be noted that the category “units not paying cash rent” in Figure 3-3 are generally units provided free by friends or relatives or in exchange for services. Housing units on military bases also are classified in the “No cash rent” category. Units “rented for cash rent” usually involve a contract between one or more individuals and a service provider guaranteeing the individual shelter, usually a house or apartment, and services.

- Multifamily development has a higher concentration in the three northernmost submarkets, consistent with the prevailing development patterns and economic activity. The Annapolis Neck-Broadneck submarket has a smaller, but substantial concentration of rental housing due to its proximity to the City of Annapolis. The remaining submarkets have substantially higher concentrations of owner-occupied housing, consistent with the more suburban scale of those areas.
- According to American Community Survey estimates, Anne Arundel County has an estimated total of 45,795 rental-occupied units where approximately 77.6% of units are renting for \$1,000 or more per month (35,538). Anne Arundel County has a small concentration of renter-occupied units within the lower rent range. Approximately 11.4% of the total rental units are being rented for \$750 or lower per month (5,203).
- Roughly 15.2% of the renter-occupied units in Submarket 3 are comprised of rents \$750 per month or lower. This correlates with the submarkets total inventory of residential properties in which there is a balanced distribution of diverse housing options that are offered in one of the more densely developed submarkets in Anne Arundel County. Submarkets 4, 6 and 9 also have higher percentages of renter-occupied units priced at \$750 per month or lower.

5. Housing Analysis Implications

Newly constructed owner-occupied properties in densely developed areas throughout the County are primarily priced for higher-income households. This is commensurate with the limited housing options throughout the County, which may result in low to moderate-income households being priced out of the County’s housing market. Additionally, larger concentrations of moderate to higher value homes found in the Lake Shore, Severna Park, Annapolis Neck-Broadneck and Edgewater-Deale-Shady Side submarkets are attributed to large lot ownership properties and their location along the peninsulas and water bodies of Chesapeake Bay.

In terms of renter-occupied units, the County offers a variety of rental housing options across most income thresholds. However, rent ranges are concentrated on the higher end (\$1,500 or more per month) in both the region and Anne Arundel County’s submarkets. Many submarkets offer few rental housing options. Newly constructed renter-occupied housing has also been focused in densely developed areas and primarily priced for higher-income households.

D. HOUSING AFFORDABILITY ANALYSIS

RKG Associates prepared an analysis examining the existing distribution of housing units based on affordability for current households. This analysis of housing affordability provides community leaders with a sense of how the existing housing prices and rents align with household income levels.

1. Housing Affordability Defined

For this analysis, housing affordability was defined as housing priced at no more than 30% of a household’s monthly gross income. The definition is consistent with affordability thresholds used by the U.S. Department of Housing and Urban Development (HUD). While households may pay less than 30% of their

gross monthly income on housing costs, a household has the potential to become cost burdened when spending exceeds this limit. For homeownership, housing costs consist of mortgage payments (including principal & interest), and other associated costs such as homeowner’s insurance, property taxes, and homeowners’ association fees. The cost of housing for renter households in this analysis is gross rent which is the contract rent.

Housing affordability was evaluated as it relates to HUD household income limits to better understand housing supply and demand for households at income thresholds relevant to HUD programs and subsidies. The 2018 Fiscal Year income limits for the Baltimore-Columbia-Towson, MD MSA contains the following areas: Anne Arundel County, MD; Baltimore County, MD; Carroll County, MD; Harford County, MD; Howard County, MD; Queen Anne’s County, MD; and Baltimore City, MD (Table 3-7). Two-person household income limits were used for the rental housing analysis and three-person household income limits were used for the ownership housing analysis. These income limits were chosen based on their approximation of the average household size for both types of housing tenure and the fact that homeownership typically requires a greater household income. This does not account for larger families who may have less income available to spend on housing. While HUD typically reports household income at 50% of Area Median Income (AMI), RKG Associates substituted 60% limits in response to growing interest in pursuing low-income housing tax credits (LIHTC) developments nationally. Such projects typically provide affordable housing for persons/households earning at 60% AMI and below.

Table 3-7
HUD Fiscal Year 2018 Income Limits
Baltimore-Columbia, MD MSA

Threshold	2-Person	3-Person
30% of AMI	\$22,800	\$25,650
60% of AMI	\$45,600	\$51,300
80% of AMI	\$57,550	\$64,750
100% of AMI	\$76,000	\$85,500
120% of AMI	\$91,200	\$102,600

Source: U.S. Department of Housing and Urban Development, RKG Associates, Inc., 2018

2. Data Sources

In addition to those mentioned above, the data sources for this analysis include a combination of U.S. Census Bureau ACS 2012-2016 estimates and ACS 2017 1-year estimates. The estimates of renter-occupied and owner-occupied household incomes county-wide were used to represent the current housing cost. While this data can provide insight into relative housing values among two or more areas, it is a less accurate and reliable indicator of home prices in an area than actual sales data. A homeowner who has lived in a home for 20 years may have little knowledge of current market conditions and grossly underestimate the actual value of their home. They may misinterpret the question and simply list what they paid for it. For long time homeowners, this could be associated with a mortgage paid off years ago on a home bought decades ago. The ACS data does not provide the value of homes available for purchase over a given time span.

Residential supply information was provided by ACS 2012-2016 estimates for renter-occupied units by gross rent and ACS 2017 1-year estimates, the most recent information at this level, geographically, was available for owner-occupied units by housing value. The consultant acknowledges that comparing occupied housing units does not fully account for all the housing stock within the study area because it does not account for vacant units. However, it is not possible to determine to what extent the existing vacant units are ownership units or typical rental units (i.e. units in apartment buildings). Based on 2018 ESRI estimates, a relatively small portion of all housing units throughout the County are vacant (6.4%) and projected a commensurate rate by 2023 (6.3%). Additionally, Survey recipients living in subsidized housing or using a Housing Choice Voucher would report rent that is based on their income, not the actual market price. This leads to an over representation of units in the lowest price categories; those rates are only available because that household was able to get assistance.

To determine homeownership costs, data was gathered from a variety of sources, including the average property values from Anne Arundel County and mortgage rates from www.bankrate.com. Additionally,

FHA mortgage information was provided by HUD and conventional loan information was provided by Wells Fargo Bank.

3. Supply Analysis

The supply of homeownership units was identified by using owner-occupied housing by value data reported in the 2017 1-year ACS estimates. Ownership units are typically single-family homes, townhouses, and condominiums, but under various conditions, these housing types can be occupied by renter households and the ACS data classifies the supply by tenure and not by housing type. These owner-occupied units were apportioned by value across the affordability thresholds described earlier based on the maximum price that 30% (conventional) and 31% (FHA) of each income limit can afford when housing costs were included. The maximum home value for each threshold was determined by using the HUD 3-person Income Limit. Rental units were also distributed across the thresholds based on the maximum rent rate affordable for each income threshold. The maximum rent for each threshold was determined by dividing 30% of the HUD 2-person Income Limit by 12.

4. Housing Projections

Future housing projections between 2018 and 2035 were developed using Woods & Poole population and household projections; RKG's analysis of available land (see Chapter 8) and housing trends analysis. Housing values were derived from adjusted property assessment homes values, Zillow home value trends and the vacancy rates were assumed to be constant.

E. HOUSING SUPPLY ANALYSIS

1. Existing Ownership Supply

Owner-occupied housing units throughout the County and its submarket areas were apportioned into affordability thresholds based on their reported value range relative to the maximum home value affordable for households using both conventional and FHA loans. Conventional mortgages assume 20% down payment and FHA mortgages require at least a 3.5% down payment, with additional charges from Private Mortgage Insurance (PMI). While a small down payment is attractive to most home buyers, it results in a greater borrowed and higher mortgage payment. This effectively reduces the value of homes that can be purchased when an FHA loan is used. In today's mortgage environment, the traditional 20% down payment is becoming less common practice. According to the National Association of Realtors, 60% of first homebuyers put down 6% or less to buy their first home.² As such, the FHA and Conventional lending scenarios are off the high and low estimate of housing affordability, with the FHA scenario considered to be more reflective of typical lending practices.

- Over 55% of Owner-Occupied Housing Units in Anne Arundel County are Considered Affordable to Households Earning 100% of AMI or Less

According to the ACS 1-year estimate, the County contains approximately 156,684 owner-occupied housing units and 55.4% of these units are classified as affordable to households making 100% of area median income or less. This is true under conventional lending assumptions with a 20% down payment. Under FHA lending assumptions (3.5% down payment), this percentage drops to 37.4% for households making 100% of AMI or less. This is because the smaller down payment requires a larger mortgage amount, which reduces the buyer's ability to afford a more expensive home.

² <https://www.marketwatch.com/story/nobody-puts-20-down-on-a-house-anymore-2017-07-24>

- Lower Value Owner-Occupied Housing Units are Limited and are Concentrated in Only a Few Submarkets

Based on the conventional lending assumptions, roughly 49,575 (31.6%) of owner-occupied housing units are priced affordable for households earning 80% of AMI or less, which represents homes priced at \$288,778 or lower. For FHA lending, approximately 13,000 (8.5%) owner-occupied housing units are priced within the same threshold for homes priced at \$185,959 or below. According to ESRI's Community Profile Report, only 6% of the owner-occupied housing units are valued below \$150,000. Concentrations of these units (72%) are located within submarkets 2 (Linthicum-Severn), 3 (Brooklyn Park-Glen Burnie-Pasadena) and 9 (South County) (Table 3-8).

**Table 3-8
 Housing Units by Value
 Anne Arundel County, MD (2018)**

	Traditional Ownership Units				
	Limit	Home Value Range		Traditional Ownership Units	% of Total
		Low End	High End		
CONVENTIONAL LOAN					
30% of AMI and Below	\$113,995	\$0	\$113,995	6,751	4.3%
30% to 60% of AMI	\$228,792	\$113,996	\$228,792	22,134	14.1%
60% to 80% of AMI	\$288,778	\$228,793	\$288,778	20,690	13.2%
80% to 100% of AMI	\$381,554	\$288,779	\$381,554	37,167	23.7%
100% to 120% of AMI	\$457,585	\$381,555	\$457,585	20,879	13.3%
120% of AMI and Above	\$457,586	\$457,586		49,063	31.3%
Total				156,684	100.0%
FHA LOAN					
30% of AMI and Below	\$92,980	\$0	\$92,980	5,546	3.5%
30% to 60% of AMI	\$185,959	\$92,981	\$185,959	7,855	5.0%
60% to 80% of AMI	\$234,715	\$185,960	\$234,715	13,594	8.7%
80% to 100% of AMI	\$309,932	\$234,716	\$309,932	31,590	20.2%
100% to 120% of AMI	\$371,918	\$309,933	\$371,918	42,053	26.8%
120% of AMI and Above	\$371,919	\$371,919		56,046	35.8%
Total				156,684	100.0%

Source: U.S. Census Bureau (2016 ACS 5-Year Estimates), RKG Associates, Inc., 2018

2. Existing Rental Housing Supply

- The Market of Rental Units within Anne Arundel County is for Units that Fall Between the 30% of AMI to 100% Threshold

Over 70% of the renter-occupied units fall within affordability thresholds for households earning between 30% and 100% of AMI with gross rents between \$571 and \$1,900 per month (Table 3-9). An additional 12.6% of rental units are affordably-priced for households earning extremely low incomes, 30% of AMI or

**Table 3-9
 Renter-Occupied Units
 Anne Arundel County, MD**

	Limit	Rent Range		Units	% of Units
		Low End	High End		
30% of AMI and Below	\$570	\$0	\$570	6,735	12.6%
30% to 60% of AMI	\$1,140	\$571	\$1,140	13,023	24.3%
60% to 80% of AMI	\$1,439	\$1,141	\$1,439	11,583	21.7%
80% to 100% of AMI	\$1,900	\$1,440	\$1,900	13,244	24.8%
100% to 120% of AMI	\$2,280	\$1,901	\$2,280	6,185	11.6%
120% of AMI and Above	\$2,281	\$2,281	n/a	2,728	5.1%
Total				53,498	100.0%

Source: U.S. Census Bureau (2016 ACS 5-Year Estimates), RKG Associates, Inc., 2018

below. These units have gross rents at \$570 or less per month. Approximately 16.7% of rental units are priced for households earning more than 100% of AMI or above \$1,900 per month.

F. HOUSEHOLD INCOME ANALYSIS

1. Existing Ownership Thresholds

- Nearly 61% of Anne Arundel’s Owner-Occupied Households Earn at least 100% of AMI

To understand the existing ownership, the household income of the 151,331 owner-occupied households were distributed across the housing affordability thresholds (Table 3-10). Approximately 61% of owner-occupied households are earning more than \$85,501 (100% of AMI and Above).

Table 3-10
Ownership Unit Demand
Anne Arundel County, MD

Threshold	Income - Housing Demand		% of	
	Threshold Minimum	Threshold Maximum	Households Within Threshold	Households Within Threshold
30% of AMI and Below	\$0	\$25,650	11,699	7.7%
30% to 60% of AMI	\$25,651	\$51,300	18,391	12.2%
60% to 80% of AMI	\$51,301	\$64,750	11,657	7.7%
80% to 100% of AMI	\$64,751	\$85,500	17,682	11.7%
100% to 120% of AMI	\$85,501	\$102,600	14,017	9.3%
120% of AMI and Above	\$102,601		77,885	51.5%
Total			151,331	100.0%

Source: U.S. Census Bureau (2016 ACS 5-Year Estimates), RKG Associates, Inc., 2018

*Thresholds based on 3-Person HUD Income Limits

- Roughly 20% of the County’s owner-occupied housing units are earning \$51,300 or less. This is commensurate with RKG’s analysis of the household income distribution throughout the County. Although all submarket areas in the County have a median household income above \$70,000, there are communities within these submarkets that contain household incomes earning less than \$50,000.

Table 3-11
Rental Unit Demand
Anne Arundel County, MD

Threshold	Income - Housing Demand		% of	
	Threshold Minimum	Threshold Maximum	Households Within Threshold	Households Within Threshold
30% of AMI and Below	\$0	\$22,800	8,196	15.3%
30% to 60% of AMI	\$22,801	\$45,600	10,736	20.1%
60% to 80% of AMI	\$45,601	\$57,550	5,488	10.3%
80% to 100% of AMI	\$57,551	\$76,000	7,940	14.8%
100% to 120% of AMI	\$76,001	\$91,200	13,629	25.5%
120% of AMI and Above	\$91,201		7,509	14.0%
Total			53,498	100.0%

Source: U.S. Census Bureau (2016 ACS 5-Year Estimates), RKG Associates, Inc., 2018

2. Existing Rental Thresholds

- Approximately 35% of Household Incomes are earning less than \$45,600 (60% AMI and Below). The largest concentration of households (39.5%) earn \$76,000 or more. (Table 3-11).

G. HOUSING PROJECTIONS (2018-2035)

1. Methodology and Approach

The following section addresses the issue of new housing construction in Anne Arundel County between 2018 and 2035. The land demand projection model presented in Chapter 8 was the source of new housing construction projections contained in this section, which were derived from adjusted property assessment homes values.

Future housing demand will be driven in large part by annual increases in population and households demanding new housing. While not every new household in the future will demand a new housing unit, RKG Associates assumes that current levels of vacancy will remain stable in the future and that as new housing units are delivered to the market, they will be filled by new County residents or by existing residents. Eventually, those existing units that are vacated by Anne Arundel County residents will be absorbed by new household growth.

2. Ownership Housing Unit Projections

a. Ownership Housing Unit and Value Projections (2018-2035)

According to RKG’s land demand projection model presented in Chapter 8, approximately 28,373 new residential units are projected to be constructed between 2018 and 2035 (Table 3-12). This number is approximately 5,500 units fewer than what was constructed in the County during the previous 17-year period from 2000 to 2017. This projection of 28,373 new units is slightly higher than the number of new households projected between 2018 and 2035 (28,152 households) as reported in Chapter 8. This is largely due to a projected household decline in two submarkets (Lake Shore and Crofton) during the 2030-2035 period. However, this small decline in households was not matched by a reduction in the number of new housing units constructed from previous growth in the number of households.

In order to estimate the affordability of housing in the future, RKG projected housing values by inflating current home values out to 2035. This was done at the submarket level and accounts for the fact that each submarket has a different housing mix and price points. As such, the total for Anne Arundel County reflects the blended average of all ten submarkets. It should be noted, that while these new housing units will be constructed over the next 17 years, the analysis treats them as though they are priced to sell in 2035. This is because they are being compared against the future value of the County’s existing housing stock and projected Area Median Income levels for 2035.

Table 3-12
Projected New Housing Construction and Assessed Values (2018-2035)
Anne Arundel County, MD

Unit Type	Anne Arundel County Total Inventory 2018-2035				
	Residential Units	Total Bldg. SF	Avg. Bldg SF	Total AV/SF	AV/Unit
New Residential Construction (2018 Estimated Values)					
Single Family	15,542	43,511,434	2,800	\$ 200	\$ 559,591
Townhome	8,639	17,272,628	1,999	\$ 166	\$ 332,260
Condominium	64	85,376	1,342	\$ 163	\$ 218,883
Apartment	4,105	3,809,293	928	\$ 160	\$ 148,625
Mobile Home	23	34,151	1,456	\$ 68	\$ 99,008
Total Housing Units	28,373	64,712,882	2,281		
Annual Value Appreciation Rate 1.70%					
Unit Type	Anne Arundel County Total Inventory 2018-2035				
	Residential Units	Total Bldg. SF	Avg. Bldg SF	Total AV/SF	AV/Unit
New Residential Construction (2035 Projected Values)					
Single Family	15,542	43,511,434	2,800	\$ 298	\$ 833,297
Townhome	8,639	17,272,628	1,999	\$ 247	\$ 494,775
Condominium	64	85,376	1,342	\$ 243	\$ 325,943
Apartment	4,105	3,809,293	928	\$ 238	\$ 221,320
Mobile Home	23	34,151	1,456	\$ 101	\$ 147,435
Total Housing Units	28,373	64,712,882	2,281		

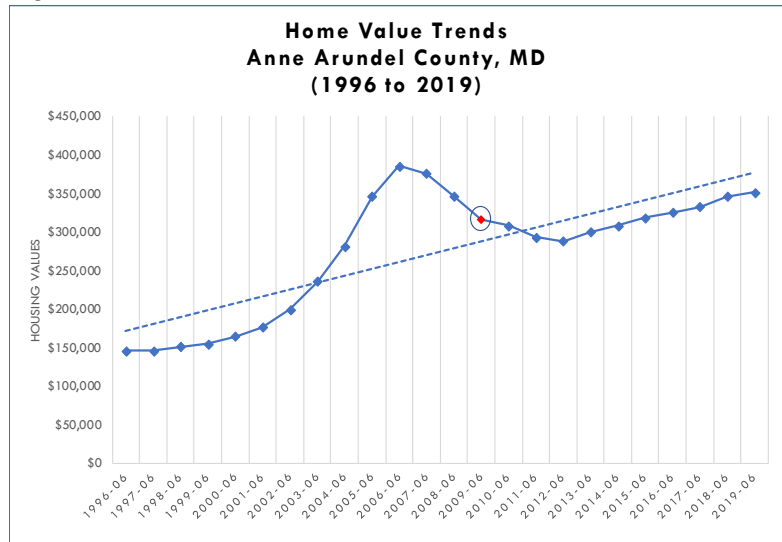
Source: Anne Arundel County Property Assessor, 2017 and RKG Associates, Inc., 2019

RKG Associates then analyzed Anne Arundel County home value changes over the past 10 years, as reported by Zillow.com, a home valuation and real estate listing website. Between June 2009 and June 2019, median home values in Anne Arundel County increased from \$315,200 to \$350,900, for a change of \$35,700 or 11.3%. This period included the last recession in 2009 and 2010 and the value recovery that has followed. However, it did not include the full home value loss that occurred

leading up to the recession, which started in June 2006 and continued until January 2012 (Figure 3-4). While home value declines do occur on occasion during severe real estate declines, the magnitude of decline that occurred between 2006 and 2012 is unprecedented and would not be anticipated in the future.

However, over the next 17 years, it would be reasonable to expect more than one recession to slow long-term home appreciation rates, which have been steadily increasing since 2012. RKG used an annual appreciation rate of 1.13%, which reflects all existing housing units, but does not reflect the sales price of new housing construction, which tends to be higher than existing home sales. To reflect the higher prices of new housing construction, RKG factored in 50% premium on top of annual appreciation rates to increase the rate to 1.70% annually. Finally, Zillow reports that there has been a 14.1% difference between home sales

Figure 3-4



Source: Zillow, Inc. data series and RKG Associates, Inc., 2019

prices and average home values between January 2010 and today. To reflect the difference between the two values, RKG increased the future appreciated home values by 14.1% to arrive at a projected sales price of new housing construction in 2035.

Once an average value was established for each housing type (e.g., single family, town home, etc.), RKG then created a spread of likely sales values on either side of the median value. This accounted for the fact that new housing construction will fall within a range of prices, that RKG estimated at 15% below and above the average home value. This spread in values accounts for different finish levels (i.e., contractor grade to custom upgrades) and lot sizes for the same size homes. It also accounts for the fact that homebuilders in Anne Arundel County tend to build to the upper end of the housing market, and thus there isn't a large value spread from the average new construction home sales price.

The results in Table 3-13 shows the future value spreads by the various housing types. The difference between the future value of newly constructed homes in 2035 and the value of "existing homes" is a price premium of roughly 24%. At the high end of the price range, this spread is even greater. Apartments were not included in this analysis because their future value and affordability is based on rent levels and not sales prices per square foot. The 2035 rental housing projections are presented later in this section.

Table 3-13
 Projected New Housing Construction Value Ranges (2035)
 Anne Arundel County, MD (2035)

	No. of Units	Value Spread	Low	Avg	High
Single Family	15,542	\$ 249,989	\$ 708,302	\$ 833,297	\$ 958,292
Townhome	8,639	\$ 148,432	\$ 420,559	\$ 494,775	\$ 568,991
Condominiums	64	\$ 97,783	\$ 277,051	\$ 325,943	\$ 374,834
Apartments	--	--	--	--	--
Mobile Homes	23	\$ 44,230	\$ 125,319	\$ 147,435	\$ 169,550
Totals	24,268				

Source: RKG Associates, Inc., 2019

b. New Ownership Housing Price Affordability

In order to assess the affordability of new construction in 2035, RKG allocated the future home sales into the same adjusted home value ranges presented in the affordable housing projections at the beginning of Section I. While the two analyses use different data sources and must be kept separate, it is useful to see how new construction sales prices would fit into the affordable housing value ranges as denoted by the AMI % Ranges.

Based on future area median incomes for 3-person households in 2035, the analysis indicates that only .03% (77 units) will be priced at 80% of AMI and below (Table 3-14). These housing units consist of mobile homes, condos, townhomes, as well as some lower priced single-family homes. The most likely location for these lower priced single family homes would be in the Brooklyn Park-Glen Burnie-Pasadena submarket, which is projected to capture the largest share of new housing development and currently has the most affordable existing home values in the County. In contrast, most (85.3%) of the future housing construction will sell at price points that cater to households making at least 100% of the area median income at that time (\$126,448/3-person household). Households earning between 80 and 100% of AMI will account for 14.4% of the total newly constructed housing units.

Table 3-14
Distribution of New Housing Construction by Housing Value Range and AMI Range
Anne Arundel County, MD (2018 and 2035)

AMI % Range	2018 Home Value Ranges		2035 Home Value Ranges		New Housing Construction	
	Low Value	High Value	Low Value	High Value	No. of New Units	% Dist. of New Units
0/30	\$0	\$9,999	\$ -	\$ 12,033	-	0.0%
0/30	\$10,000	\$14,999	\$ 12,034	\$ 18,050	-	0.0%
0/30	\$15,000	\$19,999	\$ 18,051	\$ 24,067	-	0.0%
0/30	\$20,000	\$24,999	\$ 24,068	\$ 30,084	-	0.0%
0/30	\$25,000	\$29,999	\$ 30,085	\$ 36,101	-	0.0%
0/30	\$30,000	\$34,999	\$ 36,102	\$ 42,118	-	0.0%
0/30	\$35,000	\$39,999	\$ 42,119	\$ 48,135	-	0.0%
0/30	\$40,000	\$49,999	\$ 48,136	\$ 60,169	-	0.0%
0/30	\$50,000	\$59,999	\$ 60,170	\$ 72,203	-	0.0%
0/30	\$60,000	\$69,999	\$ 72,204	\$ 84,237	-	0.0%
0/30	\$70,000	\$79,999	\$ 84,238	\$ 96,271	-	0.0%
0/30	\$80,000	\$89,999	\$ 96,272	\$ 108,305	-	0.0%
0/30	\$90,000	\$99,999	\$ 108,306	\$ 120,339	-	0.0%
30/60	\$100,000	\$124,999	\$ 120,340	\$ 150,424	13	0.1%
30/60	\$125,000	\$149,999	\$ 150,425	\$ 180,509	10	0.0%
30/60	\$150,000	\$174,999	\$ 180,510	\$ 210,594	2	0.0%
30/60	\$175,000	\$199,999	\$ 210,595	\$ 240,679	3	0.0%
30/60	\$200,000	\$249,999	\$ 240,680	\$ 300,849	10	0.0%
60/80	\$250,000	\$299,999	\$ 300,850	\$ 361,019	37	0.2%
80/100	\$300,000	\$399,999	\$ 361,020	\$ 481,359	3,502	14.4%
100/120/120+	\$400,000	\$499,999	\$ 481,360	\$ 601,699	7,212	29.7%
120+	\$500,000	\$749,999	\$ 601,700	\$ 902,549	8,785	36.2%
120+	\$750,000	\$999,999	\$ 902,550	\$ 1,203,399	3,342	13.8%
120+	\$1,000,000	--	\$ 1,229,500	--	1,350	5.6%
Totals					24,267	100.0%

Source: RKG Associates, Inc. 2019

3. New Apartment Projections (2018-2035)

a. Apartment Unit and Value Projections (2018-2035)

The projection and pricing of new apartment units relied on different data sources than the ownership housing analysis. According to the land demand projection model, 4,105 new apartments are projected to be constructed in the County between 2018 and 2035. This does not include other types of housing (i.e., single family, townhomes, condos, etc.) that might be rented in the future, which is quite common in Anne Arundel County.

The gross distribution of these apartments by submarket was obtained from the model, and the distribution of units by type was obtained from the County's recent apartment survey. Each submarket has a different distribution of apartments and different price points. The data in Table 3-15 shows that close to 49% of apartments in Anne Arundel County are 2-bedroom units and 38% are 1-bedroom. The analysis assumed that the distribution of apartment types by submarket would essentially remain the same during the projection period (2018-2035). While there is likely to be some variation over time as market conditions and housing preferences change, they are not likely to substantially change the distribution of all apartments in the County. By 2035, Odenton (1,324 units), Brooklyn Park-Glen Burnie-Pasadena (986 units) and Linthicum-Severn (907 units), are expected to capture the largest share on new apartment construction (Table 3-15).

Table 3-15
Distribution of Future Apartment Units by Submarket
Anne Arundel County, MD (2035)

Submarket	Apartment Type					Total Inventory
	Studio	One-Bedroom	Two-Bedroom	Three-Bedroom	Four Bedroom	
SM 1 - Jessup-Maryland City	0	170	318	69	0	557
SM 2 - Linthicum-Severn	32	263	463	141	8	907
SM 3 - Brooklyn Park-Glen Burnie-Pasadena	25	382	461	115	2	986
SM 4 - Lake Shore	0	0	0	0	0	0
SM 5 - Odenton	5	510	691	117	1	1,324
SM 6 - Severna Park-Crownsville	1	12	6	0	0	18
SM 7 - Annapolis Neck-Broadneck	7	161	126	10	0	304
SM 8 - Crofton	0	0	0	0	0	0
SM 9 - South County	0	0	0	0	0	0
SM 10 - Edgewater-Deale-Shady Side	2	2	5	0	0	8
TOTAL	73	1,499	2,070	452	11	4,105
PERCENT DISTRIBUTION						
SM 1 - Jessup-Maryland City	0.1%	30.4%	57.1%	12.4%	0.0%	100.0%
SM 2 - Linthicum-Severn	3.5%	29.0%	51.1%	15.5%	0.8%	100.0%
SM 3 - Brooklyn Park-Glen Burnie-Pasadena	2.6%	38.7%	46.8%	11.7%	0.2%	100.0%
SM 4 - Lake Shore	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%
SM 5 - Odenton	0.4%	38.5%	52.2%	8.8%	0.1%	100.0%
SM 6 - Severna Park-Crownsville	3.3%	63.8%	31.0%	1.9%	0.0%	100.0%
SM 7 - Annapolis Neck-Broadneck	2.4%	53.0%	41.4%	3.2%	0.0%	100.0%
SM 8 - Crofton	0.0%	37.9%	55.0%	7.1%	0.0%	100.0%
SM 9 - South County	0.0%	0.0%	100.0%	0.0%	0.0%	100.0%
SM 10 - Edgewater-Deale-Shady Side	23.3%	20.1%	55.3%	1.3%	0.0%	100.0%
% TOTAL	2.2%	37.9%	48.8%	10.8%	0.3%	100.0%

Source: Anne Arundel County & RKG Associates, Inc., 2019

b. Apartment Pricing and Affordability Projections

The pricing of apartments by submarket was obtained from CoStar, a leading real estate market data company. Because many of RKG’s submarket areas overlap with similar, but not identical CoStar apartment submarkets, RKG had to roughly apply CoStar rental pricing for comparable RKG submarkets. For a full comparison on RKG and CoStar submarkets, please refer to Chapter 6 – Real Estate Market Analysis (Table 3-16).

Table 3-16
Apartment Pricing Projects by Submarket
Anne Arundel County, MD (2018 & 2035)

Submarket Areas	Apartment Unit Type					CoStar Submarket
	Studio	One-Bedroom	Two-Bedroom	Three-Bedroom	Four Bedroom	
Apartment Pricing (2018)						
SM 1 - Jessup-Maryland City	\$ 1,495	\$ 1,453	\$ 1,656	\$ 1,764	\$ 1,764	BWI/AA
SM 2 - Linthicum-Severn	\$ 1,445	\$ 1,351	\$ 1,618	\$ 2,408	\$ 2,408	BWI North/Linthicum
SM 3 - Brooklyn Park-Glen Burnie-Pasadena	\$ 868	\$ 993	\$ 1,224	\$ 1,403	\$ 1,403	Route 2 Corridor
SM 4 - Lake Shore	\$ 868	\$ 993	\$ 1,224	\$ 1,403	\$ 1,403	Route 2 Corridor
SM 5 - Odenton	\$ 1,356	\$ 1,252	\$ 1,409	\$ 1,669	\$ 1,669	I-97/Crain Highway
SM 6 - Sevens Park-Crownsville	\$ 868	\$ 993	\$ 1,224	\$ 1,403	\$ 1,403	Route 2 Corridor
SM 7 - Annapolis Neck-Broadneck	\$ 1,386	\$ 1,397	\$ 1,573	\$ 1,400	\$ 1,400	Annapolis
SM 8 - Crofton	\$ 1,356	\$ 1,252	\$ 1,409	\$ 1,669	\$ 1,669	I-97/Crain Highway
SM 9 - South County	\$ 636	\$ 640	\$ 766	\$ 989	\$ 989	Southern Anne Arundel
SM 10 - Edgewater-Deale-Shady Side	\$ 636	\$ 640	\$ 766	\$ 989	\$ 989	Southern Anne Arundel
Apartment Pricing (2035)						
SM 1 - Jessup-Maryland City	\$ 2,532	\$ 2,461	\$ 2,805	\$ 2,988	\$ 2,988	BWI/AA
SM 2 - Linthicum-Severn	\$ 2,447	\$ 2,288	\$ 2,740	\$ 4,078	\$ 4,078	BWI North/Linthicum
SM 3 - Brooklyn Park-Glen Burnie-Pasadena	\$ 1,470	\$ 1,682	\$ 2,073	\$ 2,376	\$ 2,376	Route 2 Corridor
SM 4 - Lake Shore	\$ 1,470	\$ 1,682	\$ 2,073	\$ 2,376	\$ 2,376	Route 2 Corridor
SM 5 - Odenton	\$ 2,297	\$ 2,120	\$ 2,386	\$ 2,827	\$ 2,827	I-97/Crain Highway
SM 6 - Sevens Park-Crownsville	\$ 1,470	\$ 1,682	\$ 2,073	\$ 2,376	\$ 2,376	Route 2 Corridor
SM 7 - Annapolis Neck-Broadneck	\$ 2,347	\$ 2,366	\$ 2,664	\$ 2,371	\$ 2,371	Annapolis
SM 8 - Crofton	\$ 2,297	\$ 2,120	\$ 2,386	\$ 2,827	\$ 2,827	I-97/Crain Highway
SM 9 - South County	\$ 1,077	\$ 1,084	\$ 1,297	\$ 1,674	\$ 1,674	Southern Anne Arundel
SM 10 - Edgewater-Deale-Shady Side	\$ 1,077	\$ 1,084	\$ 1,297	\$ 1,674	\$ 1,674	Southern Anne Arundel
Weighted Average Rent	\$ 2,043	\$ 2,098	\$ 2,474	\$ 3,115	\$ 3,584	

Source: CoStar 2018 and RKG Associates, Inc., 2019

This pricing analysis produced a set of weighted average market rents for 2035 based on 2018 Fair Market Rent levels obtained from HUD for the Baltimore-Towson, MD Metropolitan FMR Area, which includes Anne Arundel County. RKG first inflated 2018 rents 17 years into the future. RKG documented changes in Fair Market Rents for the Anne Arundel market between 2009 and 2019 as reported by HUD, which is roughly the same period used to document changes in home values and home sales prices. The rent levels were then weighted by the distribution of units by type in Anne Arundel County. The weighting process gave greater weight to some rental price changes than others. For example, studio apartments only represent 2.2% of all apartments in the County, and as such, their 1.5% average annual rent change was weighted at only 3.35% of the total weighted growth rate. Rent changes for 1- and 2-bedroom units had the greatest influence on the weighted average annual rent change of 2.72% (Table 3-17). However, this rent

Table 3-17
HUD Fair Market Rents (FMRs), 2009-2019
Anne Arundel County, Maryland

Year	2009	2014	2019	Chg. 09'-19'		Wgt. Avg Annual Chge
				Actual \$ Chg.	Ann. % Chg.	
0-Bedroom	\$748	\$847	\$862	\$114	1.5%	3.35%
1-Bedroom	\$868	\$1,001	\$1,074	\$206	2.4%	89.95%
2-Bedroom	\$1,037	\$1,252	\$1,342	\$305	2.9%	143.53%
3-Bedroom	\$1,315	\$1,599	\$1,732	\$417	3.2%	34.25%
4-Bedroom	\$1,532	\$1,741	\$1,992	\$460	3.0%	0.90%

Source: HUD & RKG Associates, Inc., 2019

Note: Anne Arundel County, MD is contained in the Baltimore-Towson, MD HUD Metro FMR Area

growth trend reflects the change in “existing” apartment rents over the past 10-year period but does not reflect pricing of new apartments. As such, RKG adjusted recent rent growth by a 50% premium over existing apartment rates, which increased the new apartments’ appreciation rate to 4.08% annually.

Table 3-18
Distribution of New Apartment Unit Construction by Rent and AMI Range
Anne Arundel County, MD (2018 and 2035)

AMI % Range	2018 Rent Ranges		2035 Rent Ranges		New Apt. Construction	
	Low	High	Low	High	No. of Units	% Dist.
0/30	\$ -	\$ 99	\$ -	\$ 145	-	0.0%
0/30	\$ 100	\$ 149	\$ 146	\$ 218	-	0.0%
0/30	\$ 150	\$ 199	\$ 219	\$ 291	-	0.0%
0/30	\$ 200	\$ 249	\$ 292	\$ 364	-	0.0%
0/30	\$ 250	\$ 299	\$ 365	\$ 437	-	0.0%
0/30	\$ 300	\$ 349	\$ 438	\$ 510	-	0.0%
0/30	\$ 350	\$ 399	\$ 511	\$ 583	-	0.0%
0/30	\$ 400	\$ 449	\$ 584	\$ 657	-	0.0%
0/30	\$ 450	\$ 499	\$ 658	\$ 730	-	0.0%
0/30	\$ 500	\$ 549	\$ 731	\$ 803	-	0.0%
0/30	\$ 550	\$ 599	\$ 804	\$ 876	-	0.0%
30/60	\$ 600	\$ 649	\$ 877	\$ 949	-	0.0%
30/60	\$ 650	\$ 699	\$ 950	\$ 1,022	-	0.0%
30/60	\$ 700	\$ 749	\$ 1,023	\$ 1,095	-	0.0%
30/60	\$ 750	\$ 799	\$ 1,096	\$ 1,168	-	0.0%
30/60	\$ 800	\$ 899	\$ 1,169	\$ 1,315	-	0.0%
30/60	\$ 900	\$ 999	\$ 1,316	\$ 1,461	-	0.0%
60/80	\$ 1,000	\$ 1,249	\$ 1,462	\$ 1,827	113	2.7%
60/80	\$ 1,250	\$ 1,499	\$ 1,828	\$ 2,192	1,164	28.3%
80/100	\$ 1,500	\$ 1,999	\$ 2,193	\$ 2,923	2,499	60.9%
100+	\$ 2,000	\$ 4,500	\$ 2,924	\$ 6,581	330	8.0%
Totals					4,105	100.0%

Source: RKG Associates, Inc., 2019

Like the new ownership housing projection methodology, RKG set a rent price spread of 15% below and above the average rental value for each unit type (Table 3-18). This reflects the fact that not every unit will be constructed to the same quality or in the same location. If apartment rents within these price ranges distribute evenly throughout the ranges, RKG apportioned the 4,105 new apartments into escalated rent ranges shown in Table 3-23. Because most apartments are in the County are 1- and 2-bedroom units, most of the new units fall within these segments.

The results indicate that an estimated 31% of new apartment units in 2035 will be accessible to 2-person households making at least 60 to 80% of area median income which is projected to be \$112,370 in 2035. Approximately 60.9% will be priced between \$2,193 and \$2,923/mo., which in today’s dollars, would be enough to purchase a home priced between \$391,000 and \$520,000, with a 20% down payment.

H. FUTURE HOUSING IMPLICATIONS

1. Ownership Housing Market

Between 1980 to 2000, Anne Arundel County had an average increase of 3,500 housing units annually, since 2010 housing unit production has slowed to an average of 900 units annually. It is projected that 85.3% of the 24,267 future housing units will sell at price points that accommodate households making at least 100% AMI. Only 0.3% of newly constructed housing will be affordable for households making less than 80% AMI. The shortage of housing for households making 80% AMI or less is likely to create a housing market with lower vacancy rates and higher competition for lower value housing units.

2. Rental Housing Market

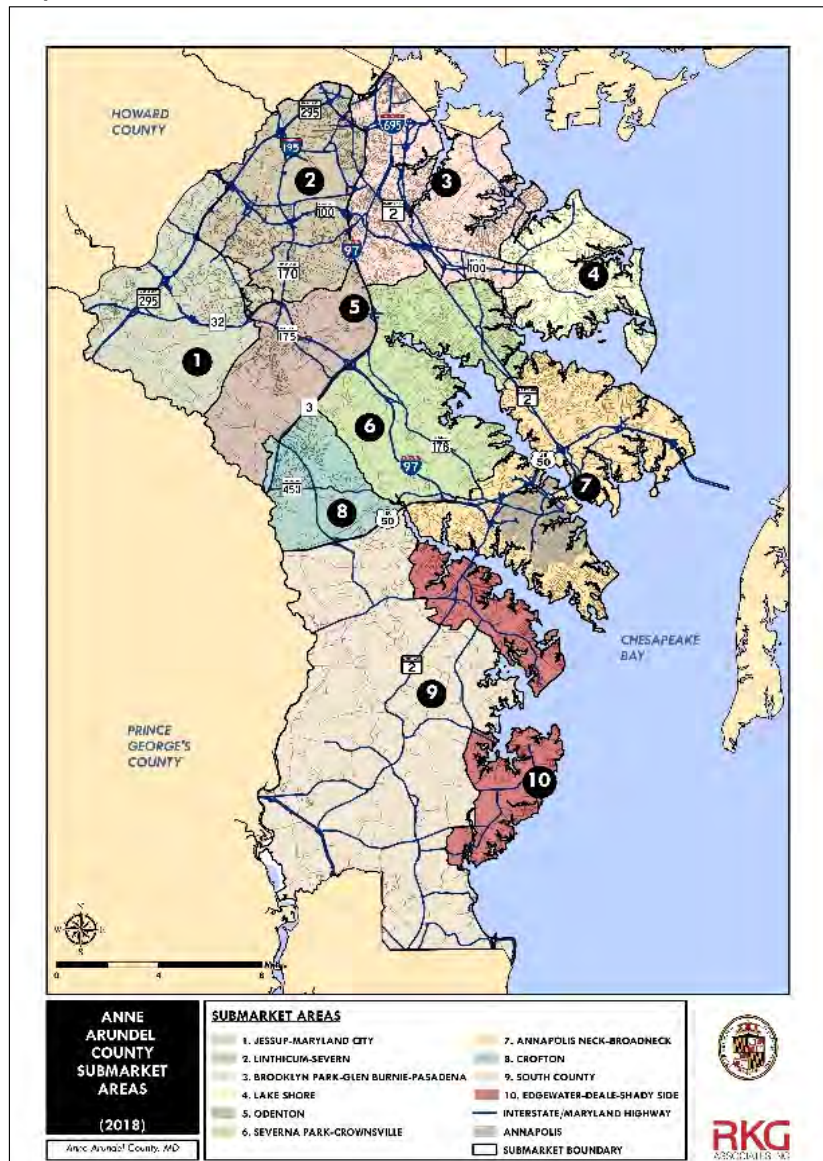
The pricing of rental units in Anne Arundel County is projected to increase at a faster rate than ownership housing in the future. Like new ownership housing construction, new rental housing construction is projected to accommodate households making 80% of AMI and above, with 60.9% of the 4,105 new apartment units priced between \$2,193 and \$2,923/mo. The development trend of luxury apartments leaves the households making 60% AMI or less vulnerable to shortages in housing stock.

4 DEVELOPMENT TRENDS ANALYSIS

A. INTRODUCTION

This following section analyzes residential and non-residential development activity in Anne Arundel County and its ten submarket areas. Both the residential and non-residential analyses document 10-year development trends by submarket for each decade beginning in 1980 and ending with the 2010-2017 1st QTR. The submarkets chosen for this analysis were derived in consultation with the County's Office of Planning & Zoning and roughly follow the County's small planning area boundaries (SPA).¹ In several instances, more than one small planning areas were combined to reflect an area with similar real estate market, land use and demographic characteristics. Breaking the County into submarkets was necessary to recognize the different growth patterns and potential throughout the County. For example, the area surrounding BWI Airport referred to as the Linthicum-Severn submarket has much different market and growth characteristics than the South County submarket. This approach allowed RKG to be more precise in its analysis of the County and allowed for customized growth projections based on the market positioning

Map 4-1



¹ <https://www.aacounty.org/departments/planning-and-zoning/long-range-planning/small-area-planning/index.html>

and development trends in each submarket. Map 4-1 displays the boundaries and location of Anne Arundel County’s submarket areas.

B. METHODOLOGY AND DATA SOURCES

In order to understand historic development trends over the past 36 years and the beginning of 2017, RKG Associates analyzed data obtained from MD PropertyView, which are real property assessment records maintained by the State Department of Assessments and Taxation. As stated previously, the data was segmented by various residential and non-residential land use types and tracked by decade from 1980 to 2017 1st QTR; the latest data available in which property assessment records were tracked through the early months of 2017. RKG parsed hundreds of thousands of real property records and grouped them by their submarket boundaries. The consultants then analyzed development by each structure’s “year-built” to determine the year in which new development activity occurred. New residential units were accounted for by the number of new parcels developed based on the unit type descriptions in the database (single-family, townhome, condominium, apartment, and mobile home), while non-residential development was tracked by the amount of new building square feet constructed. The data had some limitations in that the number of new apartment units built could not be discerned from the property assessment records; only the number of parcels developed. However, RKG was able to track the total new building square footage for apartments to determine how much new inventory was added during each decade.

C. COUNTY-WIDE DEVELOPMENT ACTIVITY

1. Residential Development Activity by Density Type

Regarding County-wide residential development activity, RKG analyzed two measures of development activity. The first included the analysis by housing type (e.g., single-family, townhome, apartments, etc.) as described above and the second was an analysis by residential development density. Density in this context refers to the average number of residential units developed on a per-acre basis throughout the County during the 1980-2017 study period.

Utilizing a previous study prepared by the Anne Arundel County Office of Planning & Zoning, RKG analyzed actual housing unit yields from known residential developments in the County over the past decade. Further, the consultants were able to convert those actual yields into four density thresholds. Those density thresholds were classified as Rural/Agricultural, Low-Density, Medium-Density and High-Density residential to track new residential activity by their density characteristics, regardless of their type (Table 4-1). The implication of the analysis is that residential development at different densities consumes land resources at different rates. For example, a single-family home built on a quarter-acre lot consumes less land per acre than an estate home on a rural 10-acre lot. In both instances, the yield is one housing unit, but the land consumed for that one unit is 40 times greater in the rural residential lot than the quarter-acre lot. To the

**Table 4-1
 Residential Floor-Area-Ratio Thresholds
 Anne Arundel County**

Residential Density Type	Target Yield (Units/Ac)	Avg. Bldg.		Low	High
		Calc. FAR	SF/Unit		
Rural/Agricultural	0.2	0.00878	1912	0.00001	0.00878
	0.1	0.00439	1912		
	0.2	0.00878	1912		
Residential Low- Density	0.09	0.00395	1912	0.00879	0.07462
	0.08	0.00351	1912		
	1.7	0.07462	1912		
	1.4	0.06145	1912		
Residential-Medium Density	2.9	0.12729	1912	0.07463	0.33070
	9.1	0.33070	1583		
Residential High-Density	12.2	0.44336	1583	0.33071	>0.33071
	20.9	0.45317	944.5		

Source: Anne Arundel County & RKG Associates, Inc., 2018

extent that low-density development is preserving the County’s rural character, the results are achieving their objective.

Map 4-2 illustrates a geospatial analysis of Anne Arundel County’s total residential inventory by density type. The results indicate much higher concentrations of rural/agriculture or low-density residential uses, mostly south of U.S. Route 50 in the South County submarket and areas north of Route 50 to Maryland Route 3. In past years, a substantial amount of development throughout the County had focused on retaining its suburban/urbanized communities and maintaining the rural communities. This indicates that development has been managed in ways that will maximize opportunities for sustained agricultural/forest lands and the retention of woodland and open space areas. The southern portion of the County has been identified as an area for continued preservation, protection, and restoration of its existing natural resources. This development pattern is also reflective of the local residents’ desire to maintain established communities and preserve South County’s rural character.

The County-wide geospatial analysis displays concentrations of higher density residential development north of Route 3. These areas are comprised of new residential neighborhoods near the County’s transportation and commercial corridors, specifically along the Ritchie Highway Corridor North/South, which extends throughout four of the Anne Arundel County’s submarket areas. This is commensurate with the designated town centers located in Glen Burnie and Odenton in addition to the Annapolis Neck-Broadneck areas which display larger concentrations of higher density land use and serve as major activity hubs. Overall, the County has continued to expand with clusters of new development in specific areas to meet the needs of a growing population and employment base while maintaining and preserving rural/urbanized areas.

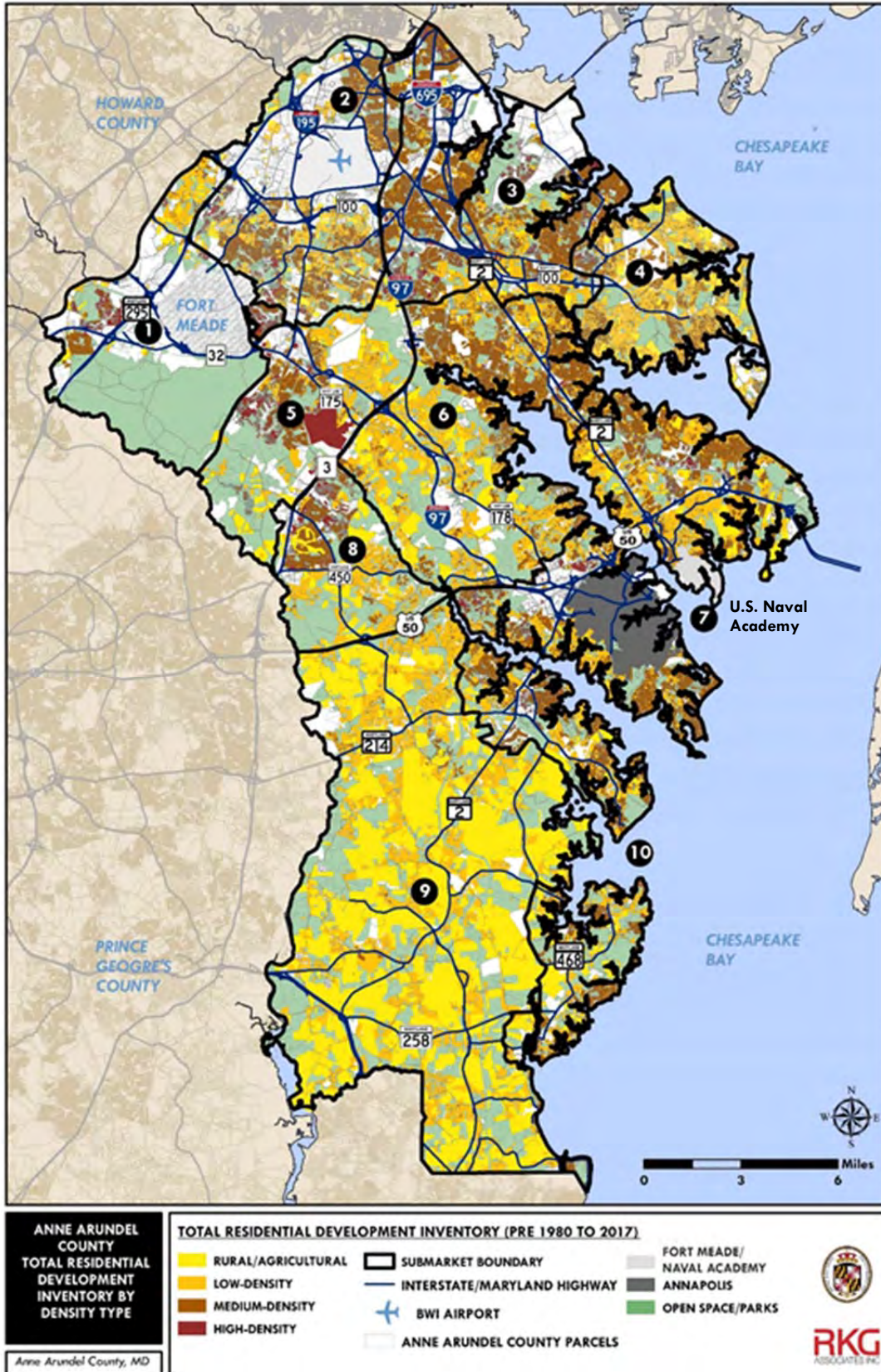
- Roughly 60% of the County’s Residential Development is Classified at Medium-Density but Much More Land is Consumed by Lower Density Residential
 Medium-density residential accounts for 60.7% of the County’s residential development parcels. This type of development yields on average between 2.9 units and 9.1 units per acre, with lot sizes ranging from a low of 4,800 SF (0.11 acres) to a high of 15,000 SF (0.34 acres) per lot. The high end of the density range would equate to a lower density townhome development. The total land acres consumed from medium-density residential (25,333 acres) equates to 21.9% of the County’s residentially developed land, while Rural and Low-Density residential accounts for only 19.4% of parcels and 76% of the total residential land (Table 4-2).
- Higher Density Residential Development Showing Substantial Growth in Anne Arundel County
 Since the 1980s, the percentage of new residential development classified as high-density has increased. High-density development, which peaked during the 1990s, has since declined but remains a larger share of the total building SF constructed.

Table 4-2
Residential Total Land Inventory by Density Type
Anne Arundel County, MD

	ANNE ARUNDEL COUNTY - ALL SUBMARKET AREAS									
	Parcels	Acreage	Total Bldg. SF	Avg. Bldg. SF/SF	Land Assessed Value	Bldg. Assessed Value	Total Assessed Value	Avg. Land AV	Avg. Bldg. AV	FAR
TOTAL INVENTORY										
RESIDENTIAL										
Rural/Agricultural	2,063	48,659.47	4,475,159	2,169	\$707,602,600	\$521,444,800	\$1,229,047,400	\$342,997	\$116.52	0.00
Low-Density	27,738	39,185.43	56,623,266	2,041	\$6,837,319,100	\$6,327,412,600	\$13,164,731,700	\$246,496	\$111.75	0.03
Medium-Density	93,012	25,337.70	165,778,386	1,782	\$17,607,721,700	\$16,913,681,800	\$34,521,403,500	\$189,306	\$102.03	0.15
High-Density	30,346	2,346.35	67,877,810	2,237	\$4,232,526,000	\$7,060,121,400	\$11,292,647,400	\$139,476	\$104.01	0.66
Total	153,159	115,528.94	294,754,621	1,925	\$29,385,169,400	\$30,822,660,600	\$60,207,830,000	\$191,861	\$104.57	0.06
Percent of Total										
Rural/Agricultural	1.3%	42.1%	1.5%	112.7%	2.4%	1.7%	2.0%	178.8%	111.4%	--
Low-Density	18.1%	33.9%	19.2%	106.1%	23.3%	20.5%	21.9%	128.5%	106.9%	--
Medium-Density	60.7%	21.9%	56.2%	92.6%	59.9%	54.9%	57.3%	98.7%	97.6%	--
High-Density	19.8%	2.0%	23.0%	116.2%	14.4%	22.9%	18.8%	72.7%	99.5%	--
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	--

Source: Anne Arundel County/MD Property View and RKG Associates, Inc., 2018

Map 4-2



- High-Density Residential Development Accounts for Less Than 20% of the Residential Land Parcels and Only 2% of the Total Land Consumed for Residential Purposes

As seen in Table 4-2, high-density residential development is limited in Anne Arundel County in terms of land consumption; accounting for only 2% of the residential land consumption. However, because these developments include larger structures and more units, high-density accounts for 23 % of the total residential building square footage. Unfortunately, the MDPropertyView property records do not identify the number of units per property. Higher-density developments have clustered in only a few submarket areas, with the most prominent submarkets including: Brooklyn Park-Glen Burnie-Pasadena (14.7 million SF), Jessup-Maryland City (10.8 million SF) and Odenton (10 million SF). Despite its dense development and status as a designated Town Center, high-density residential concentration has been limited in the Parole area until recent years. Overall, the Annapolis Neck-Broadneck submarket began experiencing clusters of high-density residential development between 1980 and 2000.

2. Residential Development Activity by Submarket Area (1980-2017)

This section breaks out the County-level development activity between 1980 to 2017 into the study’s ten submarket areas.

- The Vast Majority of Developed Land since 1980 has been Classified as Residential
 In terms of land area consumed since 1980, residential development accounts for the majority of the newly developed land acres in Anne Arundel County. Residential properties total more than 48,000 acres developed over the past 36.25 years (Table 4-3).

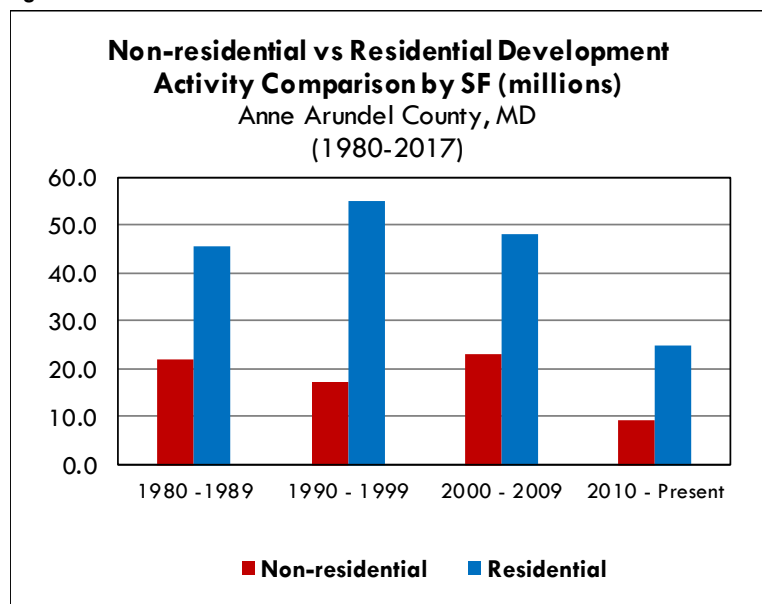
- Since 1980, Anne Arundel County Has Experienced a 143% Increase in Total Residential Building Square Feet and a 99% Increase in the Number of Residentially Developed Parcels

Anne Arundel County has experienced a rapid increase (143%) in the total amount of residential building space constructed since 1980, as the residential inventory has grown from 121 million SF to over 294 million SF in 2017. This equates to an average annual growth rate of 3.9%. The number of developed residential parcels grew at an annual rate of 2.7% during the same period. However, it should be noted that this rate of growth has slowed considerably since the last recession in 2009-10 (Figure 4-1).

- Residential Development Peaked During the 1990s and has Fallen Off Significantly Each Decade Since

During the 1990s, new residential building construction exceeded 54 million SF and resulted in the development of 25,249 new residential parcels. Between 2010 and 2017, roughly 24.9 million SF and 8,585 new residential parcels were developed, indicating a significant slow-down in residential construction since the last recession (Figure 4-1). This is consistent with slowing

Figure 4-1



Source: MD Property View and RKG Associates, Inc., 2018

population growth and household formations.

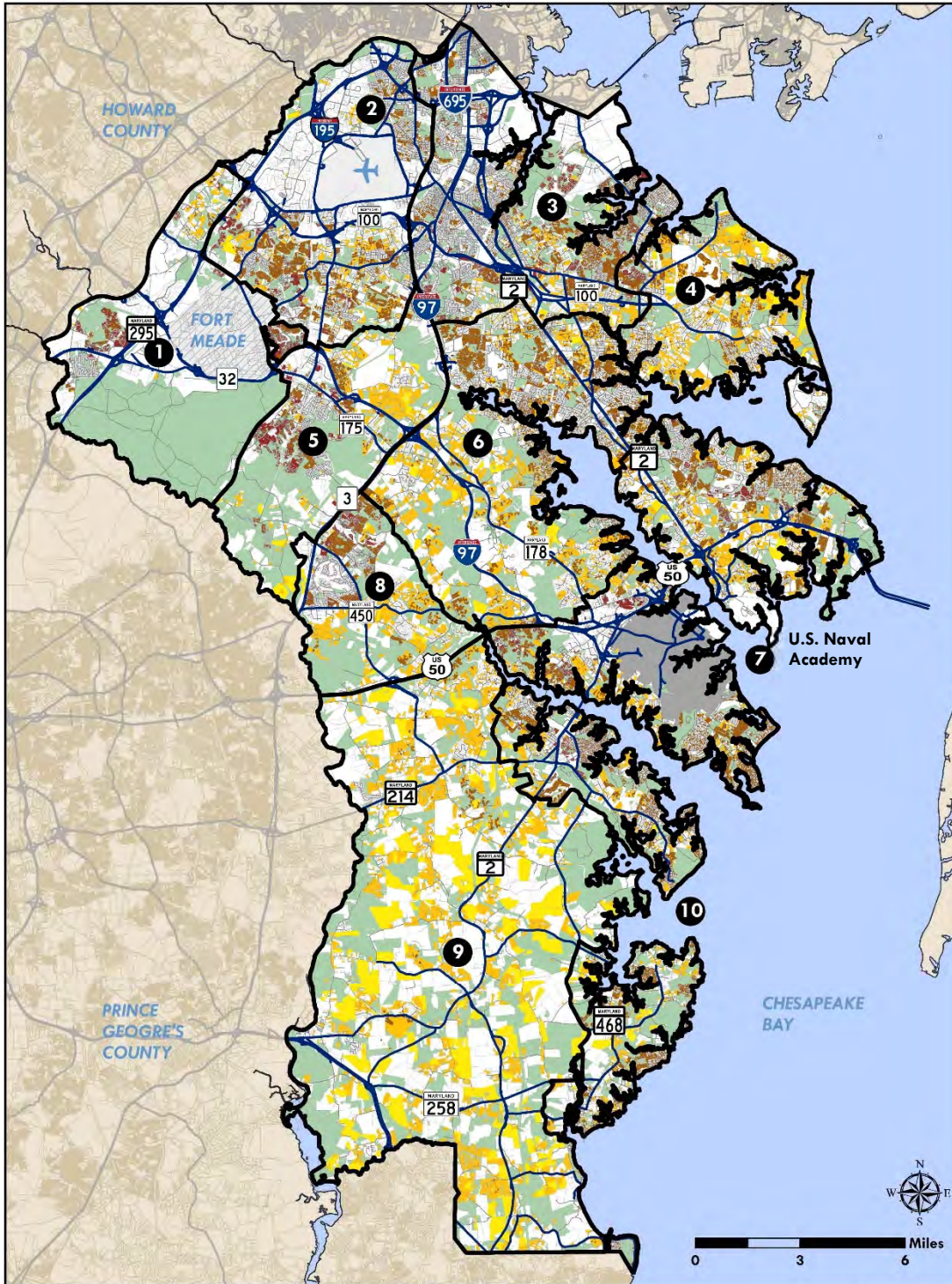
- Over the Past 36 Years, Roughly 72% of Land Acres Consumed for Residential Use Were Classified as Rural or Low-Density Development
Between 1980 and 2017 1QTR, approximately 72% of the County's 48,279 acres consumed for residential uses were classified as Rural/Agriculture (14,000 acres) or Low-Density (20,000 acres). Those two residential categories yielded on average 1 dwelling unit for 3 acres. Submarket areas such as Lake Shore, South County and portions of Severna Park-Crownsville, Crofton, Annapolis Neck-Broadneck have maintained land use patterns that preserve the community's rural/suburban character indicating that expansion and development is not a priority (Map 4-3). Ultimately, these submarket areas present limited opportunities to increase development density due to the existing infrastructure and community desire to maintain established planned densities.
- Higher Density Residential Developments Have Located in the Northern Half of the County
Medium- and high-density residential has clustered in submarkets 2 (Linthicum-Severn), 3 (Brooklyn Park-Glen Burnie-Pasadena), 5 (Odenton), 6 (Severna Park-Crownsville) and 7 (Annapolis Neck-Broadneck) mostly between Routes 100 and 32 in the northern and central portions of the County (Map 4-3). However, the Parole Town Center has seen high-density residential construction in recent years.

Table 4-3
Residential Development Inventory By Parcels & Acreage
Anne Arundel County Submarket Areas, MD (1980-2017)

DENSITY TYPE	ANNE ARUNDEL COUNTY, MD									
	(Parcels)					(Acre)				
	Rural/ Agricultural	Low-Density	Medium-Density	High-Density	Total Parcel Inventory	Rural/ Agricultural	Low-Density	Medium-Density	High-Density	Total Acreage
SM 1 - Jessup-Maryland City	7	137	756	4,732	5,632	56.67	197.72	188.55	316.24	759.17
SM 2 - Linthicum-Severn	13	707	5,943	3,133	9,796	169.06	797.31	1,521.84	288.46	2,776.66
SM 3 - Brooklyn Park-Glen Burnie-Pasadena	10	637	7,764	6,234	14,645	94.27	787.86	1,461.23	413.27	2,756.63
SM 4 - Lake Shore	45	1,434	2,059	743	4,281	695.03	2,280.42	844.24	42.78	3,862.46
SM 5 - Odenton	34	510	1,714	3,619	5,877	556.15	1,047.05	470.61	334.87	2,408.68
SM 6 - Severna Park-Crownsville	51	2,197	6,003	549	8,800	776.42	3,743.14	2,406.29	87.82	7,013.67
SM 7 - Annapolis Neck-Broadneck	35	1,438	6,943	3,713	12,129	562.16	2,492.53	2,392.59	275.61	5,722.89
SM 8 - Crofton	23	528	2,031	2,344	4,926	338.69	1,168.35	548.75	189.53	2,245.33
SM 9 - South County	356	2,544	452	38	3,390	10,476.20	6,403.31	340.94	5.82	17,226.27
SM 10 - Edgewater-Deale-Shady Side	39	762	4,324	1,458	6,583	678.47	1,371.45	1,329.10	127.78	3,506.80
ANNE ARUNDEL COUNTY TOTAL	613	10,894	37,989	26,563	76,059	14,403.12	20,289.13	11,504.15	2,082.16	48,278.56
PERCENT DISTRIBUTION										
SM 1 - Jessup-Maryland City	1.1%	1.3%	2.0%	17.8%	7.4%	0.4%	1.0%	1.6%	15.2%	1.6%
SM 2 - Linthicum-Severn	2.1%	6.5%	15.6%	11.8%	12.9%	1.2%	3.9%	13.2%	13.9%	5.8%
SM 3 - Brooklyn Park-Glen Burnie-Pasadena	1.6%	5.8%	20.4%	23.5%	19.3%	0.7%	3.9%	12.7%	19.8%	5.7%
SM 4 - Lake Shore	7.3%	13.2%	5.4%	2.8%	5.6%	4.8%	11.2%	7.3%	2.1%	8.0%
SM 5 - Odenton	5.9%	4.7%	4.5%	13.6%	7.7%	3.9%	5.2%	4.1%	16.1%	5.0%
SM 6 - Severna Park-Crownsville	8.3%	20.2%	15.8%	2.1%	11.6%	5.4%	18.4%	20.9%	4.2%	14.5%
SM 7 - Annapolis Neck-Broadneck	5.7%	13.2%	18.3%	14.0%	15.9%	3.9%	12.3%	20.8%	13.2%	11.9%
SM 8 - Crofton	3.8%	4.8%	5.3%	8.8%	6.5%	2.4%	5.8%	4.8%	9.1%	4.7%
SM 9 - South County	58.1%	23.4%	1.2%	0.1%	4.5%	72.7%	31.6%	3.0%	0.3%	35.7%
SM 10 - Edgewater-Deale-Shady Side	6.4%	7.0%	11.4%	5.5%	8.7%	4.7%	6.8%	11.6%	6.1%	7.3%
TOTAL	0.8%	14.3%	49.9%	34.9%	100.0%	29.8%	42.0%	23.8%	4.3%	100.0%

Source: MD Property View and RKG Associates, Inc., 2018

Map 4-3



<p>ANNE ARUNDEL COUNTY TOTAL RESIDENTIAL DEVELOPMENT ACTIVITY BY DENSITY TYPE</p> <p>Anne Arundel County, MD</p>	<p>TOTAL RESIDENTIAL DEVELOPMENT ACTIVITY (1980-2017)</p>		
	<p>■ RURAL/AGRICULTURAL</p> <p>■ LOW-DENSITY</p> <p>■ MEDIUM-DENSITY</p> <p>■ HIGH-DENSITY</p>	<p>▭ SUBMARKET BOUNDARY</p> <p>— INTERSTATE/MARYLAND HIGHWAY</p> <p>✈ BWI AIRPORT</p> <p>□ ANNE ARUNDEL COUNTY PARCELS</p>	<p>■ FORT MEADE</p> <p>■ ANNAPOLIS</p> <p>■ OPEN SPACE/PARKS</p>



3. Non-residential Development Inventory by Building Square Feet

RKG Associates analyzed the County’s non-residential development based on a consolidated list of major land use categories including: retail, office, industrial, services, restaurant/hospitality and other. This group of properties did not include institutional uses (i.e., churches, schools, etc.), government or other uses such as vacant land, open space/conservation land and the like. These uses are considered the core of Anne Arundel County’s economic and employment base.

- The County’s Employment-Generating Uses Account for Only 15.1% of Land Acres but Comprise of 28.5% of Total Building Square Feet and 25% of Total Assessed Value
 The non-residential tax base comprises 25.2% of the County’s total assessed property value in 2018, despite only consuming 15.1% of the developed acreage. Industrial uses comprise 33% of non-residential building space at over 34.7 million SF. Office (25.8 million SF) and retail (19.6 million SF) contribute another 43% to the non-residential tax base (Table 4-4).
- Office Development Accounts for More than 28% of the County’s Non-Residential Tax Base at a Value of Over \$5 billion
 Despite job growth in the retail and industrial sectors, office development accounts for the greatest share of non-residential assessed value at over \$5 billion in 2018.
- The County’s Employment-Generating Uses Cluster in a Few Submarkets in the Northern Part of the County
 Approximately 60 million SF of non-residential building space is in just two submarket areas in the County’s northern part. Linthicum-Severn and Brooklyn Park-Glen Burnie-Pasadena submarkets account for approximately 57% of the total non-residential building square footage (105 million SF). Roughly 26 million SF of this space is classified as industrial, which includes warehouse/distribution, shops and other similar operations (Table 4-5).

Table 4-4
 Non-Residential Development Inventory by Land Use
 Anne Arundel County (2018)

	ANNE ARUNDEL COUNTY - ALL SUBMARKET AREAS									
	Parcels	Acreage	Total Bldg. SF	Avg. Bldg SF/SF	Land Assessed Value	Bldg Assessed Value	Total Assessed Value	Avg. Land AV	Avg. Bldg. AV	FAR
TOTAL INVENTORY										
NONRESIDENTIAL										
Retail	844	2,265.48	19,579,970	23,199	\$1,408,779,500	\$2,292,633,800	\$3,701,413,300	\$1,669,170	\$117.09	0.20
Office	991	3,231.85	25,799,307	26,034	\$1,339,754,400	\$3,662,831,700	\$5,002,586,100	\$1,351,922	\$141.97	0.18
Industrial	628	4,566.79	34,797,166	55,410	\$1,538,566,900	\$2,155,175,500	\$3,693,742,400	\$2,449,947	\$61.94	0.17
Services	528	3,416.35	7,681,347	14,548	\$601,688,400	\$1,400,478,200	\$2,002,166,600	\$1,139,561	\$182.32	0.05
Restaurant/ Hospitality	375	591.25	7,150,969	19,069	\$391,392,300	\$1,249,596,400	\$1,640,988,700	\$1,043,713	\$174.75	0.28
Other	381	3,806.53	10,299,839	27,034	\$502,981,300	\$1,134,718,900	\$1,637,700,200	\$1,320,161	\$110.17	0.06
Total	3,747	17,878.25	105,308,598	28,105	\$5,783,162,800	\$11,895,434,500	\$17,678,597,300	\$1,543,411	\$112.96	0.14
Percent of Total										
NONRESIDENTIAL										
Retail	22.5%	12.7%	18.6%	82.5%	24.4%	19.3%	20.9%	108.1%	103.7%	--
Office	26.4%	18.1%	24.5%	92.6%	23.2%	30.8%	28.3%	87.6%	125.7%	--
Industrial	16.8%	25.5%	33.0%	197.2%	26.6%	18.1%	20.9%	158.7%	54.8%	--
Services	14.1%	19.1%	7.3%	51.8%	10.4%	11.8%	11.3%	73.8%	161.4%	--
Restaurant/ Hospitality	10.0%	3.3%	6.8%	67.9%	6.8%	10.5%	9.3%	67.6%	154.7%	--
Other	10.2%	21.3%	9.8%	96.2%	8.7%	9.5%	9.3%	85.5%	97.5%	--
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	--

Source: Anne Arundel County/MDProperty View and RKG Associates, Inc., 2018

4. Non-Residential Development Activity by Submarket Area (1980-2017)

- Employment-Generating Uses Have Clustered Along Key Transportation Infrastructure
 Map 4-4 shows the general location of where non-residential building square space has been delivered since 1980. In proximity to important transportation corridors, clusters of non-residential development have located near BWI Airport, which is largely comprised of industrial/business parks. These areas have continued to display patterns which have largely

impacted the County's major employment centers near the intersection of Maryland Highway 32 and the Baltimore-Washington Parkway, as well as the Ritchie Highway corridor, which contains several shopping centers that provide different types of service.

- Since 1980, Anne Arundel County Has Added 69 Million SF of New Non-Residential Space
New non-residential development equaled roughly 69 million SF between 1980 and 2017. This represented a 265% increase over the pre-1980 inventory. Approximately 26 million SF (38%) of this new space was classified as industrial.
- Employment-Generating Uses are Clustering Around the County's Major Employment Centers
The Linthicum-Severn submarket has seen rapid development around BWI Airport, primarily west and south of the airport along Route 100, New Ridge Road and Wilson Road. The area north of the airport between I-195, I-695 and Route 295 has seen a concentration of hotel development and other businesses supporting the airport. Other significant development of new non-residential development has clustered in the Odenton submarket near the southern edge of Fort Meade, as well as in the Annapolis Neck-Broadneck submarket in the Parole Town Center between Route 50 and the outer West Street area just outside the City of Annapolis (Map 4-4).

D. ANNE ARUNDEL COUNTY SUBMARKET DEVELOPMENT ACTIVITY (1980-2017)

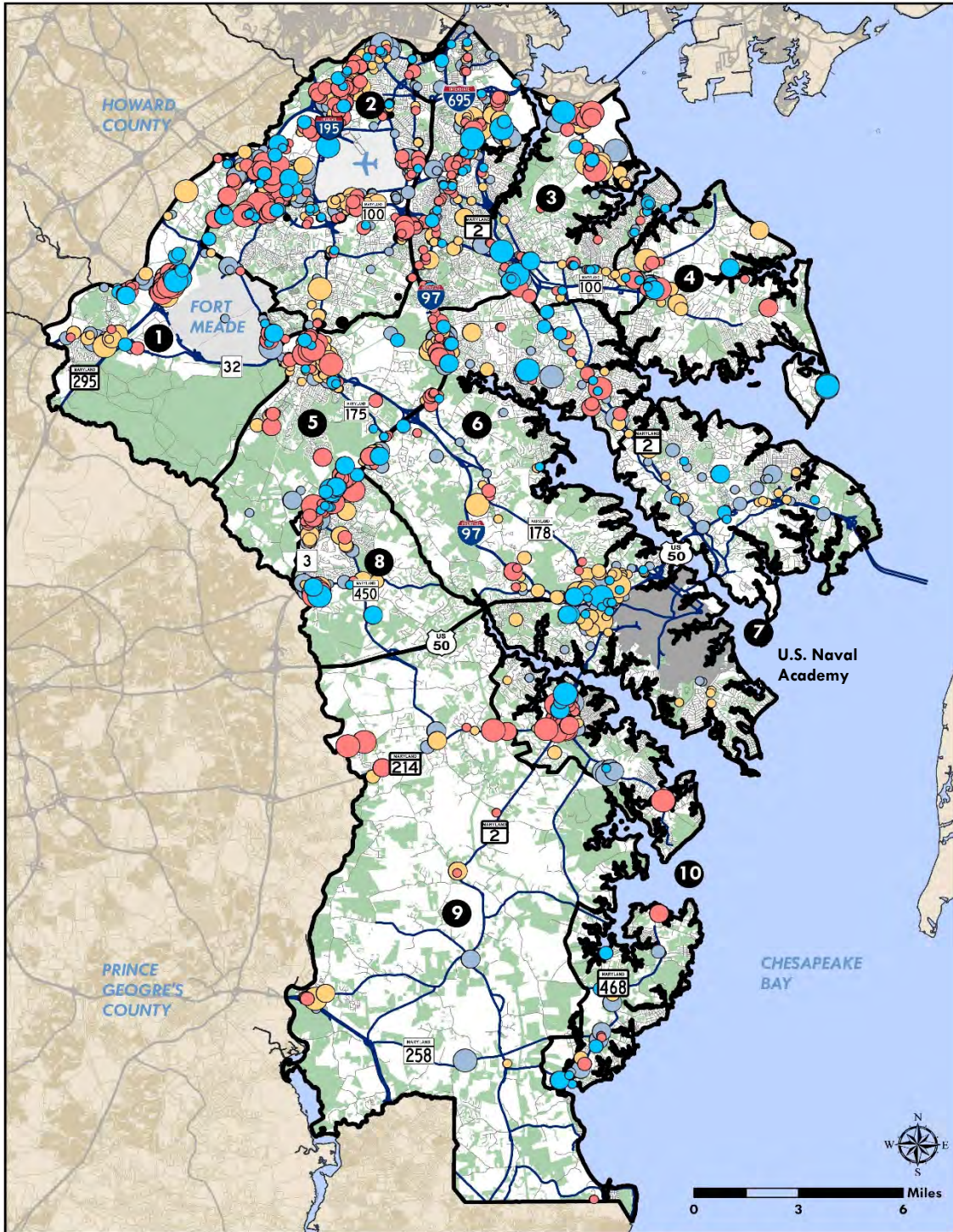
This section contains an analysis of development activity, both residential and non-residential properties during the 1980-2017 period in the County's ten submarkets. The development trends in each of these submarkets vary in terms of the size, scale, character, and pace of development activity. To locate where these clusters and patterns of new development are located, RKG completed a geospatial analysis for each submarket assessing the area's development profile by property type and total building square feet as well as development activity by decade between 1980 and 2017. The consultants then quantified this development activity and mapped it by its submarket location. The development totals can be found in the Appendix tables at the end of this chapter.

1. Jessup-Maryland City Submarket

The Jessup-Maryland City submarket contains a critical transportation corridor defined by the Baltimore-Washington Parkway and the MARC rail, located in the northwestern part of Anne Arundel County. Its location has been influenced by these important infrastructure investments, which has allowed it to capture new growth and development activity over the past 37 years. Like other abutting submarket areas, the Jessup-Maryland City submarket has experienced growth in population and households.

- The Jessup-Maryland City Submarket has experienced substantial Townhome Development
Townhome development is primarily concentrated in the Russet and Seven Oaks planned unit developments which are near major employment areas along Maryland Highway 32, specifically, the location of Fort Meade, Laurel Racetrack, the National Security Agency office complex, and Annapolis Junction, which includes the National Business Park. Fort Meade is one of Anne Arundel County's major employment growth centers along Maryland 32 that projected to create tens of thousands of jobs between 2005 and 2020. Overall, these developments, as well as the suburban expansion of Baltimore and the Washington D.C. Metro area have transformed the Jessup-Maryland City submarket area from a once expansive farmland region to a business, residential, governmental, and industrial center in Anne Arundel County.

Map 4-4



ANNE ARUNDEL COUNTY TOTAL NON-RESIDENTIAL DEVELOPMENT ACTIVITY BY YEAR & TOTAL SF (1980 TO 2017) Anne Arundel County, MD	NON-RESIDENTIAL DEVELOPMENT ACTIVITY BY YEAR & TOTAL SF DISTRIBUTION			SUBMARKET BOUNDARY
	● 1980 TO 1989 ● 1990 TO 1999 ● 2000 TO 2009 ● 2010 TO PRESENT	● 1,984 - 44,300 SF ● 44,300 - 155,800 SF ● 155,800 - 342,000 SF ● 342,000 - 1.6 MILLION SF	INTERSTATE/MARYLAND HIGHWAY BWI AIRPORT ANNAPOLIS OPEN SPACE/PARKS	

**Table 4-5
 Non-residential Development Total Inventory By Square Footage & Acreage
 Anne Arundel County Submarket Areas, MD**

NONRESIDENTIAL TYPE	ANNE ARUNDEL COUNTY, MD										Total Acreage			
	Retail	Office	Industrial	Services	Restaurant/ Hospitality	Other	Total Square Footage	Retail	Office	Industrial		Services	Restaurant/ Hospitality	Other
SM 1 - Jessup-Maryland City	1,134,546	5,426,832	1,127,668	650,718	420,016	327,752	9,087,532	140,71	408,09	176,37	416,11	34,47	37,551	1,551,27
SM 2 - Linthicum-Severn	3,118,754	8,495,516	15,233,534	965,464	3,860,631	927,028	32,600,927	397,59	846,72	1,448,67	127,70	205,23	416,45	3,442,36
SM 3 - Brooklyn Park-Glen Burnie-Pasadena	6,335,793	4,492,776	10,793,736	1,987,946	1,197,446	2,617,930	27,425,627	631,76	624,98	1,552,76	310,67	133,68	616,34	3,870,18
SM 4 - Lake Shore	512,099	133,374	70,406	135,152	85,974	919,989	1,856,994	152,34	72,28	12,66	60,63	19,26	396,44	713,61
SM 5 - Odenton	1,295,565	1,198,639	3,238,918	736,548	199,708	423,252	7,092,630	178,95	316,87	418,77	145,02	25,89	181,34	1,266,83
SM 6 - Severna Park-Crownsville	1,015,418	1,288,049	1,175,719	900,456	122,106	1,424,848	5,926,596	148,23	234,07	271,64	973,48	27,34	505,59	2,160,33
SM 7 - Annapolis Neck-Broadneck	4,735,786	3,837,289	1,665,879	1,367,362	913,910	1,984,306	14,504,532	360,97	469,52	271,70	664,02	82,69	673,73	2,522,63
SM 8 - Crofton	619,390	437,926	881,236	327,897	56,651	568,577	2,891,677	71,31	41,26	112,73	123,02	14,70	31,346	676,47
SM 9 - South County	72,039	72,072	219,327	174,553	11,965	143,624	693,580	51,22	117,82	175,02	389,34	2,79	94,21	830,40
SM 10 - Edgewater-Deale-Shady Side	740,580	416,834	390,743	435,251	282,562	962,533	3,228,503	132,40	100,25	126,47	206,37	45,21	233,47	844,17
TOTAL	19,579,970	25,799,307	34,797,166	7,681,347	7,150,969	10,299,839	105,308,598	2,265,48	3,231,85	4,566,79	3,416,35	591,25	3,806,53	17,878,25
PERCENT DISTRIBUTION														
SM 1 - Jessup-Maryland City	5.8%	21.0%	3.2%	8.5%	5.9%	3.2%	8.6%	6.2%	12.6%	3.9%	12.2%	5.8%	9.9%	8.7%
SM 2 - Linthicum-Severn	15.9%	32.9%	43.8%	12.6%	54.0%	9.0%	31.0%	17.5%	26.2%	31.7%	3.7%	34.7%	10.9%	19.3%
SM 3 - Brooklyn Park-Glen Burnie-Pasadena	32.4%	17.4%	31.0%	25.9%	16.7%	25.4%	26.0%	27.9%	19.3%	34.0%	9.1%	22.6%	16.2%	21.6%
SM 4 - Lake Shore	2.6%	0.5%	0.2%	1.8%	1.2%	8.9%	1.8%	6.7%	2.2%	0.3%	1.8%	3.3%	10.4%	4.0%
SM 5 - Odenton	6.6%	4.6%	9.3%	9.6%	2.8%	4.1%	6.7%	7.9%	9.8%	9.2%	4.2%	4.4%	4.8%	7.1%
SM 6 - Severna Park-Crownsville	5.2%	5.0%	3.4%	11.7%	1.7%	13.8%	5.6%	6.5%	7.2%	5.9%	28.5%	4.6%	13.3%	12.1%
SM 7 - Annapolis Neck-Broadneck	24.2%	14.9%	4.8%	17.8%	12.8%	19.3%	13.8%	15.9%	14.5%	5.9%	19.4%	14.0%	17.7%	14.1%
SM 8 - Crofton	3.2%	1.7%	2.5%	4.3%	0.8%	5.5%	2.7%	3.1%	1.3%	2.5%	3.6%	2.5%	8.2%	3.8%
SM 9 - South County	0.4%	0.3%	0.6%	2.3%	0.2%	1.4%	0.7%	2.3%	3.6%	3.8%	11.4%	0.5%	2.5%	4.6%
SM 10 - Edgewater-Deale-Shady Side	3.8%	1.6%	1.1%	5.7%	4.0%	9.3%	3.1%	5.8%	3.1%	2.8%	6.0%	7.6%	6.1%	4.7%
TOTAL	18.6%	24.5%	33.0%	7.3%	6.8%	9.8%	100.0%	12.7%	18.1%	25.5%	19.1%	3.3%	21.3%	100.0%

Source: MD Property View and RKG Associates, Inc., 2018

- Townhome Development Peaked Between 1990 and 1999
The Jessup-Maryland City submarket added over 60% (3,423 properties) of its residential inventory during the 37-year study period. This is largely attributed to the increase in townhome development. Approximately, 2,414 townhomes, or 70.5% of residential development activity, were delivered during this study period (Appendix Table 4-1). Clusters of townhome subdivision development have been common throughout Anne Arundel County. Appendix Map 1 shows a high concentration of townhome development was delivered near Fort Meade and the MD Highway 198 commercial corridor. Since 2000, townhome development patterns have slowed down, which can be identified in Appendix Map 2.
- Expansion of the National Business Park and Fort Meade has Spun-off Other Non-residential Development
The Jessup-Maryland City submarket can be characterized as one of four major activity centers throughout the County due to its proximity near strategic transportation corridors. That said, this submarket is comprised of roughly 5.2 million SF of office space. In fact, this submarket is one of the main attractions for building SF dedicated to office space and is commensurate among neighboring submarkets, such as Linthicum-Severn and Brooklyn Park-Glen Burnie-Pasadena. This is largely due to the location of the National Business Park concentrated near Annapolis Junction as well as the addition of the neighboring NSA office facility at the Maryland Highway Route 32/Baltimore-Washington intersection (Appendix Map 3).

2. Linthicum-Severn Submarket

Situated in the northern tip of Anne Arundel County, this submarket area lies within one of the most densely populated and developed areas. Like neighboring submarket areas, Linthicum-Severn is located within an important transportation corridor that links major employment centers at Fort Meade, Arundel Mills, and BWI Airport. The Submarket is dominated by industrial, offices and general commercial development in support of the major employment centers. These growth patterns have created an imbalance as much of the land area is dedicated to non-residential development. Concentrations of higher-density residential development are located along Severn Road and Ridge Road (Route 713), which gives residents easy access to these commercial developments, regional shopping centers, and the highway network.

- Medium-Density Land Use Dominates Residential Area in Linthicum-Severn Submarket
Appendix Table 4-2 and Map 4 indicate that a clear majority of single-family homes were constructed between 1980 and 1989. This is commensurate with residential development activity that was constructed overall during this period. Approximately 92.1% of residential development during the 1980s was dedicated to single-family homes. Since then, residential development trends indicate that construction of traditional single-family homes has slowed down. In fact, by 2010 construction of townhomes (955 properties or 33.9%) outpaced single-family development (779 properties or 27.7%).
- Residential Development Activity has been Limited Throughout the Years
Based on the geospatial analysis in Appendix Map 5 clusters of residential development are located south of MD Route 100. Clusters of residential development were constructed between 1980 and 1999, but development activity has been scarce since.
- Large-scale Industrial and Business Parks Have Benefited from their Proximity Around BWI Airport
In association with the BWI Airport, the Linthicum-Severn submarket can be characterized as the County's major industrial district. Further, roughly 11.7 million building SF or 46.1% of the total building SF for non-residential properties is dedicated to industrial space, which is the highest total of industrial building SF amongst the other submarket areas (Appendix Table 4-2).
- The Stoney Run area continues to Deliver Additional Building SF Dedicated to Non-Residential Properties
This area is bounded by the Baltimore-Washington Parkway Corridor and MD Highway 176 and comprised of various manufacturing and distribution centers. Appendix Map 6 indicates that the

County has continued to focus on expanding this industrial/business district where higher concentrations of development activity took place during the 2000-2010 period.

- Linthicum-Severn Submarket Has Become a Commercial Destination

The submarket has become a commercial destination due to the addition of the Arundel Mills shopping area and the clusters of hotel development north of the BWI Marshall Airport area. Arundel Mills is characterized as the County's regional shopping center, which consists of the mall Casino & Hotel and several big-box retailers. Since 2000, over 4.6 million SF of new retail and restaurant/hospitality establishments has been constructed in this submarket (Appendix Table 4-2).

3. Brooklyn Park-Glen Burnie-Pasadena

The Brooklyn Park-Glen Burnie-Pasadena submarket areas share a proximity to the main commercial corridor along Ritchie Highway. Additional major roads that serve this Submarket are MD 100, MD 10, B & A Boulevard, Mountain Road and Fort Smallwood Road. The Glen Burnie Town Center, one of the County's three designated town centers, is located in this Submarket.

- The Brooklyn Park-Glen Burnie-Pasadena Submarket has Experienced Consistent Housing Growth Pressures

During the study period, this submarket has produced an estimated total of 14,646 residential properties with 59.2% classified as single-family and 40% classified as townhomes. The estimated assessed value of these new residential properties is the lowest of the ten submarkets, with single-family values equaling \$311,000 (\$485,000 County avg.) and townhomes equaling \$245,000 (\$288,000 County avg.) (Appendix Table 4-3). This submarket is comprised of several suburban neighborhoods that have made strong implications towards the submarket's development activity (Appendix Map 7).

- Large Apartment Complexes Have Been Constructed Throughout the Submarket in Recent Years

Throughout the 80s and 90s, this submarket has been noticeably dedicated to the construction of single-family homes throughout the residential neighborhoods. However, by 2000 the submarket's development activity has shifted toward the construction of multifamily housing and large apartment complexes. From 2000 to 2009, the submarket saw the construction of seven new apartment developments. Another 32 multi-family properties were developed between 2010 and 2017. Additionally, townhome developments outgained single-family home by roughly 900 properties, which is another indication of how the submarket area has shifted to more densely developed neighborhoods.

- Glen Burnie Town Center Area Attracted Strong Residential Development During the Study Period

This submarket is a major activity hub due to the location of the Glen Burnie Town Center and commercial corridors along Crain and Ritchie Highway. Appendix Map 8 illustrates the development activity that surrounds this civic community center. Additionally, clusters of development activity throughout Pasadena are largely concentrated along strategic transportation corridors (MD Highway 177/100).

- Non-residential Development Activity is Driven by the Clusters of Retail/Commercial Corridors along Ritchie Highway North/South

This submarket has delivered substantial building SF dedicated to non-residential space. Approximately, 11.1 million SF (70.1%) is comprised of industrial/office space. Much of this building SF was delivered between the 80s and 90s (Appendix Map 9). Additionally, 3.5 million square feet are designated to retail space, which is commensurate with the growth pressures of retail/commercial corridors along Crain and Ritchie Highway (Appendix Table 4-3).

In previous years, existing residents have expressed interest in urban revitalization and improving community facilities, especially near Marley Station in Pasadena; a shopping center in Anne Arundel County. However, new commercial development has replaced older shopping centers and have made redevelopment more difficult. Based on the consultant's field observation and data

findings, clusters of development have exhibited vibrant mixed-use centers, office and commercial districts, while maintaining its suburban nature.

4. Lake Shore Submarket

The Lake Shore submarket has exhibited shifts from a rural/agricultural to an attractive and desirable residential area in northeastern Anne Arundel County. This submarket area is one of several peninsula areas that jut into the Chesapeake Bay.

- The Lake Shore Submarket Lacks Housing Diversity
Lake Shore is largely residential in nature and comprised of seasonal recreation communities with clusters of higher value real estate and offers tourist attractions along the waterfront. Most of the residential development in this submarket is classified as single-family homes and many were constructed during the 1980s (Appendix Table 4-4 and Maps 10 and 11).
- Much of the Lake Shore Submarket is Comprised of Older and Larger Single-Family Homes
Approximately 92.7% of residential property is dedicated to single-family homes that are large. Between 1980 and 2010, the average size of single-family homes increased from 1,816 SF to its peak of 3,164 SF during the 2000s. However, since the recession of 2009, new single-family homes have dropped in size to 2,518 SF, a homebuilding trend seen throughout the County but more pronounced in Lake Shore (Appendix Table 4-4).
- Non-Residential Development Has Been Limited in the Lake Shore Submarket
The primary commercial area is located along Mountain and Fort Smallwood Roads, however, submarkets of this nature throughout Anne Arundel are limited in terms of access to major transportation corridors. This may explain the minimal development activity that has taken place over the years (Map 12 - Appendix). The Lake Shore Shopping Plaza is where most of the non-residential building SF has been constructed in this submarket, however much of this development was constructed prior to 2000.

5. Odenton Submarket

The Odenton Submarket is in the western part of Anne Arundel County and bounded by major transportation corridors such as Maryland Highway 32, Annapolis Road and Crain Highway. Like the Jessup-Maryland City submarket, development activity has impacted population and housing patterns due to the growth in major employment centers, specifically, the development of the National Security Administration office complex adjacent from the National Business Park along the Baltimore-Washington Parkway corridor. This submarket is anchored by the Odenton Town Center corridor along MD Highway 175, which has created redevelopment opportunity areas in past years.

- Odenton Offers a Diverse Mix of Residential Property Types
The Odenton submarket is comprised of roughly 5,887 residential properties, with approximately 48.5% classified as large-lot single-family homes. Approximately 49.5% is classified as townhome development (Appendix Table 4-5). As seen in Appendix Map 13, a high concentration of townhome subdivisions is located along Piney Orchard Parkway and Chapel Gate Drive.
- Residential Development Peaked Between 1990-2009
During the 1980s, residential development activity was limited resulting in a total of roughly 400 residential properties, less than 7% of the total residential development during the 1980-2017 study period. However, Appendix Map 14 indicates that high concentrations of residential development took place during the 1990s and the first decade of the 2000s, which is largely attributed to the construction of townhomes, traditional single-family homes, and some condominiums. In recent years, residential development has slowed in the Odenton Submarket, as well as Anne Arundel County.

- Multi-family Development Has Increased in Recent Years
The Odenton Town Center has made this submarket one of the more vibrant communities in Anne Arundel County. Although residential development activity has slowed, roughly 48.7% (1.8 million SF) of new apartment complexes have been constructed since 2010. This is largely attributed to the construction of new apartments located along MD 175 and Telegraph Road (Appendix Table 4-5).
- The Crain Highway Commercial Corridor Has Exhibited Substantial Growth Pressures Throughout the Years in addition to the Odenton Town Center Area
Over time, the Odenton submarket has established itself as one of the more vibrant communities, largely due to the addition of the Waugh Chapel Towne Centre along Crain Highway, which is utilized by residents in neighboring submarket areas (Crofton, Severna Park-Crownsville).

Appendix Map 15 displays how the Crain Highway corridor has extended throughout the years of non-residential development. However, 52.5% (2.6 million SF) of non-residential space is designated for industrial use. That said, the addition of large-scale industrial parks between 1990-2009 are major factors of the submarkets existing landscape of non-residential development clustered along MD Highway 32/175.

6. Severna Park-Crownsville Submarket

The Severna Park-Crownsville Submarket contains several communities and established residential neighborhoods along the shores of the Severn River.

- The Severna Park-Crownsville Submarket Has Seen a Doubling of its Residential and Non-Residential Development Since 1980
On a building square footage basis, the submarket experienced rapid growth of 122% for residential and 111% for non-residential, effectively doubling the amount of building space since 1980 (Appendix Table 4-6, Map 16). Much of this development activity has been captured in the Severna Park portion of the submarket at the connection of Benfield Road and Interstate 97 and at the Park Plaza Shopping Center off Route 2 (Appendix Map 17 and 18). Between 2010 and 2017, 2,074,629 square feet of residential properties and 341,447 square feet of non-residential properties were developed, contributing 8.9% to residential building square footage and 14.4% of the total non-residential square footage built since 1980 respectively.
- Nearly 99 Percent of New Residential Development in the Submarket Has Been Single-Family Development
Of the 8,800 new residential parcels developed during the study period, nearly 99% were classified as single-family. At an estimated assessed value of \$590,000 per parcel, the Severna Park-Crownsville submarket has captured the third most expensive single-family housing, just behind the Annapolis Neck-Broadneck (\$606,000) and the South County (\$591,000) submarkets.

7. Annapolis Neck-Broadneck Submarket

The Annapolis Neck portion of the submarket effectively surrounds the City of Annapolis on its north, west and south borders. The Broadneck portion is located to the north across the Severn River and is defined by its riverfront and bayfront location. The Parole Town Center is one of the County's more urbanized areas in terms of its development pattern. This submarket has experienced very strong growth in both residential and non-residential development since 1980. The area is well served by U.S. Route 50 which runs east and west and Route 2, which runs north and south through the submarket.

- The Submarket Has Experienced Rapid Residential Development of Nearly 150% Over 1980 Levels
Over 28.6 million SF of new residential building SF has been developed since 1980, which is 147% of pre-1980 levels. Roughly 20% of this new residential is classified as townhomes with

another 5% classified as apartments (Appendix Table 4-7 and Map 19). Between 2010 and 2017, only single-family homes and townhomes were developed, contributing over 2.1 million new residential building SF, which is 7.5% of the total new residential building SF built since 1980 (Appendix Map 20).

- The Parole Area Has Captured Much of the Commercial Development in the Submarket
Approximately 9.6 million SF of new non-residential building space has been added to the submarket supply since 1980, with almost one-third of this space constructed since 2000. This new development represents a 342% increase over pre-1980 levels. Nearly 50% of this new space has come in the form of retail, restaurants and hospitality developments. The Parole Town Center area is at the center of this commercial growth area (Appendix Map 21).

8. Crofton Submarket

The Crofton Submarket sits on the western side of the County, south of the Odenton Submarket and north of South County. This area is served by U.S. Route 50, Maryland Highway 450 and Maryland Route 3. In terms of land area, the Crofton Submarket is one of the smallest in the County.

- Crofton Submarket Has Experienced Rapid Residential Growth Since 1980
With only 2,800 residentially-developed parcels prior to 1980, the Crofton submarket has added over 4,900 new residential parcels over the past 37 years, for an annual growth rate of 4.8%. Approximately 31% of these new residential parcels have been townhomes. Several large townhome developments have occurred south of the Waugh Chapel Town Centre (Appendix Table 4-8 and Map 22). Only single-family homes were developed between 2010 and 2017, contributing 628,318 new residential building SF, which is 5.3% of the total new residential building SF built since 1980 (Appendix Map 23).
- Non-Residential Building Square Feet Has Grown Equally Fast as Residential, Increasing at an Annual Rate of 4.6% Since 1980
The Waugh Chapel Town Centre off Crain Highway at the northern end of the Crofton Submarket has added to the submarket's commercial offerings and has become a hot growth area. Another commercial area east of Crain Highway and south of Route 450 (Priest Bridge Centre) has experienced new commercial development as well (Appendix Map 24). Between 2010 and 2017, 135,917 square feet of non-residential buildings were added, most of which (81.2%) are industrial properties. The total new non-residential building SF developed during this period accounts for 9.2% of the total since 1980.

9. South County Submarket

The South County Submarket comprises much of the southern half of Anne Arundel County below U.S. Route 50 and is defined by its rural agricultural and forested landscape. According to RKG's development analysis, the submarket consists of over 44,000 acres of residential and non-residential developed acres; the largest submarket in the County, accounting for 38% of all developed land acres. Despite the submarket large inventory of developed acres, the development pattern is classified as rural agricultural density.

- Residential Development in South County Submarket is Primarily Low-Density Residential
Since 1980, roughly 3,300 new residential parcels have been developed consuming over 17,000 acres. This equates to approximately 90 units per year with an average lot size of 5 acres (Appendix Table 4-9 and Map 25). The period between 2010 and 2017 contributed 216 new residential parcels, accounting for a relatively small proportion (6.4%) of the total of 3,390. These parcels consumed over 1,700 acres, which is 10.0% of the total developed since 1980 (Appendix Map 26).

- Non-Residential Development Has Averaged 5,100 SF Annually Since 1980
Only 189,000 SF of new non-residential space has been constructed since 1980, with the largest share being industrial at 62,000 SF. Much of this new development has clustered along West Central Avenue (Appendix Map 27). Between 2010 and 2017, no new non-residential property was developed in the South County Submarket.

10. Edgewater-Deale-Shady Side Submarket

The Edgewater-Deale-Shady Side Submarket is in the southeastern portion of the County and is defined by its generous bay frontage. It is a submarket that is split into two distinct areas and is located on the eastern side of the South County Submarket. The submarket has unique inland waterways such as the West and Rhode Rivers that create riverfront access that leads into the Chesapeake Bay. Marinas and yacht clubs are prominent in this waterfront location, as are the businesses and services that support such operations.

- Townhouse Development Has Started to Become Part of the Submarket's Housing Mix
Since 1990, roughly 20% of the new housing development in the Edgewater-Deale-Shady Side submarket has been classified as townhome development, which is a departure from the traditional single-family development in this area (Appendix Table 4-11 and Map 28).
- The Submarket Has Experienced Steady Residential and Non-Residential Growth Since 1980
The submarket has seen the development of roughly 188 new residential parcels per year over the past 37 years, which is roughly twice the rate of development in the South County submarket. However, those annual averages have dropped since 2010 to roughly 55 residential parcels annually. Non-Residential development has been surprisingly strong with nearly 1.4 million SF constructed since 1980 for an annual average of nearly 37,000 SF per year. Approximately 36% of this space has been classified as retail, with another 15% classified as restaurant and hospitality (Appendix Map 29).
- Edgewater Area Has Captured New Non-Residential Development
The Edgewater area in the submarket has captured new non-residential development at the intersection of Central Avenue and Route 2/Solomon's Island Road leading east towards Annapolis (Appendix Map 30).

E. IMPLICATIONS

Anne Arundel County has grown rapidly over the past 37 years, and in some submarkets, there has been a doubling and tripling of development over pre-1980s levels. At the same time, the County's residential development pattern exhibits medium to low-density suburban development characteristics with pockets of higher density in certain locations. With the County's highly-valued natural amenities including open space, rural agricultural/forested lands, river and bay frontage and many natural recreational areas, residents are very sensitive to the steady encroachment of new development. However, Anne Arundel County's growth position within the Greater Baltimore-Washington MSA placed at a critical junction of an urbanizing regional growth pattern that is showing a preference for urban mixed-use and higher density developments near important transportation routes and transit lines linking residential communities to employment centers.

Some of these trends are playing out in Anne Arundel County but in very selective ways. Some submarkets have shown a reluctance to accept much new development, particularly development that is believed to contribute to local traffic congestion and the steady loss of natural character. As a result, other submarkets, particularly in the Jessup-Maryland City, Linthicum-Severn and the Brooklyn Park-Glen Burnie-Pasadena submarkets have captured much of this growth, which is taxing the transportation network in these areas. These development trends since the 1980s have been an intentional effort using smart growth principles.

In the future, some thought should be given to the distribution of future growth and development in the County as it pertains to policy considerations for development, redevelopment, and infill development opportunities in each of the submarkets. While Anne Arundel County is viewed as a desirable destination for new residential and non-residential growth, it is becoming a community of older and wealthier households and with a slowing of growth in the younger age cohorts. If this trend continues, it has the potential to create a growing tension between 'no-growth' and 'pro-growth' interests that will continue to push parts of the County towards a more urbanized growth pattern.

F. APPENDIX TABLES

APPENDIX TABLE 4-1
Residential & Non-residential Development Trends
Anne Arundel County, Maryland (1980-2017)

SM 1 - JESSUP-MARLYAND CITY														
	No. of Properties	% of All Properties	% of All Acreage Land Area		Total Bldg. SF	% of All Properties	Avg. Bldg SF	Land Assessed Value	Building Assessed Value	Total Assessed Value	% Of All Property Appraised Value	Avg. Land AV	Avg. Bldg. AV	FAR
1980 TO 1989														
RESIDENTIAL PROPERTIES														
Single Family	44	28.9%	62.14	91.4%	75,456	35.9%	1,715	\$8,714,100	\$7,234,500	\$15,948,600	38.6%	\$198,048	\$95.88	0.03
Townhome	107	70.4%	5.50	8.1%	133,906	63.7%	1,251	\$11,885,000	\$13,285,600	\$25,170,600	60.9%	\$111,075	\$99.22	0.56
Condominium	0	0.0%	0.00	0.0%	0	0.0%	0	\$0	\$0	\$0	0.0%	\$0	\$0.00	0.00
Apartment	0	0.0%	0.00	0.0%	0	0.0%	0	\$0	\$0	\$0	0.0%	\$0	\$0.00	0.00
Mobile Home	1	0.7%	0.34	0.5%	816	0.4%	816	\$159,200	\$46,700	\$205,900	0.5%	\$159,200	\$57.23	0.05
TOTAL % TOTAL	152	2.7%	67.99	9.0%	210,178	1.7%	1,383	\$20,758,300	\$20,566,800	\$41,325,100	1.9%	\$136,568	\$97.85	0.07
NON-RESIDENTIAL PROPERTIES														
Retail	1	5.6%	13.22	11.2%	251,460	28.6%	251,460	\$6,279,900	\$19,860,200	\$26,140,100	22.5%	\$6,279,900	\$78.98	0.44
Office	5	27.8%	37.54	31.9%	314,261	35.7%	62,852	\$9,906,800	\$32,281,200	\$42,188,000	36.4%	\$1,981,360	\$102.72	0.19
Industrial	6	33.3%	37.28	31.7%	95,264	10.8%	15,877	\$7,411,300	\$7,453,800	\$14,865,100	12.8%	\$1,235,217	\$78.24	0.06
Services	4	22.2%	24.57	20.9%	177,258	20.2%	44,315	\$10,934,700	\$14,827,100	\$25,761,800	22.2%	\$2,733,675	\$83.65	0.17
Restaurant/Hospitality	2	11.1%	5.03	4.3%	41,367	4.7%	20,684	\$2,391,100	\$4,612,900	\$7,004,000	6.0%	\$1,195,550	\$111.51	0.19
TOTAL % TOTAL	18	19.8%	117.64	17.9%	879,610	11.1%	48,867	\$36,923,800	\$79,035,200	\$115,959,000	7.1%	\$2,051,322	\$89.85	0.17
1990 TO 1999														
RESIDENTIAL PROPERTIES														
Single Family	998	29.2%	251.38	66.0%	2,221,585	33.6%	2,226	\$140,954,100	\$238,826,000	\$379,780,100	32.6%	\$141,237	\$107.50	0.20
Townhome	2,414	70.5%	99.67	26.2%	3,814,300	57.8%	1,580	\$296,480,000	\$364,061,100	\$660,541,100	56.7%	\$122,817	\$95.45	0.88
Condominium	9	0.3%	0.00	0.0%	10,084	0.2%	1,120	\$774,400	\$774,800	\$1,549,200	0.1%	\$86,044	\$76.83	0.00
Apartment	2	0.1%	29.63	7.8%	558,638	8.5%	279,319	\$29,600,000	\$94,498,700	\$124,098,700	10.6%	\$14,800,000	\$169.16	0.43
Mobile Home	0	0.0%	0.00	0.0%	0	0.0%	0	\$0	\$0	\$0	0.0%	\$0	\$0.00	0.00
TOTAL % TOTAL	3,423	60.8%	380.68	50.1%	6,604,607	53.0%	1,929	\$467,808,500	\$698,160,600	\$1,165,969,100	53.4%	\$136,666	\$105.71	0.40
NON-RESIDENTIAL PROPERTIES														
Retail	7	25.0%	85.45	39.7%	681,079	34.6%	97,297	\$39,357,600	\$55,788,000	\$95,145,600	26.3%	\$5,622,514	\$81.91	0.18
Office	6	21.4%	28.67	13.3%	440,544	22.4%	73,424	\$17,697,700	\$115,318,400	\$133,016,100	36.8%	\$2,949,617	\$261.76	0.35
Industrial	5	17.9%	82.70	38.4%	527,497	26.8%	105,499	\$20,764,800	\$20,546,600	\$41,311,400	11.4%	\$4,152,960	\$38.95	0.15
Services	4	14.3%	12.23	5.7%	268,617	13.7%	67,154	\$6,477,400	\$69,444,100	\$75,921,500	21.0%	\$1,619,350	\$258.52	0.50
Restaurant/Hospitality	6	21.4%	6.39	3.0%	49,662	2.5%	8,277	\$3,209,300	\$12,731,200	\$15,940,500	4.4%	\$534,883	\$256.36	0.18
TOTAL % TOTAL	28	30.8%	215.44	32.8%	1,967,399	24.8%	70,264	\$87,506,800	\$273,828,300	\$361,335,100	22.2%	\$3,125,243	\$139.18	0.21
2000 TO 2009														
RESIDENTIAL PROPERTIES														
Single Family	213	15.8%	108.26	50.8%	486,845	12.4%	2,286	\$31,436,500	\$52,494,300	\$83,930,800	12.3%	\$147,589	\$107.83	0.10
Townhome	1,133	83.8%	39.96	18.7%	1,993,933	51.0%	1,760	\$130,211,800	\$198,851,900	\$329,063,700	48.2%	\$114,927	\$99.73	1.15
Condominium	1	0.1%	0.00	0.0%	1,285	0.0%	1,285	\$102,800	\$102,800	\$205,600	0.0%	\$102,800	\$80.00	0.00
Apartment	5	0.4%	65.01	30.5%	1,430,294	36.6%	286,059	\$67,250,000	\$202,575,900	\$269,825,900	39.5%	\$13,450,000	\$141.63	0.51
Mobile Home	0	0.0%	0.00	0.0%	0	0.0%	0	\$0	\$0	\$0	0.0%	\$0	\$0.00	0.00
TOTAL % TOTAL	1,352	24.0%	213.23	28.1%	3,912,357	31.4%	2,894	\$229,001,100	\$454,024,900	\$683,026,000	31.3%	\$169,380	\$116.05	0.42
NON-RESIDENTIAL PROPERTIES														
Retail	1	3.2%	2.23	1.1%	10,530	0.4%	10,530	\$1,240,000	\$679,100	\$1,919,100	0.3%	\$1,240,000	\$64.49	0.11
Office	18	58.1%	154.24	75.1%	2,267,997	81.7%	126,000	\$82,870,900	\$575,872,200	\$658,743,100	90.7%	\$4,603,939	\$253.91	0.34
Industrial	6	19.4%	31.66	15.4%	325,093	11.7%	54,182	\$7,261,000	\$28,484,600	\$35,745,600	4.9%	\$1,210,167	\$87.62	0.24
Services	4	12.9%	9.45	4.6%	30,614	1.1%	7,654	\$1,516,000	\$2,331,600	\$3,847,600	0.5%	\$379,000	\$76.16	0.07
Restaurant/Hospitality	2	6.5%	7.87	3.8%	141,906	5.1%	70,953	\$4,879,400	\$21,381,300	\$26,260,700	3.6%	\$2,489,700	\$150.67	0.41
TOTAL % TOTAL	31	34.1%	205.46	31.3%	2,776,140	35.0%	89,553	\$97,767,300	\$628,748,800	\$726,516,100	44.6%	\$3,153,784	\$226.48	0.31
2010 TO PRESENT														
RESIDENTIAL PROPERTIES														
Single Family	128	18.2%	72.11	74.1%	395,292	22.9%	3,088	\$23,319,000	\$47,729,100	\$71,048,100	24.1%	\$182,180	\$120.74	0.13
Townhome	566	80.3%	24.70	25.4%	1,286,129	74.4%	2,272	\$76,030,000	\$142,308,500	\$218,338,500	74.2%	\$134,329	\$110.65	1.20
Condominium	0	0.0%	0.00	0.0%	0	0.0%	0	\$0	\$0	\$0	0.0%	\$0	\$0.00	0.00
Apartment	0	0.0%	0.00	0.0%	0	0.0%	0	\$0	\$0	\$0	0.0%	\$0	\$0.00	0.00
Mobile Home	11	1.6%	0.47	0.5%	47,674	2.8%	4,334	\$1,760,000	\$3,220,100	\$4,980,100	1.7%	\$160,000	\$67.54	2.33
TOTAL % TOTAL	705	12.5%	97.27	12.8%	1,729,095	13.9%	2,453	\$101,109,000	\$193,257,700	\$294,366,700	13.5%	\$143,417	\$111.77	0.41
NON-RESIDENTIAL PROPERTIES														
Retail	1	5.6%	1.65	1.4%	10,660	0.5%	10,660	\$347,200	\$2,178,500	\$2,525,700	0.6%	\$347,200	\$204.36	0.15
Office	12	66.7%	112.10	94.4%	2,217,504	96.2%	184,792	\$9,906,800	\$377,079,500	\$386,986,300	90.7%	\$825,567	\$170.05	0.45
Industrial	1	5.6%	4.94	4.2%	77,952	3.4%	77,952	\$7,411,300	\$14,160,800	\$21,572,100	5.1%	\$7,411,300	\$181.66	0.36
Services	0	0.0%	0.00	0.0%	0	0.0%	0	\$0	\$0	\$0	0.0%	\$0	\$0.00	0.00
Restaurant/Hospitality	0	0.0%	0.00	0.0%	0	0.0%	0	\$0	\$0	\$0	0.0%	\$0	\$0.00	0.00
TOTAL % TOTAL	14	15.4%	118.69	18.1%	2,306,116	29.1%	164,723	\$30,991,100	\$395,597,300	\$426,588,400	26.2%	\$2,213,650	\$171.54	0.45
TOTAL INVENTORY (1980 TO 2017)														
RESIDENTIAL PROPERTIES														
Single Family	1,383	24.6%	493.90	65.1%	3,179,178	25.5%	2,299	\$204,423,700	\$346,283,900	\$550,707,600	25.2%	\$147,812	\$108.92	0.15
Townhome	4,220	74.9%	169.83	22.4%	7,228,268	58.0%	1,713	\$514,606,800	\$718,507,100	\$1,233,113,900	56.4%	\$121,945	\$99.40	0.98
Condominium	10	0.2%	0.00	0.0%	11,369	0.1%	1,137	\$877,200	\$877,600	\$1,754,800	0.1%	\$87,720	\$77.19	0.00
Apartment	7	0.1%	94.64	12.5%	1,988,932	16.0%	284,133	\$96,850,000	\$297,074,600	\$393,924,600	18.0%	\$13,835,714	\$149.36	0.48
Mobile Home	12	0.2%	0.81	0.1%	48,490	0.4%	4,041	\$1,919,200	\$3,266,800	\$5,186,000	0.2%	\$159,933	\$67.37	1.37
TOTAL	5,632	98.4%	759.17	53.6%	12,456,237	61.1%	2,212	\$818,676,900	\$1,366,010,000	\$2,184,686,900	57.3%	\$145,362	\$109.66	0.38
NON-RESIDENTIAL PROPERTIES														
Retail	10	11.0%	102.55	15.6%	953,729	12.0%	95,373	\$47,224,700	\$78,505,800	\$125,730,500	7.7%	\$4,722,470	\$82.31	0.21
Office	41	45.1%	332.56	50.6%	5,240,306	66.1%	127,812	\$120,382,200	\$1,100,551,300	\$1,220,933,500	74.9%	\$2,936,151	\$210.02	0.36
Industrial	18	19.8%	156.58	23.8%	1,025,806	12.9%	56,989	\$42,848,400	\$70,645,800	\$113,494,200	7.0%	\$2,380,467	\$68.87	0.15
Services	12	13.2%	46.25	7.0%	476,489	6.0%	39,707	\$29,862,800	\$88,781,300	\$118,644,100	7.3%	\$2,488,567	\$186.32	0.24
Restaurant/Hospitality	10	11.0%	19.29	2.9%	232,935	2.9%	23,294	\$12,870,900	\$38,725,400	\$51,596,300	3.2%	\$1,287,090	\$166.25	0.28
TOTAL % TOTAL	91	1.6%	657.23	46.4%	7,929,265	38.9%	87,135	\$253,189,000	\$1,377,209,600	\$1,630,398,600	42.7%	\$2,782,297	\$173.69	0.28
SUBMARKET TOTAL	5,723	100.0%	1,416.40	100.0%	20,385,502	100.0%	3,562	\$1,071,865,900	\$2,743,219,600	\$3,815,085,500	100.0%	\$187,291	\$134.57	0.33

Source: MD Property View and RKG Associates, Inc., 2018

APPENDIX TABLE 4-2
Residential & Non-residential Development Trends
Anne Arundel County, Maryland (1980-2017)

SM 2 - LINTHICUM SEVERN														
	No. of Properties	% of All Properties	% of All Acreage Land Area		Total Bldg. SF	% of All Properties	Avg. Bldg SF	Land Assessed Value	Building Assessed Value	Total Assessed Value	% Of All Property Appraised Value	Avg. Land AV	Avg. Bldg. AV	FAR
1980 TO 1989														
RESIDENTIAL PROPERTIES														
Single Family	2,594	92.1%	966.89	98.2%	4,326,725	94.4%	1,668	\$387,797,700	\$449,983,600	\$837,781,300	95.3%	\$149,498	\$104.00	0.10
Townhome	222	7.9%	17.53	1.8%	255,681	5.6%	1,152	\$17,610,800	\$23,594,300	\$41,205,100	4.7%	\$79,328	\$92.28	0.33
Condominium	0	0.0%	0.00	0.0%	0	0.0%	0	\$0	\$0	\$0	0.0%	\$0	\$0.00	0.00
Apartment	0	0.0%	0.00	0.0%	0	0.0%	0	\$0	\$0	\$0	0.0%	\$0	\$0.00	0.00
Mobile Home	0	0.0%	0.00	0.0%	0	0.0%	0	\$0	\$0	\$0	0.0%	\$0	\$0.00	0.00
TOTAL/% TOTAL	2,816	28.7%	984.42	35.5%	4,582,406	20.8%	1,627	\$405,408,500	\$473,577,900	\$878,986,400	22.6%	\$143,966	\$103.35	0.11
NON-RESIDENTIAL PROPERTIES														
Retail	11	9.1%	17.75	2.9%	122,071	1.7%	11,097	\$8,298,700	\$14,697,800	\$22,996,500	3.2%	\$754,427	\$120.40	0.16
Office	48	39.7%	244.98	40.2%	2,873,831	40.9%	59,871	\$77,130,200	\$255,361,500	\$332,491,700	45.6%	\$1,606,879	\$88.86	0.27
Industrial	44	36.4%	308.49	50.6%	3,334,203	47.5%	75,777	\$88,134,000	\$158,058,900	\$246,192,900	33.8%	\$2,003,045	\$47.41	0.25
Services	6	5.0%	7.67	1.3%	23,826	0.3%	3,971	\$2,571,900	\$2,908,200	\$5,480,100	0.8%	\$428,650	\$122.06	0.07
Restaurant/Hospitality	12	9.9%	31.09	5.1%	669,383	9.5%	55,782	\$12,130,100	\$110,133,500	\$122,263,600	16.8%	\$1,010,842	\$164.53	0.49
TOTAL/% TOTAL	121	32.1%	609.98	25.8%	7,023,314	27.8%	58,044	\$188,264,900	\$541,159,900	\$729,424,800	20.0%	\$1,555,908	\$77.05	0.26
1990 TO 1999														
RESIDENTIAL PROPERTIES														
Single Family	2,320	88.8%	719.33	89.3%	4,645,400	90.9%	2,002	\$336,728,100	\$504,593,700	\$841,321,800	90.7%	\$145,141	\$108.62	0.15
Townhome	291	11.1%	12.58	1.6%	465,884	9.1%	1,601	\$29,891,100	\$42,323,600	\$72,214,700	7.8%	\$102,719	\$90.85	0.85
Condominium	0	0.0%	0.00	0.0%	0	0.0%	0	\$0	\$0	\$0	0.0%	\$0	\$0.00	0.00
Apartment	0	0.0%	0.00	0.0%	0	0.0%	0	\$0	\$0	\$0	0.0%	\$0	\$0.00	0.00
Mobile Home	1	0.0%	73.28	9.1%	1,784	0.0%	1,784	\$13,954,500	\$134,000	\$14,088,500	1.5%	\$13,954,500	\$75.11	0.00
TOTAL/% TOTAL	2,612	26.7%	805.19	29.0%	5,113,068	23.2%	1,958	\$380,573,700	\$547,051,300	\$927,625,000	23.9%	\$145,702	\$106.99	0.15
NON-RESIDENTIAL PROPERTIES														
Retail	11	13.8%	17.48	3.7%	126,340	2.7%	11,485	\$7,542,500	\$17,750,100	\$25,292,600	4.3%	\$685,682	\$140.49	0.17
Office	16	20.0%	126.44	26.9%	978,633	21.0%	61,165	\$38,234,300	\$148,843,700	\$187,078,000	31.8%	\$2,389,644	\$152.09	0.18
Industrial	30	37.5%	226.37	48.2%	2,323,441	49.8%	77,448	\$67,028,000	\$111,807,700	\$178,835,700	30.4%	\$2,234,267	\$48.12	0.24
Services	8	10.0%	57.32	12.2%	486,485	10.4%	60,811	\$15,768,700	\$41,902,800	\$57,671,500	9.8%	\$1,971,088	\$86.13	0.19
Restaurant/Hospitality	15	18.8%	42.14	9.0%	752,955	16.1%	50,197	\$18,096,900	\$121,899,100	\$139,996,000	23.8%	\$1,206,460	\$161.89	0.41
TOTAL/% TOTAL	80	21.2%	469.75	19.9%	4,667,854	18.5%	58,348	\$146,670,400	\$442,203,400	\$588,873,800	16.1%	\$1,833,380	\$94.73	0.23
2000 TO 2009														
RESIDENTIAL PROPERTIES														
Single Family	1,897	72.2%	633.07	93.1%	5,107,074	71.6%	2,692	\$251,407,800	\$599,221,700	\$850,629,500	71.0%	\$132,529	\$117.33	0.19
Townhome	727	27.7%	33.54	4.9%	1,434,701	20.1%	1,973	\$94,700,800	\$151,696,300	\$246,397,100	20.6%	\$130,262	\$105.73	0.98
Condominium	2	0.1%	0.06	0.0%	2,814	0.0%	1,407	\$239,000	\$239,200	\$478,200	0.0%	\$119,500	\$85.00	1.01
Apartment	1	0.0%	13.26	2.0%	588,828	8.3%	588,828	\$24,800,000	\$75,469,700	\$100,269,700	8.4%	\$24,800,000	\$128.17	1.02
Mobile Home	0	0.0%	0.00	0.0%	0	0.0%	0	\$0	\$0	\$0	0.0%	\$0	\$0.00	0.00
TOTAL/% TOTAL	2,627	26.8%	679.93	24.5%	7,133,417	32.4%	2,715	\$371,147,600	\$826,626,900	\$1,197,774,500	30.9%	\$141,282	\$115.88	0.24
NON-RESIDENTIAL PROPERTIES														
Retail	28	20.7%	286.09	27.7%	2,463,082	24.2%	87,967	\$223,478,600	\$437,739,200	\$661,217,800	35.0%	\$7,981,379	\$177.72	0.20
Office	26	19.3%	250.91	24.3%	2,067,850	20.4%	79,533	\$104,898,400	\$335,374,300	\$440,272,700	23.3%	\$4,034,554	\$162.19	0.19
Industrial	43	31.9%	393.77	38.1%	3,826,851	37.7%	88,997	\$118,838,500	\$259,896,600	\$378,735,100	20.0%	\$2,763,686	\$67.91	0.22
Services	11	8.1%	14.49	1.4%	58,461	0.6%	5,315	\$7,810,200	\$20,118,000	\$27,928,200	1.5%	\$710,018	\$344.13	0.09
Restaurant/Hospitality	27	20.0%	87.23	8.4%	1,743,371	17.2%	64,569	\$47,243,500	\$334,367,100	\$381,610,600	20.2%	\$1,749,759	\$191.79	0.46
TOTAL/% TOTAL	135	35.8%	1,032.50	43.7%	10,159,615	40.2%	75,256	\$502,269,200	\$1,387,495,200	\$1,889,764,400	51.7%	\$3,720,513	\$136.57	0.23
2010 TO PRESENT														
RESIDENTIAL PROPERTIES														
Single Family	779	44.7%	251.24	81.8%	2,247,219	43.2%	2,885	\$113,351,700	\$278,628,000	\$391,979,700	44.7%	\$145,509	\$123.99	0.21
Townhome	955	54.9%	42.42	13.8%	2,038,048	39.1%	2,134	\$127,764,900	\$237,788,600	\$365,553,500	41.7%	\$133,785	\$116.67	1.10
Condominium	5	0.3%	0.13	0.0%	7,035	0.1%	1,407	\$597,500	\$598,000	\$1,195,500	0.1%	\$119,500	\$85.00	1.26
Apartment	2	0.1%	13.34	4.3%	913,860	17.6%	456,930	\$26,150,000	\$92,213,000	\$118,363,000	13.5%	\$13,075,000	\$100.90	1.57
Mobile Home	0	0.0%	0.00	0.0%	0	0.0%	0	\$0	\$0	\$0	0.0%	\$0	\$0.00	0.00
TOTAL/% TOTAL	1,741	17.8%	307.13	11.1%	5,206,162	23.6%	2,990	\$267,864,100	\$609,227,600	\$877,091,700	22.6%	\$153,856	\$117.02	0.39
NON-RESIDENTIAL PROPERTIES														
Retail	8	6.6%	13.68	5.4%	72,988	2.1%	9,124	\$9,696,100	\$14,397,800	\$24,093,900	5.4%	\$1,212,013	\$197.26	0.12
Office	7	5.8%	50.39	20.1%	500,146	14.6%	71,449	\$77,130,200	\$60,526,600	\$137,656,800	30.8%	\$11,018,600	\$121.02	0.23
Industrial	12	9.9%	160.63	64.0%	2,257,621	66.1%	188,135	\$88,134,000	\$84,615,700	\$172,749,700	38.6%	\$7,344,500	\$37.48	0.32
Services	3	2.5%	5.97	2.4%	239,540	7.0%	79,847	\$2,571,900	\$14,397,800	\$16,969,700	3.8%	\$857,300	\$60.11	0.92
Restaurant/Hospitality	11	9.1%	20.42	8.1%	344,109	10.1%	31,283	\$12,130,100	\$83,720,900	\$95,851,000	21.4%	\$1,102,736	\$243.30	0.39
TOTAL/% TOTAL	41	10.9%	251.08	10.6%	3,414,404	13.5%	83,278	\$189,662,300	\$257,658,800	\$447,321,100	12.2%	\$4,625,910	\$75.46	0.31
TOTAL INVENTORY (1980 TO 2017)														
RESIDENTIAL PROPERTIES														
Single Family	7,590	77.5%	2,570.52	92.6%	16,326,418	74.1%	2,151	\$1,089,285,300	\$1,832,427,000	\$2,921,712,300	75.3%	\$143,516	\$112.24	0.15
Townhome	2,195	22.4%	106.07	3.8%	4,194,314	19.0%	1,911	\$269,967,600	\$455,402,800	\$725,370,400	18.7%	\$122,992	\$108.58	0.91
Condominium	7	0.1%	0.19	0.0%	9,849	0.0%	1,407	\$836,500	\$837,200	\$1,673,700	0.0%	\$119,500	\$85.00	1.18
Apartment	3	0.0%	26.60	1.0%	1,502,688	6.8%	500,896	\$50,950,000	\$167,682,700	\$218,632,700	5.6%	\$16,983,333	\$111.59	1.30
Mobile Home	1	0.0%	73.28	2.6%	1,784	0.0%	1,784	\$13,954,500	\$134,000	\$14,088,500	0.4%	\$13,954,500	\$75.11	0.00
TOTAL	9,796	96.3%	2,776.66	54.0%	22,035,053	46.6%	2,249	\$1,424,993,900	\$2,456,483,700	\$3,881,477,600	51.5%	\$145,467	\$111.48	0.18
NON-RESIDENTIAL PROPERTIES														
Retail	58	15.4%	335.01	14.2%	2,784,481	11.0%	48,008	\$249,015,900	\$484,584,900	\$733,600,800	20.1%	\$4,293,378	\$174.03	0.19
Office	97	25.7%	672.72	28.5%	6,420,460	25.4%	66,190	\$297,393,100	\$800,106,100	\$1,097,499,200	30.0%	\$3,065,908	\$124.62	0.22
Industrial	129	34.2%	1,089.26	46.1%	11,742,116	46.5%	91,024	\$362,134,500	\$614,378,900	\$976,513,400	26.7%	\$2,807,244	\$52.32	0.25
Services	28	7.4%	85.44	3.6%	808,312	3.2%	28,868	\$28,722,700	\$79,326,800	\$108,049,500	3.0%	\$1,025,811	\$98.14	0.22
Restaurant/Hospitality	65	17.2%	180.88	7.7%	3,509,818	13.9%	53,997	\$89,600,600	\$650,120,600	\$739,721,200	20.2%	\$1,378,471	\$185.23	0.45
TOTAL/% TOTAL	377	3.7%	2,363.31	46.0%	25,265,187	53.4%	67,016	\$1,026,866,800	\$2,628,517,300	\$3,655,384,100	48.5%	\$2,723,785	\$104.04	0.25
SUBMARKET TOTAL	10,173	100.0%	5,139.97	100.0%	47,300,240	100.0%	4,650	\$2,451,860,700	\$5,085,001,000	\$7,536,861,700	100.0%	\$241,016	\$107.50	0.21

Source: MD Property View and RKG Associates, Inc., 2018

APPENDIX TABLE 4-3

Residential & Non-residential Development Trends
Anne Arundel County, Maryland (1980-2017)

SM 3 - BROOKLYN PARK-GLEN BURNIE-PASADENA														
	No. of Properties	% of All Properties	% of All Acreage Land Area		Total Bldg. SF	% of All Properties	Avg. Bldg SF	Land Assessed Value	Building Assessed Value	Total Assessed Value	% Of All Property Appraised Value	Avg. Land AV	Avg. Bldg. AV	FAR
1980 TO 1989														
RESIDENTIAL PROPERTIES														
Single Family	3,313	61.5%	840.02	85.7%	4,462,787	65.1%	1,347	\$413,143,500	\$481,312,000	\$894,455,500	68.7%	\$124,704	\$107.85	0.12
Townhome	2,058	38.2%	135.71	13.8%	2,376,228	34.7%	1,155	\$176,316,300	\$229,238,200	\$405,554,500	31.2%	\$85,674	\$96.47	0.40
Condominium	10	0.2%	0.00	0.0%	9,565	0.1%	957	\$701,300	\$701,600	\$1,402,900	0.1%	\$70,130	\$73.35	0.00
Apartment	0	0.0%	0.00	0.0%	0	0.0%	0	\$0	\$0	\$0	0.0%	\$0	\$0.00	0.00
Mobile Home	2	0.0%	4.44	0.5%	3,120	0.0%	1,560	\$287,400	\$110,900	\$398,300	0.0%	\$143,700	\$35.54	0.02
TOTAL/% TOTAL	5,383	36.8%	980.17	35.5%	6,851,700	27.5%	1,273	\$590,448,500	\$711,362,700	\$1,301,811,200	30.0%	\$109,688	\$103.82	0.16
NON-RESIDENTIAL PROPERTIES														
Retail	30	23.3%	142.17	15.2%	1,756,527	25.3%	58,551	\$96,352,800	\$108,322,800	\$204,675,600	27.4%	\$3,211,760	\$61.67	0.28
Office	36	27.9%	99.90	10.6%	1,359,295	19.6%	37,758	\$39,431,900	\$69,872,800	\$109,304,700	14.6%	\$1,095,331	\$51.40	0.31
Industrial	28	21.7%	594.12	63.3%	3,077,038	44.3%	109,894	\$141,381,600	\$190,716,000	\$332,097,600	44.5%	\$5,049,343	\$61.98	0.12
Services	20	15.5%	57.42	6.1%	299,240	4.3%	14,962	\$20,275,400	\$24,072,600	\$44,348,000	5.9%	\$1,013,770	\$80.45	0.12
Restaurant/Hospitality	15	11.6%	44.61	4.8%	446,213	6.4%	29,748	\$19,668,500	\$36,534,000	\$56,202,500	7.8%	\$1,311,233	\$81.88	0.23
TOTAL/% TOTAL	129	36.3%	938.22	49.6%	6,938,313	45.7%	53,785	\$317,110,200	\$429,518,200	\$746,628,400	37.8%	\$2,458,219	\$61.91	0.17
1990 TO 1999														
RESIDENTIAL PROPERTIES														
Single Family	2,525	65.4%	663.88	91.9%	3,803,842	68.1%	1,506	\$316,693,600	\$416,742,300	\$733,435,900	71.4%	\$125,423	\$109.56	0.13
Townhome	1,279	33.1%	57.90	8.0%	1,729,796	31.0%	1,352	\$112,392,000	\$173,294,600	\$285,686,600	27.8%	\$87,875	\$100.18	0.69
Condominium	55	1.4%	0.02	0.0%	49,633	0.9%	902	\$3,750,900	\$3,753,300	\$7,504,200	0.7%	\$68,198	\$75.62	56.97
Apartment	1	0.0%	0.35	0.0%	3,063	0.1%	3,063	\$104,900	\$304,900	\$409,800	0.0%	\$104,900	\$99.54	0.20
Mobile Home	0	0.0%	0.00	0.0%	0	0.0%	0	\$0	\$0	\$0	0.0%	\$0	\$0.00	0.00
TOTAL/% TOTAL	3,860	26.4%	722.16	26.2%	5,586,334	22.4%	1,447	\$432,941,400	\$594,095,100	\$1,027,036,500	23.7%	\$112,161	\$106.35	0.18
NON-RESIDENTIAL PROPERTIES														
Retail	32	31.1%	118.73	29.4%	1,060,406	22.7%	33,138	\$71,357,700	\$105,623,100	\$176,980,800	33.9%	\$2,229,928	\$99.61	0.21
Office	20	19.4%	39.60	9.8%	497,330	10.7%	24,867	\$18,085,200	\$41,579,000	\$59,664,200	11.4%	\$904,260	\$83.60	0.29
Industrial	31	30.1%	197.03	48.8%	2,738,324	58.7%	88,333	\$70,126,100	\$156,904,300	\$227,030,400	43.5%	\$2,262,132	\$57.30	0.32
Services	11	10.7%	36.46	9.0%	295,546	6.3%	26,868	\$23,773,100	\$19,552,300	\$43,325,400	8.3%	\$2,161,191	\$66.16	0.19
Restaurant/Hospitality	9	8.7%	11.64	2.9%	70,880	1.5%	7,876	\$7,505,900	\$7,134,400	\$14,640,300	2.8%	\$833,989	\$100.65	0.14
TOTAL/% TOTAL	103	29.0%	403.45	21.3%	4,662,486	30.7%	45,267	\$190,848,000	\$330,793,100	\$521,641,100	26.4%	\$1,852,893	\$70.95	0.27
2000 TO 2009														
RESIDENTIAL PROPERTIES														
Single Family	1,824	77.0%	641.14	92.4%	3,742,905	70.7%	2,052	\$234,878,500	\$429,640,200	\$664,518,700	76.3%	\$128,771	\$114.79	0.13
Townhome	526	22.2%	21.07	3.0%	930,784	17.6%	1,770	\$46,120,200	\$99,341,800	\$145,462,000	16.7%	\$87,681	\$106.73	1.01
Condominium	12	0.5%	0.00	0.0%	12,582	0.2%	1,049	\$887,400	\$888,100	\$1,775,500	0.2%	\$73,950	\$70.58	0.00
Apartment	7	0.3%	31.39	4.5%	604,673	11.4%	86,382	\$26,825,300	\$32,351,200	\$59,176,500	6.8%	\$3,832,186	\$53.50	0.44
Mobile Home	0	0.0%	0.00	0.0%	0	0.0%	0	\$0	\$0	\$0	0.0%	\$0	\$0.00	0.00
TOTAL/% TOTAL	2,369	16.2%	693.60	25.1%	5,290,944	21.2%	2,233	\$308,711,400	\$562,221,300	\$870,932,700	20.1%	\$130,313	\$106.26	0.18
NON-RESIDENTIAL PROPERTIES														
Retail	26	31.7%	57.48	17.3%	530,132	20.3%	20,390	\$35,029,200	\$63,742,700	\$98,771,900	30.4%	\$1,347,277	\$120.24	0.21
Office	19	23.2%	45.50	13.7%	424,528	16.2%	22,344	\$23,304,100	\$50,626,300	\$73,930,400	22.8%	\$1,226,532	\$119.25	0.21
Industrial	17	20.7%	174.95	52.5%	1,431,010	54.7%	84,177	\$39,302,100	\$69,105,100	\$108,407,200	33.4%	\$2,311,888	\$48.29	0.19
Services	10	12.2%	39.44	11.8%	81,348	3.1%	8,135	\$5,457,200	\$10,673,300	\$16,130,500	5.0%	\$545,720	\$131.21	0.05
Restaurant/Hospitality	10	12.2%	15.74	4.7%	146,717	5.6%	14,672	\$27,464,900	\$20,070,600	\$47,535,500	8.5%	\$739,430	\$136.80	0.21
TOTAL/% TOTAL	82	23.1%	333.11	17.6%	2,613,735	17.2%	31,875	\$110,486,900	\$214,218,000	\$324,704,900	16.5%	\$1,347,401	\$81.96	0.18
2010 TO PRESENT														
RESIDENTIAL PROPERTIES														
Single Family	1,011	33.3%	235.56	64.4%	2,193,795	30.4%	2,170	\$126,229,800	\$279,829,100	\$406,058,900	35.7%	\$124,856	\$127.55	0.21
Townhome	1,989	65.6%	83.59	22.9%	3,869,055	53.6%	1,945	\$181,355,600	\$415,846,700	\$597,202,300	52.4%	\$91,179	\$107.48	1.06
Condominium	0	0.0%	0.00	0.0%	0	0.0%	0	\$0	\$0	\$0	0.0%	\$0	\$0.00	0.00
Apartment	32	1.1%	40.24	11.0%	1,160,099	16.1%	36,253	\$37,613,700	\$96,891,900	\$134,505,600	11.8%	\$1,175,428	\$83.52	0.66
Mobile Home	2	0.1%	6.18	1.7%	1,643	0.0%	822	\$127,000	\$960,600	\$1,087,600	0.1%	\$416,800	\$77.30	0.01
TOTAL/% TOTAL	3,034	20.7%	365.58	13.2%	7,224,592	29.0%	2,381	\$346,032,700	\$792,694,700	\$1,138,727,400	26.2%	\$114,052	\$109.72	0.45
NON-RESIDENTIAL PROPERTIES														
Retail	11	8.5%	28.73	13.3%	228,309	23.5%	20,755	\$18,825,500	\$29,776,000	\$48,601,500	12.8%	\$1,711,409	\$130.42	0.18
Office	10	7.8%	64.05	29.7%	190,600	19.6%	19,060	\$39,431,900	\$42,131,200	\$81,563,100	21.4%	\$3,943,190	\$221.05	0.07
Industrial	11	8.5%	108.98	50.6%	480,017	49.4%	43,638	\$141,381,600	\$32,718,900	\$174,100,500	45.7%	\$12,852,873	\$68.16	0.10
Services	3	2.3%	6.91	3.2%	56,000	5.8%	18,667	\$20,275,400	\$29,776,000	\$50,051,400	13.1%	\$6,758,467	\$531.71	0.19
Restaurant/Hospitality	6	4.7%	6.76	3.1%	17,006	1.7%	2,834	\$19,668,500	\$6,799,600	\$26,468,100	7.0%	\$3,278,083	\$399.84	0.06
TOTAL/% TOTAL	41	11.5%	215.42	11.4%	971,932	6.4%	23,706	\$239,582,900	\$141,201,700	\$380,784,600	19.3%	\$5,843,485	\$145.28	0.10
TOTAL INVENTORY (1980 TO 2017)														
RESIDENTIAL PROPERTIES														
Single Family	8,673	59.2%	2,380.61	86.2%	14,203,329	56.9%	1,638	\$1,090,945,400	\$1,607,523,600	\$2,698,469,000	62.2%	\$125,786	\$113.18	0.14
Townhome	5,852	40.0%	298.27	10.8%	8,905,863	35.7%	1,522	\$516,184,100	\$917,721,300	\$1,433,905,400	33.1%	\$88,206	\$103.05	0.69
Condominium	77	0.5%	0.02	0.0%	71,780	0.3%	932	\$5,339,600	\$5,343,000	\$10,682,600	0.2%	\$69,345	\$74.44	82.39
Apartment	40	0.3%	71.99	2.6%	1,767,835	7.1%	44,196	\$64,543,900	\$129,548,000	\$194,091,900	4.5%	\$1,613,598	\$73.28	0.56
Mobile Home	4	0.0%	10.62	0.4%	4,763	0.0%	1,191	\$1,121,000	\$237,900	\$1,358,900	0.0%	\$280,250	\$49.95	0.01
TOTAL	14,646	97.6%	2,761.51	59.4%	24,953,570	62.2%	1,704	\$1,678,134,000	\$2,660,373,800	\$4,338,507,800	68.7%	\$114,580	\$106.61	0.21
NON-RESIDENTIAL PROPERTIES														
Retail	99	27.9%	347.11	18.4%	3,575,374	23.5%	36,115	\$221,565,200	\$307,464,600	\$529,029,800	26.8%	\$2,238,032	\$86.00	0.24
Office	85	23.9%	249.05	13.2%	2,471,753	16.3%	29,079	\$120,253,100	\$204,209,300	\$324,462,400	16.4%	\$1,414,742	\$82.62	0.23
Industrial	87	24.5%	1,075.08	56.9%	7,726,389	50.9%	88,809	\$392,191,400	\$449,444,300	\$841,635,700	42.6%	\$4,507,947	\$58.17	0.16
Services	44	12.4%	140.23	7.4%	732,134	4.8%	16,639	\$69,781,100	\$84,074,200	\$153,855,300	7.8%	\$1,585,934	\$114.83	0.12
Restaurant/Hospitality	40	11.3%	78.75	4.2%	680,816	4.5%	17,020	\$54,237,200	\$70,538,600	\$124,775,800	6.3%	\$1,355,930	\$103.61	0.20
TOTAL/% TOTAL	355	2.4%	1,890.21	40.6%	15,186,466	37.8%	42,779	\$858,028,000	\$1,115,731,000	\$1,973,759,000	31.3%	\$2,416,980	\$73.47	0.18
SUBMARKET TOTAL	15,001	100.0%	4,651.72	100.0%	40,140,036	100.0%	2,676							

APPENDIX TABLE 4-4
Residential & Non-residential Development Trends
Anne Arundel County, Maryland (1980-2017)

SM 4 - LAKE SHORE														
	No. of Properties	% of All Properties	% of All Acreage Land Area		Total Bldg. SF	% of All Properties	Avg. Bldg SF	Land Assessed Value	Building Assessed Value	Total Assessed Value	% Of All Property Appraised Value	Avg. Land AV	Avg. Bldg. AV	FAR
1980 TO 1989														
RESIDENTIAL PROPERTIES														
Single Family	1,516	70.6%	1,310.01	97.2%	2,753,436	80.4%	1,816	\$287,439,100	\$295,347,500	\$582,786,600	84.1%	\$189,604	\$107.27	0.05
Townhome	605	28.2%	38.13	2.8%	648,556	18.9%	1,072	\$48,300,100	\$59,188,800	\$107,488,900	15.5%	\$79,835	\$91.26	0.39
Condominium	25	1.2%	0.00	0.0%	22,731	0.7%	909	\$1,538,600	\$1,539,400	\$3,078,000	0.4%	\$61,544	\$67.72	0.00
Apartment	0	0.0%	0.00	0.0%	0	0.0%	0	\$0	\$0	\$0	0.0%	\$0	\$0.00	0.00
Mobile Home	0	0.0%	0.00	0.0%	0	0.0%	0	\$0	\$0	\$0	0.0%	\$0	\$0.00	0.00
TOTAL/% TOTAL	2,146	80.1%	1,348.15	34.9%	3,424,723	37.2%	1,596	\$337,277,800	\$356,075,700	\$693,353,500	37.0%	\$157,166	\$103.97	0.06
NON-RESIDENTIAL PROPERTIES														
Retail	4	28.6%	17.01	64.1%	170,926	76.3%	42,732	\$6,848,700	\$14,010,500	\$20,859,200	68.9%	\$1,712,175	\$81.97	0.23
Office	4	28.6%	3.80	14.3%	32,106	14.3%	8,027	\$1,243,900	\$3,279,600	\$4,523,500	14.9%	\$310,975	\$102.15	0.19
Industrial	0	0.0%	0.00	0.0%	0	0.0%	0	\$0	\$0	\$0	0.0%	\$0	\$0.00	0.00
Services	3	21.4%	4.63	17.4%	11,864	5.3%	3,955	\$654,800	\$1,674,100	\$2,328,900	7.7%	\$218,267	\$141.11	0.06
Restaurant/Hospitality	3	21.4%	1.11	4.2%	9,224	4.1%	3,075	\$656,600	\$1,916,500	\$2,573,100	8.5%	\$218,867	\$207.77	0.19
TOTAL/% TOTAL	14	33.3%	26.56	18.6%	224,120	46.2%	16,009	\$9,404,000	\$20,880,700	\$30,284,700	29.5%	\$671,714	\$93.17	0.19
1990 TO 1999														
RESIDENTIAL PROPERTIES														
Single Family	1,001	98.2%	1,313.91	98.3%	2,443,301	99.1%	2,441	\$220,704,600	\$283,055,700	\$503,760,300	99.2%	\$220,484	\$115.85	0.04
Townhome	17	1.7%	0.67	0.1%	22,116	0.9%	1,301	\$1,360,000	\$2,267,800	\$3,627,800	0.7%	\$80,000	\$102.54	0.75
Condominium	0	0.0%	0.00	0.0%	0	0.0%	0	\$0	\$0	\$0	0.0%	\$0	\$0.00	0.00
Apartment	0	0.0%	0.00	0.0%	0	0.0%	0	\$0	\$0	\$0	0.0%	\$0	\$0.00	0.00
Mobile Home	1	0.1%	22.28	1.7%	840	0.0%	840	\$186,500	\$52,300	\$238,800	0.0%	\$186,500	\$62.26	0.00
TOTAL/% TOTAL	1,019	23.8%	1,336.86	34.6%	2,466,257	26.8%	2,420	\$222,251,100	\$285,375,800	\$507,626,900	27.1%	\$218,107	\$115.71	0.04
NON-RESIDENTIAL PROPERTIES														
Retail	5	38.5%	37.88	68.3%	50,525	60.5%	10,105	\$5,050,100	\$4,431,000	\$9,481,100	45.4%	\$1,010,020	\$87.70	0.03
Office	2	15.4%	12.11	21.8%	10,392	12.5%	5,196	\$3,823,300	\$1,386,400	\$5,209,700	24.9%	\$1,911,650	\$133.41	0.02
Industrial	0	0.0%	0.00	0.0%	0	0.0%	0	\$0	\$0	\$0	0.0%	\$0	\$0.00	0.00
Services	2	15.4%	1.96	3.5%	13,955	16.7%	6,978	\$751,100	\$739,700	\$1,490,800	7.1%	\$375,550	\$53.01	0.16
Restaurant/Hospitality	4	30.8%	3.52	6.3%	8,576	10.3%	2,144	\$2,112,400	\$2,597,100	\$4,709,500	22.5%	\$528,100	\$302.83	0.06
TOTAL/% TOTAL	13	31.0%	55.47	38.8%	83,448	17.2%	6,419	\$11,736,900	\$9,154,200	\$20,891,100	20.4%	\$902,838	\$109.70	0.03
2000 TO 2009														
RESIDENTIAL PROPERTIES														
Single Family	833	90.1%	996.10	99.6%	2,635,607	93.0%	3,164	\$189,292,000	\$346,604,900	\$535,896,900	95.8%	\$227,241	\$131.51	0.06
Townhome	92	9.9%	3.97	0.4%	199,716	7.0%	2,171	\$4,600,000	\$19,004,400	\$23,604,400	4.2%	\$50,000	\$95.16	1.15
Condominium	0	0.0%	0.00	0.0%	0	0.0%	0	\$0	\$0	\$0	0.0%	\$0	\$0.00	0.00
Apartment	0	0.0%	0.00	0.0%	0	0.0%	0	\$0	\$0	\$0	0.0%	\$0	\$0.00	0.00
Mobile Home	0	0.0%	0.00	0.0%	0	0.0%	0	\$0	\$0	\$0	0.0%	\$0	\$0.00	0.00
TOTAL/% TOTAL	925	21.6%	1,000.07	25.9%	2,835,323	30.8%	3,065	\$193,892,000	\$365,609,300	\$559,501,300	29.8%	\$209,613	\$128.95	0.07
NON-RESIDENTIAL PROPERTIES														
Retail	4	44.4%	11.54	38.6%	93,275	69.3%	23,319	\$4,366,600	\$11,934,000	\$16,300,600	61.8%	\$1,091,650	\$127.94	0.19
Office	1	11.1%	1.00	3.3%	11,397	8.5%	11,397	\$200,000	\$1,785,600	\$1,985,600	7.5%	\$200,000	\$156.67	0.26
Industrial	0	0.0%	0.00	0.0%	0	0.0%	0	\$0	\$0	\$0	0.0%	\$0	\$0.00	0.00
Services	4	44.4%	17.33	58.0%	29,978	22.3%	7,495	\$1,820,900	\$6,280,300	\$8,101,200	30.7%	\$455,225	\$209.50	0.04
Restaurant/Hospitality	0	0.0%	0.00	0.0%	0	0.0%	0	\$0	\$0	\$0	0.0%	\$0	\$0.00	0.00
TOTAL/% TOTAL	9	21.4%	29.87	20.9%	134,650	27.8%	14,961	\$6,387,500	\$19,999,900	\$26,387,400	25.7%	\$709,722	\$148.53	0.10
2010 TO PRESENT														
RESIDENTIAL PROPERTIES														
Single Family	191	100.0%	177.39	100.0%	480,909	100.0%	2,518	\$48,653,800	\$65,586,500	\$114,240,300	100.0%	\$254,732	\$136.38	0.06
Townhome	0	0.0%	0.00	0.0%	0	0.0%	0	\$0	\$0	\$0	0.0%	\$0	\$0.00	0.00
Condominium	0	0.0%	0.00	0.0%	0	0.0%	0	\$0	\$0	\$0	0.0%	\$0	\$0.00	0.00
Apartment	0	0.0%	0.00	0.0%	0	0.0%	0	\$0	\$0	\$0	0.0%	\$0	\$0.00	0.00
Mobile Home	0	0.0%	0.00	0.0%	0	0.0%	0	\$0	\$0	\$0	0.0%	\$0	\$0.00	0.00
TOTAL/% TOTAL	191	4.5%	177.39	4.6%	480,909	5.2%	2,518	\$48,653,800	\$65,586,500	\$114,240,300	6.1%	\$254,732	\$136.38	0.06
NON-RESIDENTIAL PROPERTIES														
Retail	3	21.4%	25.75	82.9%	18,834	43.9%	6,278	\$4,325,800	\$8,047,400	\$12,373,200	49.5%	\$1,441,933	\$427.28	0.02
Office	0	0.0%	0.00	0.0%	0	0.0%	0	\$1,243,900	\$0	\$1,243,900	5.0%	\$0	\$0.00	0.00
Industrial	1	7.1%	2.00	6.4%	1,625	3.8%	1,625	\$0	\$1,305,500	\$1,305,500	5.2%	\$0	\$803.38	0.02
Services	1	7.1%	2.99	9.6%	20,606	48.0%	20,606	\$654,800	\$8,047,400	\$8,702,200	34.8%	\$654,800	\$390.54	0.16
Restaurant/Hospitality	1	7.1%	0.31	1.0%	1,868	4.4%	1,868	\$656,600	\$720,200	\$1,376,800	5.5%	\$656,600	\$385.55	0.14
TOTAL/% TOTAL	6	14.3%	31.05	21.7%	42,933	8.8%	7,156	\$6,881,100	\$18,120,500	\$25,001,600	24.4%	\$1,146,850	\$422.06	0.03
TOTAL INVENTORY (1980 TO 2017)														
RESIDENTIAL PROPERTIES														
Single Family	3,541	82.7%	3,797.41	98.3%	8,313,253	90.3%	2,348	\$746,089,500	\$990,594,600	\$1,736,684,100	92.6%	\$210,700	\$119.16	0.05
Townhome	714	16.7%	427.8	1.1%	870,388	9.5%	1,219	\$54,260,100	\$80,461,000	\$134,721,100	7.2%	\$75,995	\$92.44	0.47
Condominium	25	0.6%	0.00	0.0%	22,731	0.2%	909	\$1,538,600	\$1,539,400	\$3,078,000	0.2%	\$61,544	\$67.72	0.00
Apartment	0	0.0%	0.00	0.0%	0	0.0%	0	\$0	\$0	\$0	0.0%	\$0	\$0.00	0.00
Mobile Home	1	0.0%	22.28	0.6%	840	0.0%	840	\$186,500	\$52,300	\$238,800	0.0%	\$186,500	\$62.26	0.00
TOTAL	4,281	99.0%	3,862.46	96.4%	9,207,212	95.0%	2,151	\$802,074,700	\$1,072,647,300	\$1,874,722,000	94.8%	\$187,357	\$116.50	0.05
NON-RESIDENTIAL PROPERTIES														
Retail	16	38.1%	92.18	64.5%	333,560	68.8%	20,848	\$20,591,200	\$38,422,900	\$59,014,100	57.5%	\$1,286,950	\$115.19	0.08
Office	7	16.7%	16.91	11.8%	53,895	11.1%	7,699	\$6,511,100	\$6,451,600	\$12,962,700	12.6%	\$930,157	\$119.71	0.07
Industrial	1	2.4%	2.00	1.4%	1,625	0.3%	1,625	\$0	\$1,305,500	\$1,305,500	1.3%	\$0	\$803.38	0.02
Services	10	23.8%	26.91	18.8%	76,403	15.7%	7,640	\$3,881,600	\$16,741,500	\$20,623,100	20.1%	\$388,160	\$219.12	0.07
Restaurant/Hospitality	8	19.0%	4.94	3.5%	19,668	4.1%	2,459	\$3,425,600	\$5,233,800	\$8,659,400	8.4%	\$428,200	\$266.11	0.09
TOTAL/% TOTAL	42	1.0%	142.94	3.6%	485,151	5.0%	11,551	\$34,409,500	\$68,155,300	\$102,564,800	5.2%	\$819,274	\$140.48	0.08
SUBMARKET TOTAL	4,323	100.0%	4,005.41	100.0%	9,692,363	100.0%	2,242	\$836,484,200	\$1,140,802,600	\$1,977,286,800	100.0%	\$193,496	\$117.70	0.06

Source: MD Property View and RKG Associates, Inc., 2018

APPENDIX TABLE 4-5
Residential & Non-residential Development Trends
Anne Arundel County, Maryland (1980-2017)

SM 5 - ODENTON														
	No. of Properties	% of All Properties	% of All Acreage Land Area		Total Bldg. SF	% of All Properties	Avg. Bldg SF	Land Assessed Value	Building Assessed Value	Total Assessed Value	% Of All Property Appraised Value	Avg. Land AV	Avg. Bldg. AV	FAR
1980 TO 1989														
RESIDENTIAL PROPERTIES														
Single Family	380	94.8%	647.83	99.8%	728,024	96.2%	1,916	\$67,180,600	\$79,387,600	\$146,568,200	96.9%	\$176,791	\$109.05	0.03
Townhome	20	5.0%	0.90	0.1%	26,754	3.5%	1,338	\$2,000,000	\$2,386,200	\$4,386,200	2.9%	\$100,000	\$89.19	0.69
Condominium	0	0.0%	0.00	0.0%	0	0.0%	0	\$0	\$0	\$0	0.0%	\$0	\$0.00	0.00
Apartment	0	0.0%	0.00	0.0%	0	0.0%	0	\$0	\$0	\$0	0.0%	\$0	\$0.00	0.00
Mobile Home	1	0.2%	0.28	0.0%	1,656	0.2%	1,656	\$146,600	\$93,500	\$240,100	0.2%	\$146,600	\$56.46	0.14
TOTAL/% TOTAL	401	6.8%	649.01	26.9%	756,434	5.0%	1,886	\$69,327,200	\$81,867,300	\$151,194,500	5.2%	\$172,886	\$108.23	0.03
NON-RESIDENTIAL PROPERTIES														
Retail	5	18.5%	4.93	2.2%	27,287	8.4%	5,457	\$3,501,900	\$2,278,400	\$5,780,300	11.9%	\$700,380	\$83.50	0.13
Office	9	33.3%	129.36	58.0%	150,555	46.1%	16,728	\$8,144,200	\$10,698,000	\$18,842,200	38.7%	\$904,911	\$71.06	0.03
Industrial	7	25.9%	81.89	36.7%	117,985	36.1%	16,855	\$8,232,800	\$7,485,400	\$15,718,200	32.2%	\$1,176,114	\$63.44	0.03
Services	4	14.8%	4.29	1.9%	24,437	7.5%	6,109	\$3,510,200	\$771,900	\$4,282,100	8.8%	\$877,550	\$31.59	0.13
Restaurant/Hospitality	2	7.4%	2.50	1.1%	6,444	2.0%	3,222	\$1,755,600	\$2,370,800	\$4,126,400	8.5%	\$877,800	\$367.91	0.06
TOTAL/% TOTAL	27	17.8%	222.96	28.1%	326,708	6.4%	12,100	\$25,144,700	\$23,604,500	\$48,749,200	6.0%	\$931,285	\$72.25	0.03
1990 TO 1999														
RESIDENTIAL PROPERTIES														
Single Family	1,136	45.2%	719.96	88.8%	2,607,275	50.3%	2,295	\$230,594,600	\$282,004,500	\$512,599,100	51.5%	\$202,988	\$108.16	0.08
Townhome	1,323	52.7%	62.23	7.7%	1,960,768	37.8%	1,482	\$187,713,300	\$190,384,400	\$378,097,700	38.0%	\$141,885	\$97.10	0.72
Condominium	51	2.0%	0.00	0.0%	55,901	1.1%	1,096	\$4,432,600	\$4,434,900	\$8,867,500	0.9%	\$86,914	\$79.33	0.00
Apartment	2	0.1%	29.02	3.6%	562,098	10.8%	281,049	\$24,320,000	\$72,022,100	\$96,342,100	9.7%	\$12,160,000	\$128.13	0.44
Mobile Home	0	0.0%	0.00	0.0%	0	0.0%	0	\$0	\$0	\$0	0.0%	\$0	\$0.00	0.00
TOTAL/% TOTAL	2,512	42.7%	811.20	33.7%	5,186,042	34.1%	2,065	\$447,060,500	\$548,845,900	\$995,906,400	34.5%	\$177,970	\$105.83	0.15
NON-RESIDENTIAL PROPERTIES														
Retail	7	14.9%	35.54	14.7%	71,232	3.7%	10,176	\$16,696,700	\$3,779,900	\$20,476,600	9.9%	\$2,385,243	\$53.06	0.05
Office	10	21.3%	42.57	17.6%	343,627	17.9%	34,363	\$18,910,600	\$31,295,300	\$50,205,900	24.3%	\$1,891,060	\$91.07	0.19
Industrial	16	34.0%	130.86	54.0%	1,391,184	72.5%	86,949	\$75,631,600	\$38,857,500	\$114,489,100	55.5%	\$4,726,975	\$27.93	0.24
Services	11	23.4%	31.91	13.2%	107,783	5.6%	9,798	\$8,315,600	\$9,797,900	\$18,113,500	8.8%	\$755,964	\$90.90	0.08
Restaurant/Hospitality	3	6.4%	1.67	0.7%	5,493	0.3%	1,831	\$1,437,200	\$1,568,000	\$3,005,200	1.5%	\$479,067	\$285.45	0.08
TOTAL/% TOTAL	47	30.9%	242.54	30.6%	1,919,319	37.8%	40,837	\$120,991,700	\$85,298,600	\$206,290,300	25.3%	\$2,574,291	\$44.44	0.18
2000 TO 2009														
RESIDENTIAL PROPERTIES														
Single Family	901	41.1%	467.89	85.7%	2,746,679	49.3%	3,048	\$139,164,400	\$340,065,000	\$479,229,400	49.6%	\$154,455	\$123.81	0.13
Townhome	1,254	57.2%	59.85	11.0%	2,413,869	43.3%	1,925	\$188,100,100	\$253,221,600	\$441,321,700	45.7%	\$150,000	\$104.90	0.93
Condominium	36	1.6%	0.46	0.1%	48,374	0.9%	1,344	\$3,618,600	\$3,620,500	\$7,239,100	0.7%	\$100,517	\$74.84	2.39
Apartment	3	0.1%	18.02	3.3%	363,473	6.5%	121,158	\$14,902,000	\$23,469,100	\$38,371,100	4.0%	\$4,967,333	\$64.57	0.46
Mobile Home	0	0.0%	0.00	0.0%	0	0.0%	0	\$0	\$0	\$0	0.0%	\$0	\$0.00	0.00
TOTAL/% TOTAL	2,194	37.3%	546.22	22.7%	5,572,395	36.7%	2,540	\$345,785,100	\$620,376,200	\$966,161,300	33.5%	\$157,605	\$111.33	0.23
NON-RESIDENTIAL PROPERTIES														
Retail	12	21.1%	30.87	14.3%	334,224	17.7%	27,852	\$18,434,300	\$50,016,900	\$68,451,200	22.2%	\$1,536,192	\$149.65	0.25
Office	12	21.1%	25.53	11.8%	209,126	11.1%	17,427	\$9,626,100	\$36,498,000	\$46,124,100	15.0%	\$802,175	\$174.53	0.19
Industrial	17	29.8%	105.34	48.7%	1,119,947	59.3%	65,879	\$31,509,100	\$84,579,000	\$116,088,100	37.7%	\$1,853,476	\$75.52	0.24
Services	8	14.0%	49.66	23.0%	181,258	9.6%	22,657	\$20,851,100	\$37,100,200	\$57,951,300	18.8%	\$2,606,388	\$204.68	0.08
Restaurant/Hospitality	8	14.0%	4.79	2.2%	43,338	2.3%	5,417	\$3,965,400	\$15,631,000	\$19,596,400	6.4%	\$495,675	\$360.68	0.21
TOTAL/% TOTAL	57	37.5%	216.19	27.3%	1,887,893	37.2%	33,121	\$84,386,000	\$223,825,100	\$308,211,100	37.9%	\$1,480,456	\$118.56	0.20
2010 TO PRESENT														
RESIDENTIAL PROPERTIES														
Single Family	436	56.6%	315.14	78.3%	1,207,700	32.9%	2,770	\$78,833,300	\$169,480,100	\$248,313,400	32.2%	\$180,810	\$140.33	0.09
Townhome	311	40.4%	17.28	4.3%	648,953	17.7%	2,087	\$43,789,100	\$82,275,500	\$126,064,600	16.4%	\$140,801	\$126.78	0.86
Condominium	13	1.7%	0.44	0.1%	20,812	0.6%	1,601	\$1,851,300	\$1,851,900	\$3,703,200	0.5%	\$142,408	\$88.98	1.09
Apartment	6	0.8%	55.71	13.9%	1,789,550	48.7%	298,258	\$76,325,000	\$314,823,000	\$391,148,000	50.8%	\$12,720,833	\$175.92	0.74
Mobile Home	4	0.5%	13.69	3.4%	6,090	0.2%	1,523	\$679,500	\$321,700	\$1,001,200	0.1%	\$169,875	\$52.82	0.01
TOTAL/% TOTAL	770	13.1%	402.26	16.7%	3,673,105	24.2%	4,770	\$201,478,200	\$568,752,200	\$770,230,400	26.7%	\$261,660	\$154.84	0.21
NON-RESIDENTIAL PROPERTIES														
Retail	9	33.3%	64.40	58.3%	498,012	52.8%	55,335	\$42,012,100	\$77,571,900	\$119,584,000	47.6%	\$4,668,011	\$155.76	0.18
Office	5	18.5%	10.97	9.9%	171,650	18.2%	34,330	\$8,144,200	\$29,474,400	\$37,618,600	15.0%	\$1,628,840	\$171.71	0.36
Industrial	2	7.4%	5.01	4.5%	35,220	3.7%	17,610	\$8,232,800	\$789,500	\$9,022,300	3.6%	\$4,116,400	\$22.42	0.16
Services	4	14.8%	27.90	25.2%	230,068	24.4%	57,517	\$3,510,200	\$77,571,900	\$81,082,100	32.3%	\$877,550	\$337.17	0.19
Restaurant/Hospitality	1	3.7%	2.23	2.0%	7,621	0.8%	7,621	\$1,755,600	\$1,982,900	\$3,738,500	1.5%	\$1,755,600	\$260.19	0.08
TOTAL/% TOTAL	21	13.8%	110.50	13.9%	942,571	18.6%	44,884	\$63,654,900	\$187,390,600	\$251,045,500	30.8%	\$3,031,186	\$198.81	0.20
TOTAL INVENTORY (1980 TO 2017)														
RESIDENTIAL PROPERTIES														
Single Family	2,853	48.5%	2,150.81	89.3%	7,289,678	48.0%	2,555	\$515,772,900	\$870,937,200	\$1,386,710,100	48.1%	\$180,783	\$119.48	0.08
Townhome	2,908	49.5%	140.25	5.8%	5,050,344	33.3%	1,737	\$421,602,500	\$528,267,700	\$949,870,200	32.9%	\$144,980	\$104.60	0.83
Condominium	100	1.7%	0.90	0.0%	125,087	0.8%	1,251	\$9,902,500	\$9,907,300	\$19,809,800	0.7%	\$99,025	\$79.20	3.19
Apartment	11	0.2%	102.75	4.3%	2,715,121	17.9%	246,829	\$115,547,000	\$410,314,200	\$525,861,200	18.2%	\$10,504,273	\$151.12	0.61
Mobile Home	5	0.1%	13.97	0.6%	7,746	0.1%	1,549	\$826,100	\$415,200	\$1,241,300	0.0%	\$165,220	\$53.60	0.01
TOTAL	5,877	97.5%	2,408.68	75.3%	15,187,976	74.9%	2,584	\$1,063,651,000	\$1,819,841,600	\$2,883,492,600	78.0%	\$180,985	\$119.82	0.14
NON-RESIDENTIAL PROPERTIES														
Retail	33	21.7%	135.75	17.1%	930,755	18.3%	28,205	\$80,645,000	\$133,647,100	\$214,292,100	26.3%	\$2,443,788	\$143.59	0.16
Office	36	23.7%	208.42	26.3%	874,958	17.2%	24,304	\$44,825,100	\$107,965,700	\$152,790,800	18.8%	\$1,245,142	\$123.40	0.10
Industrial	42	27.6%	323.09	40.8%	2,664,336	52.5%	63,437	\$123,606,300	\$131,711,400	\$255,317,700	31.4%	\$2,943,007	\$49.43	0.19
Services	27	17.8%	113.77	14.4%	543,546	10.7%	20,131	\$36,187,100	\$125,241,900	\$161,429,000	19.8%	\$1,340,263	\$230.42	0.11
Restaurant/Hospitality	14	9.2%	11.18	1.4%	62,896	1.2%	4,493	\$8,913,800	\$21,552,700	\$30,466,500	3.7%	\$636,700	\$342.67	0.13
TOTAL/% TOTAL	152	2.5%	792.20	24.7%	5,076,491	25.1%	33,398	\$294,177,300	\$520,118,800	\$814,296,100	22.0%	\$1,935,377	\$102.46	0.15
SUBMARKET TOTAL	6,029	100.0%	3,200.88	100.0%	20,264,467	100.0%	3,361	\$1,357,828,300	\$2,339,960,400	\$3,697,788,700	100.0%	\$225,216	\$115.47	0.15

APPENDIX TABLE 4-6
 Residential & Non-residential Development Trends
 Anne Arundel County, Maryland (1980-2017)

SM 6 - SEVERNA PARK-CROWNSVILLE														
	No. of Properties	% of All Properties	% of All Acreage	% of All Land Area	Total Bldg. SF	% of All Properties	Avg. Bldg SF	Land Assessed Value	Building Assessed Value	Total Assessed Value	% Of All Property Appraised Value	Avg. Land AV	Avg. Bldg. AV	FAR
1980 TO 1989														
RESIDENTIAL PROPERTIES														
Single Family	3,975	97.1%	2,876.71	98.7%	9,103,358	98.1%	2,290	\$1,114,380,900	\$1,011,319,300	\$2,125,700,200	98.4%	\$280,347	\$111.09	0.07
Townhome	118	2.9%	14.06	0.5%	179,873	1.9%	1,524	\$16,563,900	\$18,473,000	\$35,036,900	1.6%	\$140,372	\$102.70	0.29
Condominium	0	0.0%	0.00	0.0%	0	0.0%	0	\$0	\$0	\$0	0.0%	\$0	\$0.00	0.00
Apartment	0	0.0%	0.00	0.0%	0	0.0%	0	\$0	\$0	\$0	0.0%	\$0	\$0.00	0.00
Mobile Home	1	0.0%	22.94	0.8%	924	0.0%	924	\$210,400	\$42,600	\$253,000	0.0%	\$210,400	\$46.10	0.00
TOTAL/% TOTAL	4,094	46.5%	2,913.71	41.5%	9,284,155	39.8%	2,268	\$1,131,155,200	\$1,029,834,900	\$2,160,990,100	41.8%	\$276,296	\$110.92	0.07
NON-RESIDENTIAL PROPERTIES														
Retail	12	32.4%	14.27	21.5%	116,936	27.7%	9,745	\$9,696,400	\$9,888,700	\$19,585,100	27.1%	\$808,033	\$84.57	0.19
Office	10	27.0%	11.96	18.0%	115,791	27.4%	11,579	\$8,072,000	\$9,321,700	\$17,393,700	24.1%	\$807,200	\$80.50	0.22
Industrial	6	16.2%	26.89	40.4%	84,500	20.0%	14,083	\$6,523,500	\$2,150,300	\$8,673,800	12.0%	\$1,087,250	\$25.45	0.07
Services	8	21.6%	13.06	19.6%	103,533	24.5%	12,942	\$6,093,600	\$19,563,000	\$25,656,600	35.5%	\$761,700	\$188.95	0.18
Restaurant/Hospitality	1	2.7%	0.30	0.5%	1,721	0.4%	1,721	\$395,400	\$543,100	\$938,500	1.3%	\$395,400	\$315.57	0.13
TOTAL/% TOTAL	37	35.9%	66.48	14.9%	422,481	17.9%	11,418	\$30,780,900	\$41,466,800	\$72,247,700	17.9%	\$831,916	\$98.15	0.15
1990 TO 1999														
RESIDENTIAL PROPERTIES														
Single Family	2,387	99.9%	1,989.86	99.9%	6,655,362	100.0%	2,788	\$613,204,000	\$795,035,700	\$1,408,239,700	100.0%	\$256,893	\$119.46	0.08
Townhome	0	0.0%	0.00	0.0%	0	0.0%	0	\$0	\$0	\$0	0.0%	\$0	\$0.00	0.00
Condominium	0	0.0%	0.00	0.0%	0	0.0%	0	\$0	\$0	\$0	0.0%	\$0	\$0.00	0.00
Apartment	0	0.0%	0.00	0.0%	0	0.0%	0	\$0	\$0	\$0	0.0%	\$0	\$0.00	0.00
Mobile Home	2	0.1%	1.36	0.1%	2,168	0.0%	1,084	\$294,100	\$108,500	\$402,600	0.0%	\$147,050	\$50.05	0.04
TOTAL/% TOTAL	2,389	27.1%	1,991.22	28.4%	6,657,530	28.5%	2,787	\$613,498,100	\$795,144,200	\$1,408,642,300	27.3%	\$256,801	\$119.44	0.08
NON-RESIDENTIAL PROPERTIES														
Retail	6	25.0%	5.86	2.5%	15,475	1.9%	2,579	\$5,173,800	\$3,407,800	\$8,581,600	7.1%	\$862,300	\$220.21	0.06
Office	4	16.7%	83.22	35.6%	370,469	45.6%	92,617	\$8,509,800	\$42,630,000	\$51,139,800	42.1%	\$2,127,450	\$115.07	0.10
Industrial	7	29.2%	127.65	54.6%	334,112	41.2%	47,730	\$13,999,200	\$22,438,800	\$36,438,000	30.0%	\$1,999,886	\$67.16	0.06
Services	7	29.2%	17.10	7.3%	91,560	11.3%	13,080	\$3,559,000	\$21,687,000	\$25,246,000	20.8%	\$508,429	\$236.86	0.12
Restaurant/Hospitality	0	0.0%	0.00	0.0%	0	0.0%	0	\$0	\$0	\$0	0.0%	\$0	\$0.00	0.00
TOTAL/% TOTAL	24	23.3%	233.83	52.3%	811,616	34.3%	33,817	\$31,241,800	\$90,163,600	\$121,405,400	30.1%	\$1,301,742	\$111.09	0.08
2000 TO 2009														
RESIDENTIAL PROPERTIES														
Single Family	1,636	99.9%	1,578.81	99.9%	5,326,285	100.0%	3,256	\$434,446,700	\$714,473,100	\$1,148,919,800	100.0%	\$265,554	\$134.14	0.08
Townhome	0	0.0%	0.00	0.0%	0	0.0%	0	\$0	\$0	\$0	0.0%	\$0	\$0.00	0.00
Condominium	1	0.1%	0.03	0.0%	1,321	0.0%	1,321	\$115,500	\$115,600	\$231,100	0.0%	\$115,500	\$87.51	1.01
Apartment	0	0.0%	0.00	0.0%	0	0.0%	0	\$0	\$0	\$0	0.0%	\$0	\$0.00	0.00
Mobile Home	1	0.1%	2.19	0.1%	1,152	0.0%	1,152	\$235,800	\$58,000	\$293,800	0.0%	\$235,800	\$50.35	0.01
TOTAL/% TOTAL	1,638	18.6%	1,581.03	22.5%	5,328,758	22.8%	3,253	\$434,798,000	\$714,646,700	\$1,149,444,700	22.2%	\$265,444	\$134.11	0.08
NON-RESIDENTIAL PROPERTIES														
Retail	6	21.4%	9.62	10.5%	49,453	6.2%	8,242	\$7,945,700	\$13,736,500	\$21,682,200	14.2%	\$1,324,283	\$277.77	0.12
Office	8	28.6%	15.80	17.3%	161,979	20.5%	20,247	\$8,994,500	\$25,870,100	\$34,864,600	22.9%	\$1,124,313	\$159.71	0.24
Industrial	4	14.3%	31.08	34.1%	436,751	55.2%	109,188	\$23,074,800	\$37,142,900	\$60,217,700	39.6%	\$5,768,700	\$85.04	0.32
Services	9	32.1%	34.06	37.3%	141,156	17.8%	15,684	\$9,876,100	\$24,387,000	\$34,263,100	22.5%	\$1,097,344	\$172.77	0.10
Restaurant/Hospitality	1	3.6%	0.70	0.8%	1,944	0.2%	1,944	\$668,900	\$559,300	\$1,228,200	0.8%	\$668,900	\$287.71	0.06
TOTAL/% TOTAL	28	27.2%	91.27	20.4%	791,283	33.4%	28,260	\$50,560,000	\$101,695,800	\$152,255,800	37.7%	\$1,805,714	\$128.52	0.20
2010 TO PRESENT														
RESIDENTIAL PROPERTIES														
Single Family	674	99.3%	522.90	99.1%	1,967,154	94.8%	2,919	\$175,603,100	\$264,310,300	\$439,913,400	98.1%	\$260,539	\$134.36	0.09
Townhome	4	0.6%	0.19	0.0%	10,151	0.5%	2,538	\$360,000	\$1,061,200	\$1,421,200	0.3%	\$90,000	\$104.54	1.20
Condominium	0	0.0%	0.00	0.0%	0	0.0%	0	\$0	\$0	\$0	0.0%	\$0	\$0.00	0.00
Apartment	1	0.1%	4.61	0.9%	97,324	4.7%	97,324	\$5,150,000	\$1,868,600	\$7,018,600	1.6%	\$5,150,000	\$19.20	0.48
Mobile Home	0	0.0%	0.00	0.0%	0	0.0%	0	\$0	\$0	\$0	0.0%	\$0	\$0.00	0.00
TOTAL/% TOTAL	679	7.7%	527.71	7.5%	2,074,629	8.9%	3,055	\$181,113,100	\$267,240,100	\$448,353,200	8.7%	\$266,735	\$128.81	0.09
NON-RESIDENTIAL PROPERTIES														
Retail	3	8.1%	28.97	52.0%	36,162	10.6%	12,054	\$9,606,400	\$4,693,400	\$14,299,800	24.8%	\$3,202,133	\$129.79	0.03
Office	4	10.8%	8.23	14.8%	69,433	20.3%	17,358	\$8,072,000	\$14,383,700	\$22,455,700	38.9%	\$2,018,000	\$207.16	0.19
Industrial	1	2.7%	0.44	0.8%	4,046	1.2%	4,046	\$6,523,500	\$295,700	\$6,819,200	11.8%	\$6,523,500	\$73.08	0.21
Services	4	10.8%	16.24	29.2%	218,980	64.1%	54,745	\$6,093,600	\$4,693,400	\$10,787,000	18.7%	\$1,523,400	\$21.43	0.31
Restaurant/Hospitality	2	5.4%	1.82	3.3%	12,826	3.8%	6,413	\$395,400	\$2,945,600	\$3,341,000	5.8%	\$197,700	\$229.66	0.16
TOTAL/% TOTAL	14	13.6%	55.70	12.5%	341,447	14.4%	24,389	\$30,690,900	\$27,011,800	\$57,702,700	14.3%	\$2,192,207	\$79.11	0.14
TOTAL INVENTORY (1980 TO 2017)														
RESIDENTIAL PROPERTIES														
Single Family	8,672	98.5%	6,968.27	99.4%	23,052,159	98.7%	2,658	\$2,337,634,700	\$2,785,138,400	\$5,122,773,100	99.1%	\$269,561	\$120.82	0.08
Townhome	122	1.4%	14.26	0.2%	190,024	0.8%	1,558	\$16,923,900	\$19,534,200	\$36,458,100	0.7%	\$138,720	\$102.80	0.31
Condominium	1	0.0%	0.03	0.0%	1,321	0.0%	1,321	\$115,500	\$115,600	\$231,100	0.0%	\$115,500	\$87.51	1.01
Apartment	1	0.0%	4.61	0.1%	97,324	0.4%	97,324	\$5,150,000	\$1,868,600	\$7,018,600	0.1%	\$5,150,000	\$19.20	0.48
Mobile Home	4	0.0%	26.49	0.4%	4,244	0.0%	1,061	\$740,300	\$209,100	\$949,400	0.0%	\$185,075	\$49.27	0.00
TOTAL	8,800	98.8%	7,013.67	94.0%	23,345,072	90.8%	2,653	\$2,360,564,400	\$2,806,865,900	\$5,167,430,300	92.8%	\$268,246	\$120.23	0.08
NON-RESIDENTIAL PROPERTIES														
Retail	27	26.2%	58.72	13.1%	218,026	9.2%	8,075	\$32,422,300	\$31,726,400	\$64,148,700	15.9%	\$1,200,826	\$145.52	0.09
Office	26	25.2%	119.21	26.7%	717,672	30.3%	27,603	\$33,648,300	\$92,205,500	\$125,853,800	31.2%	\$1,294,165	\$128.48	0.14
Industrial	18	17.5%	186.06	41.6%	859,409	36.3%	47,745	\$50,121,000	\$62,027,700	\$112,148,700	27.8%	\$2,784,500	\$72.17	0.11
Services	28	27.2%	80.46	18.0%	555,229	23.5%	19,830	\$25,622,300	\$70,330,400	\$95,952,700	23.8%	\$915,082	\$126.67	0.16
Restaurant/Hospitality	4	3.9%	2.82	0.6%	16,491	0.7%	4,123	\$1,459,700	\$4,048,000	\$5,507,700	1.4%	\$364,925	\$245.47	0.13
TOTAL/% TOTAL	103	1.2%	447.28	6.0%	2,366,827	9.2%	22,979	\$143,273,600	\$260,338,000	\$403,611,600	7.2%	\$1,391,006	\$109.99	0.12
SUBMARKET TOTAL	8,903	100.0%	7,460.94	100.0%	25,711,899	100.0%	2,888	\$2,503,838,000	\$3,067,203,900	\$5,571,041,900	100.0%	\$281,235	\$119.29	0.08

Source: MD Property View and RKG Associates, Inc., 2018

APPENDIX TABLE 4-7
Residential & Non-residential Development Trends
Anne Arundel County, Maryland (1980-2017)

	SM 7 - ANNAPOLIS NECK-BROADNECK													
	No. of Properties	% of All Properties	% of All Acreage Land Area		Total Bldg. SF	% of All Properties	Avg. Bldg SF	Land Assessed Value	Building Assessed Value	Total Assessed Value	% Of All Property Appraised Value	Avg. Land AV	Avg. Bldg. AV	FAR
1980 TO 1989														
RESIDENTIAL PROPERTIES														
Single Family	4,317	68.6%	2,185.49	92.2%	8,913,986	75.0%	2,065	\$1,132,031,300	\$1,000,387,500	\$2,132,418,800	79.7%	\$262,226	\$112,230	0.09
Townhome	1,965	31.2%	160.48	6.8%	2,672,984	22.5%	1,360	\$227,177,700	\$273,260,200	\$500,437,900	18.7%	\$115,612	\$102,230	0.38
Condominium	9	0.1%	0.00	0.0%	11,408	0.1%	1,268	\$924,700	\$924,900	\$1,849,600	0.1%	\$102,744	\$81.07	0.00
Apartment	1	0.0%	24.00	1.0%	285,174	2.4%	285,174	\$9,736,700	\$29,663,100	\$39,399,800	1.5%	\$9,736,700	\$104.02	0.27
Mobile Home	3	0.0%	1.24	0.1%	2,004	0.0%	668	\$706,500	\$83,800	\$790,300	0.0%	\$235,500	\$41.82	0.04
TOTAL/% TOTAL	6,295	51.9%	2,371.21	41.4%	11,885,556	41.5%	1,888	\$1,370,576,900	\$1,304,319,500	\$2,674,896,400	41.4%	\$217,725	\$109.74	0.12
NON-RESIDENTIAL PROPERTIES														
Retail	26	27.7%	140.97	41.4%	2,276,281	48.9%	87,549	\$149,196,400	\$513,870,400	\$663,066,800	63.7%	\$5,738,323	\$225.75	0.37
Office	41	43.6%	99.64	29.2%	1,480,983	31.8%	36,122	\$91,175,800	\$162,432,100	\$253,607,900	24.4%	\$2,233,800	\$109.68	0.34
Industrial	15	16.0%	56.06	16.4%	644,381	13.8%	42,959	\$40,526,900	\$37,924,600	\$78,451,500	7.5%	\$2,701,793	\$58.85	0.26
Services	7	7.4%	34.68	10.2%	123,257	2.6%	17,608	\$10,787,400	\$13,786,600	\$24,574,000	2.4%	\$1,541,057	\$111.85	0.08
Restaurant/Hospitality	5	5.3%	9.55	2.8%	133,526	2.9%	26,705	\$8,439,800	\$12,326,700	\$20,766,500	2.0%	\$1,687,960	\$92.32	0.32
TOTAL/% TOTAL	94	41.4%	340.90	29.1%	4,658,428	48.2%	49,558	\$300,126,300	\$740,340,400	\$1,040,466,700	42.6%	\$3,192,833	\$158.92	0.31
1990 TO 1999														
RESIDENTIAL PROPERTIES														
Single Family	2,274	67.6%	1,564.55	95.7%	6,065,485	73.0%	2,667	\$706,501,100	\$757,113,600	\$1,463,614,700	77.9%	\$310,686	\$124.82	0.09
Townhome	1,042	31.0%	50.54	3.1%	1,780,122	21.4%	1,708	\$139,124,200	\$193,673,500	\$332,797,700	17.7%	\$133,517	\$108.80	0.81
Condominium	45	1.3%	0.00	0.0%	54,140	0.7%	1,203	\$4,817,100	\$4,819,300	\$9,636,400	0.5%	\$107,047	\$89.02	0.00
Apartment	3	0.1%	19.40	1.2%	410,115	4.9%	136,705	\$25,800,000	\$46,874,800	\$72,674,800	3.9%	\$8,600,000	\$114.30	0.49
Mobile Home	1	0.0%	0.41	0.0%	1,440	0.0%	1,440	\$149,200	\$70,800	\$220,000	0.0%	\$149,200	\$49.17	0.08
TOTAL/% TOTAL	3,365	27.7%	1,634.90	28.6%	8,311,302	29.0%	2,470	\$876,391,600	\$1,002,552,000	\$1,878,943,600	29.1%	\$260,443	\$120.63	0.12
NON-RESIDENTIAL PROPERTIES														
Retail	19	38.0%	70.88	12.9%	756,378	38.2%	39,809	\$64,592,300	\$102,073,700	\$166,666,000	31.6%	\$3,399,595	\$134.95	0.24
Office	11	22.0%	30.71	5.6%	161,664	8.2%	14,697	\$19,235,400	\$12,302,100	\$31,537,500	6.0%	\$1,748,673	\$76.10	0.12
Industrial	7	14.0%	48.90	8.9%	366,865	18.6%	52,409	\$33,679,300	\$28,742,700	\$62,422,000	11.8%	\$4,811,329	\$78.35	0.17
Services	6	12.0%	384.08	69.9%	438,092	22.2%	73,015	\$38,990,500	\$190,580,500	\$229,571,000	43.5%	\$6,498,417	\$435.02	0.03
Restaurant/Hospitality	7	14.0%	15.17	2.8%	254,588	12.9%	36,370	\$13,886,400	\$24,082,400	\$37,968,800	7.2%	\$1,983,771	\$94.59	0.39
TOTAL/% TOTAL	50	22.0%	549.75	47.0%	1,977,587	20.4%	39,552	\$170,383,900	\$357,781,400	\$528,165,300	21.6%	\$3,407,678	\$180.92	0.08
2000 TO 2009														
RESIDENTIAL PROPERTIES														
Single Family	1,475	83.0%	1,322.97	98.1%	4,902,816	77.6%	3,324	\$506,045,200	\$672,106,200	\$1,178,151,400	83.1%	\$343,081	\$137.09	0.09
Townhome	281	15.8%	12.79	0.9%	592,166	9.4%	2,107	\$36,170,000	\$66,772,700	\$102,942,700	7.3%	\$128,719	\$112.76	1.06
Condominium	16	0.9%	0.15	0.0%	18,373	0.3%	1,148	\$1,814,500	\$1,828,300	\$3,642,800	0.3%	\$113,406	\$99.51	2.81
Apartment	5	0.3%	12.79	0.9%	804,681	12.7%	160,936	\$28,655,100	\$105,047,200	\$133,702,300	9.4%	\$5,731,020	\$130.55	1.44
Mobile Home	0	0.0%	0.00	0.0%	0	0.0%	0	\$0	\$0	\$0	0.0%	\$0	\$0.00	0.00
TOTAL/% TOTAL	1,777	14.7%	1,348.69	23.6%	6,318,036	22.0%	3,555	\$572,684,800	\$845,754,400	\$1,418,439,200	22.0%	\$322,276	\$133.86	0.11
NON-RESIDENTIAL PROPERTIES														
Retail	20	31.3%	51.91	28.1%	787,449	31.5%	39,372	\$40,032,100	\$180,168,800	\$220,200,900	35.5%	\$2,001,605	\$228.80	0.35
Office	19	29.7%	82.04	44.4%	915,617	36.6%	48,190	\$45,178,700	\$239,577,100	\$284,755,800	45.9%	\$2,377,826	\$261.66	0.26
Industrial	3	4.7%	5.57	3.0%	163,366	6.5%	54,455	\$4,853,800	\$16,672,000	\$21,525,800	3.5%	\$1,617,933	\$102.05	0.67
Services	14	21.9%	28.60	15.5%	412,695	16.5%	29,478	\$18,161,000	\$34,339,500	\$52,500,500	8.5%	\$1,297,214	\$83.21	0.33
Restaurant/Hospitality	8	12.5%	16.68	9.0%	221,720	8.9%	27,715	\$14,471,200	\$27,208,100	\$41,679,300	6.7%	\$1,808,900	\$122.71	0.31
TOTAL/% TOTAL	64	28.2%	184.79	15.8%	2,500,847	25.9%	39,076	\$122,696,800	\$497,965,500	\$620,662,300	25.4%	\$1,917,138	\$199.12	0.31
2010 TO PRESENT														
RESIDENTIAL PROPERTIES														
Single Family	420	60.7%	353.81	96.1%	1,394,728	64.9%	3,321	\$166,067,500	\$206,771,500	\$372,839,000	76.4%	\$395,399	\$148.25	0.09
Townhome	272	39.3%	14.28	3.9%	754,174	35.1%	2,773	\$32,845,000	\$82,221,500	\$115,066,500	23.6%	\$120,754	\$109.02	1.21
Condominium	0	0.0%	0.00	0.0%	0	0.0%	0	\$0	\$0	\$0	0.0%	\$0	\$0.00	0.00
Apartment	0	0.0%	0.00	0.0%	0	0.0%	0	\$0	\$0	\$0	0.0%	\$0	\$0.00	0.00
Mobile Home	0	0.0%	0.00	0.0%	0	0.0%	0	\$0	\$0	\$0	0.0%	\$0	\$0.00	0.00
TOTAL/% TOTAL	692	5.7%	368.09	6.4%	2,148,902	7.5%	3,105	\$198,912,500	\$288,993,000	\$487,905,500	7.6%	\$287,446	\$134.48	0.13
NON-RESIDENTIAL PROPERTIES														
Retail	7	7.4%	25.35	26.9%	173,887	32.4%	24,841	\$16,033,100	\$18,962,400	\$34,995,500	13.8%	\$2,290,443	\$109.05	0.16
Office	5	5.3%	13.93	14.8%	168,545	31.4%	33,709	\$91,175,800	\$17,410,300	\$108,586,100	42.7%	\$18,235,160	\$103.30	0.28
Industrial	0	0.0%	0.00	0.0%	0	0.0%	0	\$0	\$0	\$0	0.0%	\$0	\$0.00	0.00
Services	4	4.3%	35.88	38.1%	24,831	4.6%	6,208	\$10,787,400	\$18,962,400	\$29,749,800	11.7%	\$2,696,850	\$763.66	0.02
Restaurant/Hospitality	3	3.2%	19.10	20.3%	169,630	31.6%	56,543	\$8,439,800	\$32,119,800	\$40,559,600	15.9%	\$2,813,267	\$189.35	0.20
TOTAL/% TOTAL	19	8.4%	94.26	8.1%	536,893	5.5%	28,258	\$166,963,000	\$87,454,900	\$254,417,900	10.4%	\$8,787,526	\$162.89	0.13
TOTAL INVENTORY (1980 TO 2017)														
RESIDENTIAL PROPERTIES														
Single Family	8,486	70.0%	5,426.81	94.8%	21,277,015	74.2%	2,507	\$2,510,645,100	\$2,636,378,800	\$5,147,023,900	79.7%	\$295,857	\$123.91	0.09
Townhome	3,560	29.4%	238.09	4.2%	5,799,446	20.2%	1,629	\$435,316,900	\$615,927,900	\$1,051,244,800	16.3%	\$122,280	\$106.20	0.56
Condominium	70	0.6%	0.15	0.0%	83,921	0.3%	1,199	\$7,556,300	\$7,572,500	\$15,128,800	0.2%	\$107,947	\$90.23	12.84
Apartment	9	0.1%	56.19	1.0%	1,499,970	5.2%	166,663	\$64,191,800	\$181,585,100	\$245,776,900	3.8%	\$7,132,422	\$121.06	0.61
Mobile Home	4	0.0%	1.65	0.0%	3,444	0.0%	861	\$855,700	\$154,600	\$1,010,300	0.0%	\$213,925	\$44.89	0.05
TOTAL	12,129	98.2%	5,722.89	83.0%	28,663,796	74.8%	2,363	\$3,018,565,800	\$3,441,618,900	\$6,460,184,700	72.6%	\$248,872	\$120.07	0.11
NON-RESIDENTIAL PROPERTIES														
Retail	72	31.7%	289.12	24.7%	3,993,995	41.3%	55,472	\$269,853,900	\$815,075,300	\$1,084,929,200	44.4%	\$3,747,971	\$204.08	0.32
Office	76	33.5%	226.32	19.3%	2,726,809	28.2%	35,879	\$246,765,700	\$431,721,600	\$678,487,300	27.8%	\$3,246,917	\$158.32	0.28
Industrial	25	11.0%	110.53	9.4%	1,174,612	12.1%	46,984	\$119,586,900	\$83,339,300	\$202,926,200	8.3%	\$4,783,476	\$70.95	0.24
Services	31	13.7%	483.24	41.3%	998,875	10.3%	32,222	\$78,726,300	\$257,669,000	\$336,395,300	13.8%	\$2,539,558	\$257.96	0.05
Restaurant/Hospitality	23	10.1%	60.50	5.2%	779,464	8.1%	33,890	\$45,237,200	\$95,737,000	\$140,974,200	5.8%	\$1,966,835	\$122.82	0.30
TOTAL/% TOTAL	227	1.8%	1,169.70	17.0%	9,673,755	25.2%	42,616	\$760,170,000	\$1,683,542,200	\$2,443,712,200	27.4%	\$3,348,767	\$174.03	0.19
SUBMARKET TOTAL	12,356	100.0%	6,892.59	100.0%	38,337,551	100.0%	3,103	\$3,778,735,800	\$5,125,					

**APPENDIX TABLE 4-8
Residential & Non-residential Development Trends
Anne Arundel County, Maryland (1980-2017)**

	SM 8 - CROFTON												FAR	
	No. of Properties	% of All Properties	% of All Acreage Land Area		Total Bldg. SF	% of All Properties	Avg. Bldg SF	Land Assessed Value	Building Assessed Value	Total Assessed Value	% Of All Property Appraised Value	Avg. Land AV		Avg. Bldg. AV
1980 TO 1989														
RESIDENTIAL PROPERTIES														
Single Family	574	56.1%	676.12	96.0%	1,422,497	68.1%	2,478	\$118,969,600	\$159,516,500	\$278,486,100	68.9%	\$207,264	\$112.14	0.05
Townhome	450	43.9%	27.85	4.0%	666,329	31.9%	1,481	\$58,872,100	\$66,890,000	\$125,762,100	31.1%	\$130,827	\$100.39	0.55
Condominium	0	0.0%	0.00	0.0%	0	0.0%	0	\$0	\$0	\$0	0.0%	\$0	\$0.00	0.00
Apartment	0	0.0%	0.00	0.0%	0	0.0%	0	\$0	\$0	\$0	0.0%	\$0	\$0.00	0.00
Mobile Home	0	0.0%	0.00	0.0%	0	0.0%	0	\$0	\$0	\$0	0.0%	\$0	\$0.00	0.00
TOTAL/% TOTAL	1,024	20.8%	703.97	31.4%	2,088,826	17.5%	2,040	\$177,841,700	\$226,406,500	\$404,248,200	17.7%	\$173,674	\$108.39	0.07
NON-RESIDENTIAL PROPERTIES														
Retail	6	18.8%	16.36	23.3%	153,709	23.3%	25,618	\$10,769,900	\$9,039,600	\$19,809,500	28.6%	\$1,794,983	\$58.81	0.22
Office	12	37.5%	19.88	28.3%	247,635	37.6%	20,636	\$11,360,200	\$14,904,000	\$26,264,200	37.9%	\$946,683	\$60.19	0.29
Industrial	7	21.9%	17.99	25.6%	235,993	35.8%	33,713	\$10,334,200	\$6,505,300	\$16,839,500	24.3%	\$1,476,314	\$27.57	0.30
Services	3	9.4%	11.87	16.9%	9,343	1.4%	3,114	\$1,174,500	\$1,236,100	\$2,410,600	3.5%	\$391,500	\$132.30	0.02
Restaurant/Hospitality	4	12.5%	4.04	5.8%	12,048	1.8%	3,012	\$1,695,500	\$2,204,200	\$3,899,700	5.6%	\$423,875	\$182.95	0.07
TOTAL/% TOTAL	32	43.8%	70.14	29.3%	658,728	44.7%	20,585	\$35,334,300	\$33,889,200	\$69,223,500	34.9%	\$1,104,197	\$51.45	0.22
1990 TO 1999														
RESIDENTIAL PROPERTIES														
Single Family	1,824	65.9%	727.32	92.8%	4,554,074	69.4%	2,497	\$414,778,100	\$532,803,500	\$947,581,600	73.8%	\$227,400	\$116.99	0.14
Townhome	941	34.0%	37.33	4.8%	1,567,742	23.9%	1,666	\$107,389,700	\$164,708,000	\$272,097,700	21.2%	\$114,123	\$105.06	0.96
Condominium	0	0.0%	0.00	0.0%	0	0.0%	0	\$0	\$0	\$0	0.0%	\$0	\$0.00	0.00
Apartment	1	0.0%	19.48	2.5%	444,842	6.8%	444,842	\$20,300,000	\$44,173,700	\$64,473,700	5.0%	\$20,300,000	\$99.30	0.52
Mobile Home	0	0.0%	0.00	0.0%	0	0.0%	0	\$0	\$0	\$0	0.0%	\$0	\$0.00	0.00
TOTAL/% TOTAL	2,766	56.2%	784.13	34.9%	6,566,658	55.1%	2,374	\$542,467,800	\$741,685,200	\$1,284,153,000	56.4%	\$196,120	\$112.95	0.19
NON-RESIDENTIAL PROPERTIES														
Retail	3	21.4%	6.72	7.8%	63,473	24.3%	21,158	\$3,889,100	\$5,959,100	\$9,848,200	31.8%	\$1,296,367	\$93.88	0.22
Office	0	0.0%	0.00	0.0%	0	0.0%	0	\$0	\$0	\$0	0.0%	\$0	\$0.00	0.00
Industrial	2	14.3%	11.89	13.9%	134,451	51.6%	67,226	\$6,697,900	\$4,353,700	\$11,051,600	35.7%	\$3,348,950	\$32.38	0.26
Services	6	42.9%	64.98	75.9%	52,812	20.3%	8,802	\$889,900	\$6,105,100	\$6,995,000	22.6%	\$148,317	\$115.60	0.02
Restaurant/Hospitality	3	21.4%	2.02	2.4%	9,988	3.8%	3,329	\$1,459,500	\$1,605,400	\$3,064,900	9.9%	\$486,500	\$160.73	0.11
TOTAL/% TOTAL	14	19.2%	85.61	35.8%	260,724	17.7%	18,623	\$12,936,400	\$18,023,300	\$30,959,700	15.6%	\$924,029	\$69.13	0.07
2000 TO 2009														
RESIDENTIAL PROPERTIES														
Single Family	523	54.0%	560.73	96.7%	1,721,259	65.2%	3,291	\$105,840,700	\$218,380,500	\$324,221,200	68.5%	\$202,372	\$126.87	0.07
Townhome	446	46.0%	19.14	3.3%	919,480	34.8%	2,062	\$59,155,000	\$89,832,500	\$148,987,500	31.5%	\$132,635	\$97.70	1.10
Condominium	0	0.0%	0.00	0.0%	0	0.0%	0	\$0	\$0	\$0	0.0%	\$0	\$0.00	0.00
Apartment	0	0.0%	0.00	0.0%	0	0.0%	0	\$0	\$0	\$0	0.0%	\$0	\$0.00	0.00
Mobile Home	0	0.0%	0.00	0.0%	0	0.0%	0	\$0	\$0	\$0	0.0%	\$0	\$0.00	0.00
TOTAL/% TOTAL	969	19.7%	579.86	25.8%	2,640,739	22.1%	2,725	\$164,995,700	\$308,213,000	\$473,208,700	20.8%	\$170,274	\$116.71	0.10
NON-RESIDENTIAL PROPERTIES														
Retail	3	15.8%	7.49	12.5%	45,211	10.8%	15,070	\$4,370,700	\$3,454,800	\$7,825,500	12.3%	\$1,456,900	\$76.42	0.14
Office	3	15.8%	2.71	4.5%	13,522	3.2%	4,507	\$977,100	\$2,149,900	\$3,127,000	4.9%	\$325,700	\$158.99	0.11
Industrial	5	26.3%	25.17	42.1%	224,264	53.6%	44,853	\$12,341,200	\$9,687,000	\$22,028,200	34.8%	\$2,468,240	\$43.19	0.20
Services	7	36.8%	21.99	36.8%	128,315	30.6%	18,331	\$11,732,900	\$17,445,900	\$29,178,800	41.8%	\$1,676,129	\$114.92	0.13
Restaurant/Hospitality	1	5.3%	2.46	4.1%	7,442	1.8%	7,442	\$1,500,600	\$2,407,700	\$3,908,300	6.2%	\$1,500,600	\$323.53	0.07
TOTAL/% TOTAL	19	26.0%	59.81	25.0%	418,754	28.4%	22,040	\$30,922,500	\$32,445,300	\$63,367,800	31.9%	\$1,627,500	\$77.48	0.16
2010 TO PRESENT														
RESIDENTIAL PROPERTIES														
Single Family	167	100.0%	177.36	100.0%	628,318	100.0%	3,762	\$30,684,400	\$85,613,200	\$116,297,600	100.0%	\$183,739	\$136.26	0.08
Townhome	0	0.0%	0.00	0.0%	0	0.0%	0	\$0	\$0	\$0	0.0%	\$0	\$0.00	0.00
Condominium	0	0.0%	0.00	0.0%	0	0.0%	0	\$0	\$0	\$0	0.0%	\$0	\$0.00	0.00
Apartment	0	0.0%	0.00	0.0%	0	0.0%	0	\$0	\$0	\$0	0.0%	\$0	\$0.00	0.00
Mobile Home	0	0.0%	0.00	0.0%	0	0.0%	0	\$0	\$0	\$0	0.0%	\$0	\$0.00	0.00
TOTAL/% TOTAL	167	3.4%	177.36	7.9%	628,318	5.3%	3,762	\$30,684,400	\$85,613,200	\$116,297,600	5.1%	\$183,739	\$136.26	0.08
NON-RESIDENTIAL PROPERTIES														
Retail	3	9.4%	2.88	12.1%	17,032	12.5%	5,677	\$1,896,800	\$2,577,500	\$4,474,300	12.9%	\$632,267	\$151.33	0.14
Office	1	3.1%	2.84	12.0%	2,355	1.7%	2,355	\$11,360,200	\$661,600	\$12,021,800	34.6%	\$11,360,200	\$280.93	0.02
Industrial	2	6.3%	15.21	64.1%	110,312	81.2%	55,156	\$10,334,200	\$1,788,300	\$12,122,500	34.8%	\$5,167,100	\$16.21	0.17
Services	1	3.1%	2.00	8.4%	1,888	1.4%	1,888	\$1,174,500	\$2,577,500	\$3,752,000	10.8%	\$1,174,500	\$1,365.20	0.02
Restaurant/Hospitality	1	3.1%	0.81	3.4%	4,330	3.2%	4,330	\$1,695,500	\$725,800	\$2,421,300	7.0%	\$1,695,500	\$167.62	0.12
TOTAL/% TOTAL	8	11.0%	23.75	9.9%	135,917	9.2%	16,990	\$26,461,200	\$8,330,700	\$34,791,900	17.5%	\$3,307,650	\$61.29	0.13
TOTAL INVENTORY (1980 TO 2017)														
RESIDENTIAL PROPERTIES														
Single Family	3,088	62.7%	2,141.53	95.4%	8,326,148	69.8%	2,696	\$670,272,800	\$996,313,700	\$1,666,586,500	73.2%	\$217,057	\$119.66	0.09
Townhome	1,837	37.3%	84.32	3.8%	3,153,551	26.4%	1,717	\$225,416,800	\$321,430,500	\$546,847,300	24.0%	\$148,109	\$101.93	0.86
Condominium	0	0.0%	0.00	0.0%	0	0.0%	0	\$0	\$0	\$0	0.0%	\$0	\$0.00	0.00
Apartment	1	0.0%	19.48	0.9%	444,842	3.7%	444,842	\$20,300,000	\$44,173,700	\$64,473,700	2.8%	\$20,300,000	\$99.30	0.52
Mobile Home	0	0.0%	0.00	0.0%	0	0.0%	0	\$0	\$0	\$0	0.0%	\$0	\$0.00	0.00
TOTAL	4,926	98.5%	2,245.33	90.4%	11,924,541	89.0%	2,421	\$915,989,600	\$1,361,917,900	\$2,277,907,500	92.0%	\$185,950	\$114.21	0.12
NON-RESIDENTIAL PROPERTIES														
Retail	15	20.5%	33.46	14.0%	279,425	19.0%	18,628	\$20,926,500	\$21,031,000	\$41,957,500	21.2%	\$1,395,100	\$75.27	0.19
Office	16	21.9%	25.43	10.6%	263,512	17.9%	16,470	\$23,697,500	\$17,715,500	\$41,413,000	20.9%	\$1,481,094	\$67.23	0.24
Industrial	16	21.9%	70.26	29.4%	705,020	47.8%	44,064	\$39,707,500	\$22,334,300	\$62,041,800	31.3%	\$2,481,719	\$31.68	0.23
Services	17	23.3%	100.84	42.1%	192,358	13.0%	11,315	\$14,971,800	\$24,664,600	\$39,636,400	20.0%	\$880,694	\$128.22	0.04
Restaurant/Hospitality	9	12.3%	9.33	3.9%	33,808	2.3%	3,756	\$6,351,100	\$6,943,100	\$13,294,200	6.7%	\$705,678	\$205.37	0.08
TOTAL/% TOTAL	73	1.5%	239.31	9.6%	1,474,123	11.0%	20,193	\$105,654,400	\$92,688,500	\$198,342,900	8.0%	\$1,447,321	\$62.88	0.14
SUBMARKET TOTAL	4,999	100.0%	2,484.64	100.0%	13,398,664	100.0%	2,680	\$1,021,644,000	\$1,454,606,400	\$2,476,250,400	100.0%	\$204,370	\$108.56	0.12

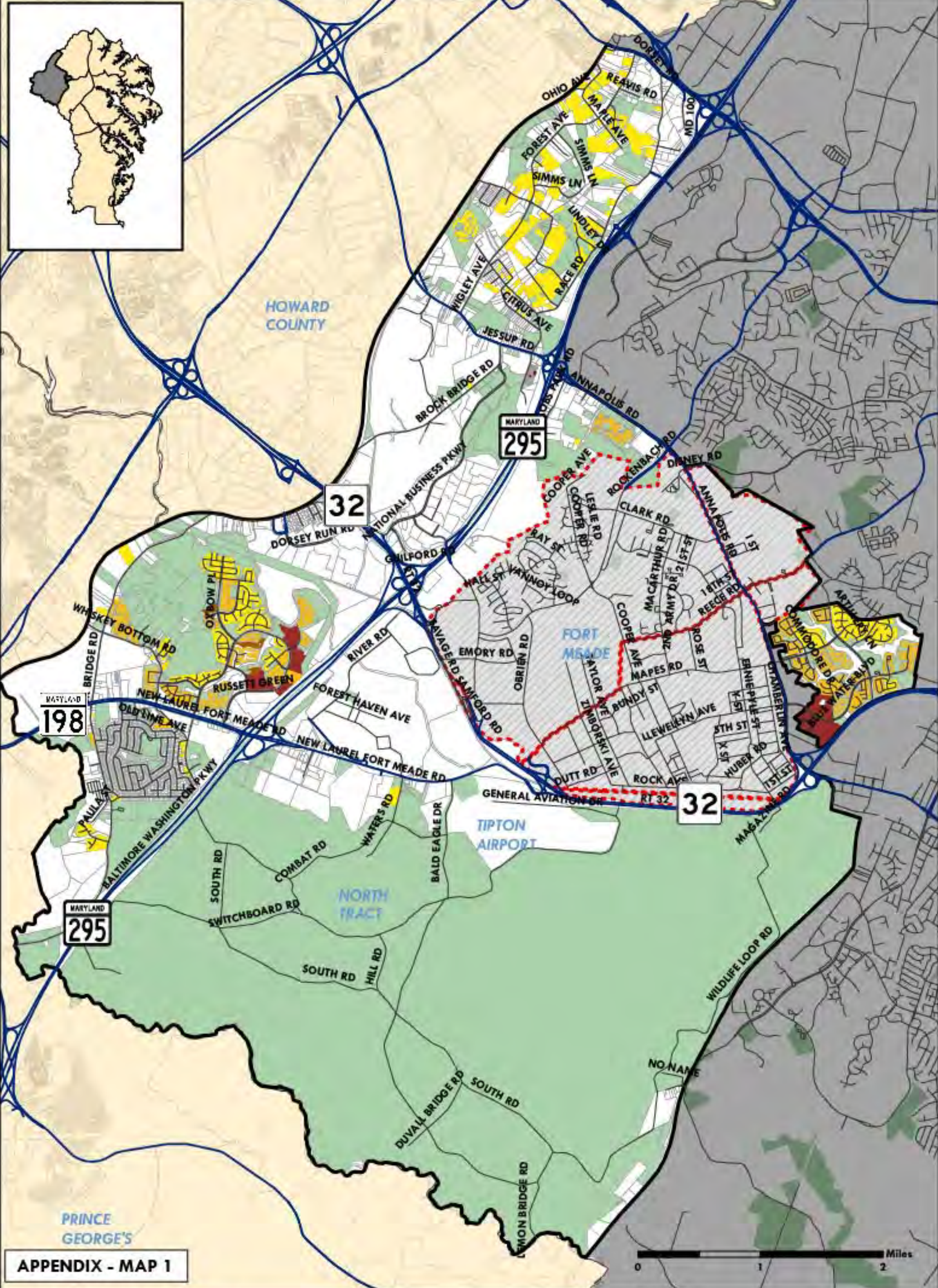
Source: MD Property View and RKG Associates, Inc., 2018

APPENDIX TABLE 4-9
Residential & Non-residential Development Trends
Anne Arundel County, Maryland (1980-2017)

SM 9 - SOUTH COUNTY														
	No. of Properties	% of All Properties	% of All Acreage Land Area		Total Bldg. SF	% of All Properties	Avg. Bldg SF	Land Assessed Value	Building Assessed Value	Total Assessed Value	% Of All Property Appraised Value	Avg. Land AV	Avg. Bldg. AV	FAR
1980 TO 1989														
RESIDENTIAL PROPERTIES														
Single Family	1,296	99.8%	6,227.70	99.7%	3,228,050	99.9%	2,491	\$234,884,100	\$385,276,200	\$620,160,300	99.9%	\$181,238	\$119.35	0.01
Townhome	0	0.0%	0.00	0.0%	0	0.0%	0	\$0	\$0	\$0	0.0%	\$0	\$0.00	0.00
Condominium	0	0.0%	0.00	0.0%	0	0.0%	0	\$0	\$0	\$0	0.0%	\$0	\$0.00	0.00
Apartment	0	0.0%	0.00	0.0%	0	0.0%	0	\$0	\$0	\$0	0.0%	\$0	\$0.00	0.00
Mobile Home	3	0.2%	15.84	0.3%	3,647	0.1%	1,216	\$505,700	\$207,400	\$713,100	0.1%	\$168,567	\$56.87	0.01
TOTAL/% TOTAL	1,299	38.3%	6,243.54	36.2%	3,231,697	31.3%	2,488	\$235,389,800	\$385,483,600	\$620,873,400	31.0%	\$181,208	\$119.28	0.01
NON-RESIDENTIAL PROPERTIES														
Retail	1	25.0%	1.66	3.4%	1,106	6.7%	1,106	\$530,000	\$36,100	\$566,100	16.4%	\$530,000	\$32.64	0.02
Office	2	50.0%	40.15	81.5%	5,985	36.3%	2,993	\$1,052,100	\$603,100	\$1,655,200	48.0%	\$526,050	\$100.77	0.00
Industrial	0	0.0%	0.00	0.0%	0	0.0%	0	\$0	\$0	\$0	0.0%	\$0	\$0.00	0.00
Services	1	25.0%	7.44	15.1%	9,394	57.0%	9,394	\$214,400	\$1,011,000	\$1,225,400	36.6%	\$214,400	\$107.62	0.03
Restaurant/Hospitality	0	0.0%	0.00	0.0%	0	0.0%	0	\$0	\$0	\$0	0.0%	\$0	\$0.00	0.00
TOTAL/% TOTAL	4	23.5%	49.25	10.5%	16,485	8.7%	4,121	\$1,796,500	\$1,650,200	\$3,446,700	13.8%	\$449,125	\$100.10	0.01
1990 TO 1999														
RESIDENTIAL PROPERTIES														
Single Family	1,079	99.7%	4,836.87	100.0%	3,427,903	99.9%	3,177	\$213,085,300	\$432,301,900	\$645,387,200	99.9%	\$197,484	\$126.11	0.02
Townhome	0	0.0%	0.00	0.0%	0	0.0%	0	\$0	\$0	\$0	0.0%	\$0	\$0.00	0.00
Condominium	0	0.0%	0.00	0.0%	0	0.0%	0	\$0	\$0	\$0	0.0%	\$0	\$0.00	0.00
Apartment	0	0.0%	0.00	0.0%	0	0.0%	0	\$0	\$0	\$0	0.0%	\$0	\$0.00	0.00
Mobile Home	3	0.3%	2.19	0.0%	3,373	0.1%	1,124	\$369,400	\$154,500	\$523,900	0.1%	\$123,133	\$45.80	0.04
TOTAL/% TOTAL	1,082	31.9%	4,839.06	28.1%	3,431,276	33.2%	3,171	\$213,454,700	\$432,456,400	\$645,911,100	32.2%	\$197,278	\$126.03	0.02
NON-RESIDENTIAL PROPERTIES														
Retail	0	0.0%	0.00	0.0%	0	0.0%	0	\$0	\$0	\$0	0.0%	\$0	\$0.00	0.00
Office	1	20.0%	1.40	4.9%	10,440	17.0%	10,440	\$408,000	\$810,600	\$1,218,600	15.7%	\$408,000	\$77.64	0.17
Industrial	2	40.0%	23.37	81.7%	39,224	63.8%	19,612	\$1,904,600	\$2,895,900	\$4,800,500	62.0%	\$952,300	\$73.83	0.04
Services	2	40.0%	3.83	13.4%	11,796	19.2%	5,898	\$1,019,000	\$706,700	\$1,725,700	22.3%	\$509,500	\$59.91	0.07
Restaurant/Hospitality	0	0.0%	0.00	0.0%	0	0.0%	0	\$0	\$0	\$0	0.0%	\$0	\$0.00	0.00
TOTAL/% TOTAL	5	29.4%	28.60	6.1%	61,460	32.4%	12,292	\$3,331,600	\$4,413,200	\$7,744,800	31.0%	\$666,320	\$71.81	0.05
2000 TO 2009														
RESIDENTIAL PROPERTIES														
Single Family	793	100.0%	4,418.99	100.0%	2,893,155	100.0%	3,648	\$150,906,000	\$428,724,000	\$579,630,000	100.0%	\$190,298	\$148.19	0.02
Townhome	0	0.0%	0.00	0.0%	0	0.0%	0	\$0	\$0	\$0	0.0%	\$0	\$0.00	0.00
Condominium	0	0.0%	0.00	0.0%	0	0.0%	0	\$0	\$0	\$0	0.0%	\$0	\$0.00	0.00
Apartment	0	0.0%	0.00	0.0%	0	0.0%	0	\$0	\$0	\$0	0.0%	\$0	\$0.00	0.00
Mobile Home	0	0.0%	0.00	0.0%	0	0.0%	0	\$0	\$0	\$0	0.0%	\$0	\$0.00	0.00
TOTAL/% TOTAL	793	23.4%	4,418.99	25.7%	2,893,155	28.0%	3,648	\$150,906,000	\$428,724,000	\$579,630,000	28.9%	\$190,298	\$148.19	0.02
NON-RESIDENTIAL PROPERTIES														
Retail	4	50.0%	8.26	2.1%	41,016	36.8%	10,254	\$1,653,200	\$3,702,500	\$5,355,700	42.8%	\$413,300	\$90.27	0.11
Office	2	25.0%	42.28	10.8%	25,418	22.8%	12,709	\$1,055,000	\$1,689,900	\$2,744,900	22.0%	\$527,500	\$66.48	0.01
Industrial	1	12.5%	4.35	1.1%	23,520	21.1%	23,520	\$442,800	\$1,197,300	\$1,640,100	13.1%	\$442,800	\$50.91	0.12
Services	1	12.5%	337.15	86.0%	21,624	19.4%	21,624	\$337,100	\$2,422,000	\$2,759,100	22.1%	\$337,100	\$112.01	0.00
Restaurant/Hospitality	0	0.0%	0.00	0.0%	0	0.0%	0	\$0	\$0	\$0	0.0%	\$0	\$0.00	0.00
TOTAL/% TOTAL	8	47.1%	392.04	83.4%	111,578	58.9%	13,947	\$3,488,100	\$9,011,700	\$12,499,800	50.1%	\$436,013	\$80.77	0.01
2010 TO PRESENT														
RESIDENTIAL PROPERTIES														
Single Family	216	100.0%	1,724.68	100.0%	779,944	100.0%	3,611	\$41,997,500	\$116,148,600	\$158,146,100	100.0%	\$194,433	\$148.92	0.01
Townhome	0	0.0%	0.00	0.0%	0	0.0%	0	\$0	\$0	\$0	0.0%	\$0	\$0.00	0.00
Condominium	0	0.0%	0.00	0.0%	0	0.0%	0	\$0	\$0	\$0	0.0%	\$0	\$0.00	0.00
Apartment	0	0.0%	0.00	0.0%	0	0.0%	0	\$0	\$0	\$0	0.0%	\$0	\$0.00	0.00
Mobile Home	0	0.0%	0.00	0.0%	0	0.0%	0	\$0	\$0	\$0	0.0%	\$0	\$0.00	0.00
TOTAL/% TOTAL	216	6.4%	1,724.68	10.0%	779,944	7.5%	3,611	\$41,997,500	\$116,148,600	\$158,146,100	7.9%	\$194,433	\$148.92	0.01
NON-RESIDENTIAL PROPERTIES														
Retail	0	0.0%	0.00	0.0%	0	0.0%	0	\$0	\$0	\$0	0.0%	\$0	\$0.00	0.00
Office	0	0.0%	0.00	0.0%	0	0.0%	0	\$1,052,100	\$0	\$1,052,100	83.1%	\$0	\$0.00	0.00
Industrial	0	0.0%	0.00	0.0%	0	0.0%	0	\$0	\$0	\$0	0.0%	\$0	\$0.00	0.00
Services	0	0.0%	0.00	0.0%	0	0.0%	0	\$214,400	\$0	\$214,400	16.9%	\$0	\$0.00	0.00
Restaurant/Hospitality	0	0.0%	0.00	0.0%	0	0.0%	0	\$0	\$0	\$0	0.0%	\$0	\$0.00	0.00
TOTAL/% TOTAL	0	0.0%	0.00	0.0%	0	0.0%	0	\$1,266,500	\$0	\$1,266,500	5.1%	\$0	\$0.00	0.00
TOTAL INVENTORY (1980 TO 2017)														
RESIDENTIAL PROPERTIES														
Single Family	3,384	99.8%	17,208.24	99.9%	10,329,052	99.9%	3,052	\$640,872,900	\$1,362,450,700	\$2,003,323,600	99.9%	\$189,383	\$131.90	0.01
Townhome	0	0.0%	0.00	0.0%	0	0.0%	0	\$0	\$0	\$0	0.0%	\$0	\$0.00	0.00
Condominium	0	0.0%	0.00	0.0%	0	0.0%	0	\$0	\$0	\$0	0.0%	\$0	\$0.00	0.00
Apartment	0	0.0%	0.00	0.0%	0	0.0%	0	\$0	\$0	\$0	0.0%	\$0	\$0.00	0.00
Mobile Home	6	0.2%	18.03	0.1%	7,020	0.1%	1,170	\$875,100	\$361,900	\$1,237,000	0.1%	\$145,850	\$51.55	0.01
TOTAL	3,390	99.5%	17,226.27	97.3%	10,336,072	98.2%	3,049	\$641,748,000	\$1,362,812,600	\$2,004,560,600	98.8%	\$189,306	\$131.85	0.01
NON-RESIDENTIAL PROPERTIES														
Retail	5	29.4%	9.92	2.1%	42,122	22.2%	8,424	\$2,183,200	\$3,738,600	\$5,921,800	23.7%	\$436,640	\$88.76	0.10
Office	5	29.4%	83.83	17.8%	41,843	22.1%	8,369	\$3,567,200	\$3,103,600	\$6,670,800	26.7%	\$713,440	\$74.17	0.01
Industrial	3	17.6%	27.72	5.9%	62,744	33.1%	20,915	\$2,347,400	\$4,093,200	\$6,440,600	25.8%	\$782,467	\$65.24	0.05
Services	4	23.5%	348.42	74.1%	42,814	22.6%	10,704	\$1,784,900	\$4,139,700	\$5,924,600	23.7%	\$446,225	\$96.69	0.00
Restaurant/Hospitality	0	0.0%	0.00	0.0%	0	0.0%	0	\$0	\$0	\$0	0.0%	\$0	\$0.00	0.00
TOTAL/% TOTAL	17	0.5%	469.89	2.7%	189,523	1.8%	11,148	\$9,882,700	\$15,075,100	\$24,957,800	1.2%	\$581,335	\$79.54	0.01
SUBMARKET TOTAL	3,407	100.0%	17,696.16	100.0%	10,525,595	100.0%	3,089	\$651,630,700	\$1,377,887,700	\$2,029,518,400	100.0%	\$191,262	\$130.91	0.01

Source: MD Property View and RKG Associates, Inc., 2018

G. APPENDIX MAPS



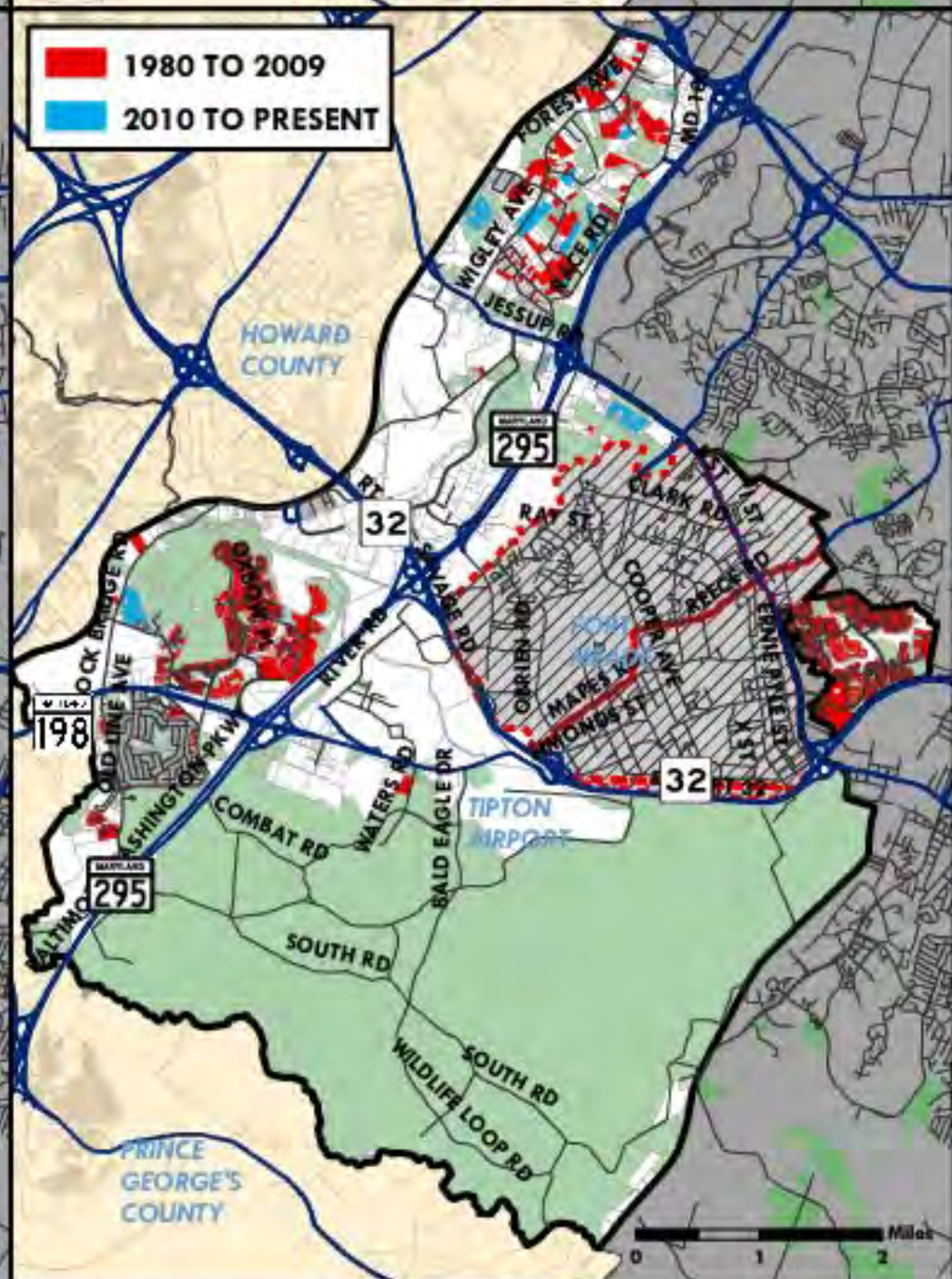
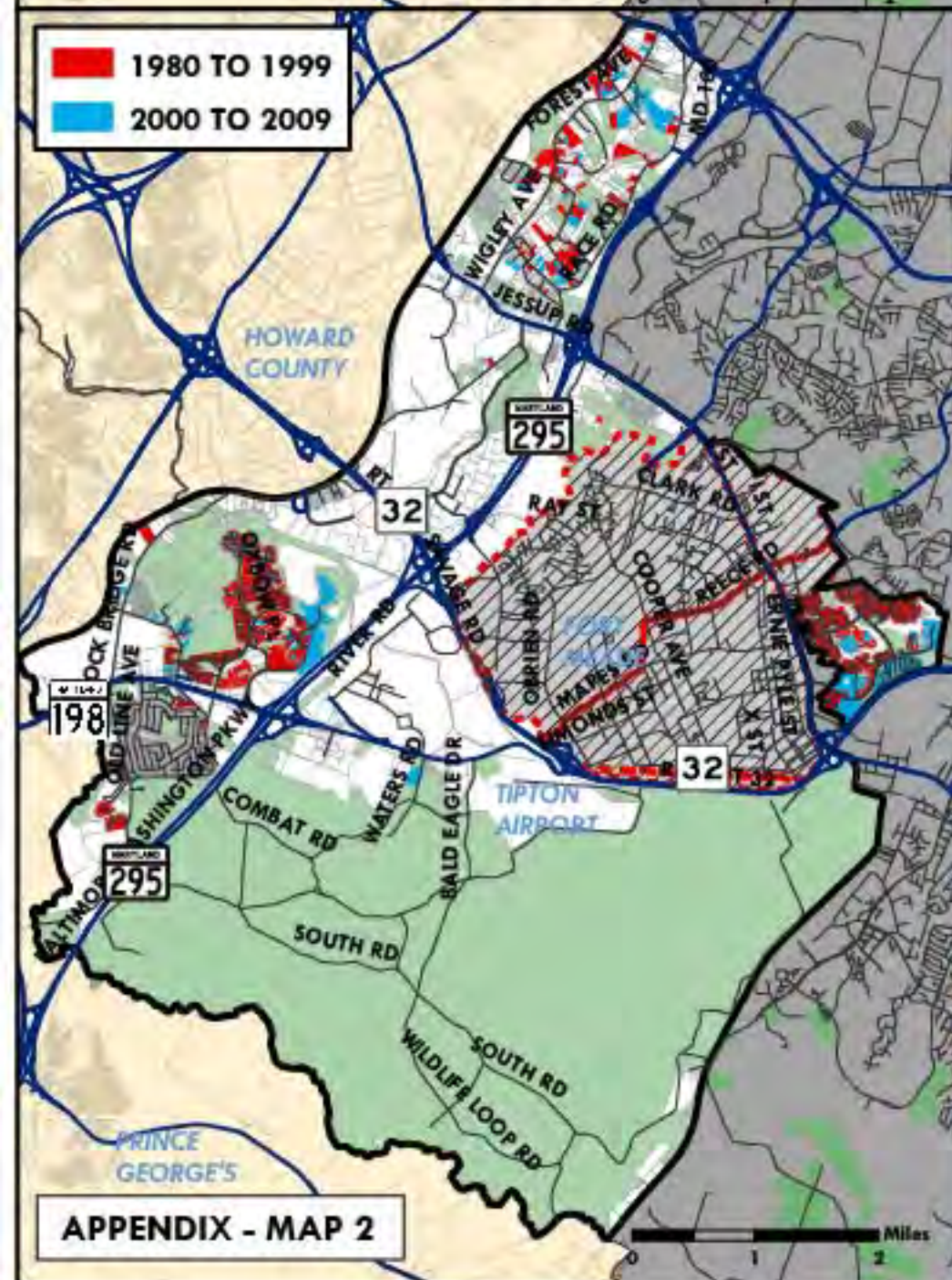
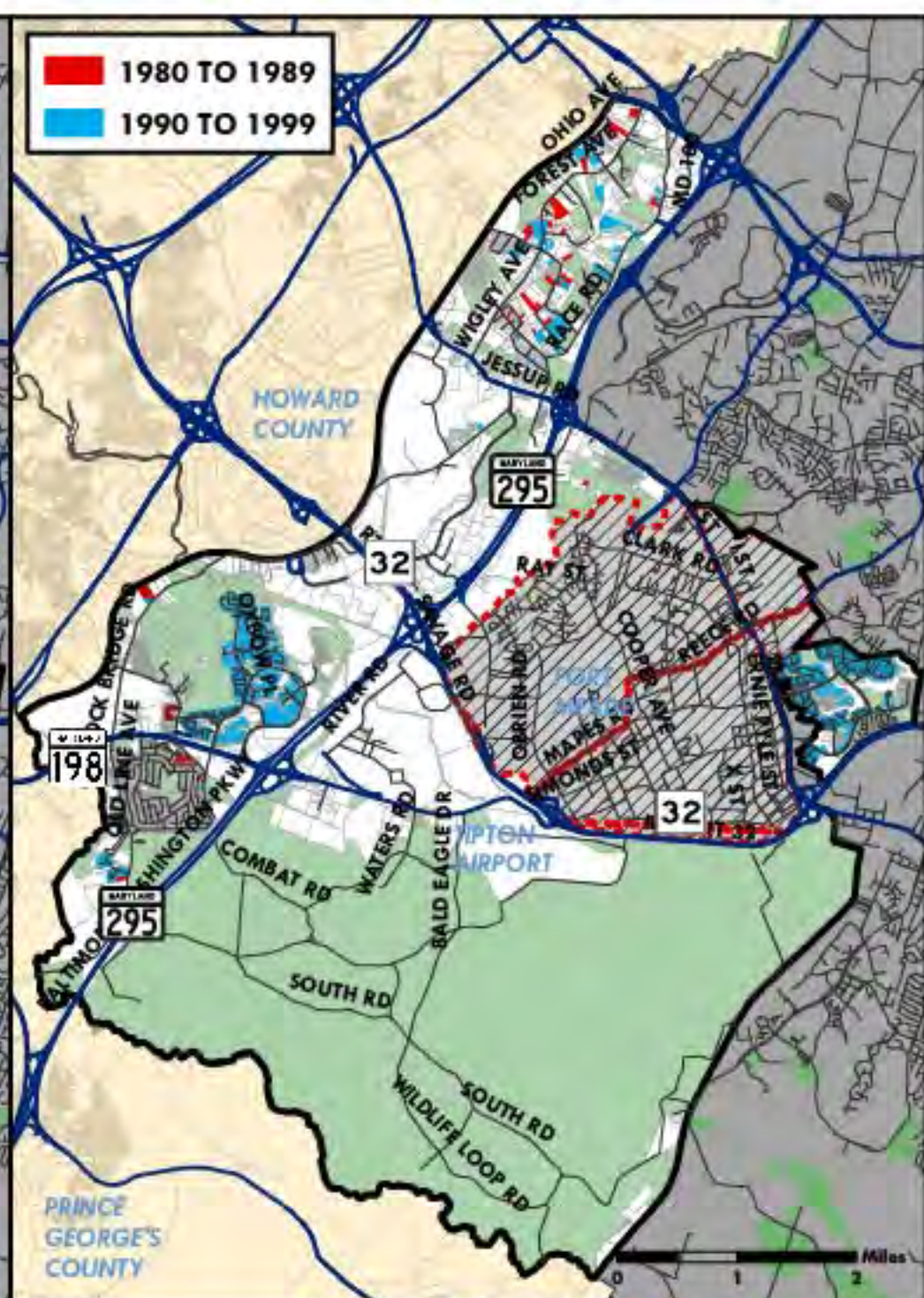
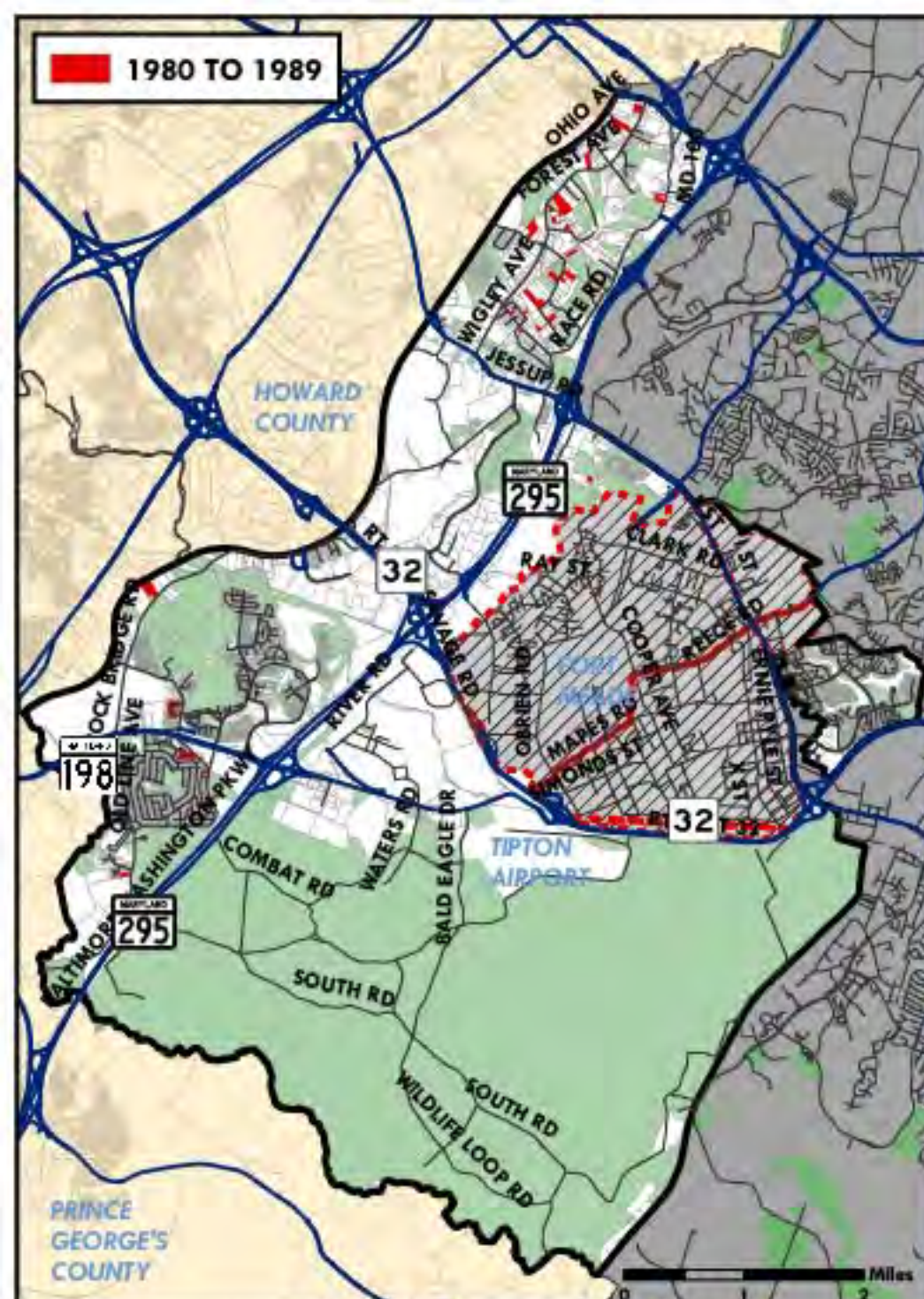
APPENDIX - MAP 1

0 1 2 Miles

JESSUP-MARYLAND CITY RESIDENTIAL DEVELOPMENT BY PROPERTY TYPE (1980 TO 2017)
 Anne Arundel County, MD

LEGEND	
	SINGLE FAMILY
	TOWNHOME
	CONDOMINIUM
	APARTMENT
	MOBILE HOME
	INTERSTATE/MARYLAND HIGHWAY
	JESSUP-MARYLAND CITY
	FORT MEADE
	SUBMARKET PARCELS
	OPEN SPACE/PARKS

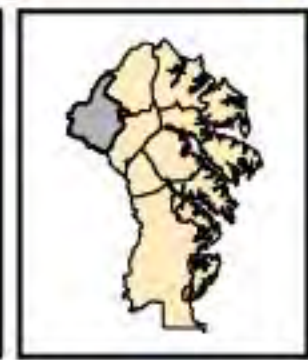


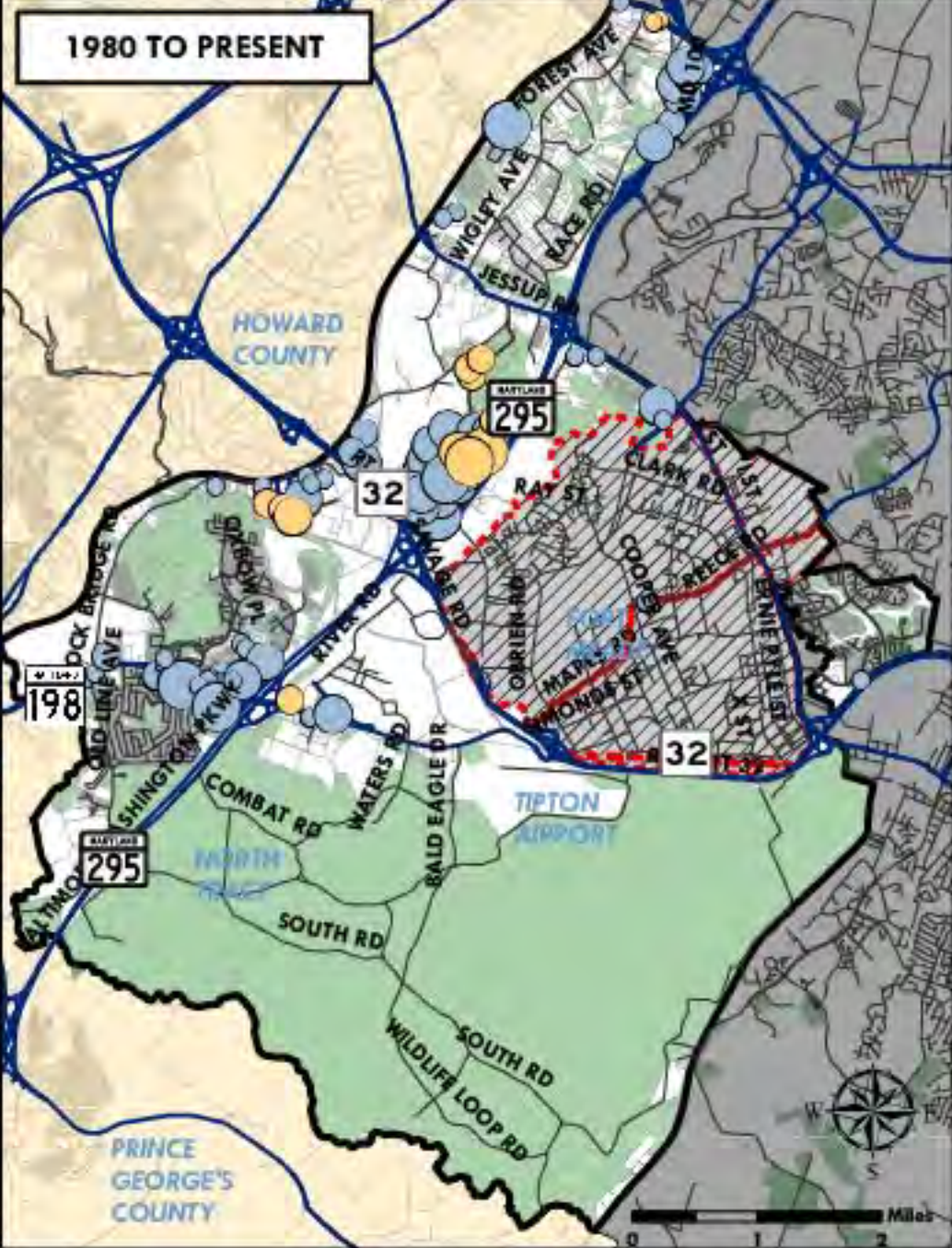
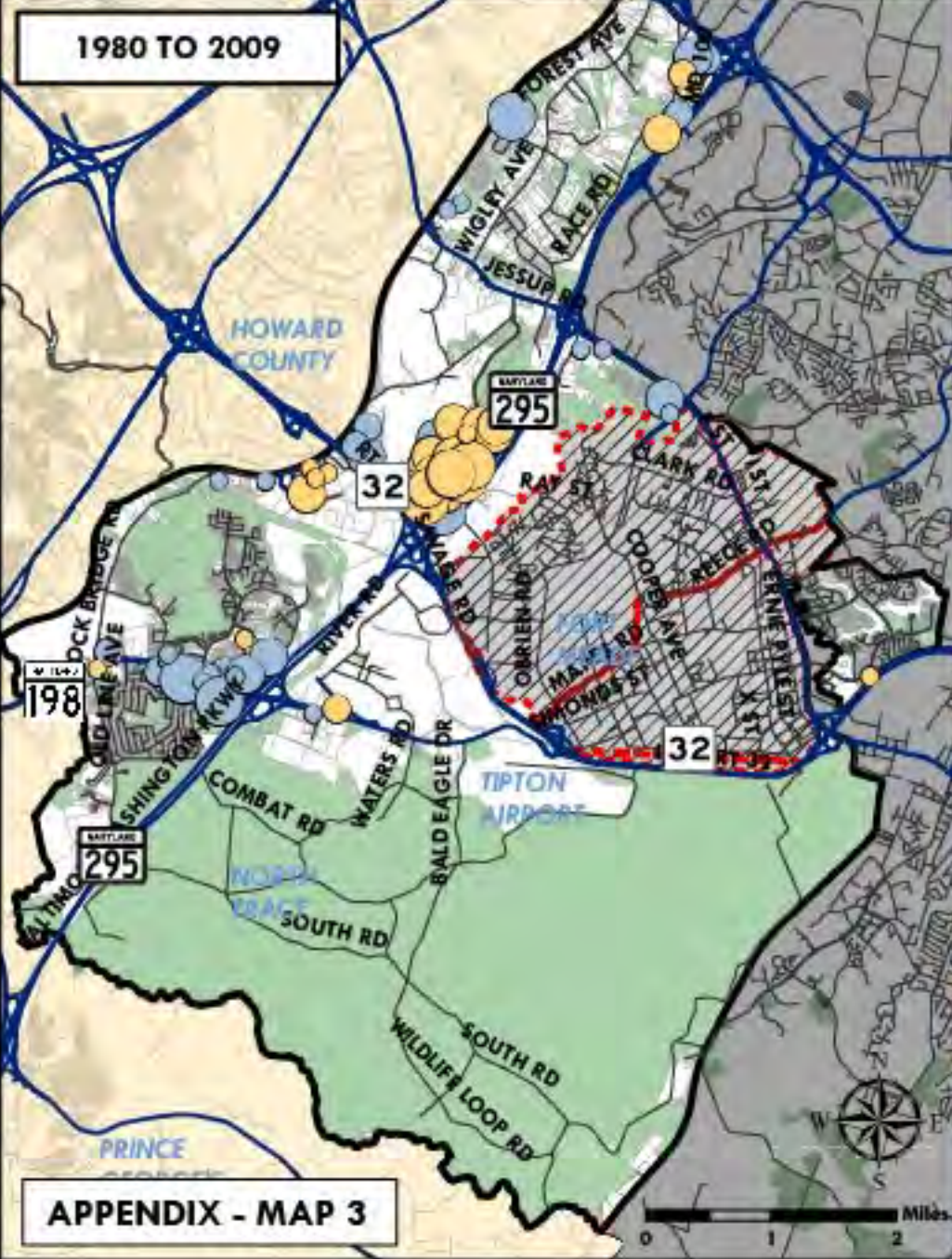
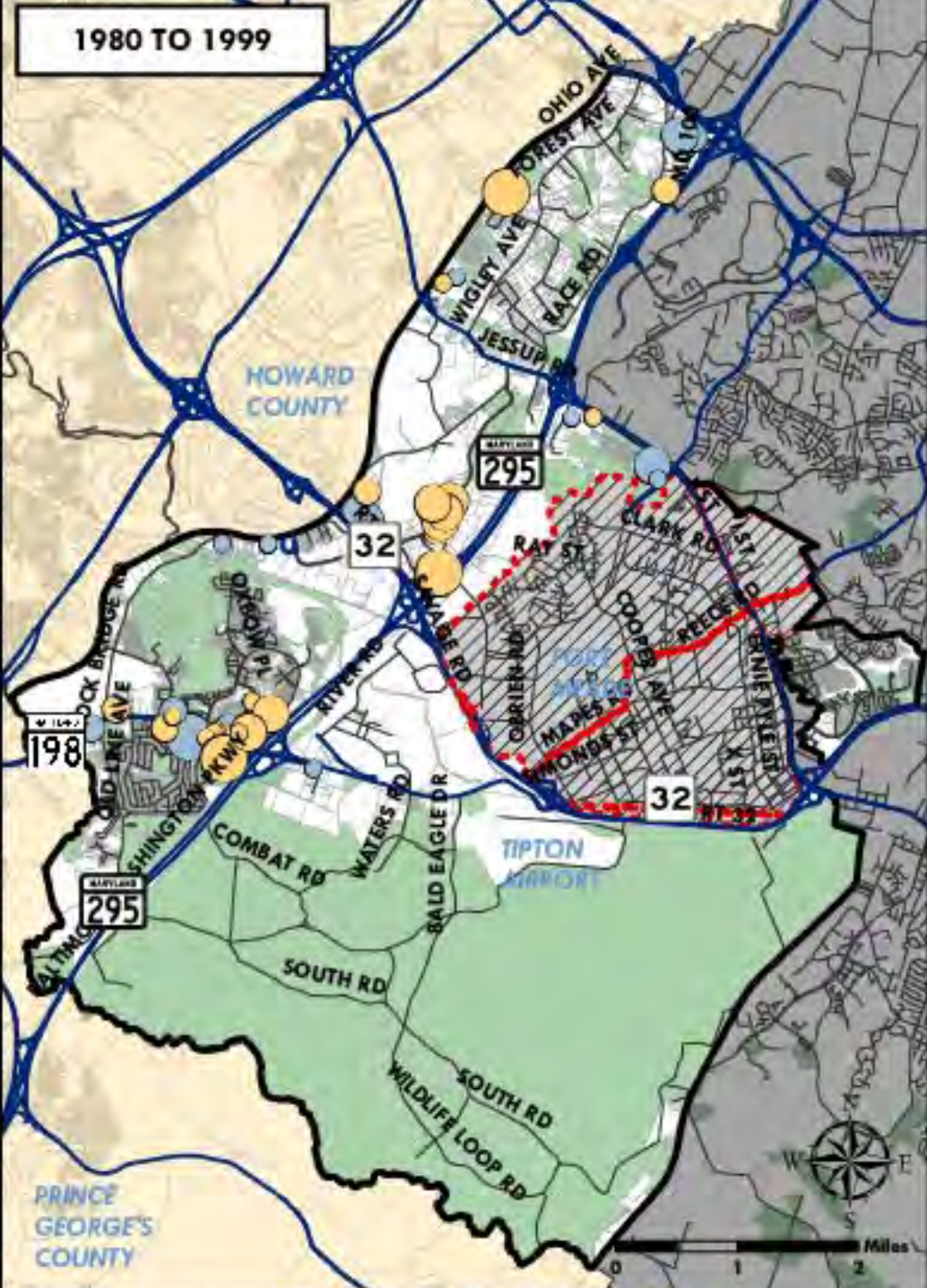
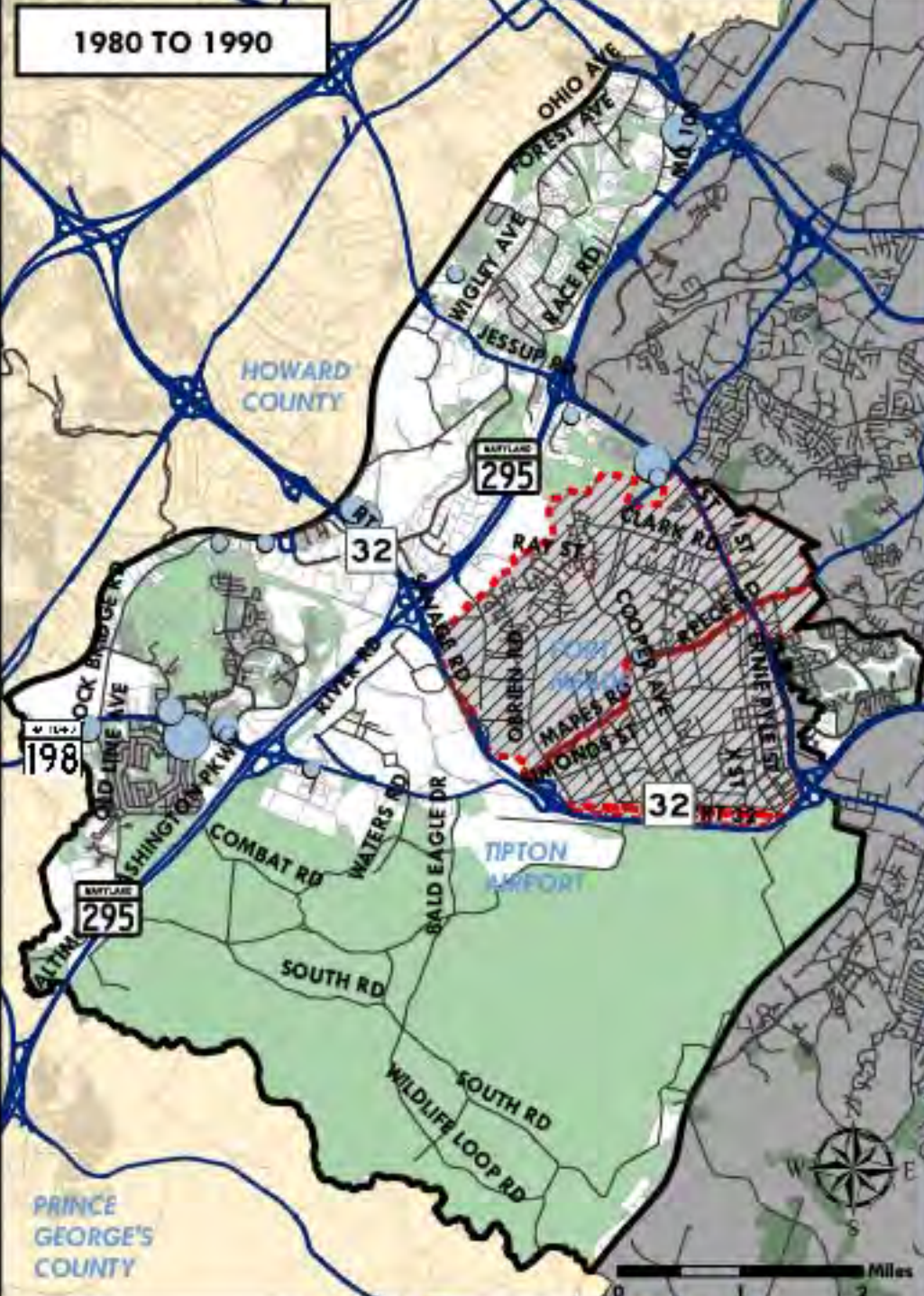


APPENDIX - MAP 2

JESSUP-MARYLAND CITY RESIDENTIAL DEVELOPMENT ACTIVITY (10-YEAR TRENDS)
 Anne Arundel County, MD

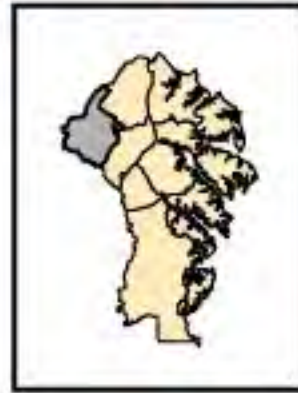
- INTERSTATE/MARYLAND HIGHWAY
- JESSUP-MARYLAND CITY
- FORT MEADE
- SUBMARKET PARCELS
- OPEN SPACE/PARKS

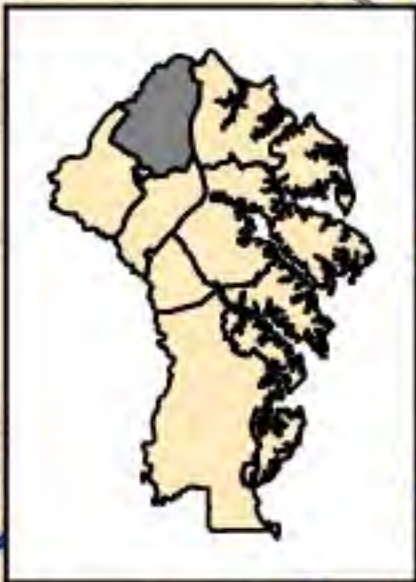




**JESSUP-MARYLAND CITY
NON-RESIDENTIAL
DEVELOPMENT
ACTIVITY BY SF
(10-YEAR TRENDS)**
Anne Arundel County, MD

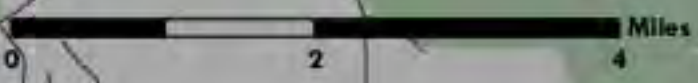
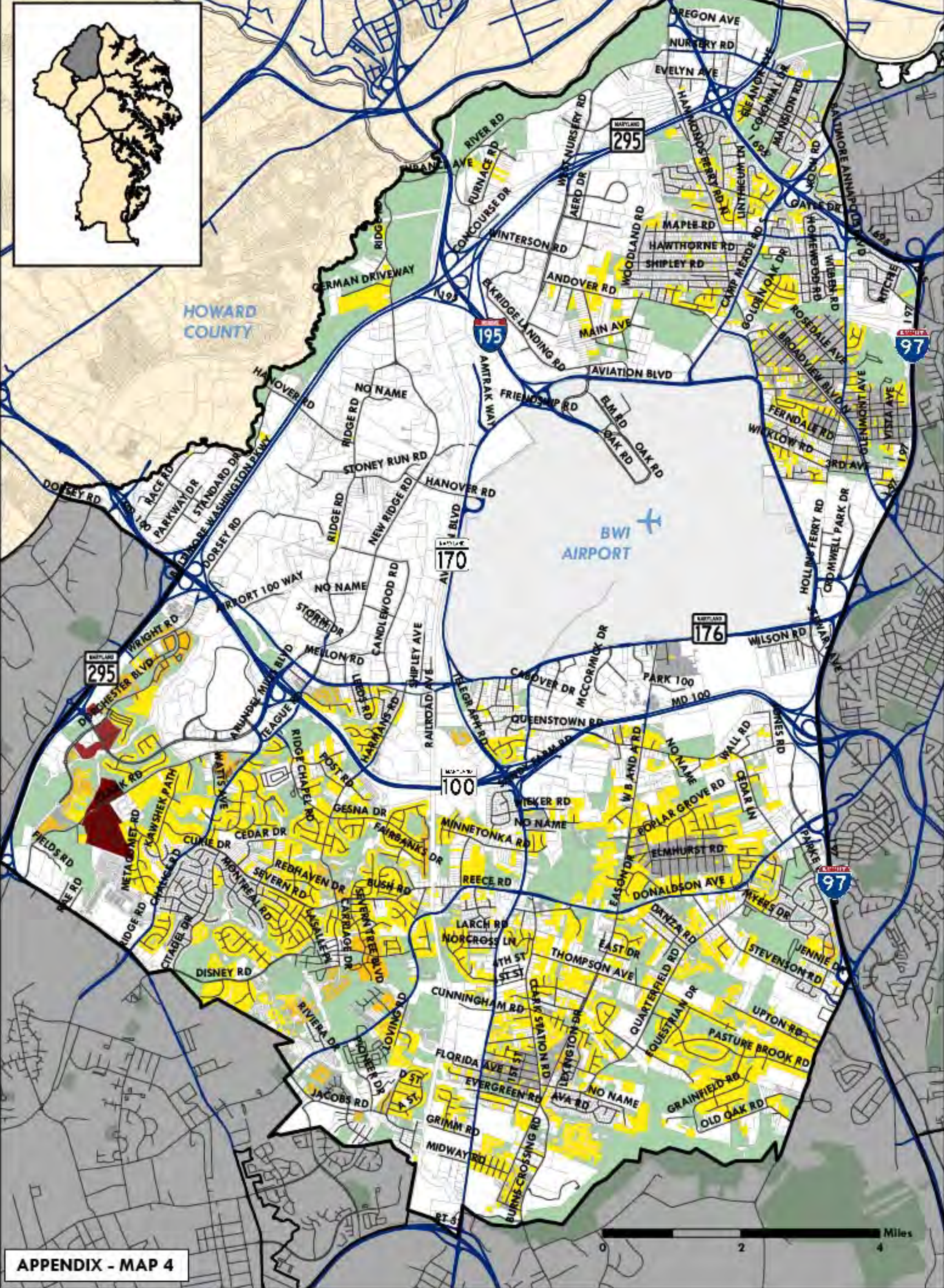
TOTAL SF (1980 - 2017)	— INTERSTATE/MARYLAND HIGHWAY
● 625 - 24,000 SF	▭ JESSUP-MARYLAND CITY
● 24,000 - 69,900 SF	⋯ FORT MEADE
● 69,900 - 200,230 SF	▨ SUBMARKET PARCELS
● 200,230 - 502,950 SF	■ OPEN SPACE/PARKS
	● CUMULATIVE NON-RESIDENTIAL SF
	● NEW NON-RESIDENTIAL SF





HOWARD COUNTY

BWI AIRPORT



APPENDIX - MAP 4

**LITHICUM-SEVERN
RESIDENTIAL
DEVELOPMENT BY
DENSITY TYPE
(1980 TO 2017)**

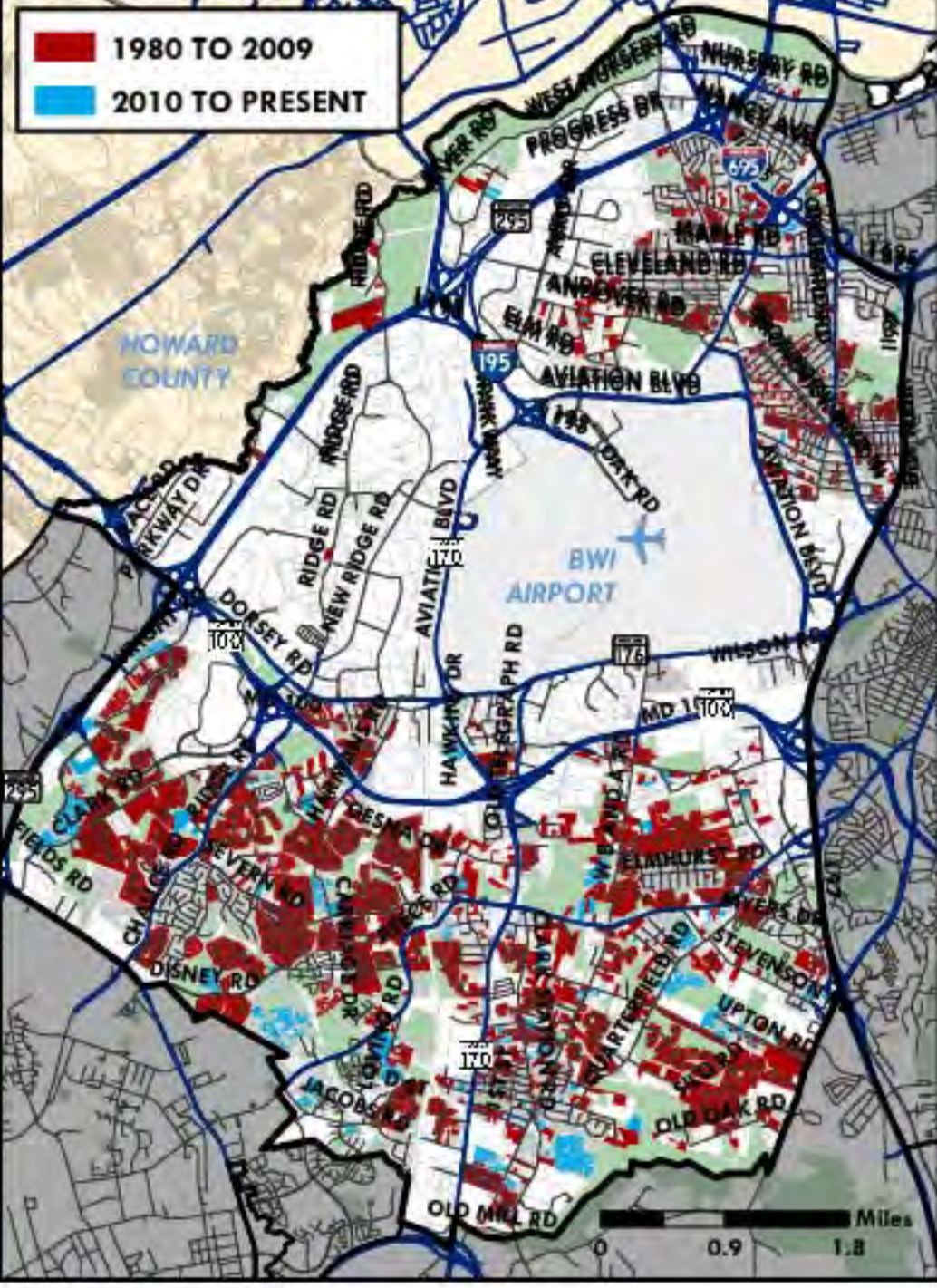
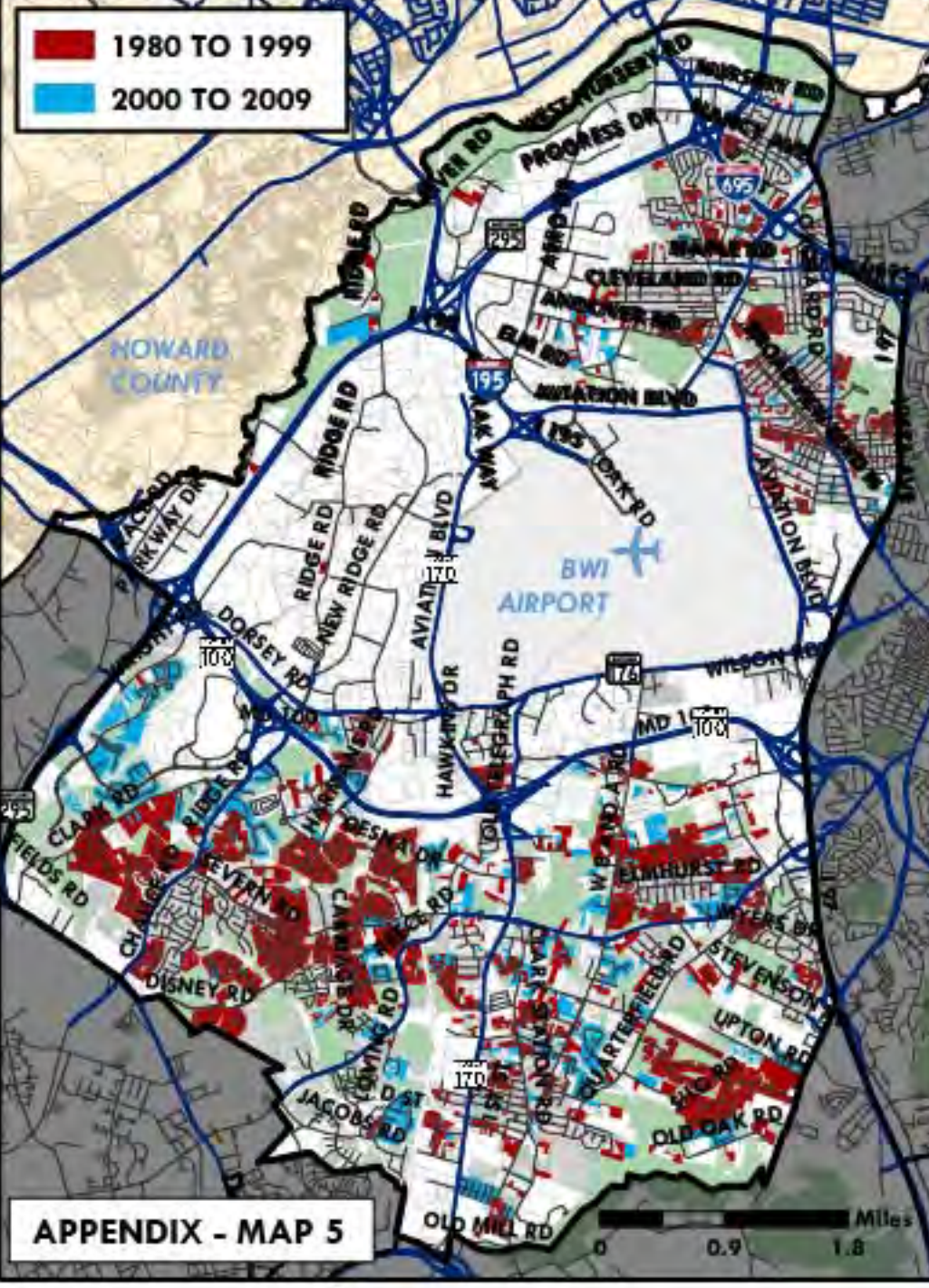
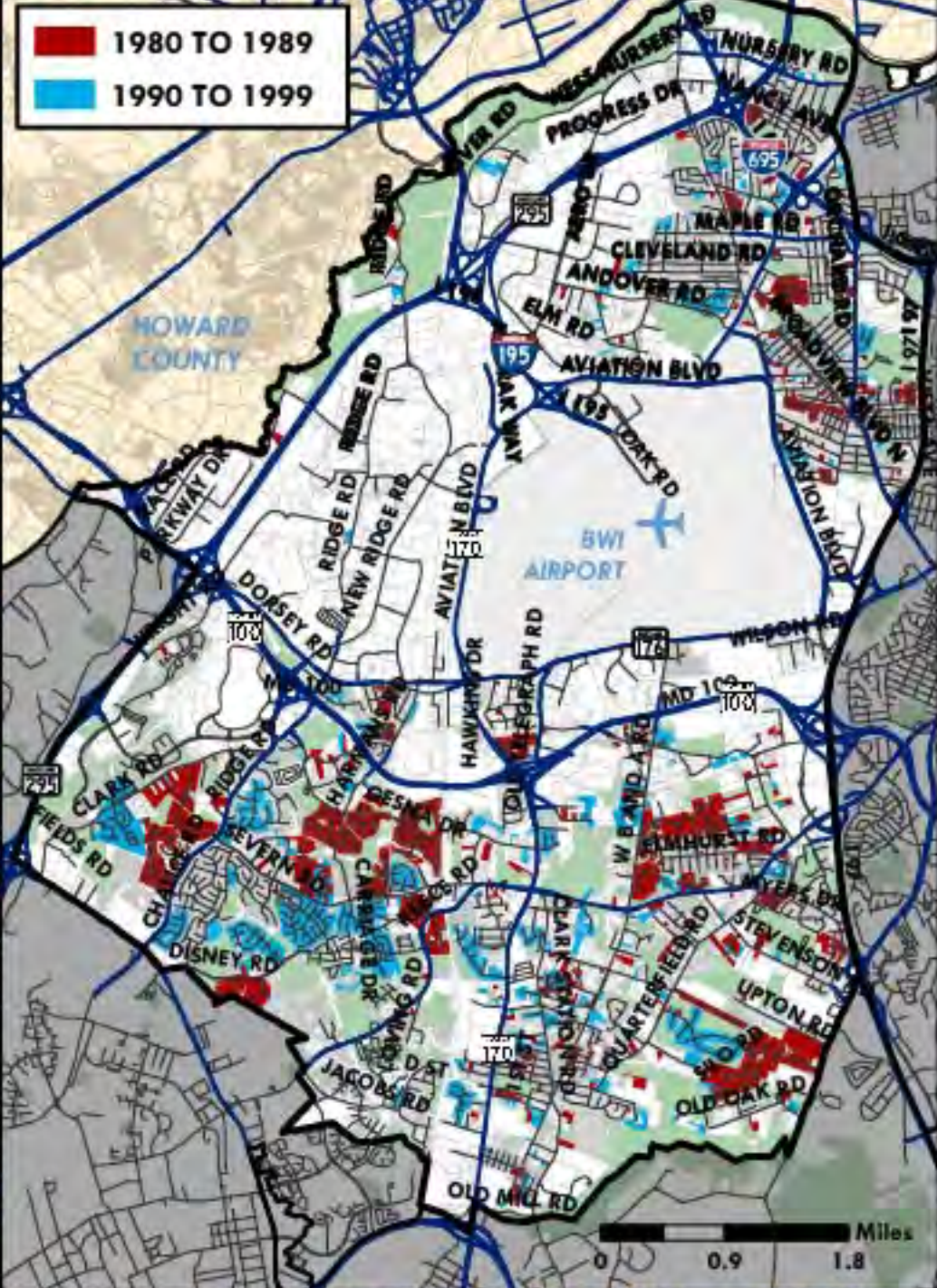
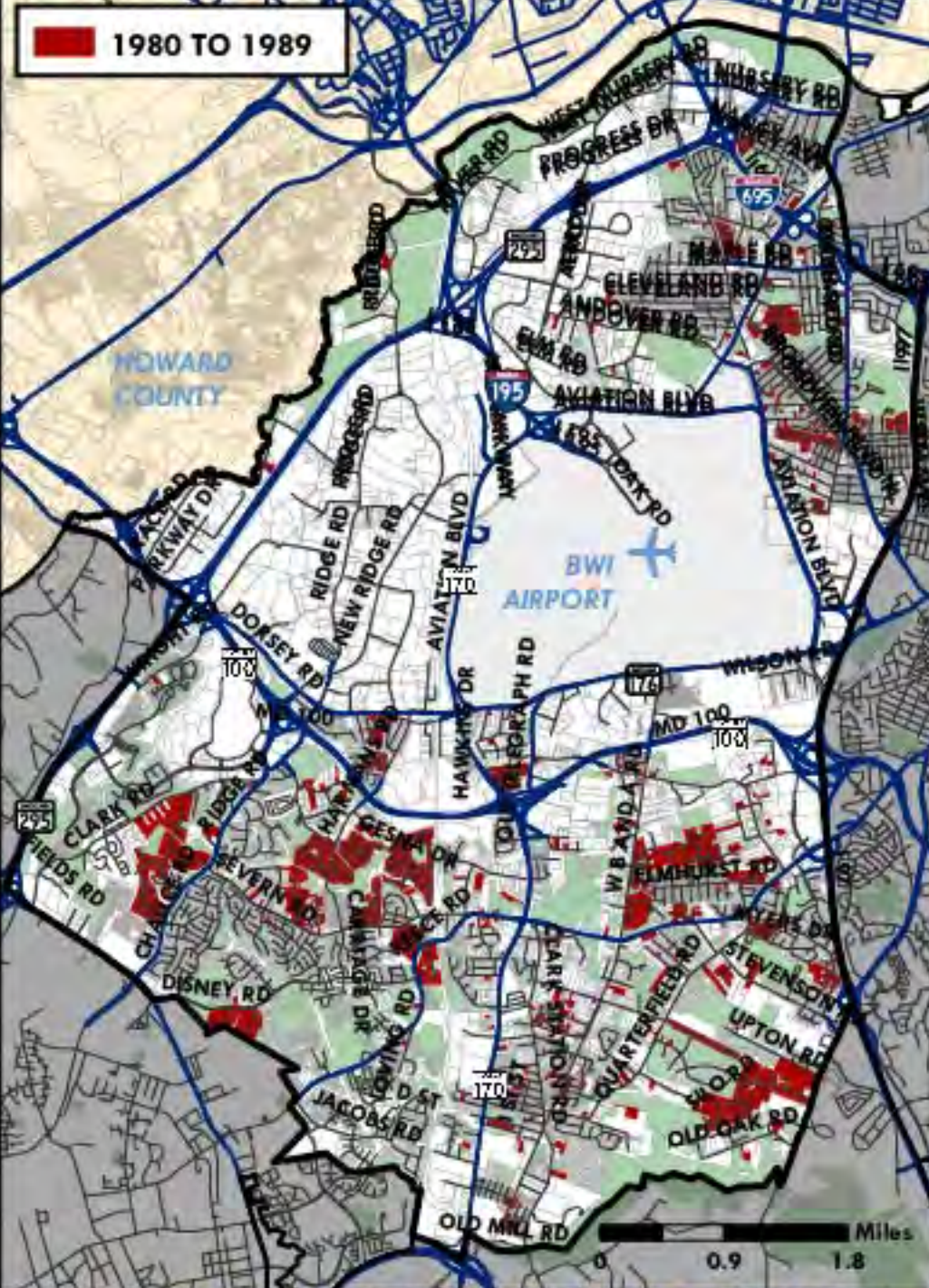
Anne Arundel County, MD

LEGEND

SINGLE FAMILY	BWI AIRPORT
TOWNHOME	INTERSTATE/MARYLAND HIGHWAY
CONDOMINIUM	SUBMARKET PARCELS
APARTMENT	OPEN SPACE/PARKS
MOBILE HOME	



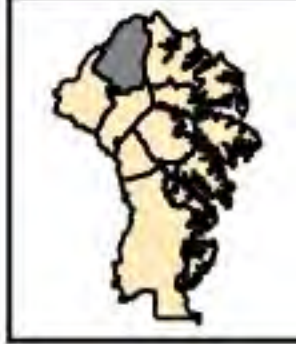
RKG
ASSOCIATES INC



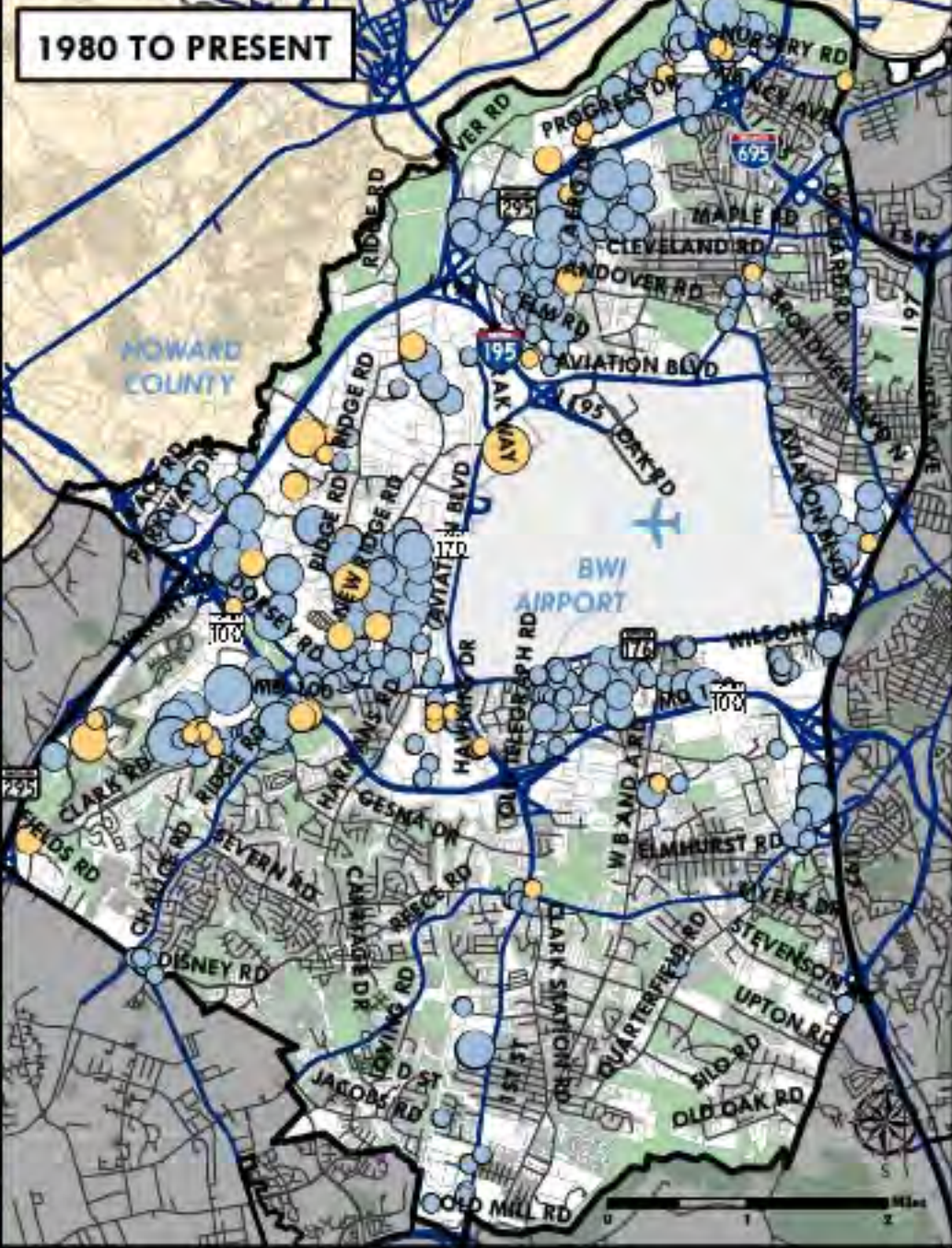
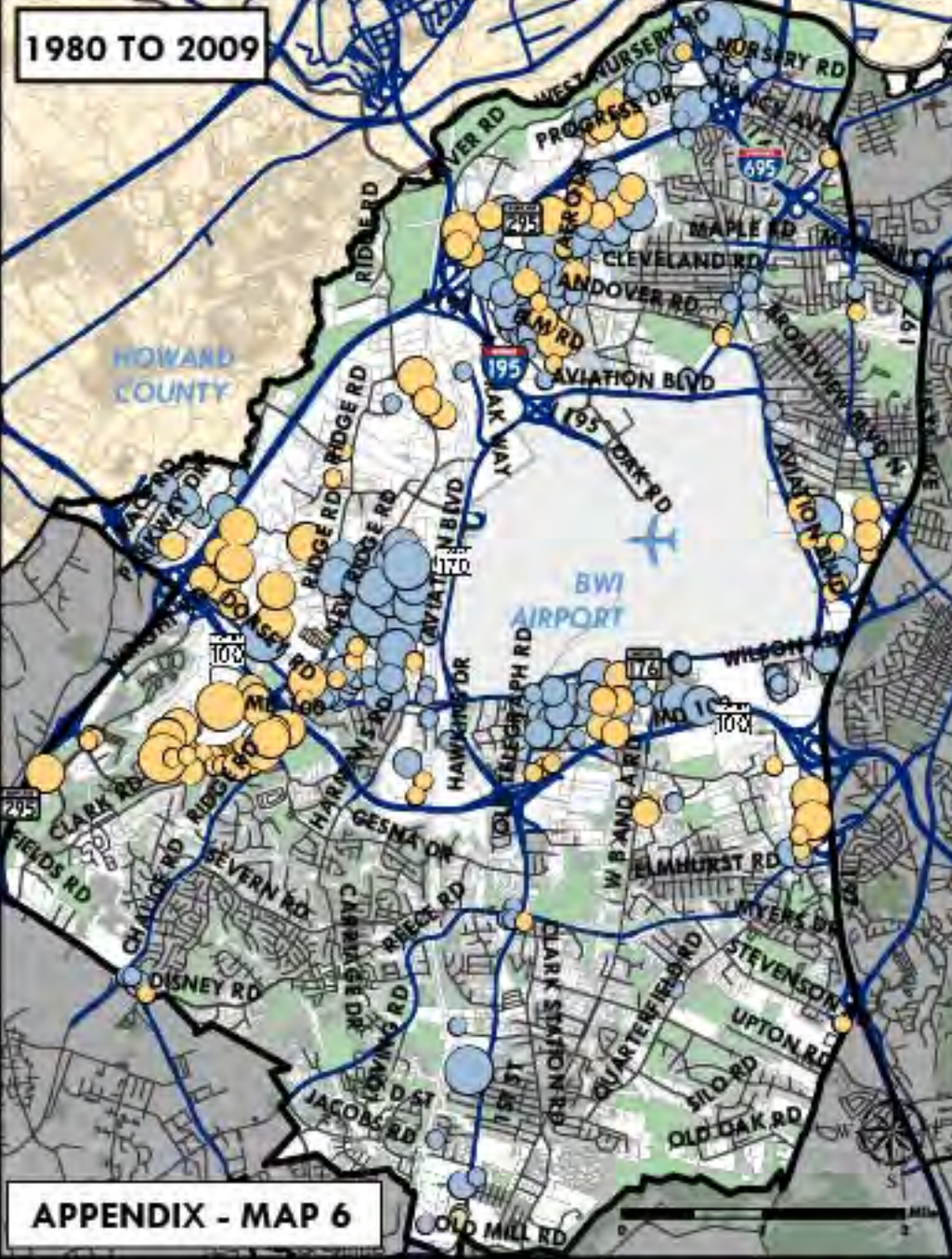
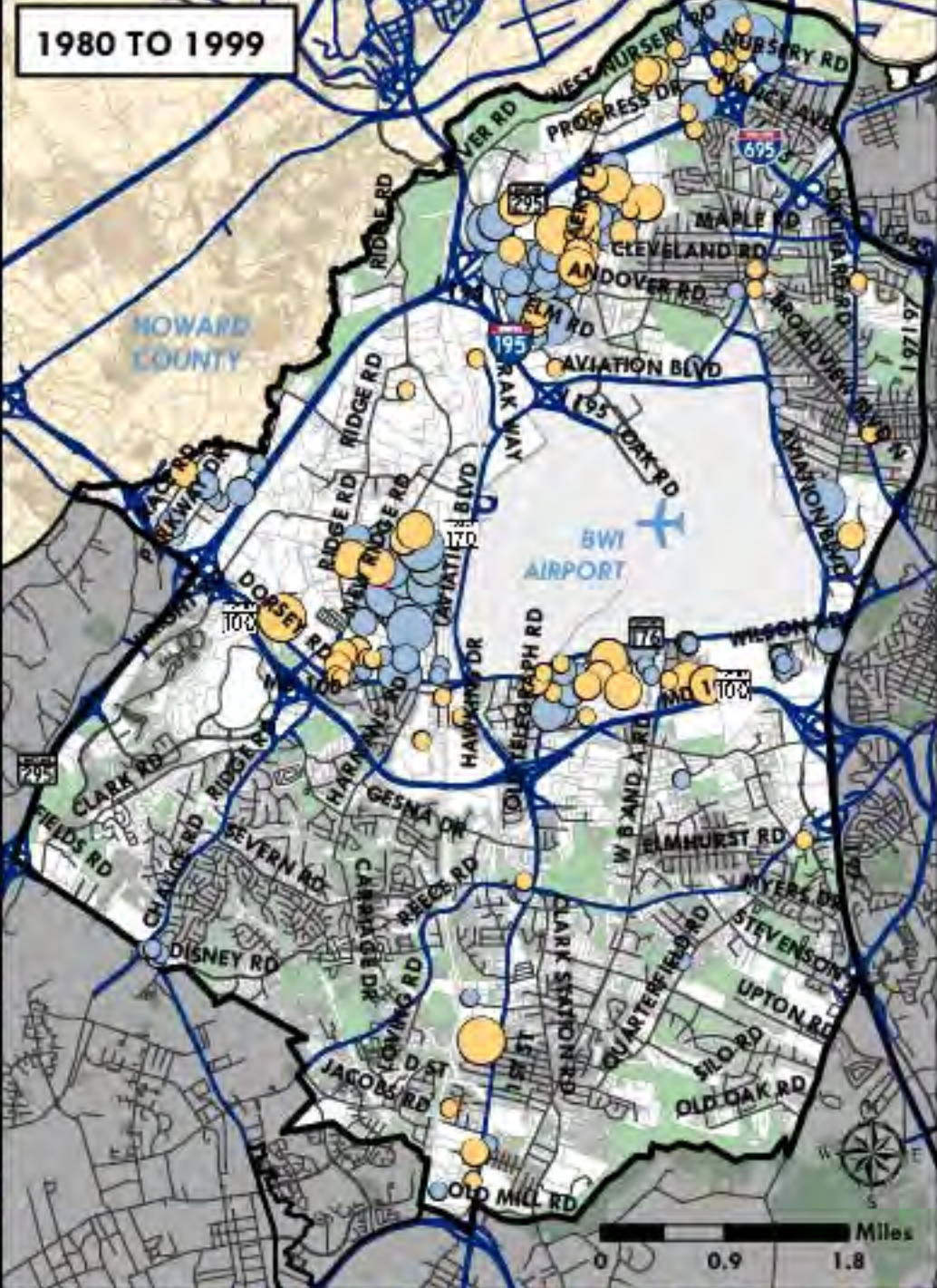
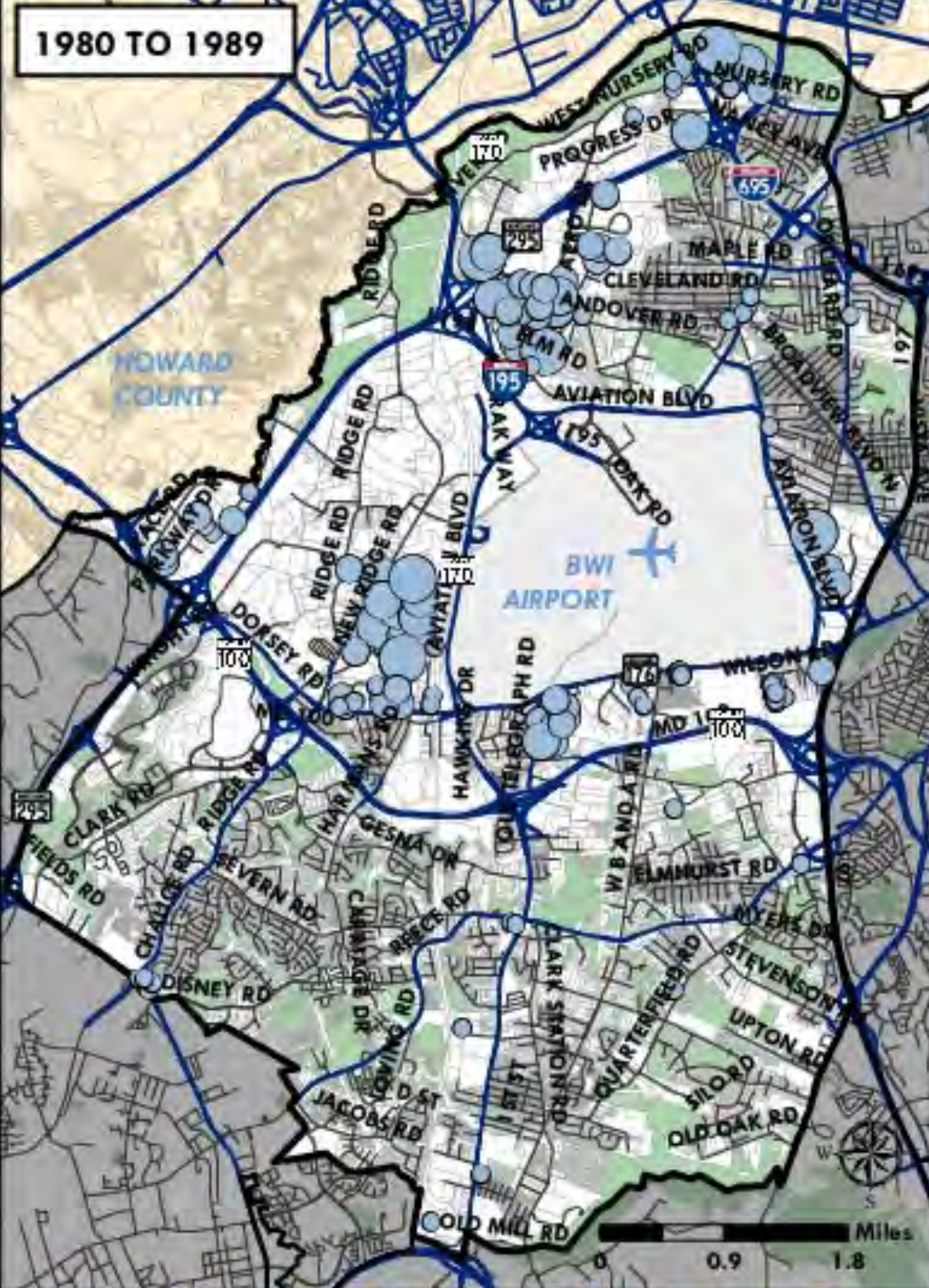
APPENDIX - MAP 5

**LITHICUM-SEVERN
RESIDENTIAL
DEVELOPMENT
ACTIVITY
(10-YEAR TRENDS)**
Anne Arundel County, MD

- LITHICUM-SEVERN
- BWI AIRPORT
- INTERSTATE/MARYLAND HIGHWAY
- SUBMARKET PARCELS
- OPEN SPACE/PARKS



RKG
ASSOCIATES INC.



**LITHICUM-SEVERN
NON-RESIDENTIAL
DEVELOPMENT
ACTIVITY BY SF
(10-YEAR TRENDS)**

Anne Arundel County, MD

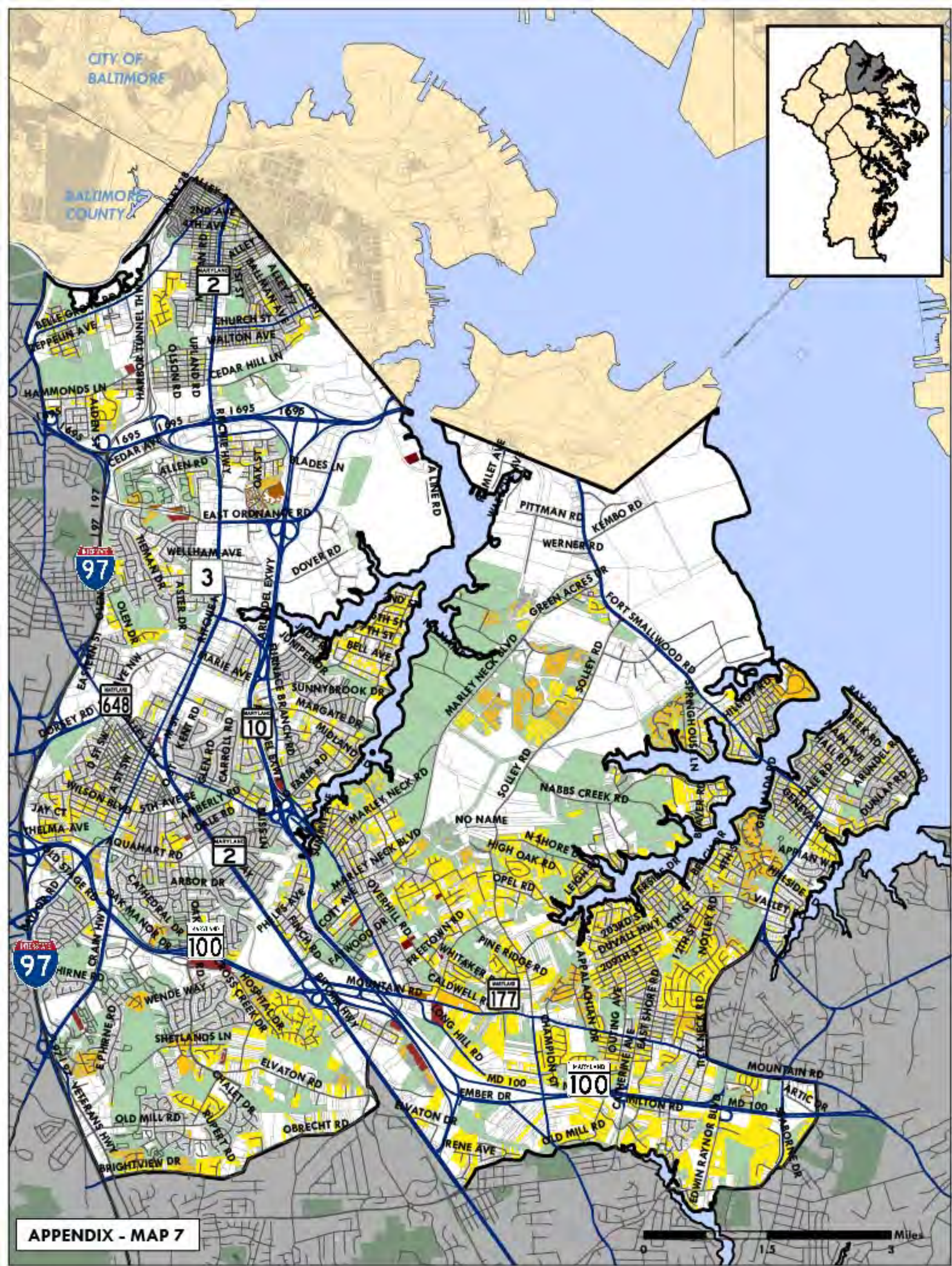
TOTAL SF (1980-2017)

- 624 - 46,600 SF
- 46,600 - 143,660 SF
- 143,660 - 342,000 SF
- 342,000 - 1.6 MILLION SF

LITHICUM-SEVERN
✈ BWI AIRPORT
 INTERSTATE/MARYLAND HIGHWAY
 SUBMARKET PARCELS
 PARKS
● CUMULATIVE NON-RESIDENTIAL SF
● NEW NON-RESIDENTIAL SF



RKG
ASSOCIATES INC.



APPENDIX - MAP 7

**B. PARK-GLEN BURNIE-
RESIDENTIAL
DEVELOPMENT BY
PROPERTY TYPE
(1980 - 2017)**

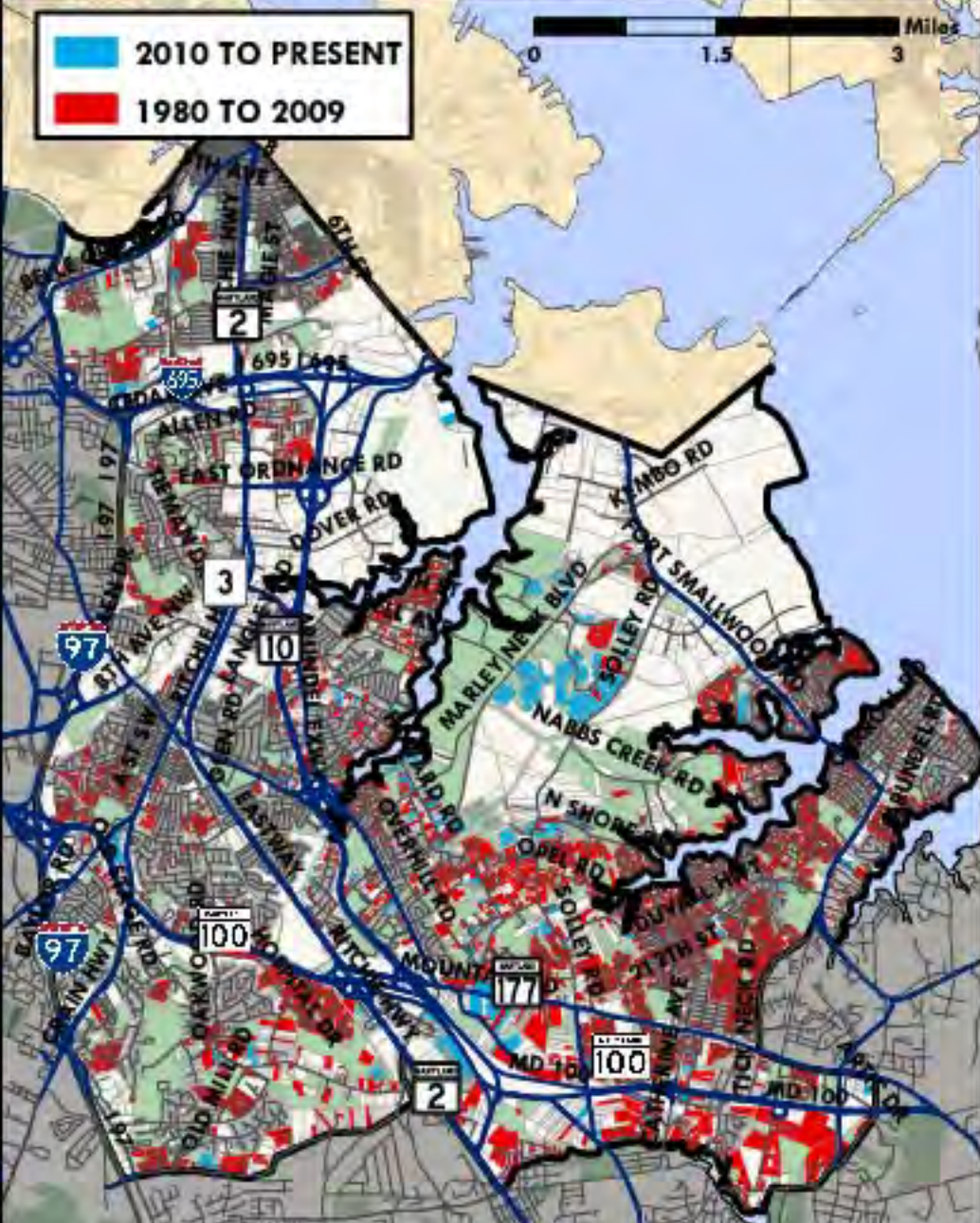
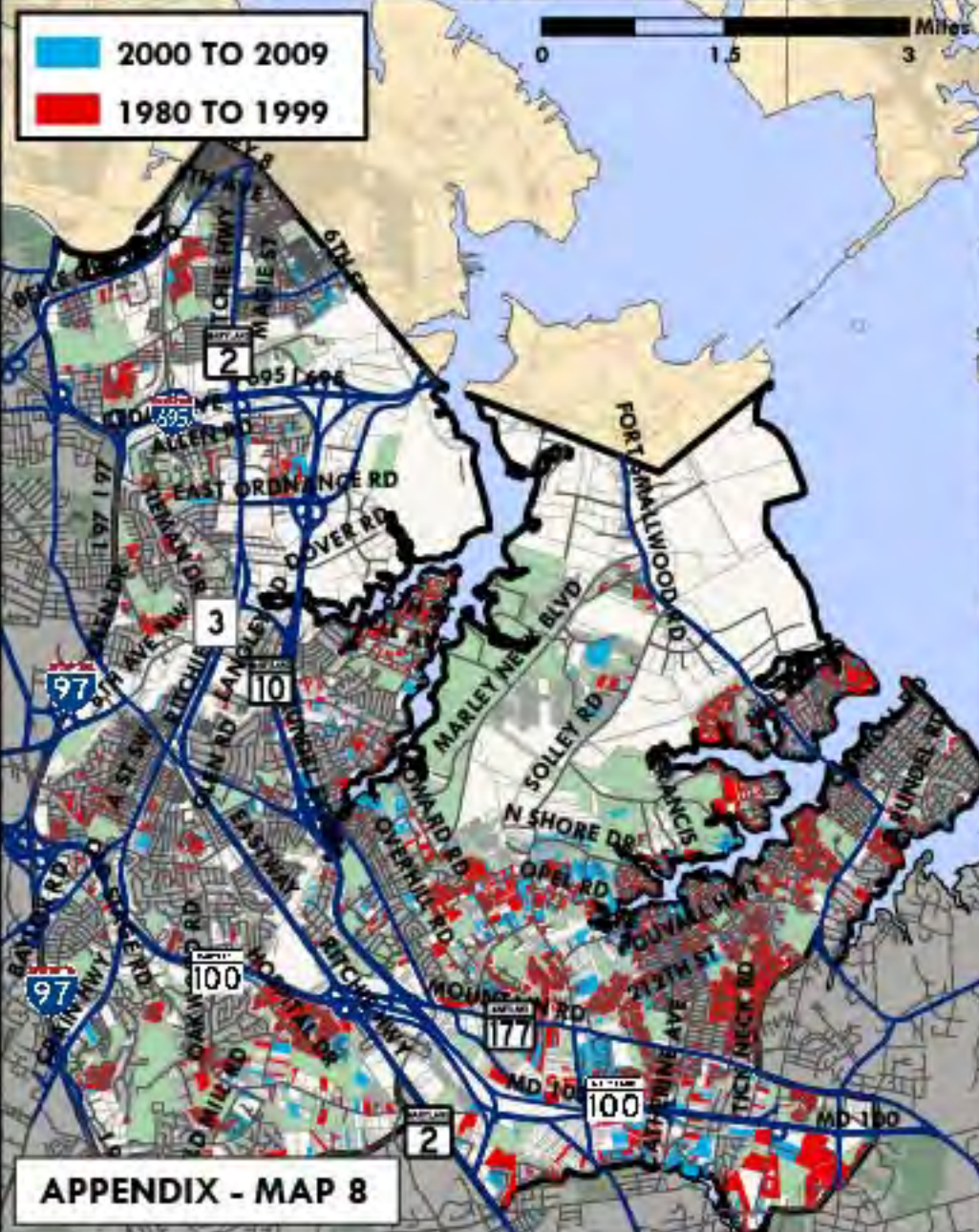
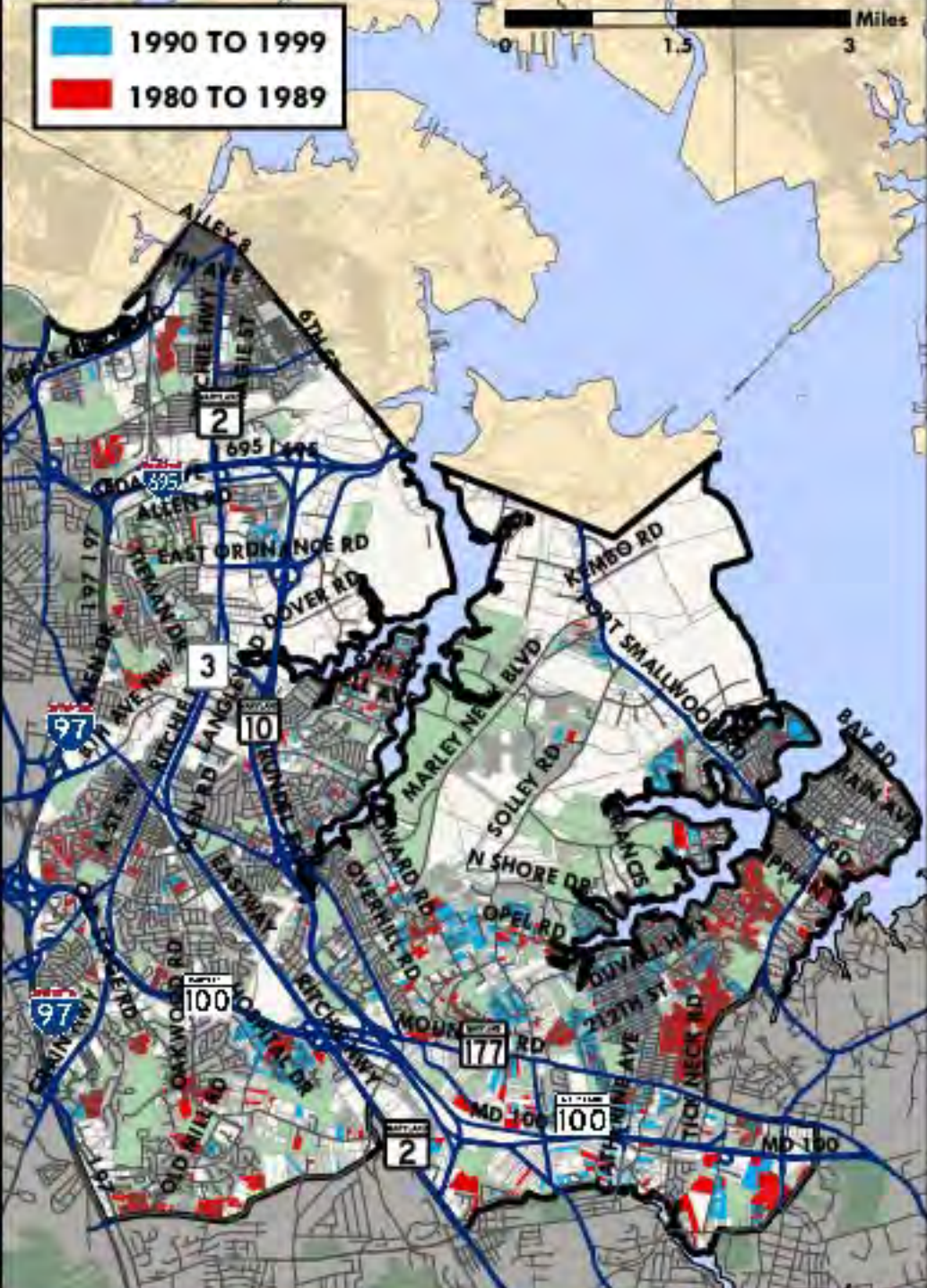
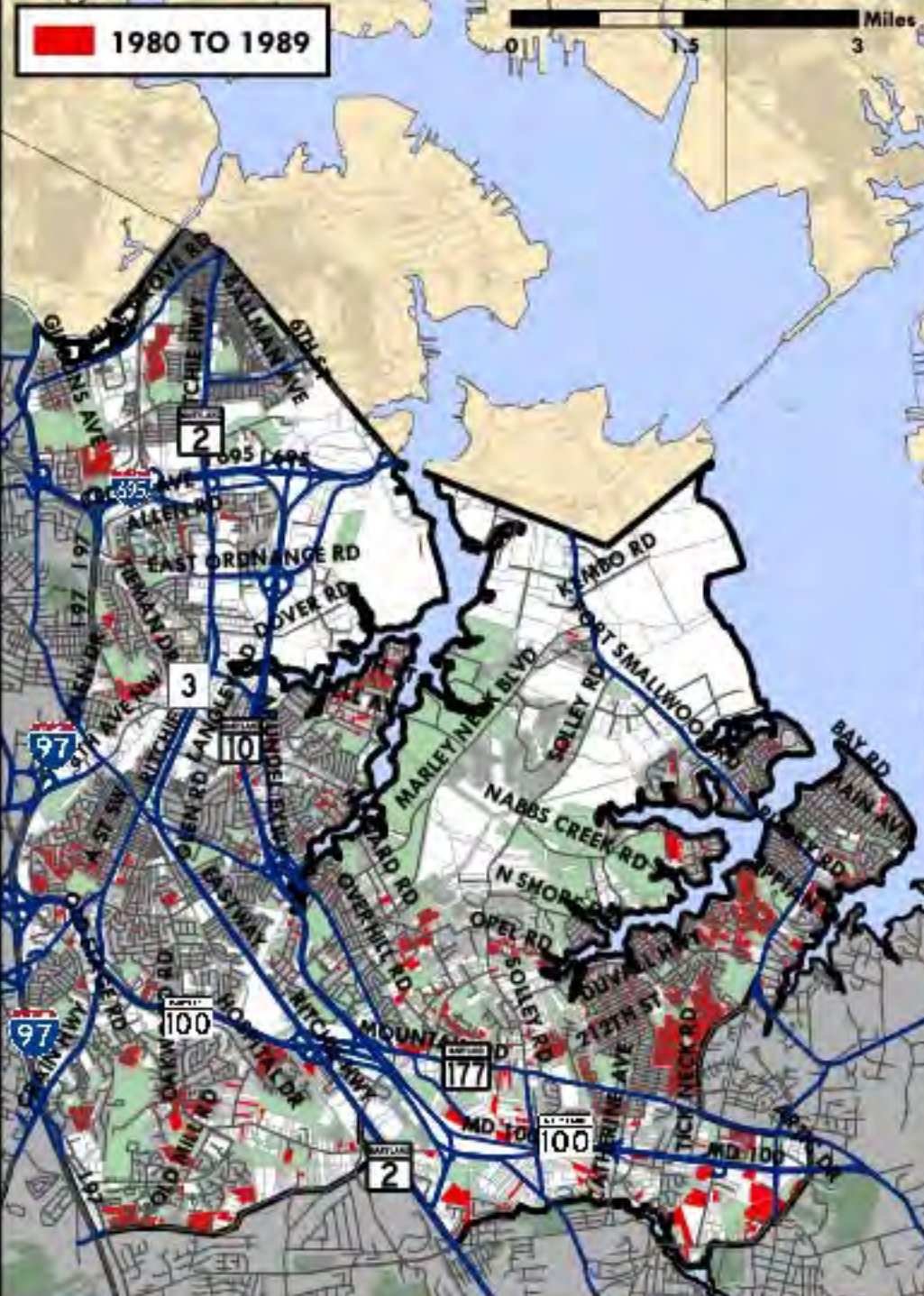
Anne Arundel County, MD

LEGEND

- | | |
|---------------|-----------------------------|
| SINGLE FAMILY | INTERSTATE/MARYLAND HIGHWAY |
| TOWNHOME | B. PARK-G. BURNIE-PASADENA |
| CONDOMINIUM | SUBMARKET PARCELS |
| APARTMENT | OPEN SPACE/PARKS |
| MOBILE HOME | |



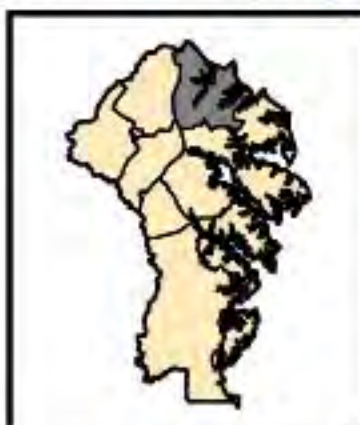
RKG
ASSOCIATES INC



**B. PARK-GLEN BURNIE-
RESIDENTIAL
DEVELOPMENT
ACTIVITY
(10-YEAR TRENDS)**

Anne Arundel County, MD

- INTERSTATE/MARYLAND HIGHWAY
- B. PARK-G. BURNIE-PASADENA
- SUBMARKET PARCELS
- OPEN SPACE/PARKS



RKG
ASSOCIATES INC.

APPENDIX - MAP 8

1980 TO 1989

1980 TO 1999

1980 TO 2009

1980 TO PRESENT

APPENDIX - MAP 9

**B.PARK-GLEN BURNIE-
NON-RESIDENTIAL
DEVELOPMENT
ACTIVITY BY SF**

(10-YEAR TRENDS)

Anne Arundel County, MD

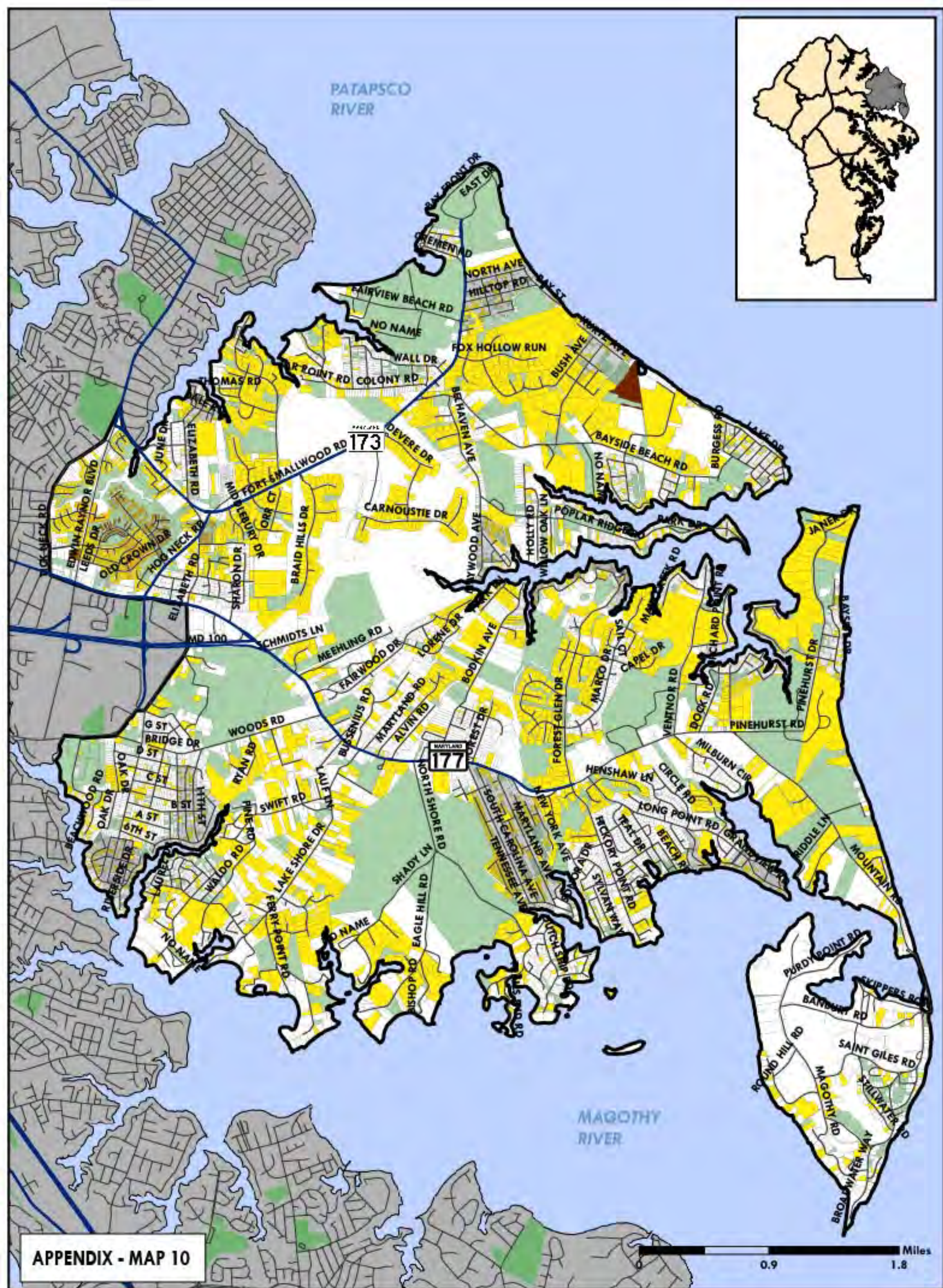
TOTAL SF (1980-2017)

- 462 - 55,200 SF
- 55,200 - 179,000 SF
- 179,000 - 642,000 SF
- 642,000 - 1.3 MILLION SF

- ▭ B. PARK-G. BURNIE-PASADENA
- INTERSTATE/MARYLAND HIGHWAY
- ▭ SUBMARKET PARCELS
- ▭ OPEN SPACE/PARKS
- CUMULATIVE NON-RESIDENTIAL SF
- NEW NON-RESIDENTIAL SF



RKG
ASSOCIATES INC



APPENDIX - MAP 10

0.9 1.8 Miles

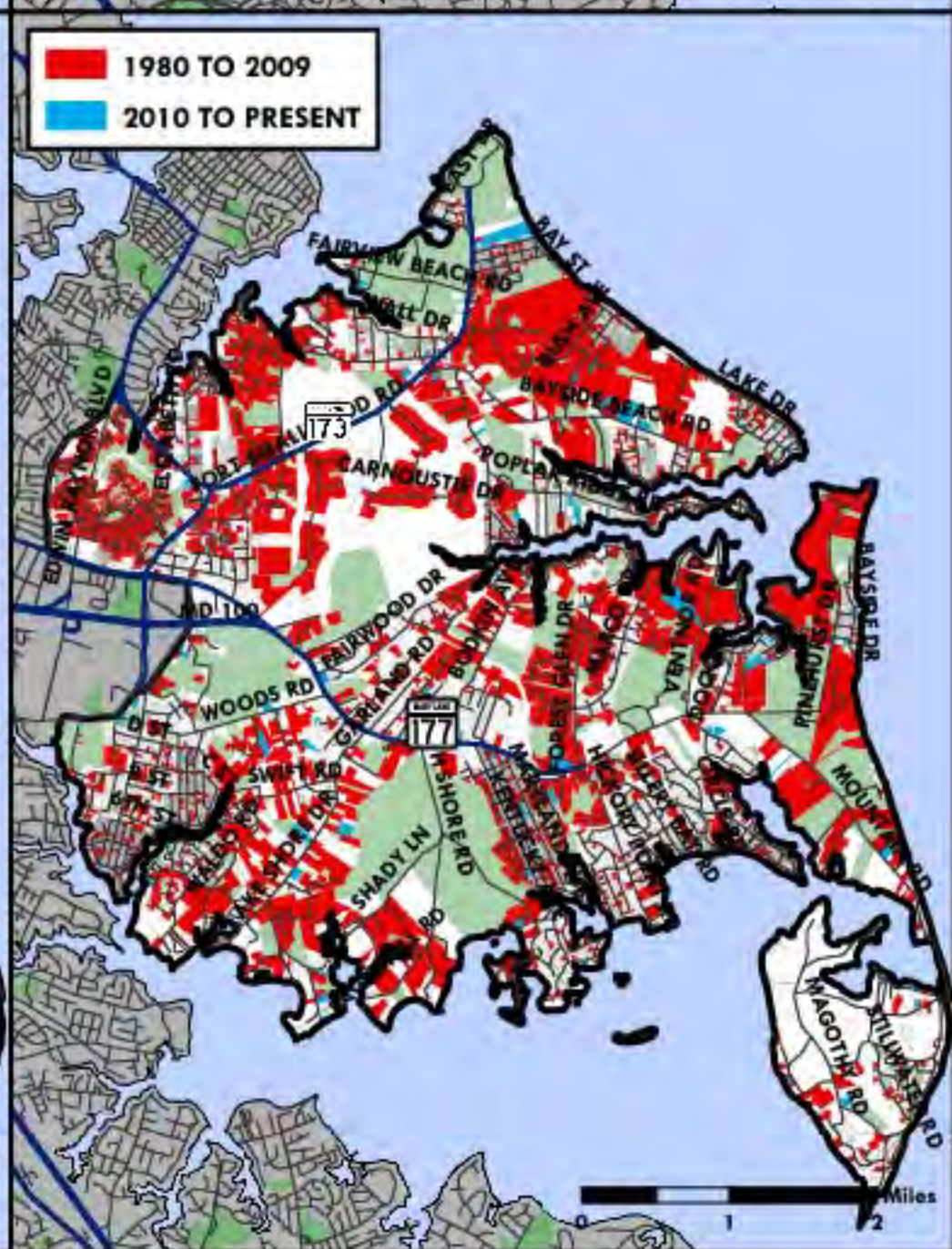
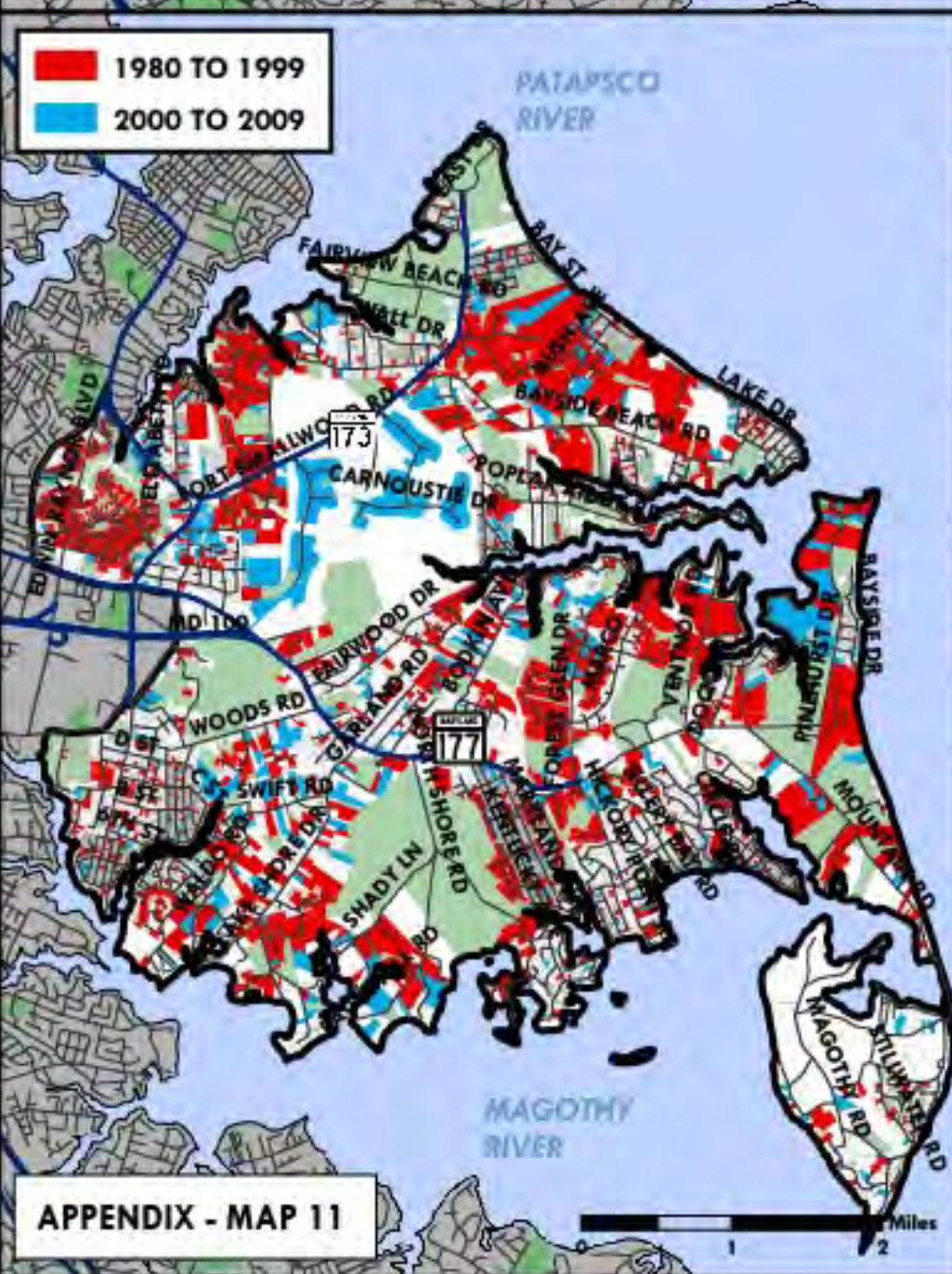
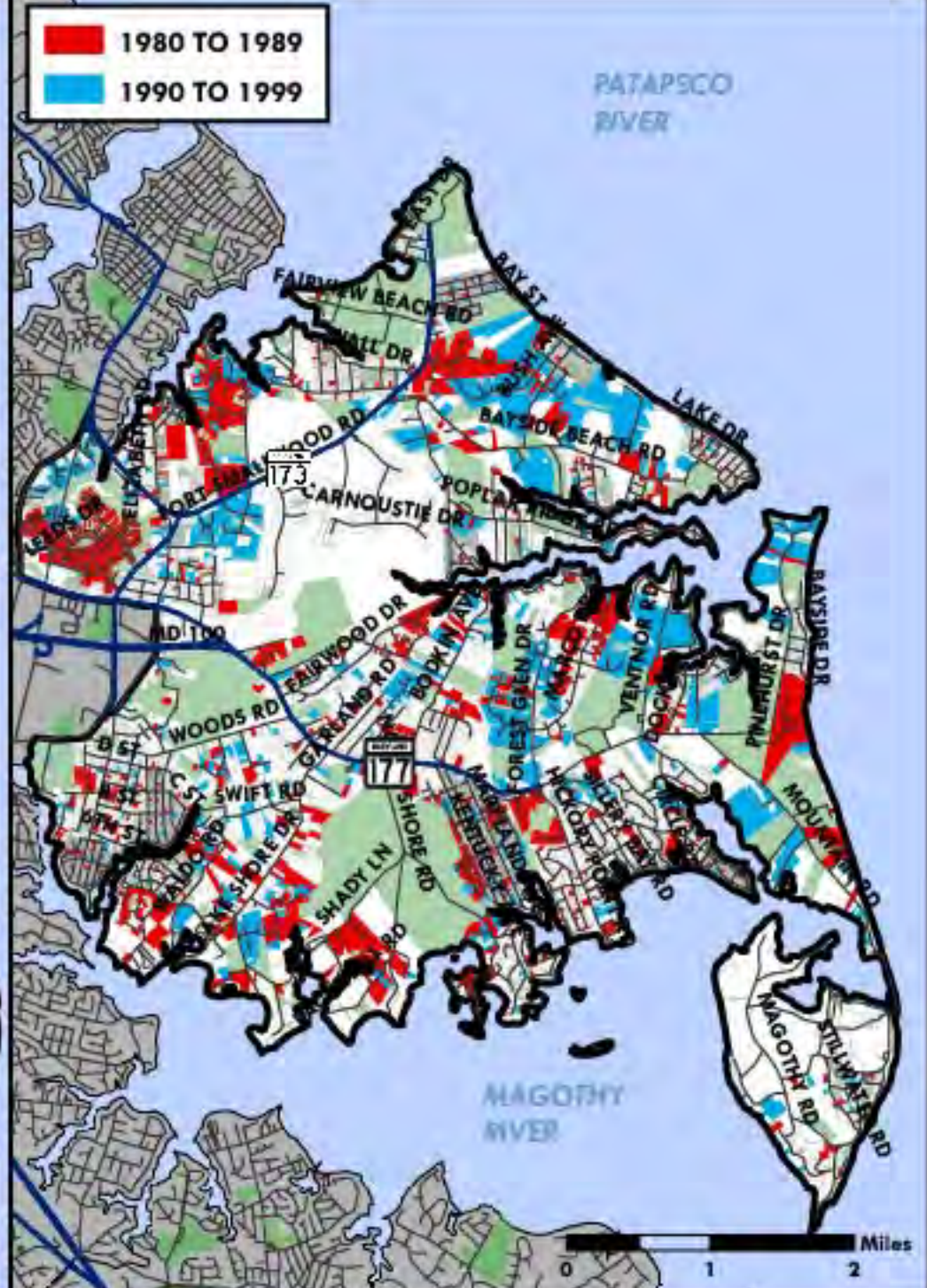
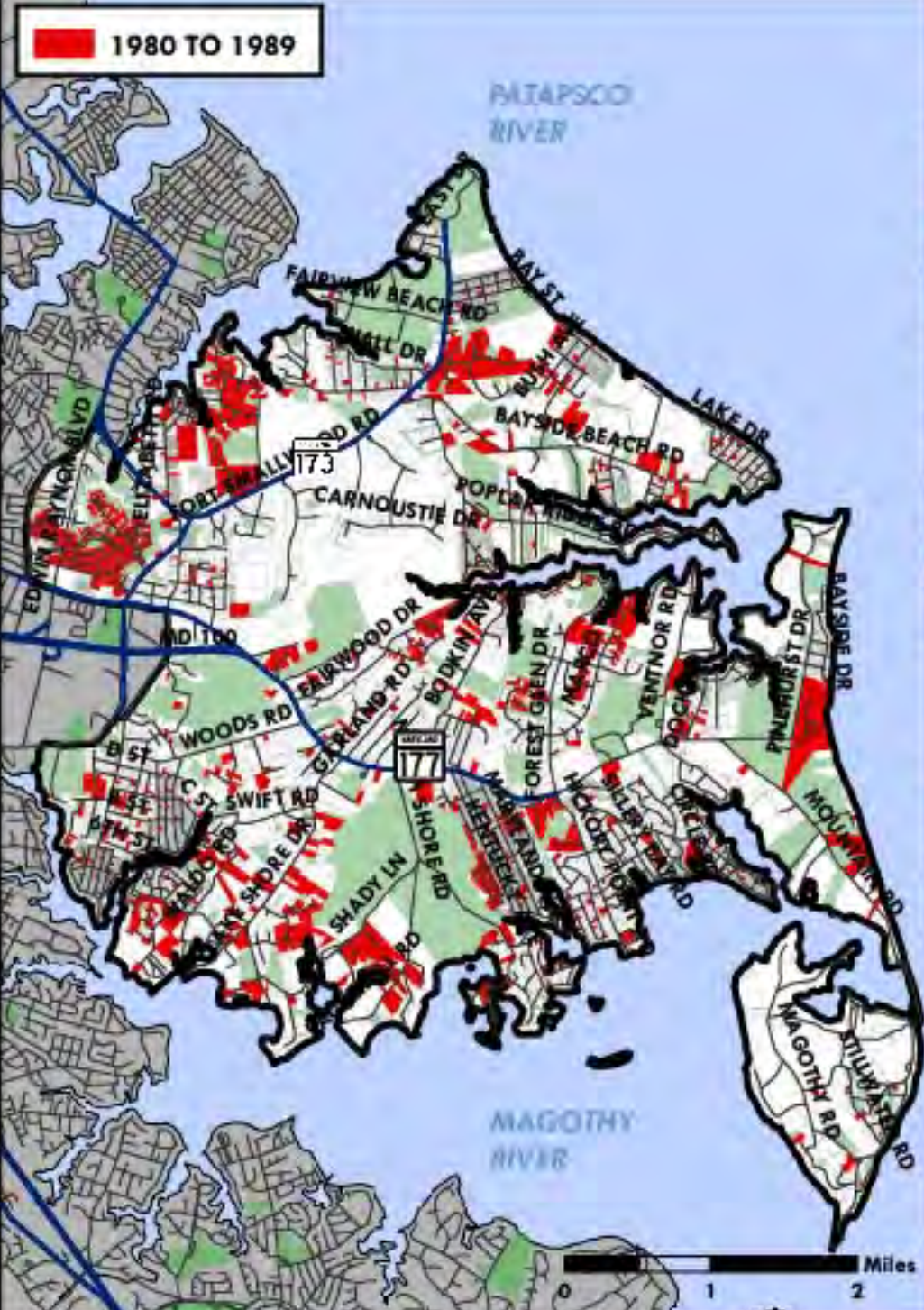
**LAKE SHORE
RESIDENTIAL
DEVELOPMENT
ACTIVITY BY
PROPERTY TYPE
(1980-2017)**

Anne Arundel County, MD

LEGEND

SINGLE FAMILY	LAKE SHORE
TOWNHOME	SUBMARKET PARCELS
CONDOMINIUM	INTERSTATE/MARYLAND HIGHWAY
MOBILE HOME	OPEN SPACE/PARKS

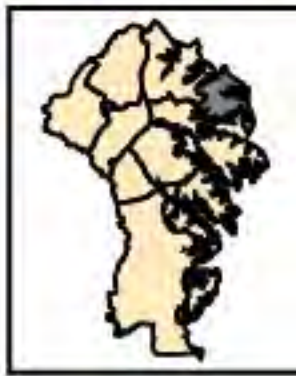
RKG
ASSOCIATES INC



APPENDIX - MAP 11

LAKE SHORE RESIDENTIAL DEVELOPMENT ACTIVITY (10-YEAR TRENDS)
Anne Arundel County, MD

- INTERSTATE/MARYLAND HIGHWAY
- ▭ LAKE SHORE
- ▭ SUBMARKET PARCELS
- ▭ OPEN SPACE/PARKS



RKG ASSOCIATES INC



APPENDIX - MAP 12

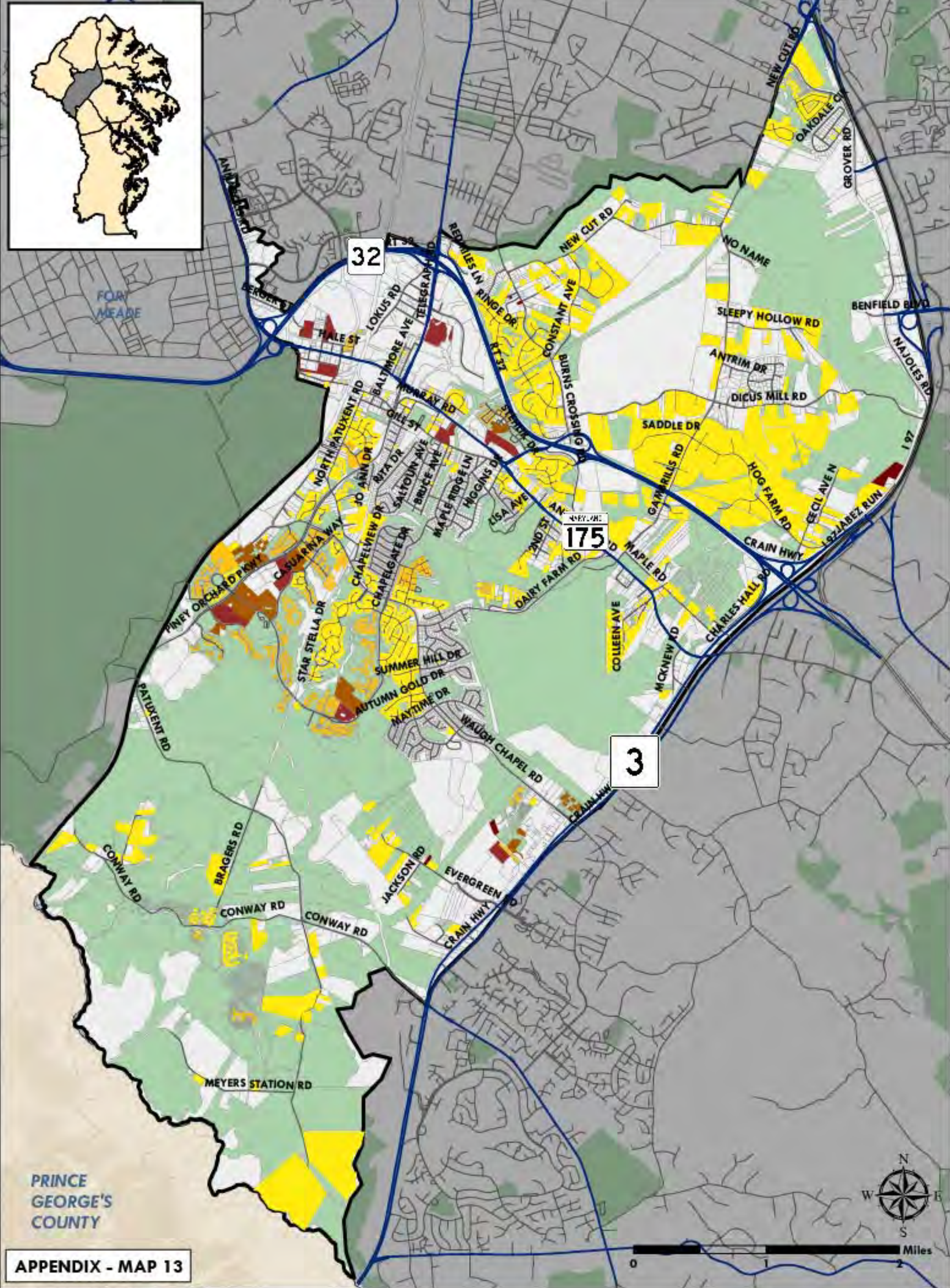
**LAKE SHORE
NON-RESIDENTIAL
DEVELOPMENT
ACTIVITY BY SF
(10-YEAR TRENDS)**

Anne Arundel County, MD

TOTAL SF (1980-2017)	LAKE SHORE
940 - 6,240 SF	INTERSTATE.MARYLAND HIGHWAY
6,240 - 17,430 SF	SUBMARKET PARCELS
17430 - 32,500 SF	OPEN SPACE/PARKS
32,500 - 88,800 SF	CUMULATIVE NON-RESIDENTIAL SF
	NEW NON-RESIDENTIAL SF



RKG
ASSOCIATES INC



APPENDIX - MAP 13

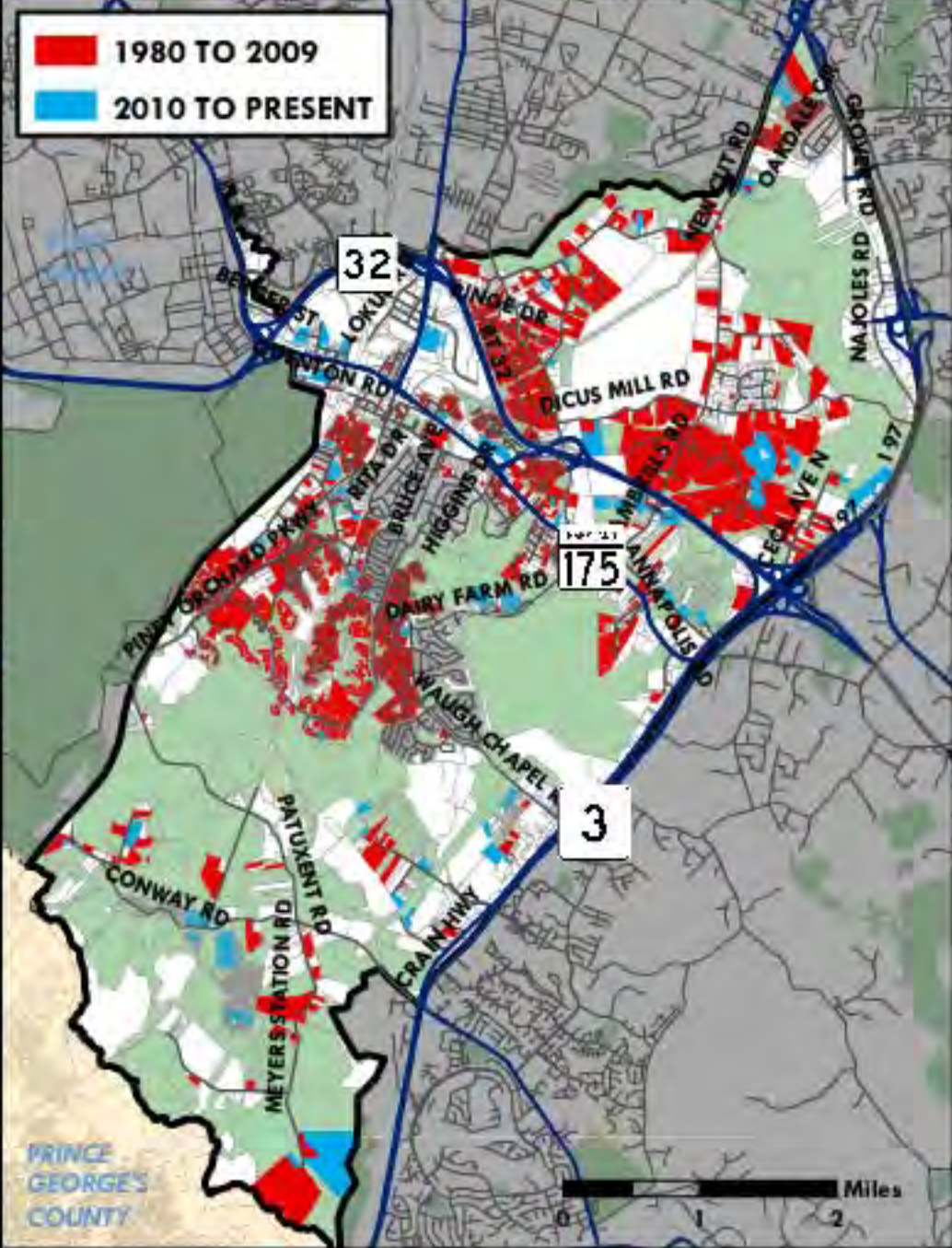
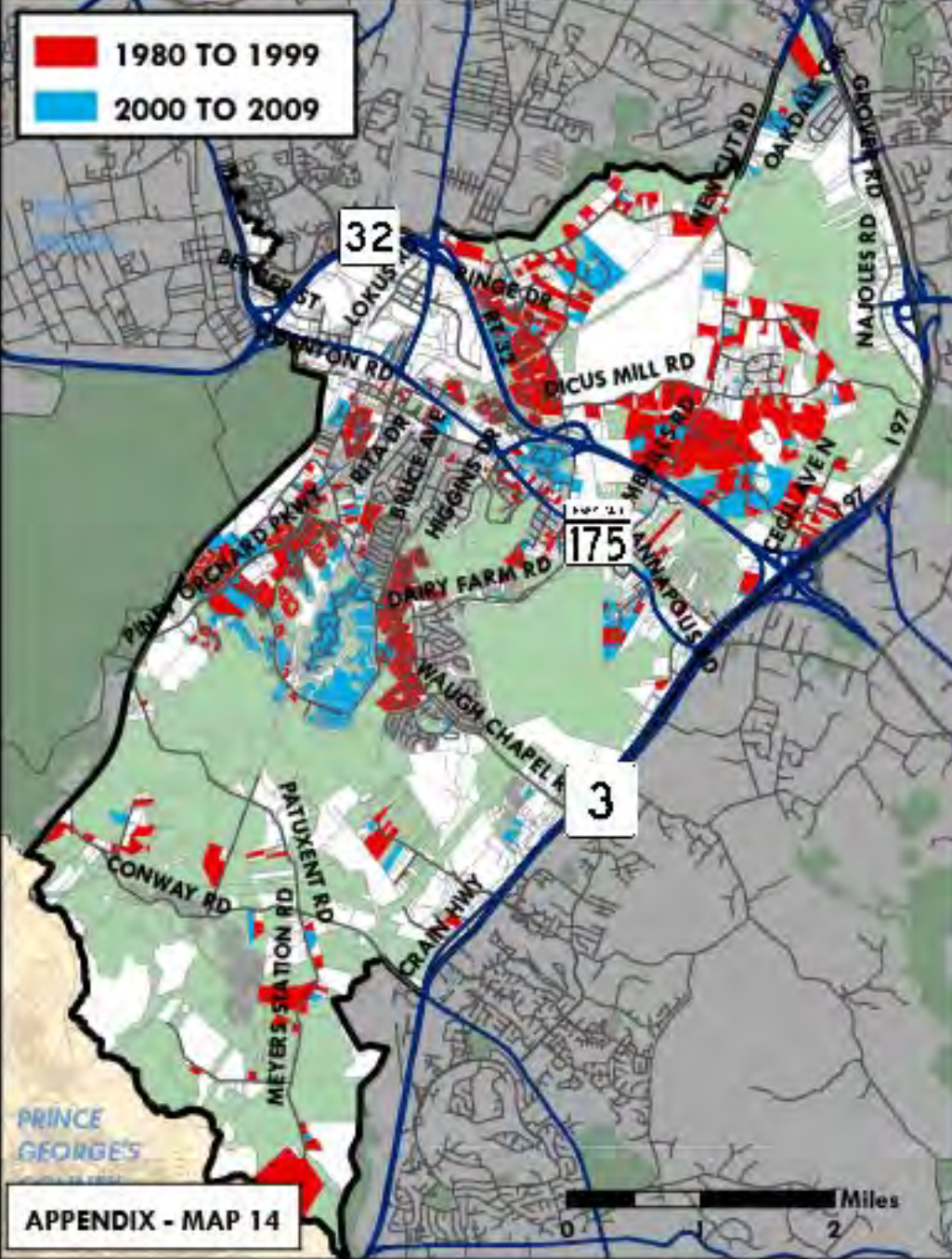
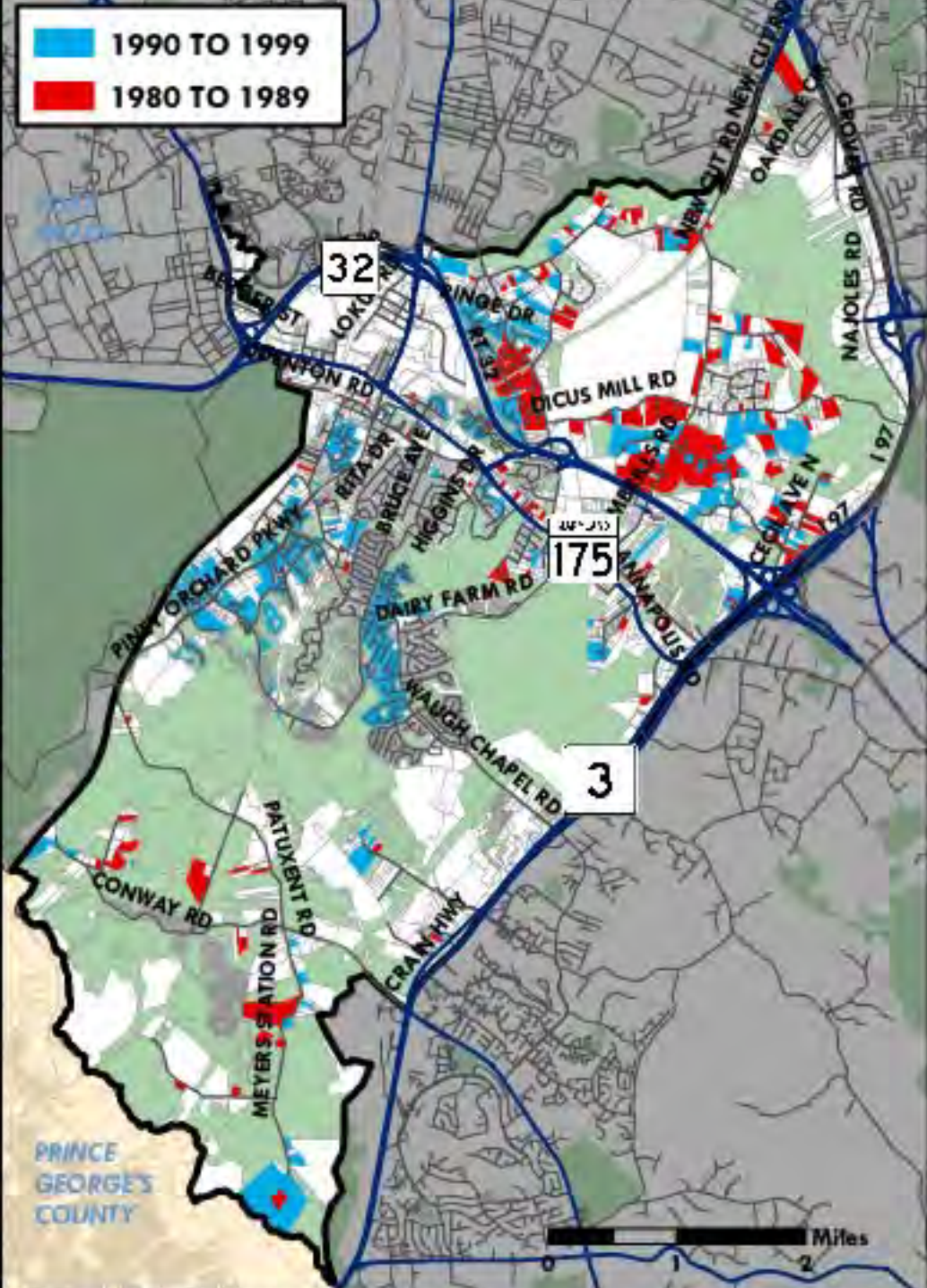
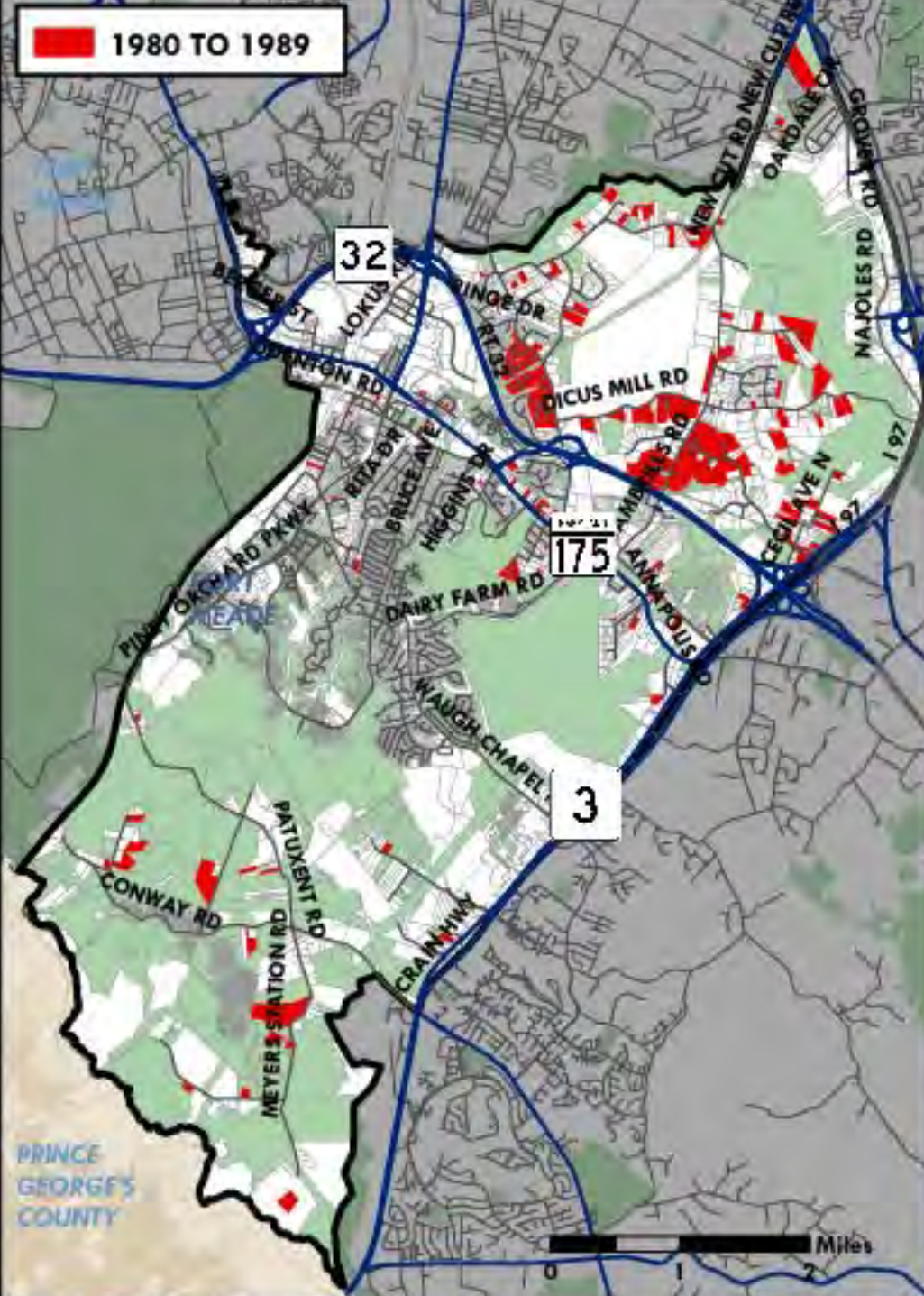
**ODENTON
RESIDENTIAL
DEVELOPMENT BY
PROPERTY TYPE
(1980 TO 2017)**

Anne Arundel County, MD

LEGEND

SINGLE FAMILY	INTERSTATE/MARYLAND HIGHWAY
TOWNHOME	ODENTON
CONDOMINIUM	SUBMARKET PARCELS
APARTMENT	OPEN SPACE/PARKS
MOBILE HOME	

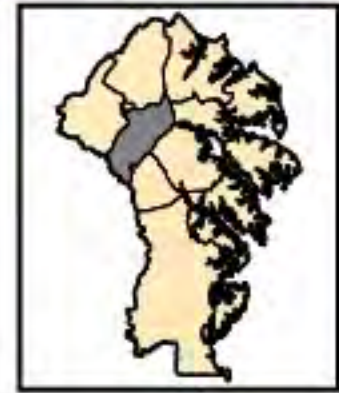




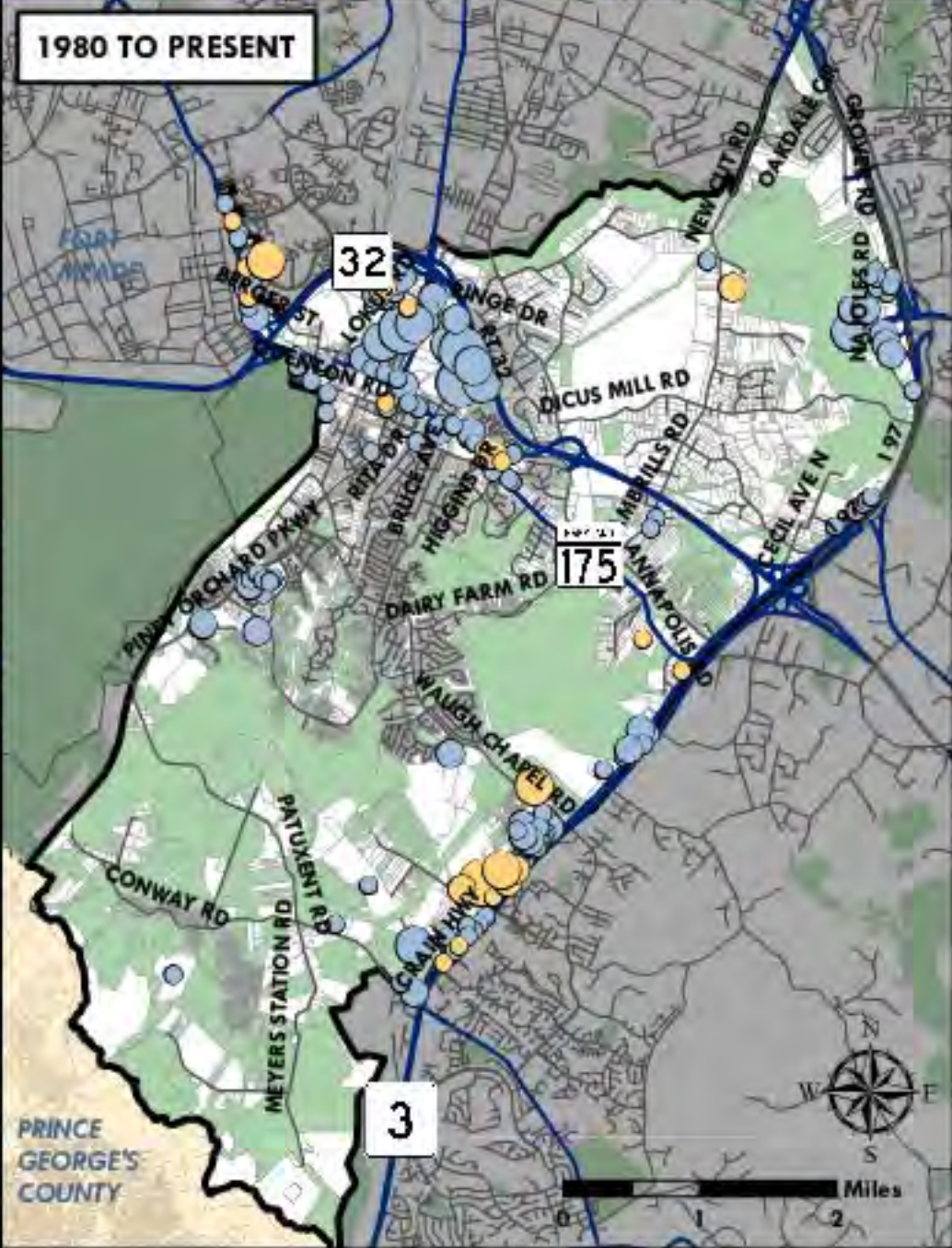
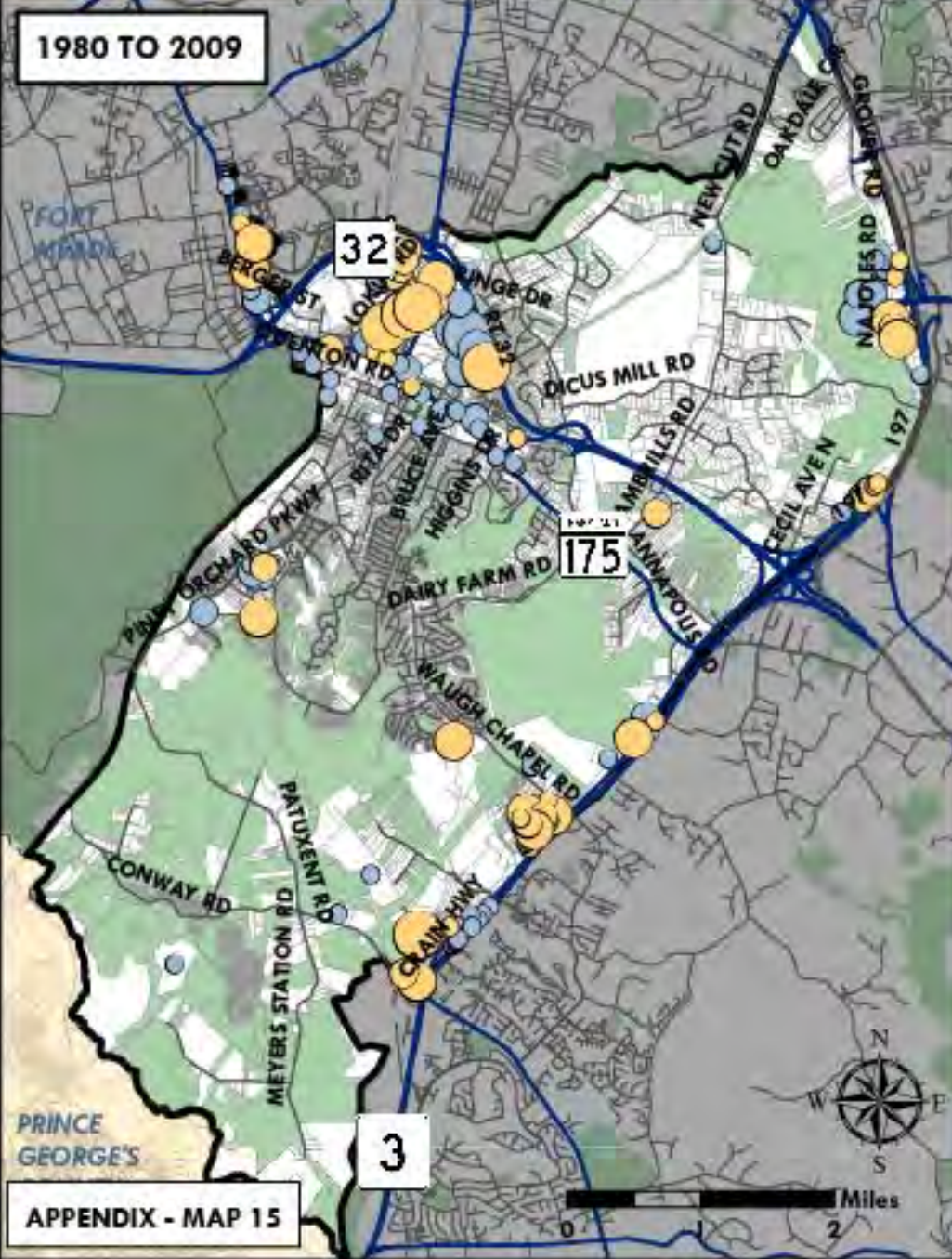
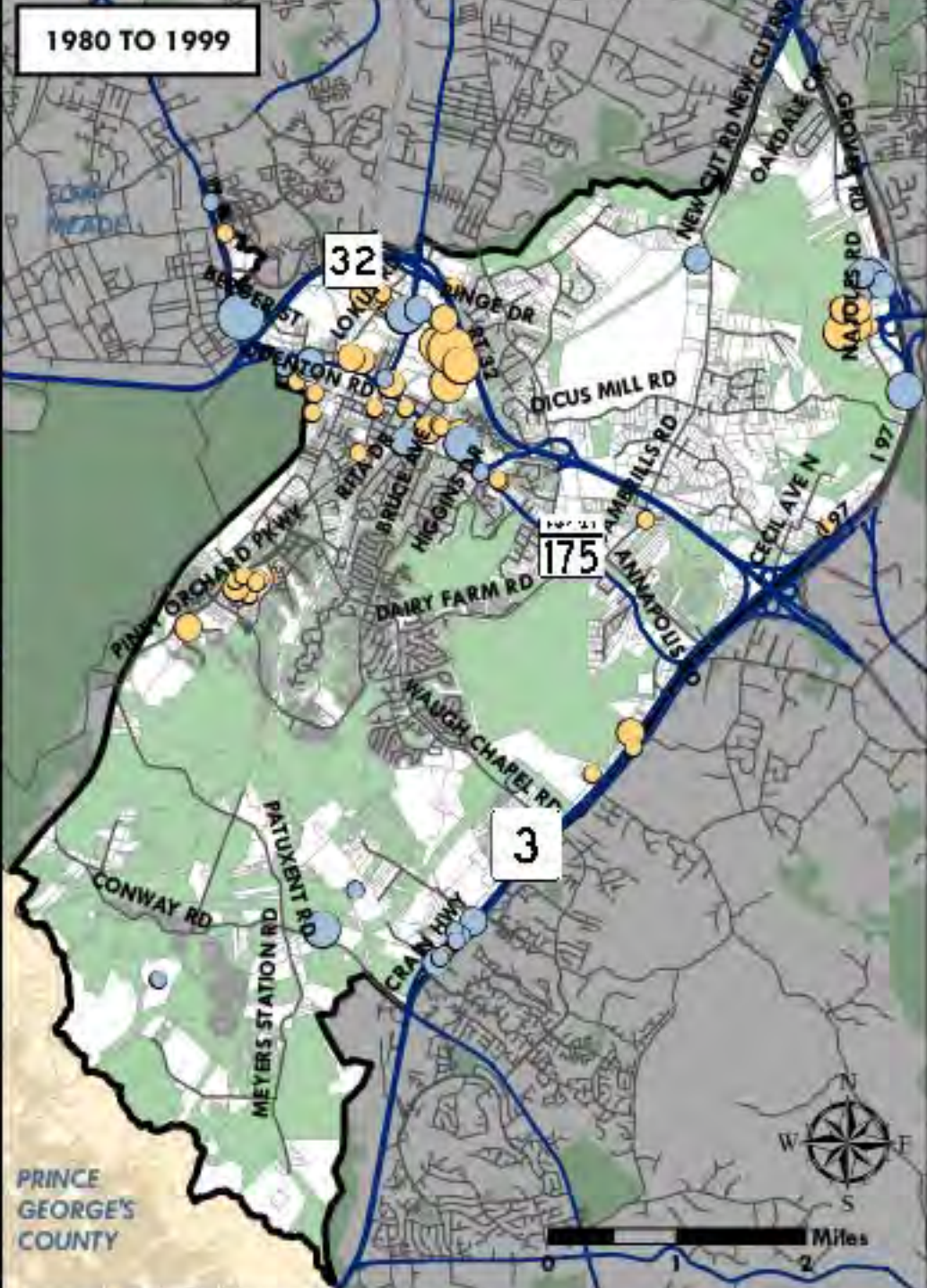
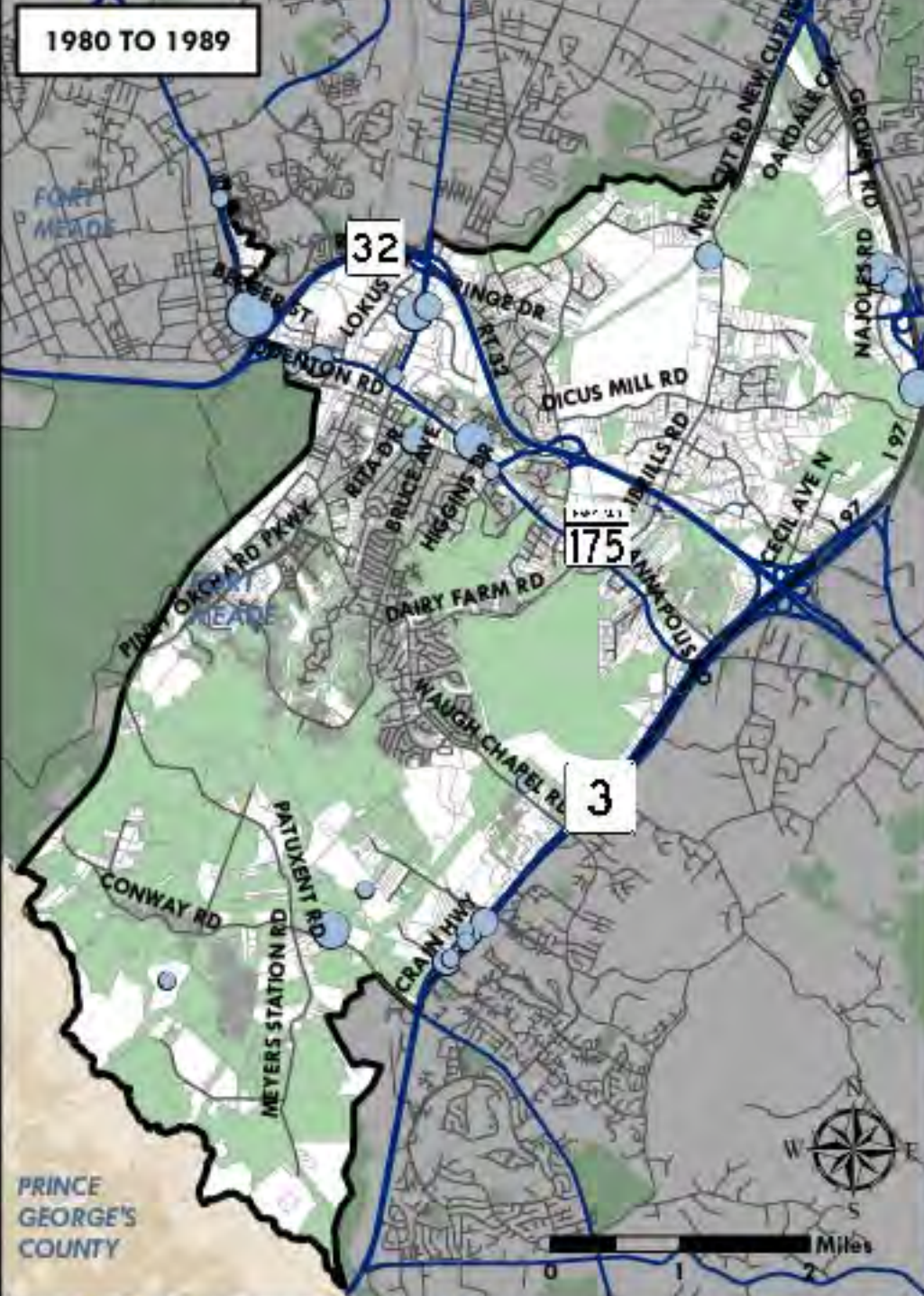
**ODENTON
RESIDENTIAL
DEVELOPMENT
ACTIVITY
(10-YEAR TRENDS)**

Anne Arundel County, MD

-  ODENTON
-  INTERSTATE/MARYLAND HIGHWAY
-  SUBMARKET PARCELS
-  OPEN SPACE/PARKS







**ODENTON
NON-RESIDENTIAL
DEVELOPMENT
ACTIVITY BY SF
(TEN-YEAR TRENDS)**

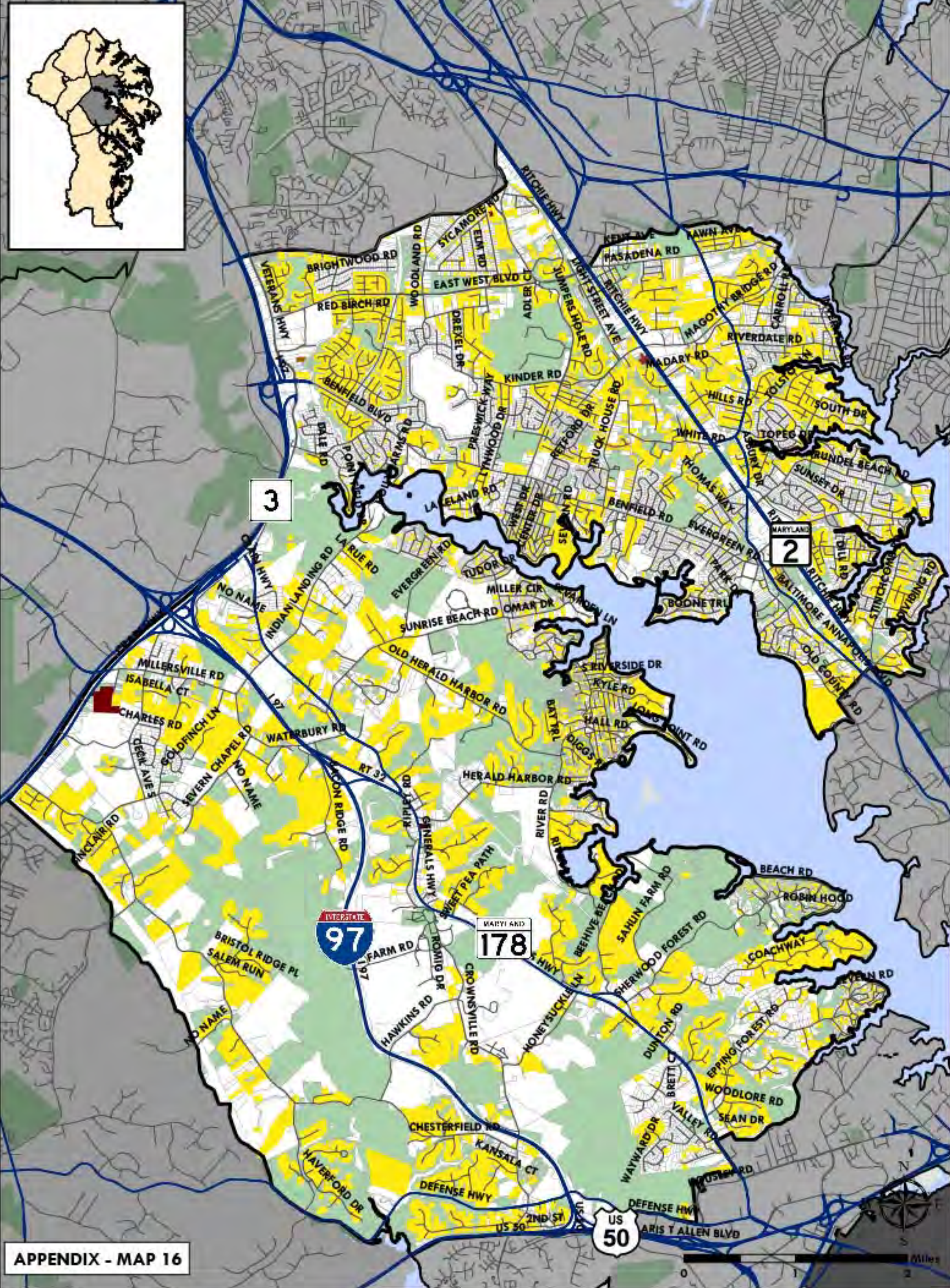
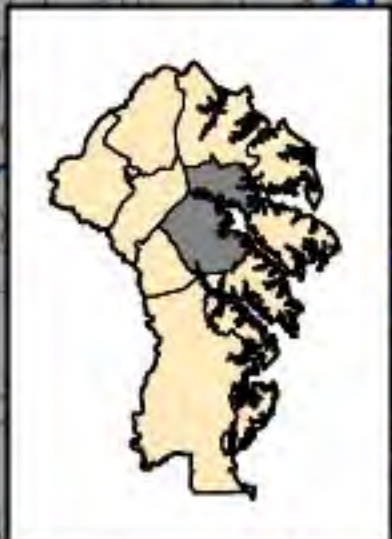
Anne Arundel County, MD

TOTAL SF (1980-2017)

- 240 - 29,780 SF
- 29,780 - 89,200 SF
- 89,200 - 168,000 SF
- 168,000 - 342,500 SF

- ▭ ODENTON
- INTERSTATE/MARYLAND HIGHWAY
- ▭ SUBMARKET PARCELS
- OPEN SPACE/PARKS
- CUMULATIVE NON-RESIDENTIAL SF
- NEW NON-RESIDENTIAL SF

RKG
ASSOCIATES INC.



APPENDIX - MAP 16

**SEVERNA PARK-CROWNSVILLE
RESIDENTIAL
DEVELOPMENT BY
PROPERTY TYPE
(1980 TO 2017)**

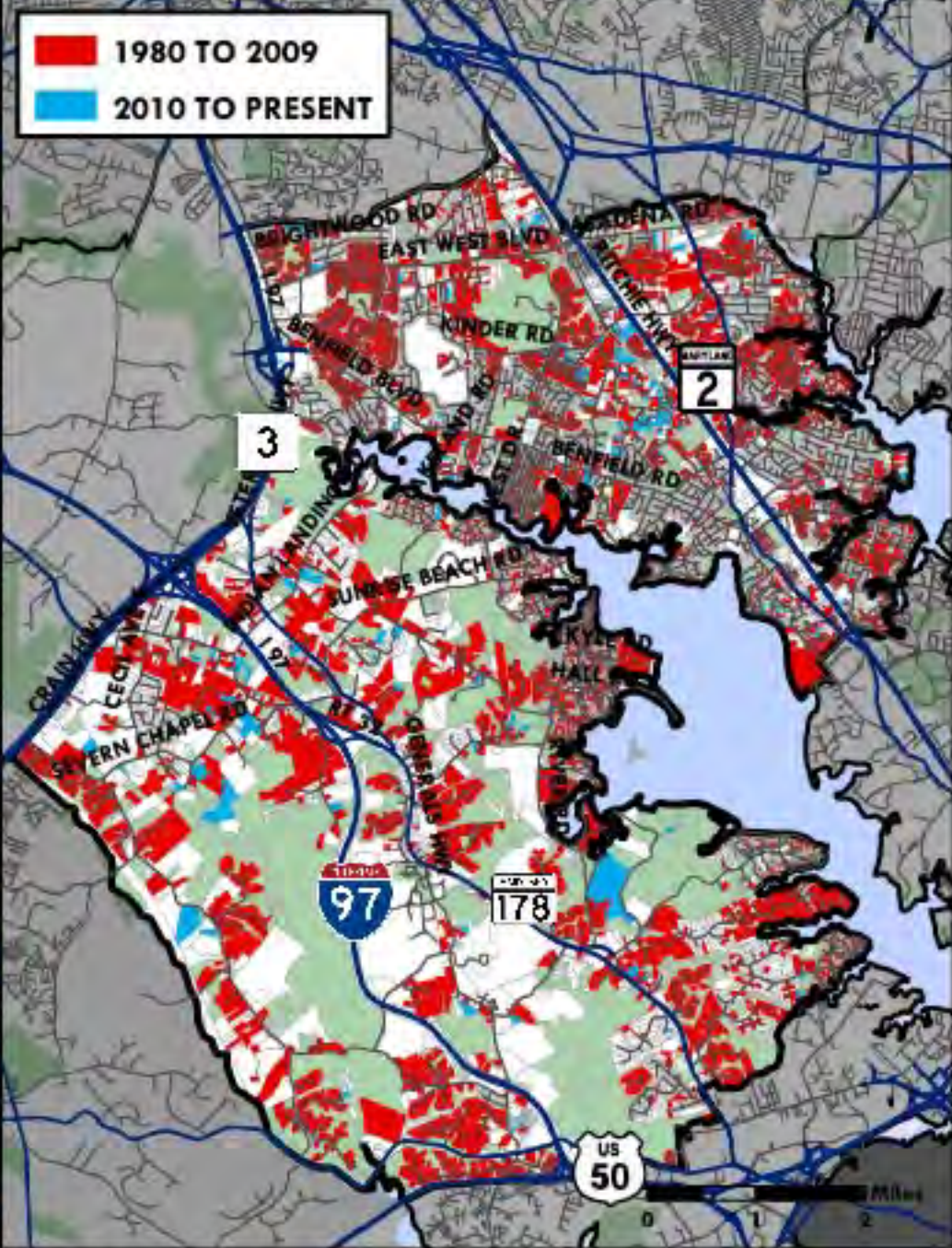
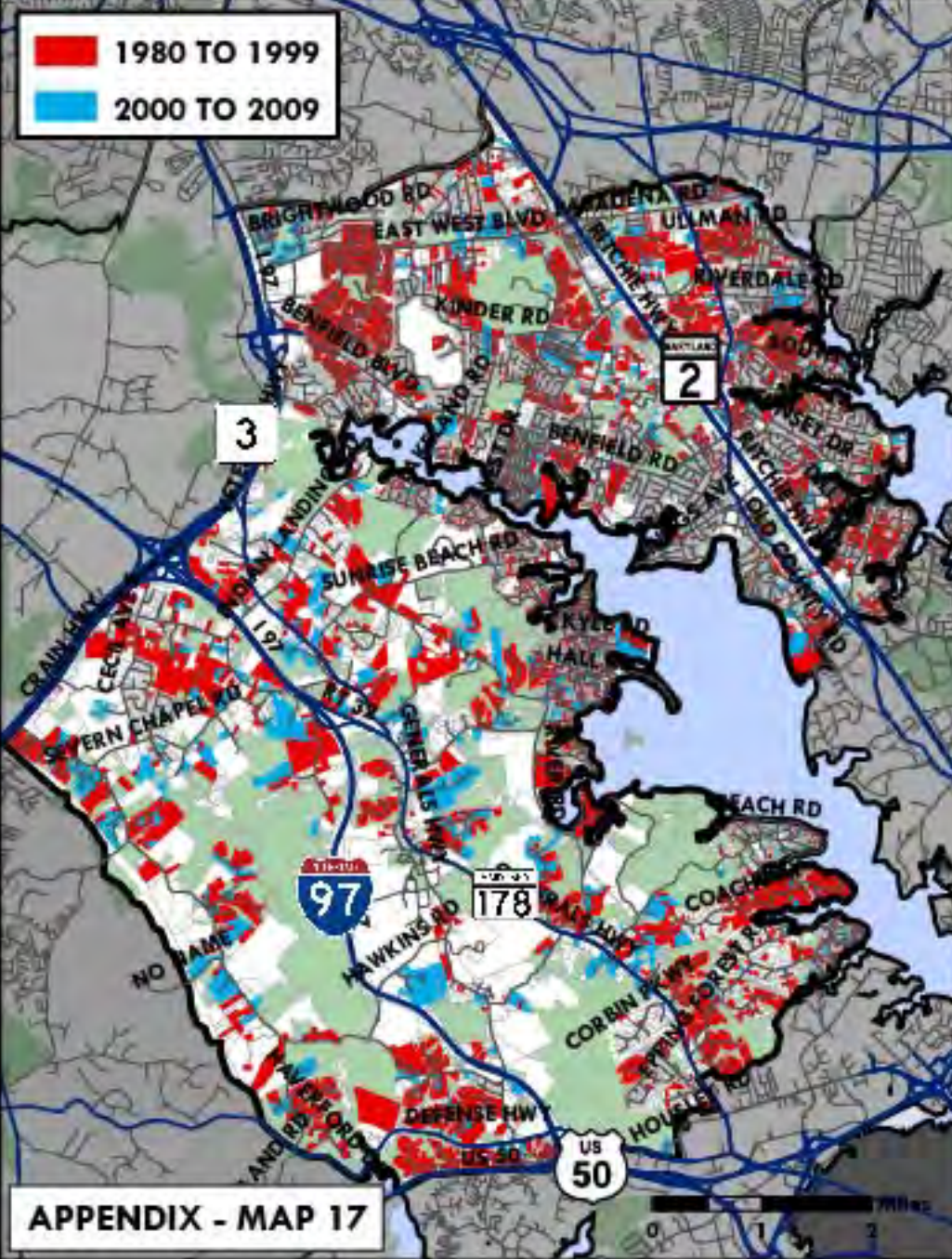
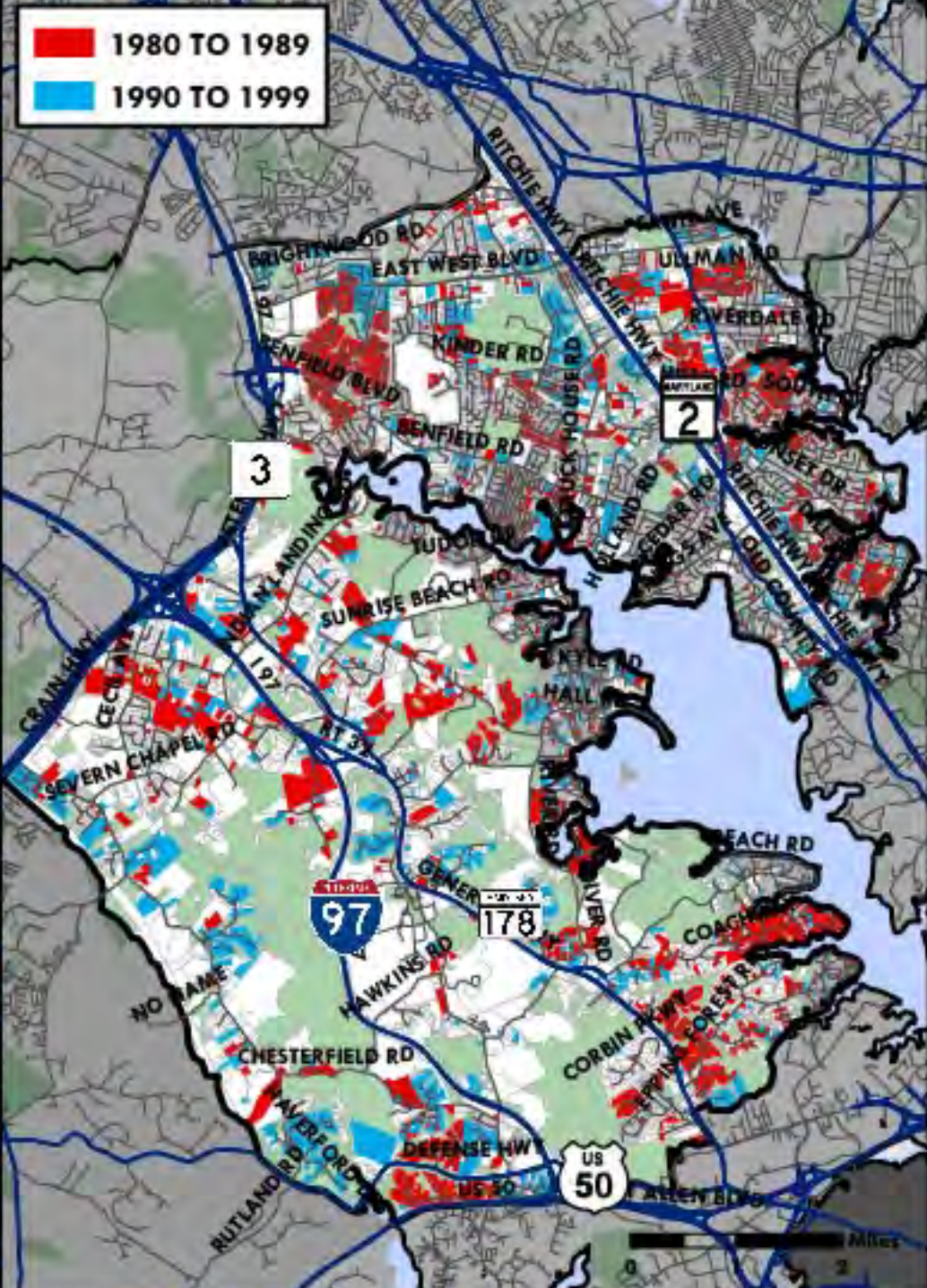
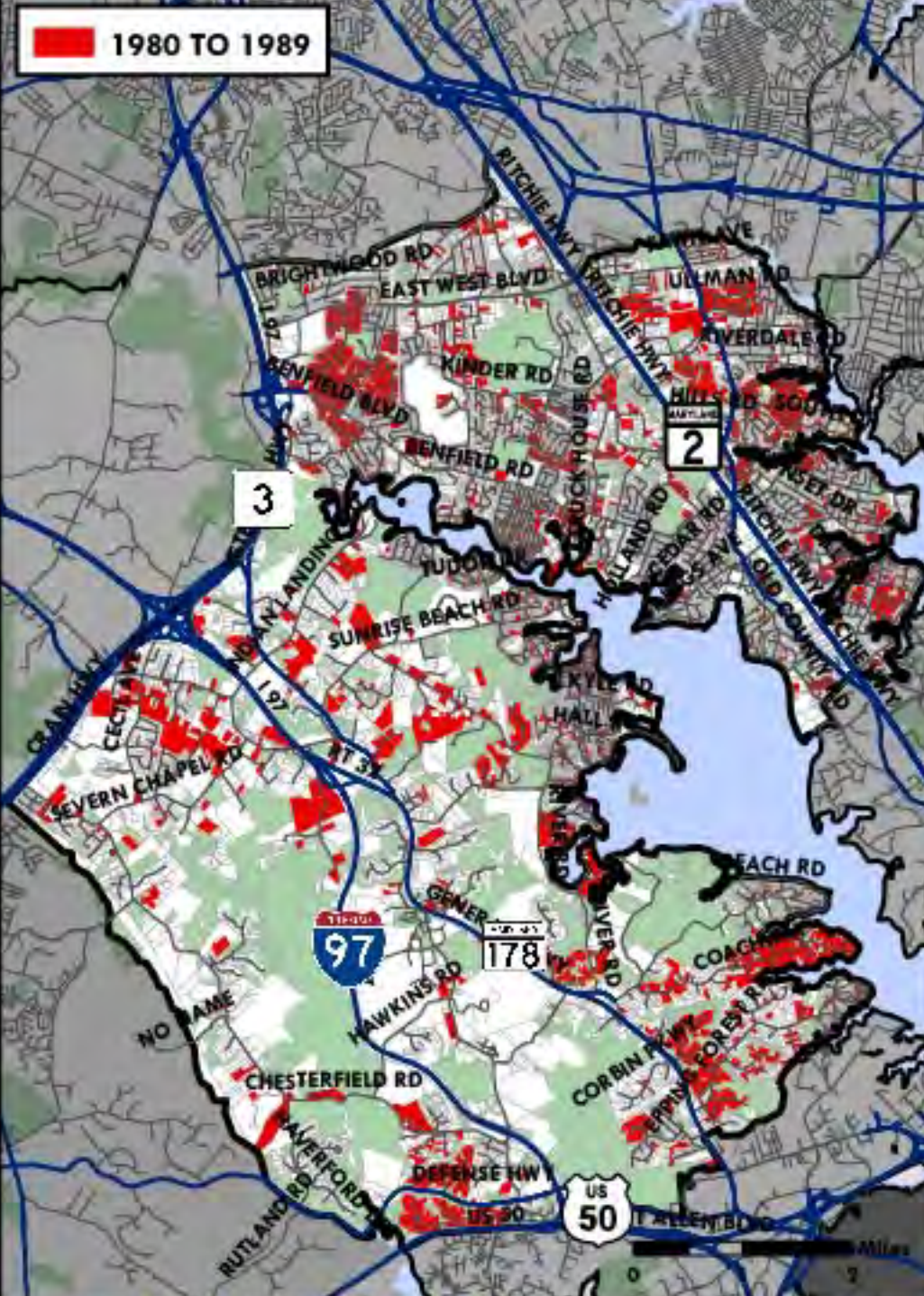
Anne Arundel County, MD

LEGEND

SINGLE FAMILY	INTERSTATE/MARYLAND HIGHWAY
TOWNHOME	S. PARK-CROWNSVILLE
CONDOMINIUM	SUBMARKET PARCELS
APARTMENT	OPEN SPACE/PARKS
MOBILE HOME	



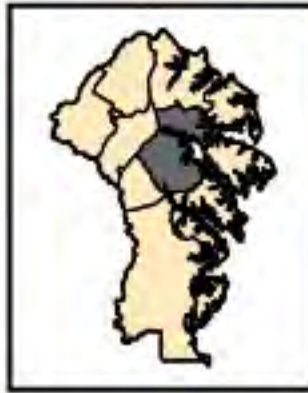
RKG
ASSOCIATES, INC.



**SEVERNA PARK-CROWNSVILLE
RESIDENTIAL
DEVELOPMENT
ACTIVITY
(TEN-YEAR-TRENDS)**

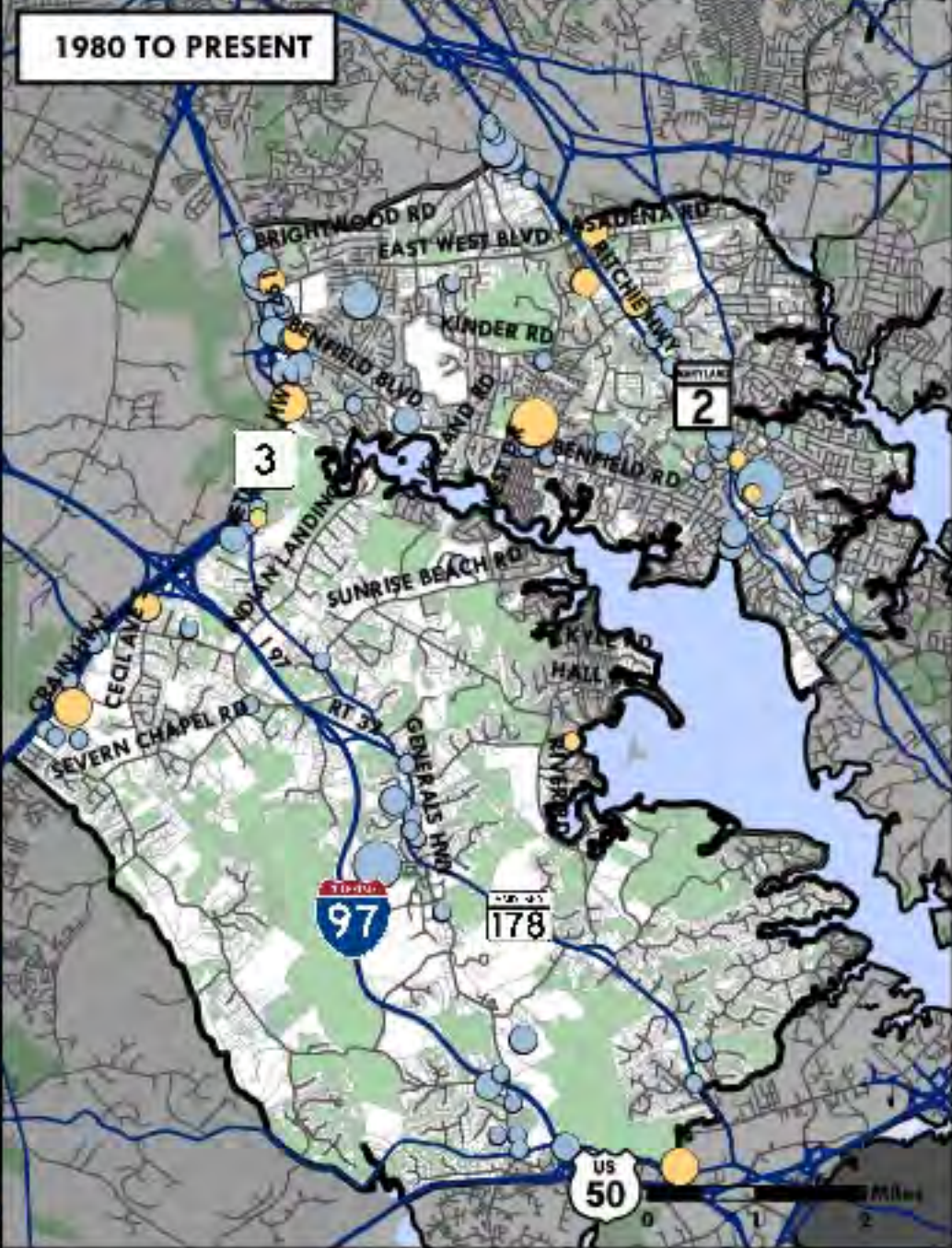
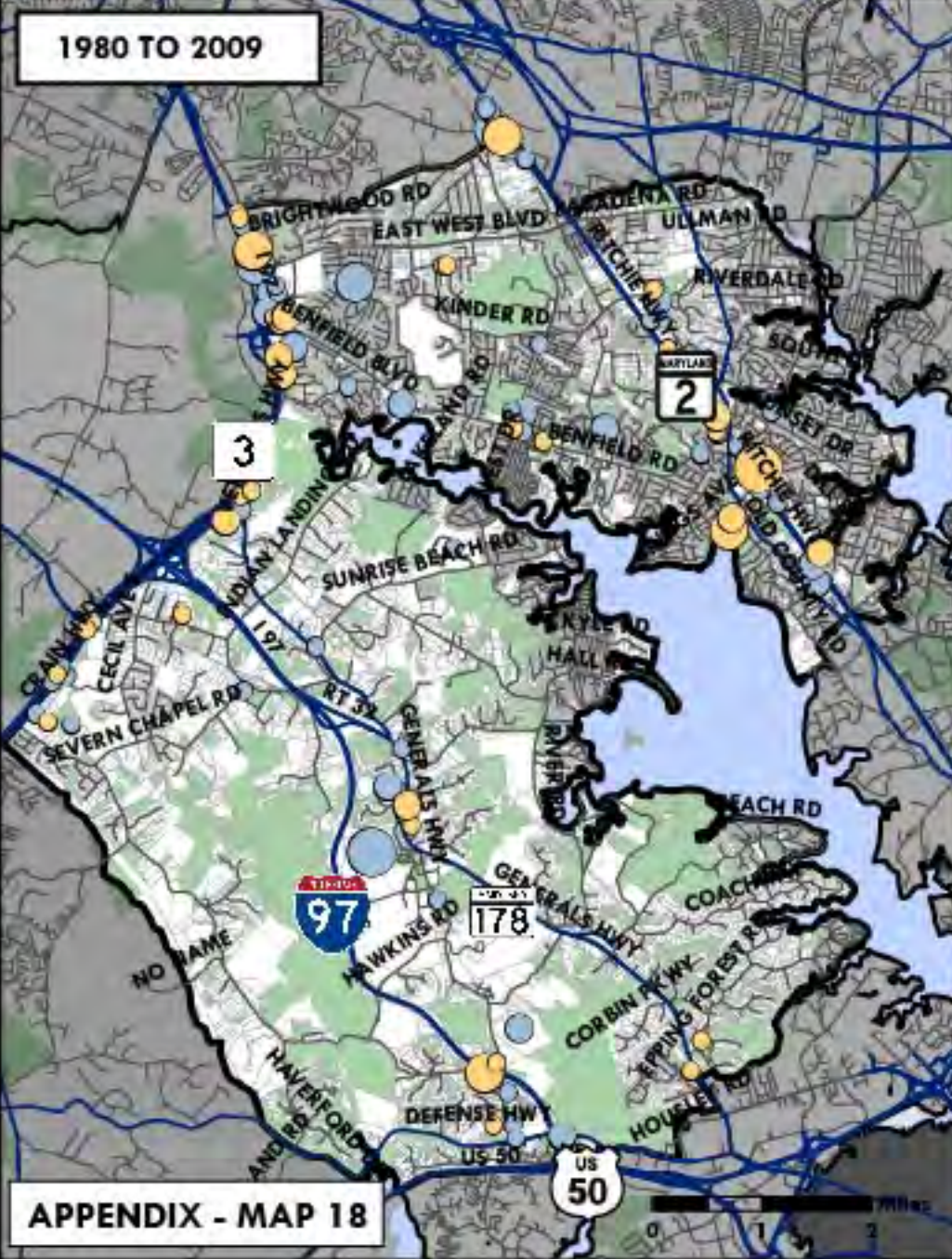
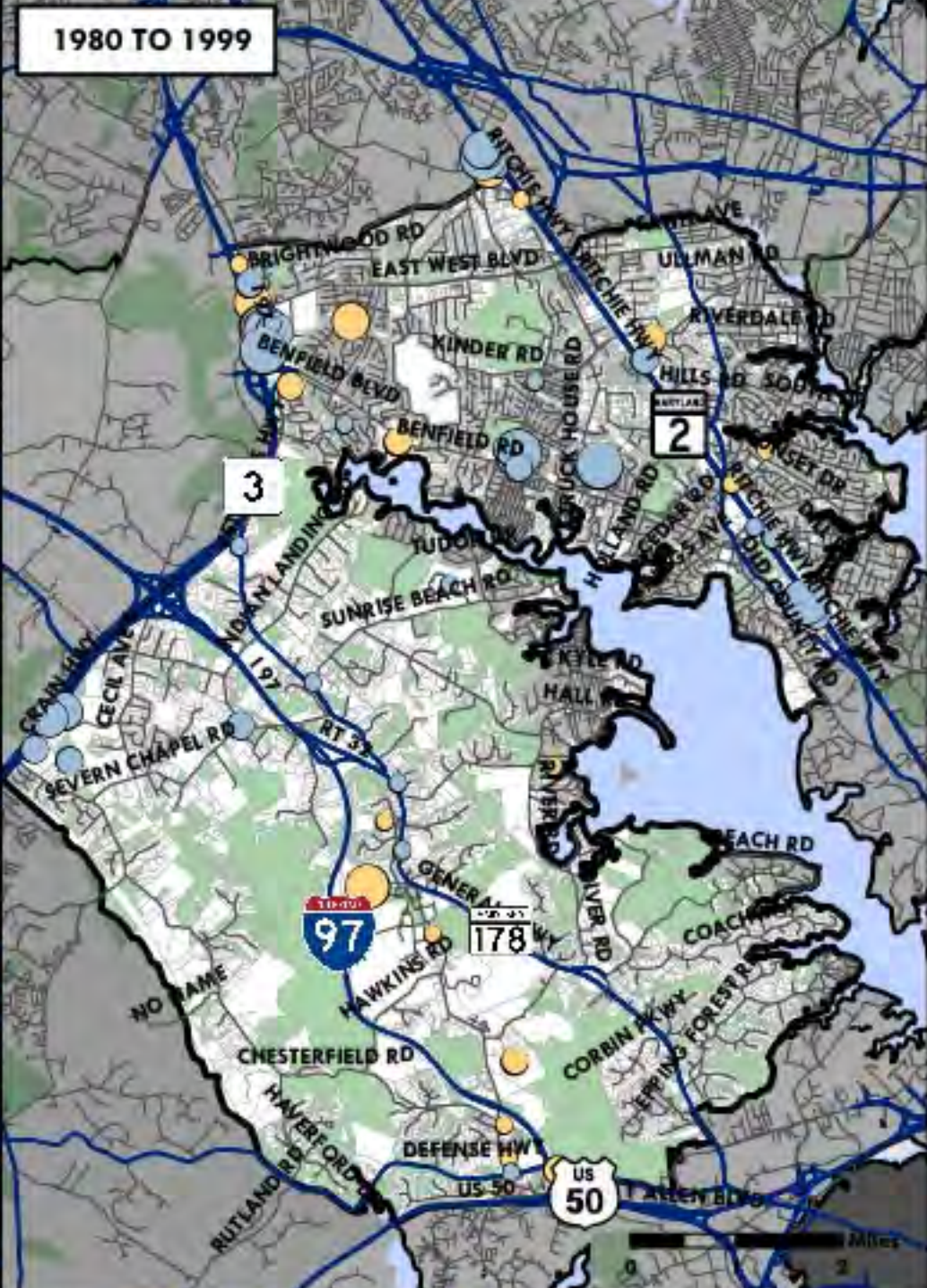
Anne Arundel County, MD

-  INTERSTATE/MARYLAND HIGHWAY
-  S. PARK-CROWNSVILLE
-  SUBMARKET PARCELS
-  OPEN SPACE/PARKS



RKG
ASSOCIATES INC.

APPENDIX - MAP 17



APPENDIX - MAP 18

**SEVERNA PARK-CROWNSVILLE
NON-RESIDENTIAL
DEVELOPMENT
ACTIVITY BY SF
(TEN-YEAR-TRENDS)**

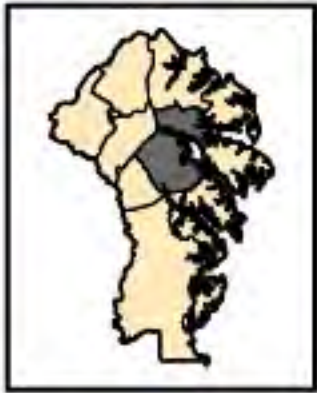
Anne Arundel County, MD

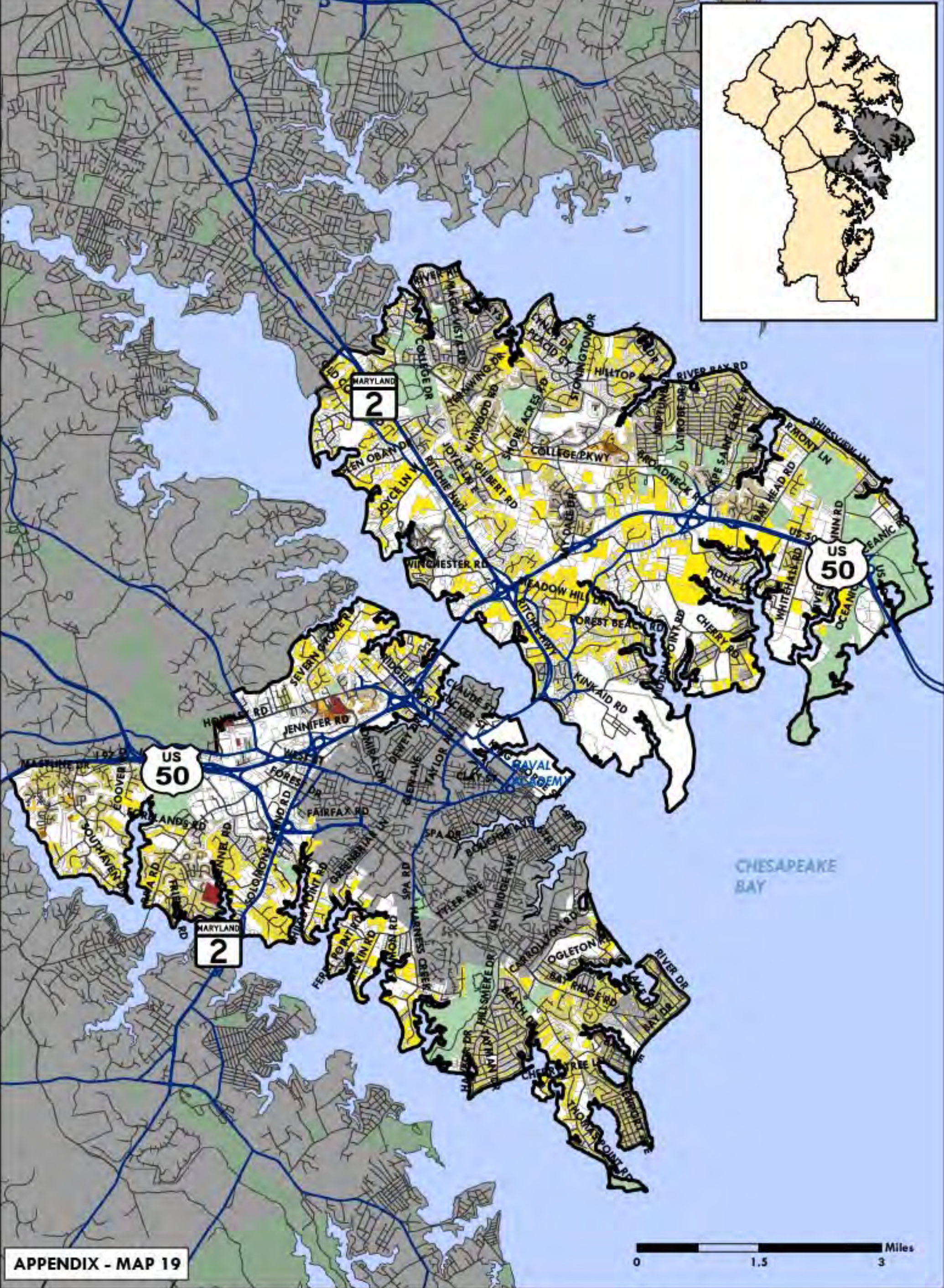
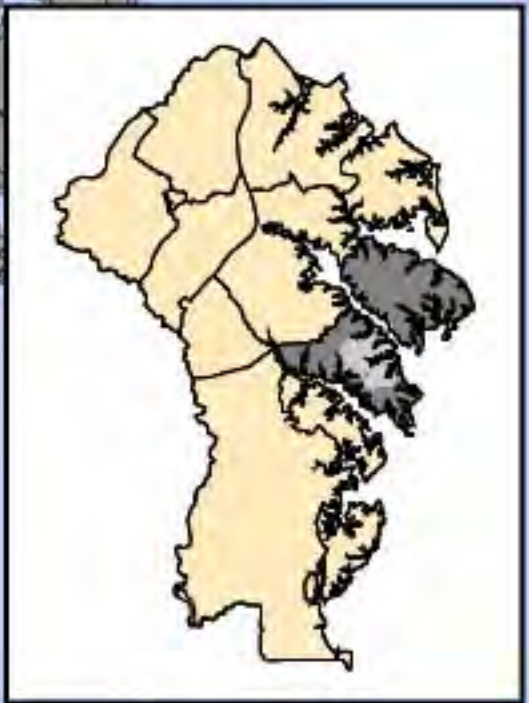
TOTAL SF (1980-2017)

- 600 - 20,900 SF
- 20,900- 67,300 SF
- 67,300 - 154,100 SF
- 154,100- 286,300 SF

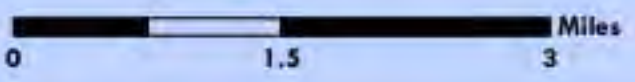
LEGEND:

- ▭ S. PARK-CROWNSVILLE
- MAJOR ROADS
- ▭ SUBMARKET PARCELS
- OPEN SPACE/PARKS
- CUMULATIVE NON-RESIDENTIAL SF
- NEW NON-RESIDENTIAL SF





APPENDIX - MAP 19



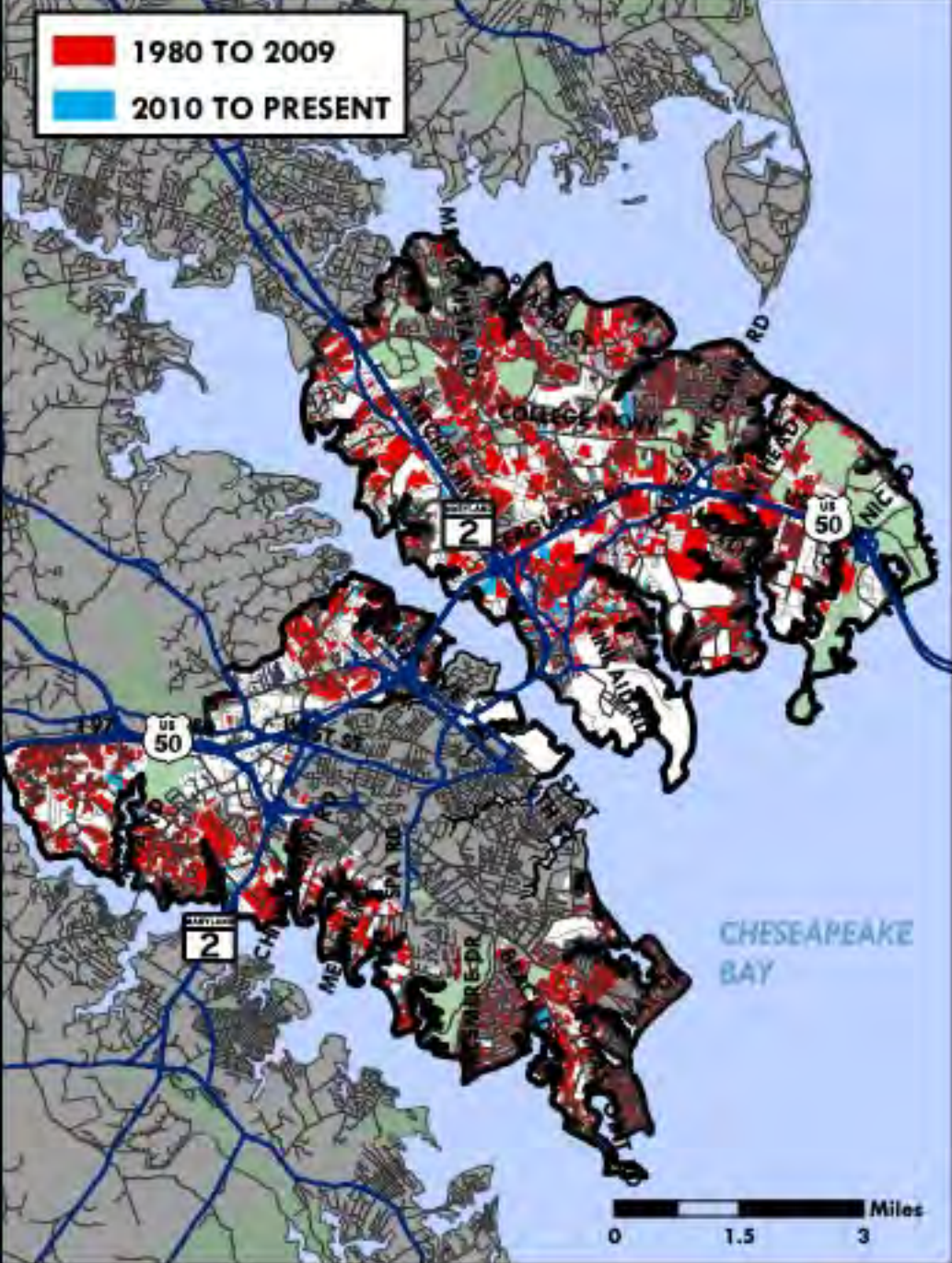
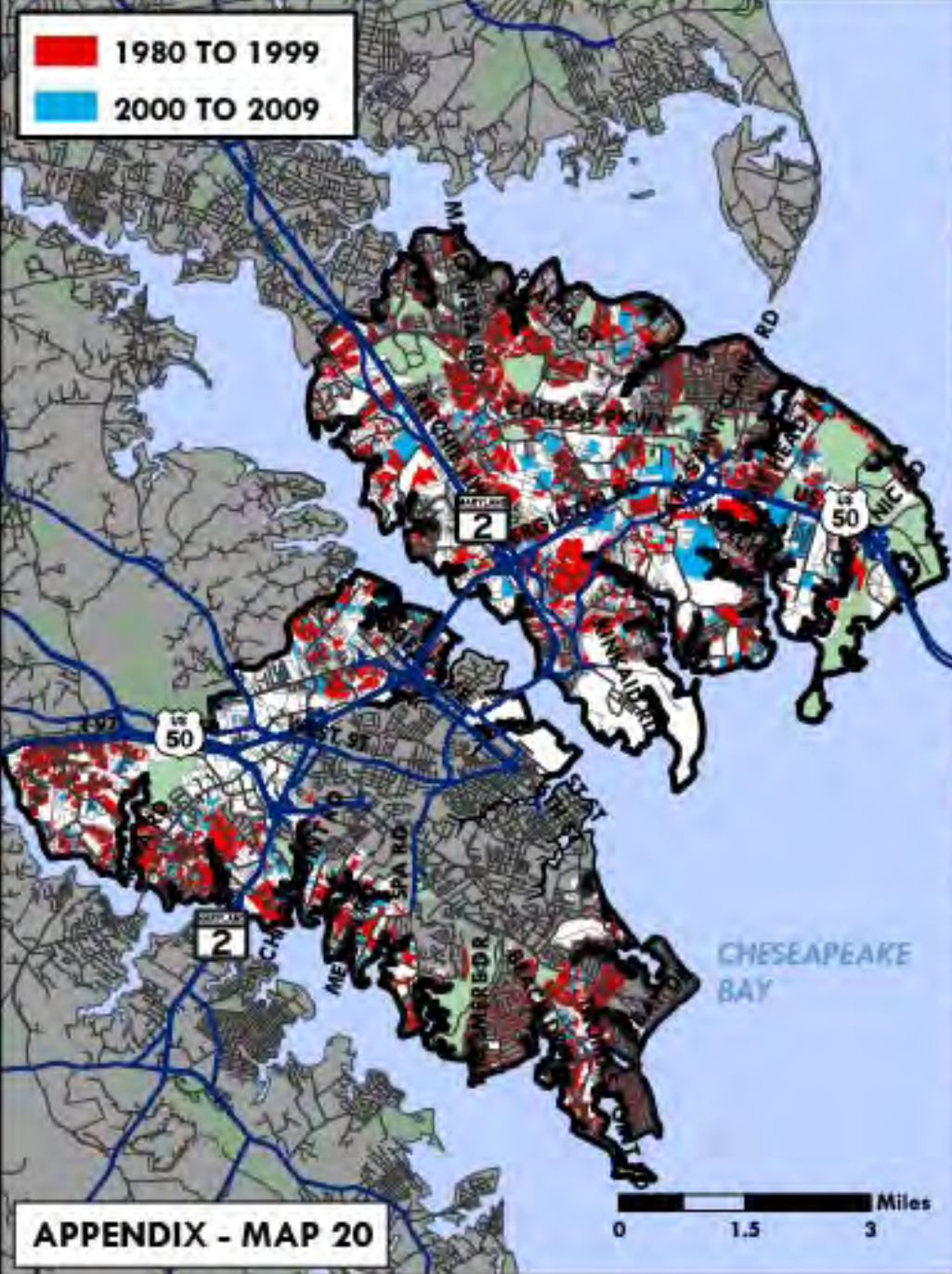
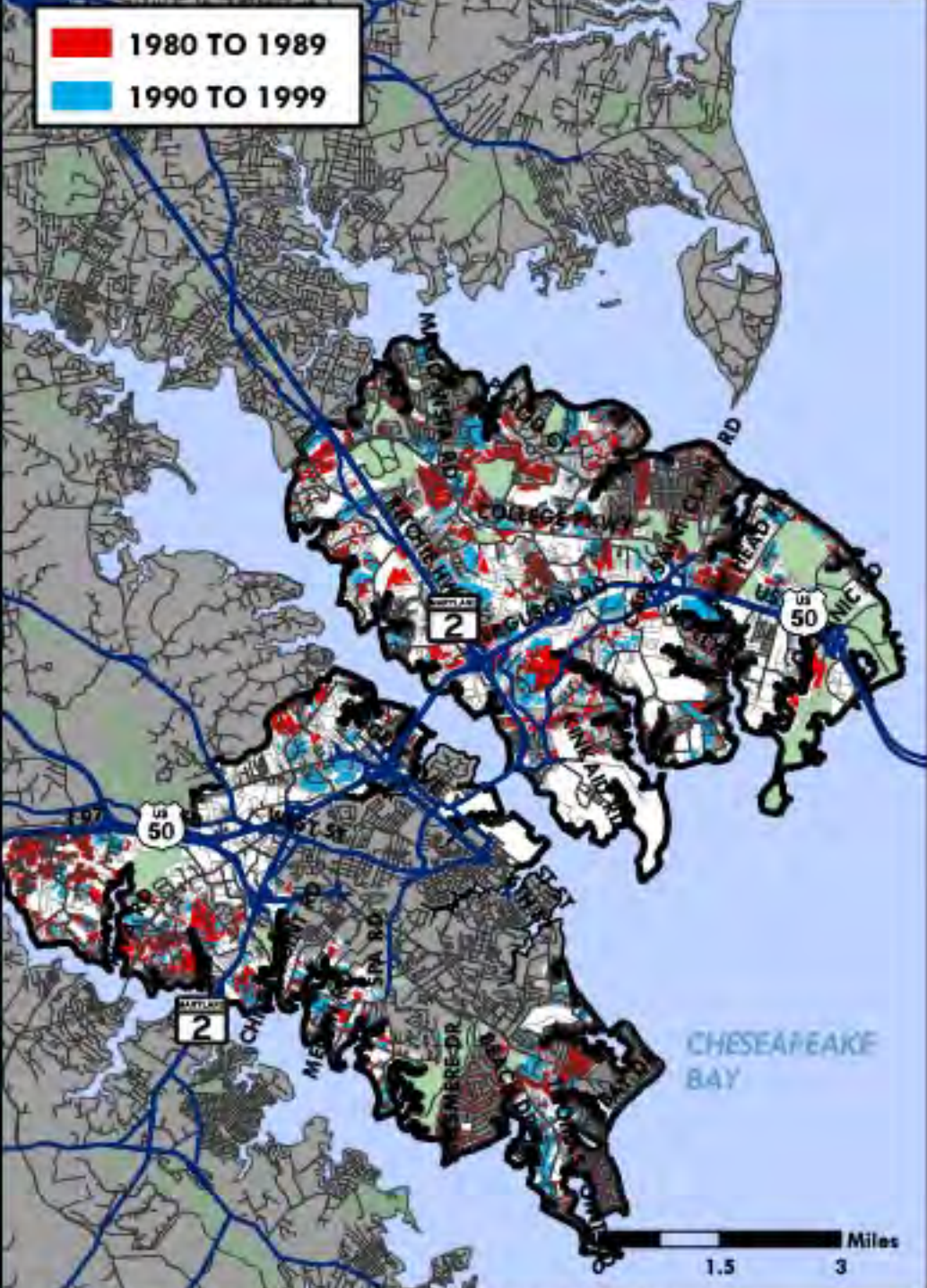
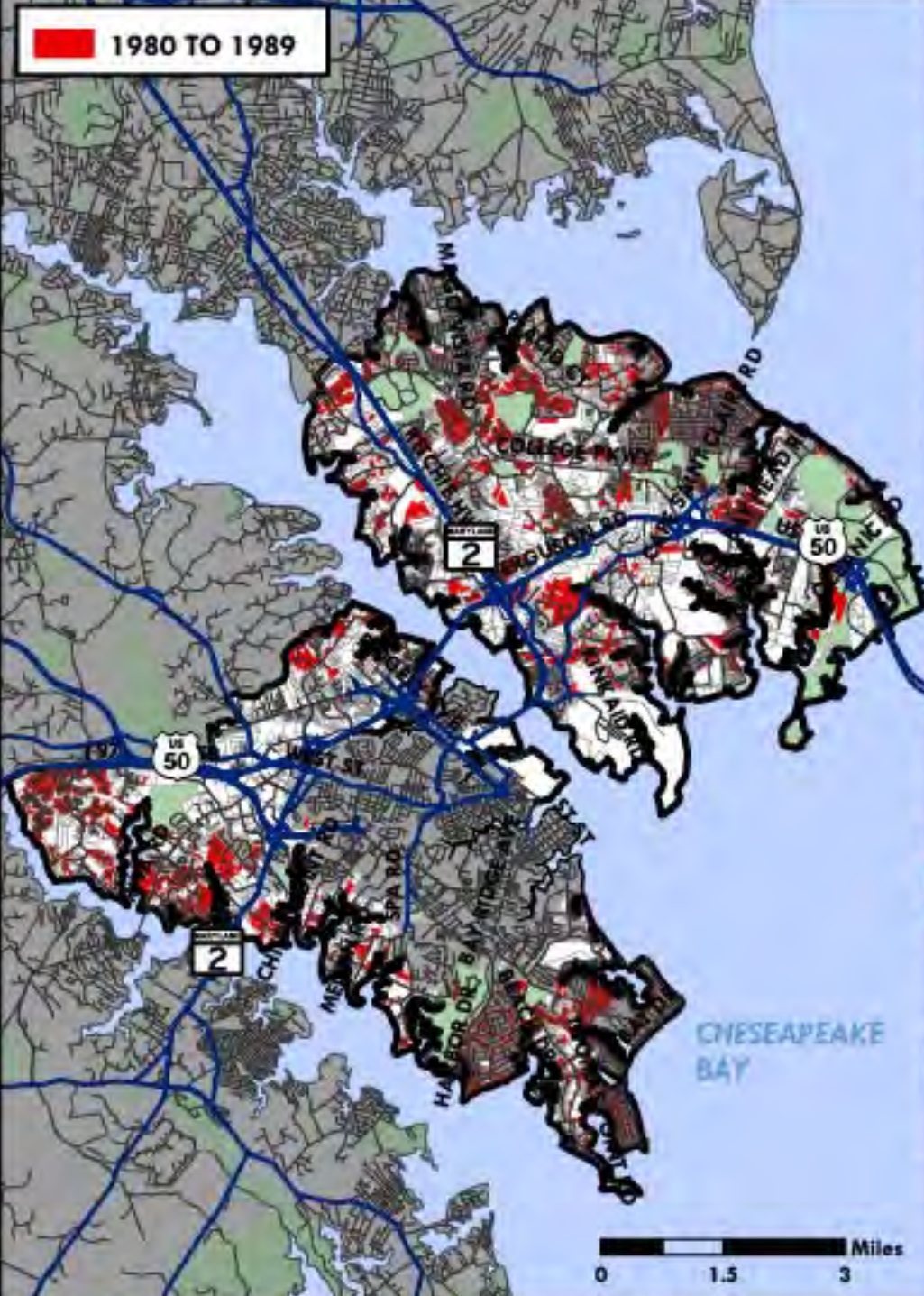
**ANNAPOLIS NECK-
BROADNECK
RESIDENTIAL
DEVELOPMENT ACTIVITY
BY PROPERTY TYPE
(1980-2017)**

Anne Arundel County, MD

LEGEND	
	SINGLE FAMILY
	TOWNHOME
	CONDOMINIUM
	APARTMENT
	MOBILE HOME
	ANNAPOLIS NECK-BROADNECK
	INTERSTATE/MARYLAND HIGHWAY
	SUBMARKET PARCELS
	ANNAPOLIS
	OPEN SPACE/PARKS



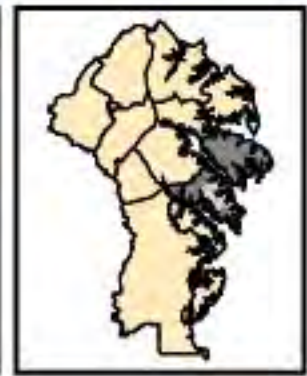
RKG
ASSOCIATES INC



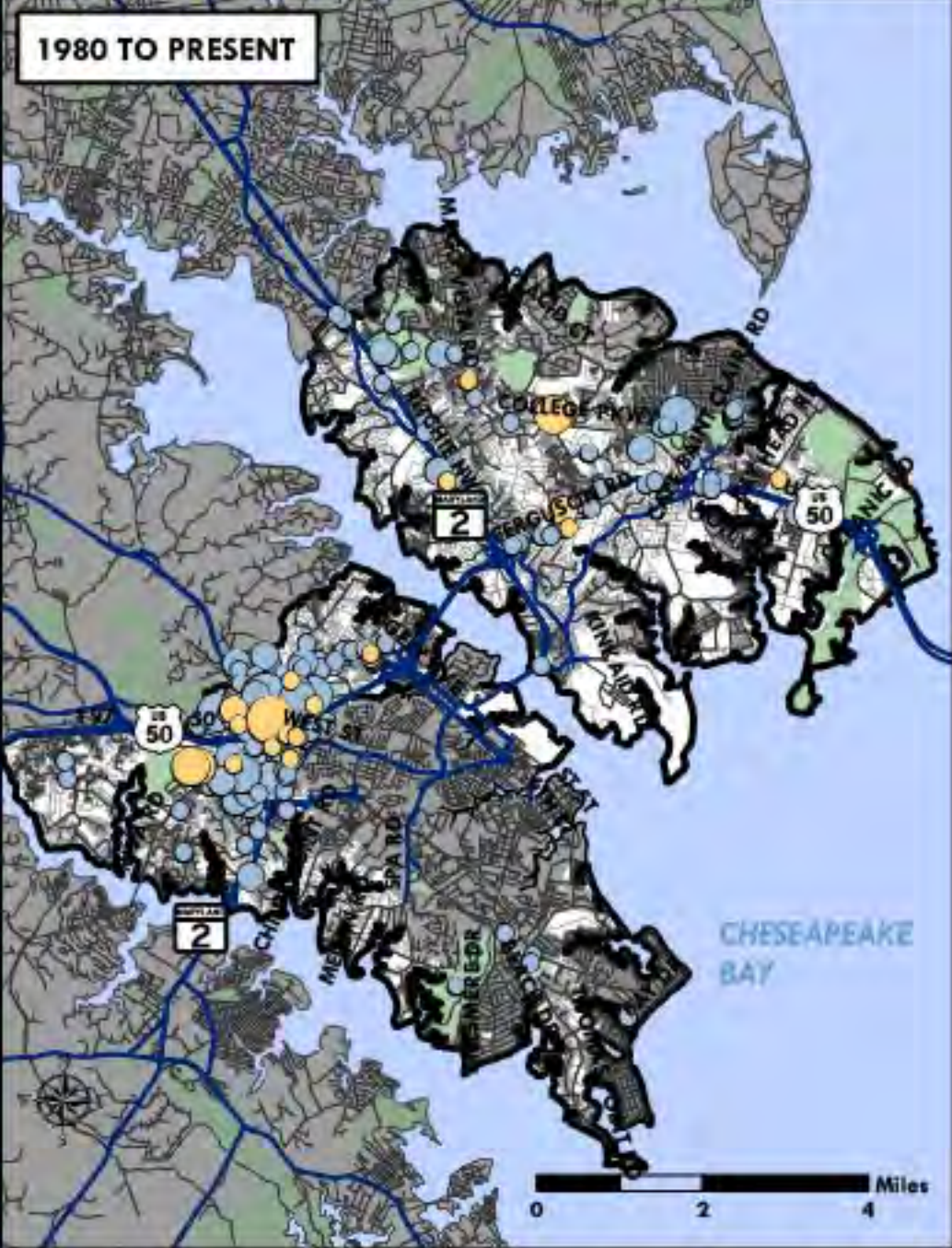
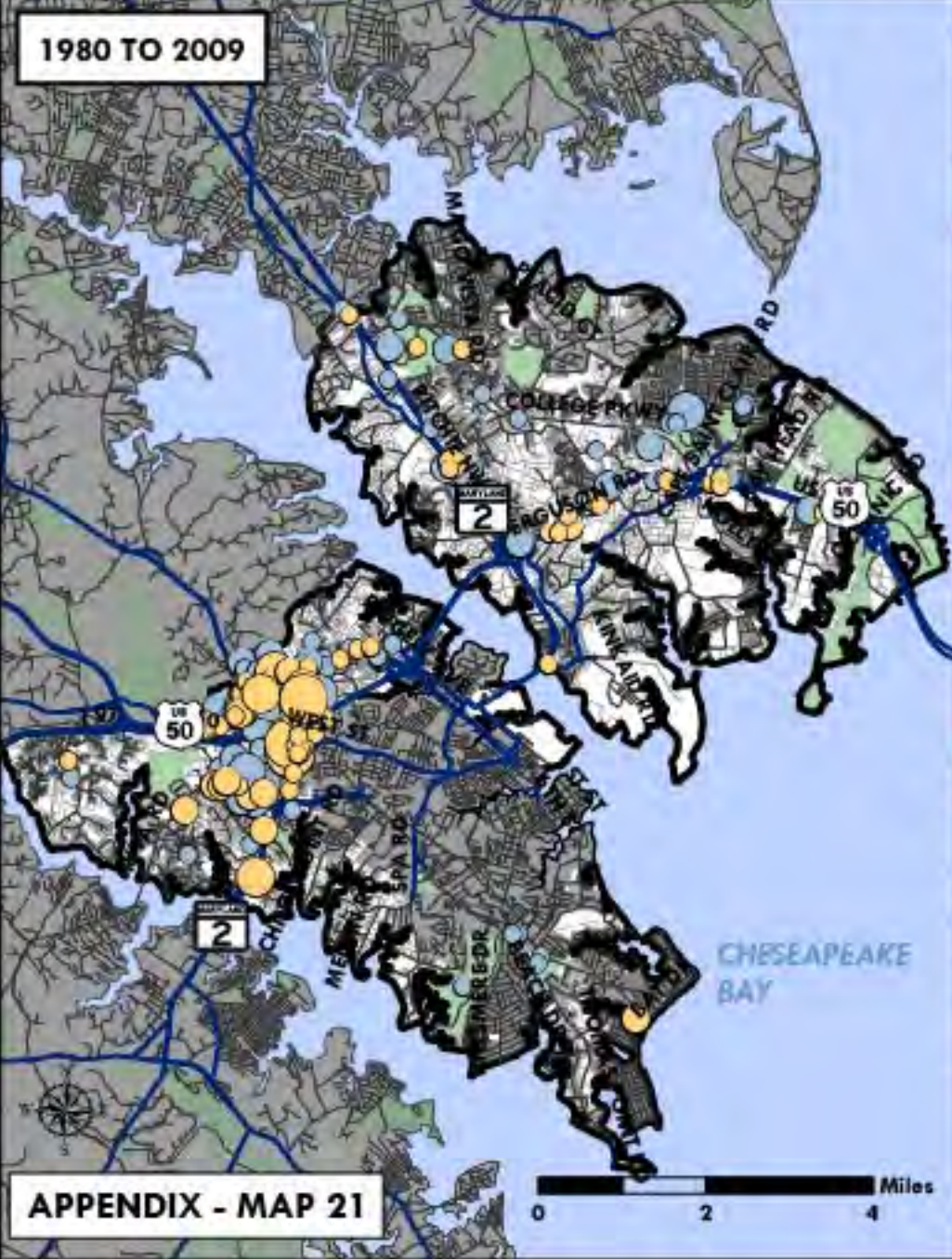
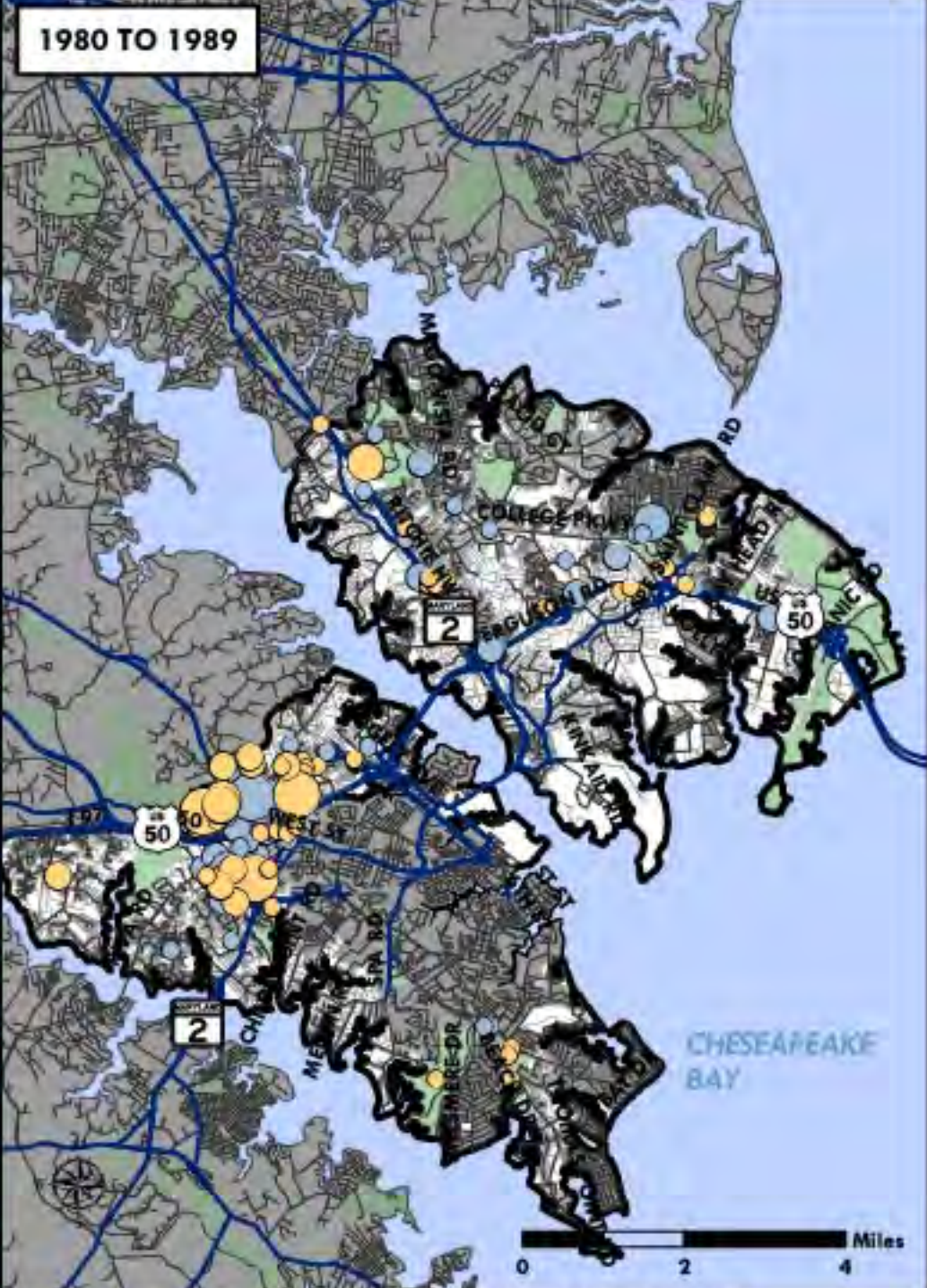
APPENDIX - MAP 20

**ANNAPOLIS NECK-
BROADNECK
RESIDENTIAL
DEVELOPMENT ACTIVITY
(10-YEAR TRENDS)**
Anne Arundel County, MD

-  INTERSTATE/MARYLAND HIGHWAY
-  ANNAPOLIS
-  ANNAPOLIS NECK-BROADNECK
-  OPEN SPACE/PARKS
-  SUBMARKET PARCELS



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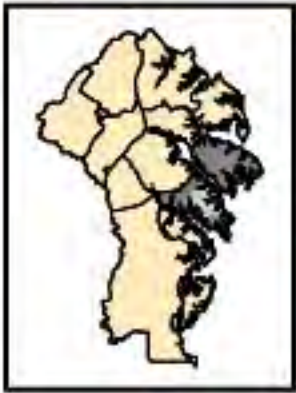


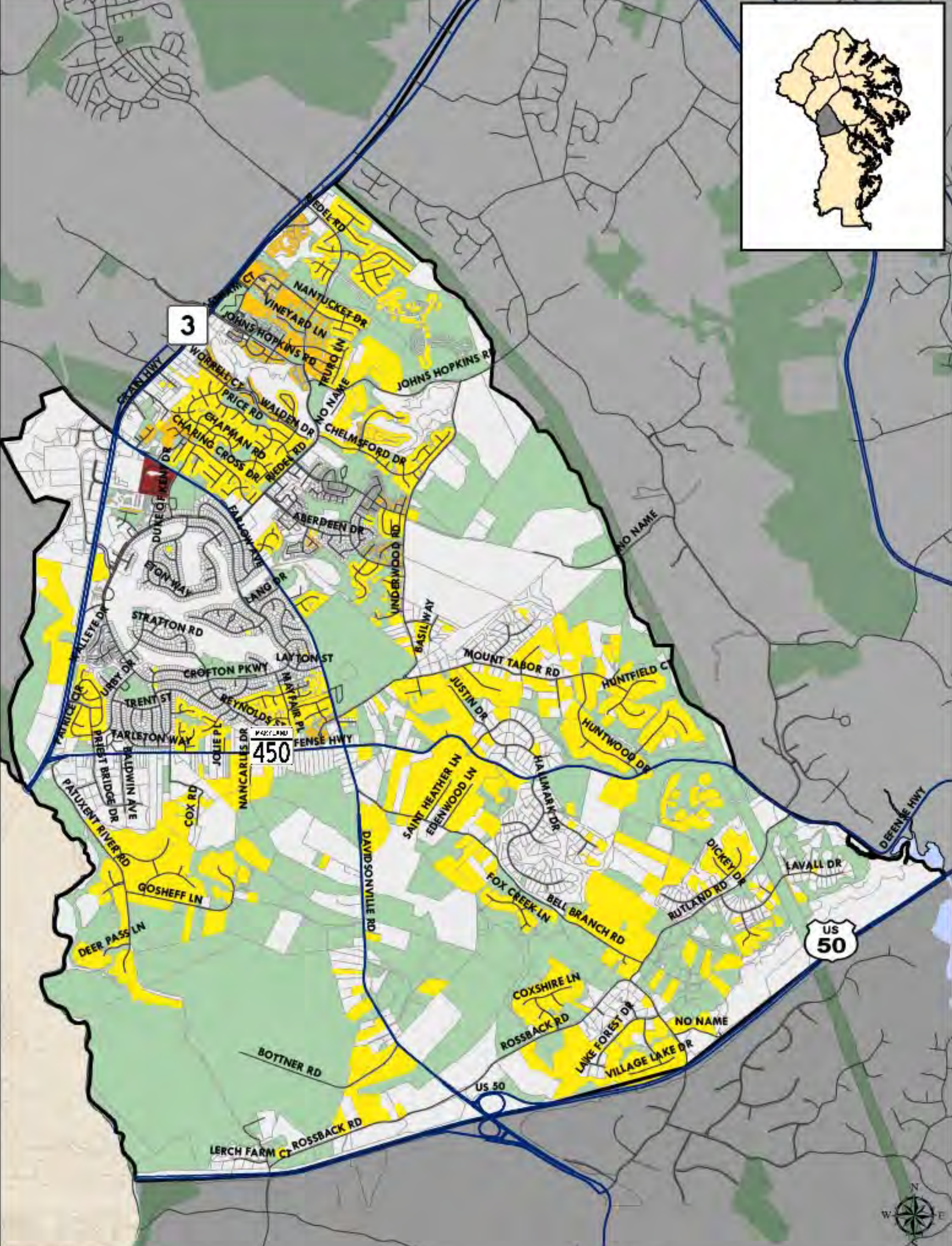
APPENDIX - MAP 21

**ANNAPOLIS NECK-BROADNECK
NON-RESIDENTIAL
DEVELOPMENT ACTIVITY
BY SF
(10-YEAR TRENDS)**

Anne Arundel County, MD

TOTAL SF (1980-2017)	ANNAPOLIS NECK-BROADNECK
● 49,140 SF OR LESS	INTERSTATE/MARYLAND HIGHWAY
● 49,140 - 173,800 SF	SUBMARKET PARCELS
● 173,800 - 330,850 SF	OPEN SPACE/PARKS
● 330,850 - 1.3 MILLION SF	ANNAPOLIS
	CUMULATIVE NON-RESIDENTIAL SF
	NEW NON-RESIDENTIAL SF












APPENDIX - MAP 22

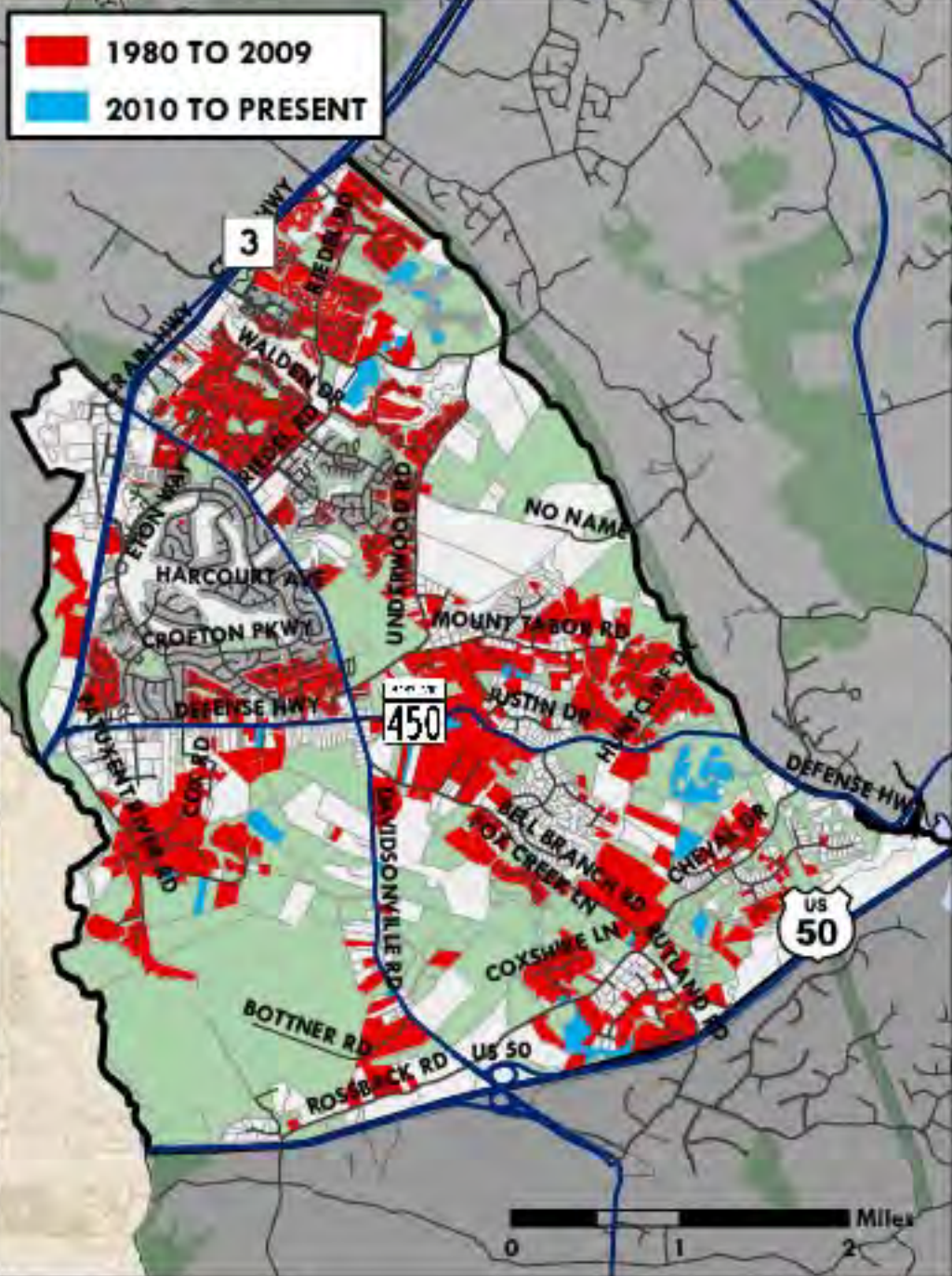
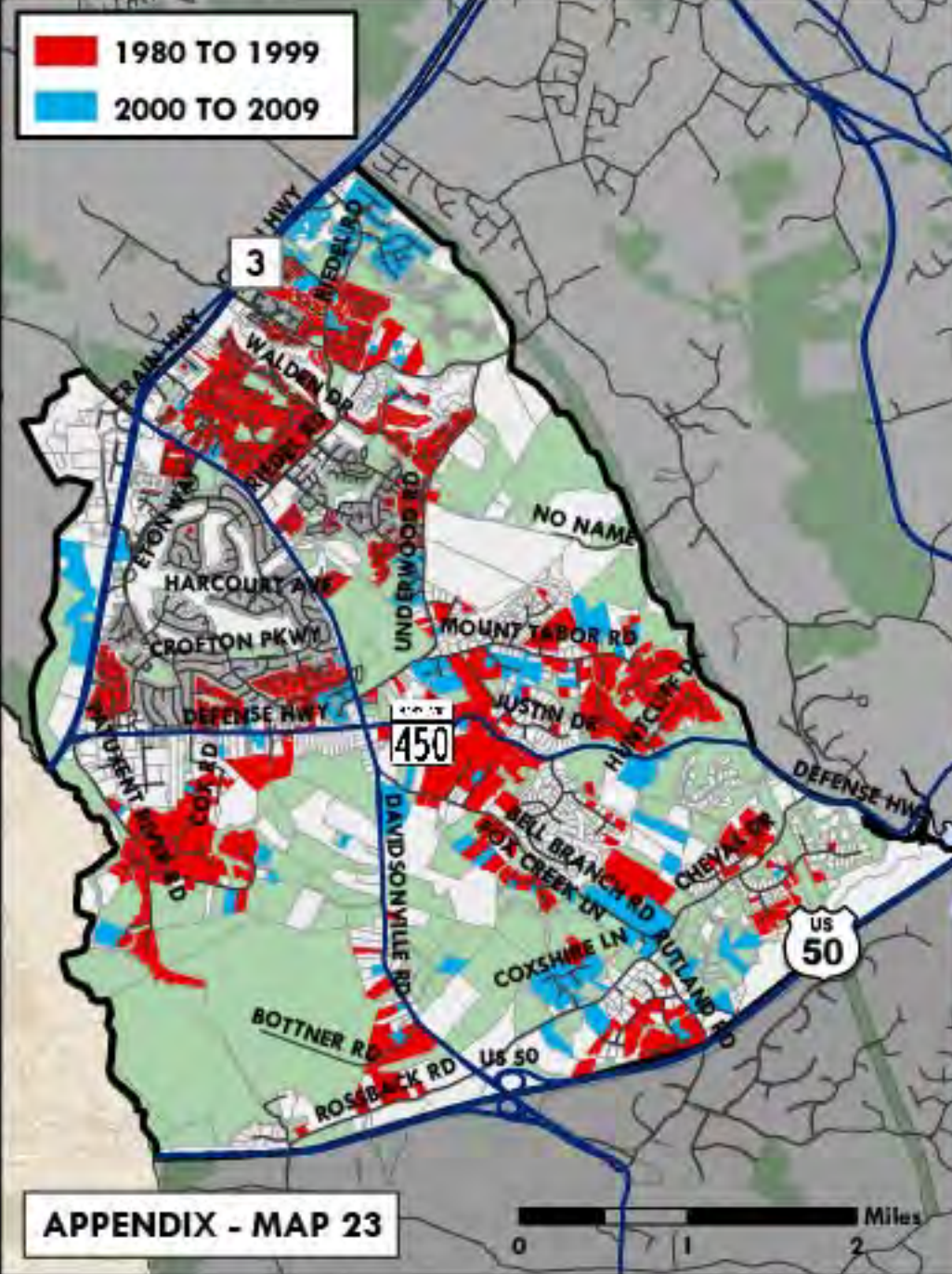
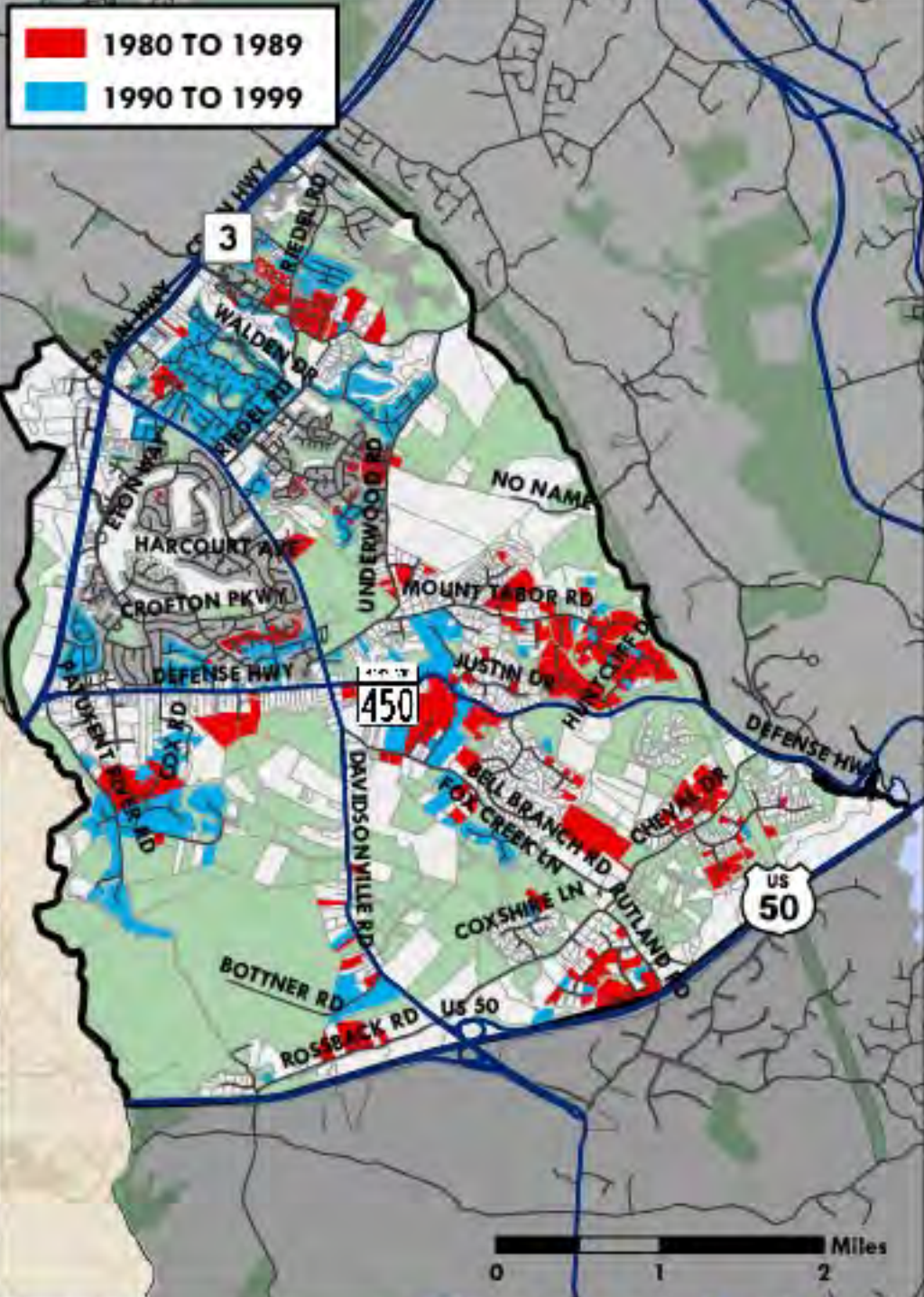
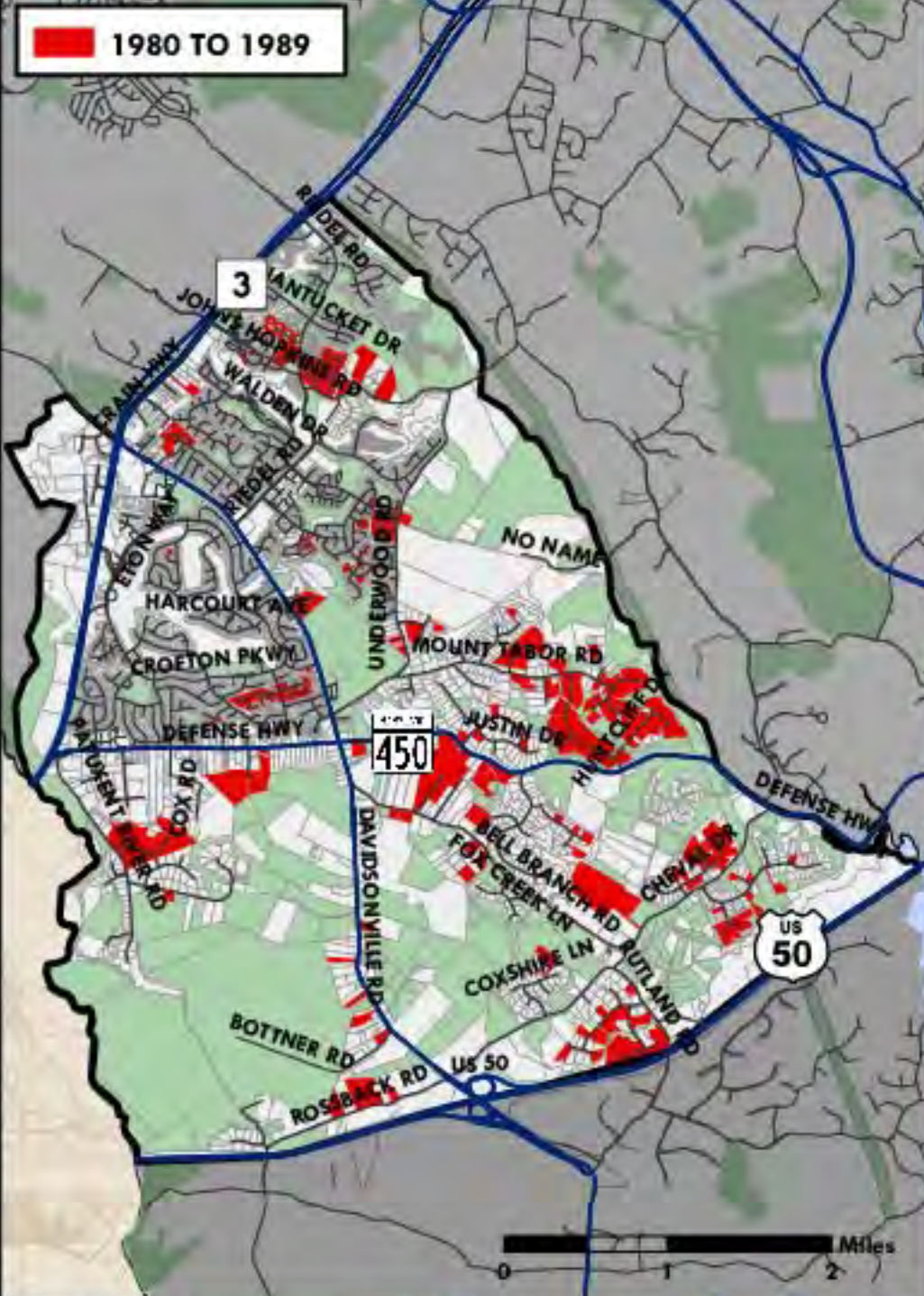
CROFTON RESIDENTIAL DEVELOPMENT BY PROPERTY TYPE (1980 TO 2017)

Anne Arundel County, MD

LEGEND

 SINGLE FAMILY	 INTERSTATE/MARYLAND HIGHWAY
 TOWNHOME	 CROFTON
 APARTMENT	 SUBMARKET PARCELS
	 OPEN SPACE/PARKS

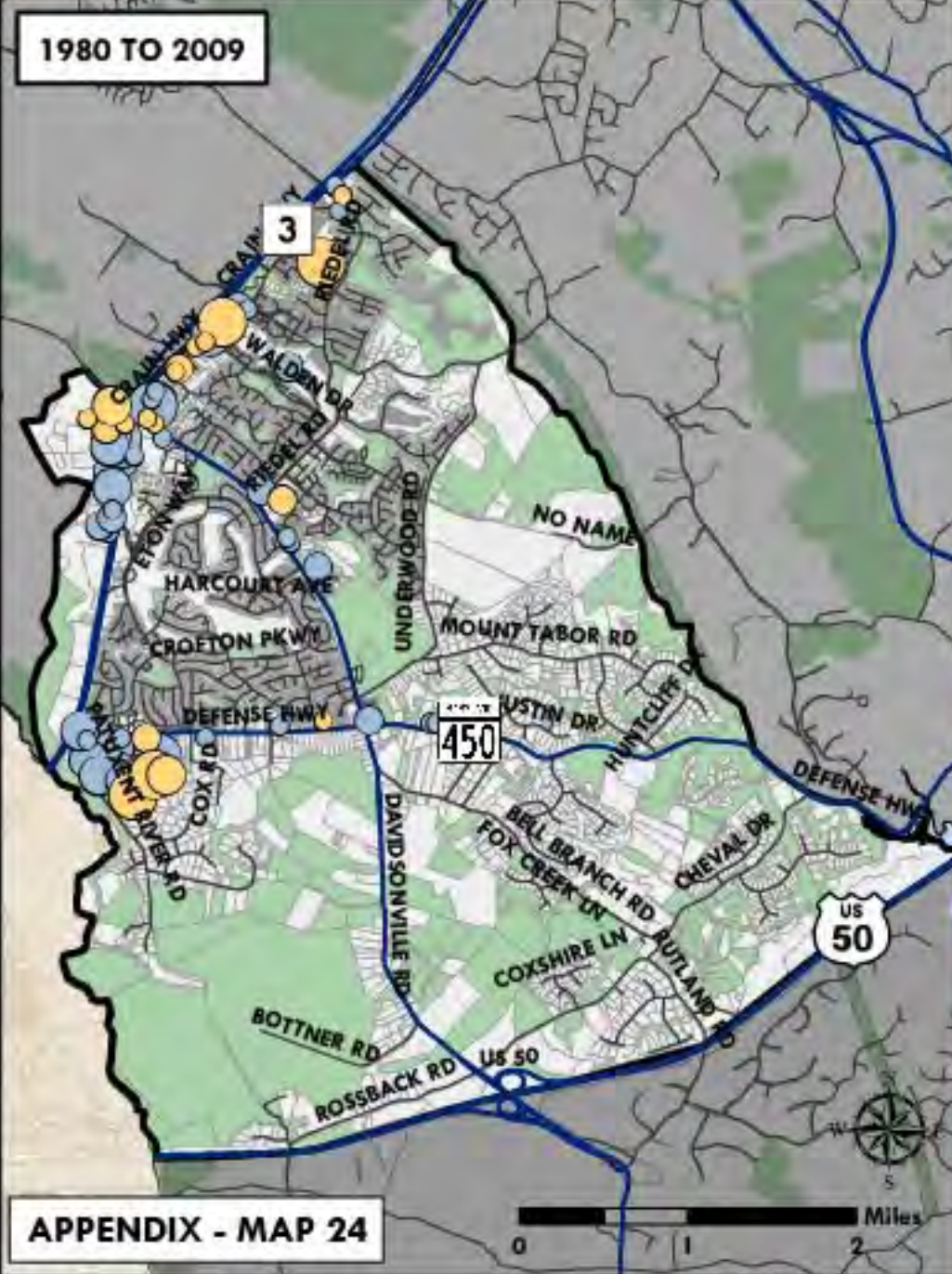
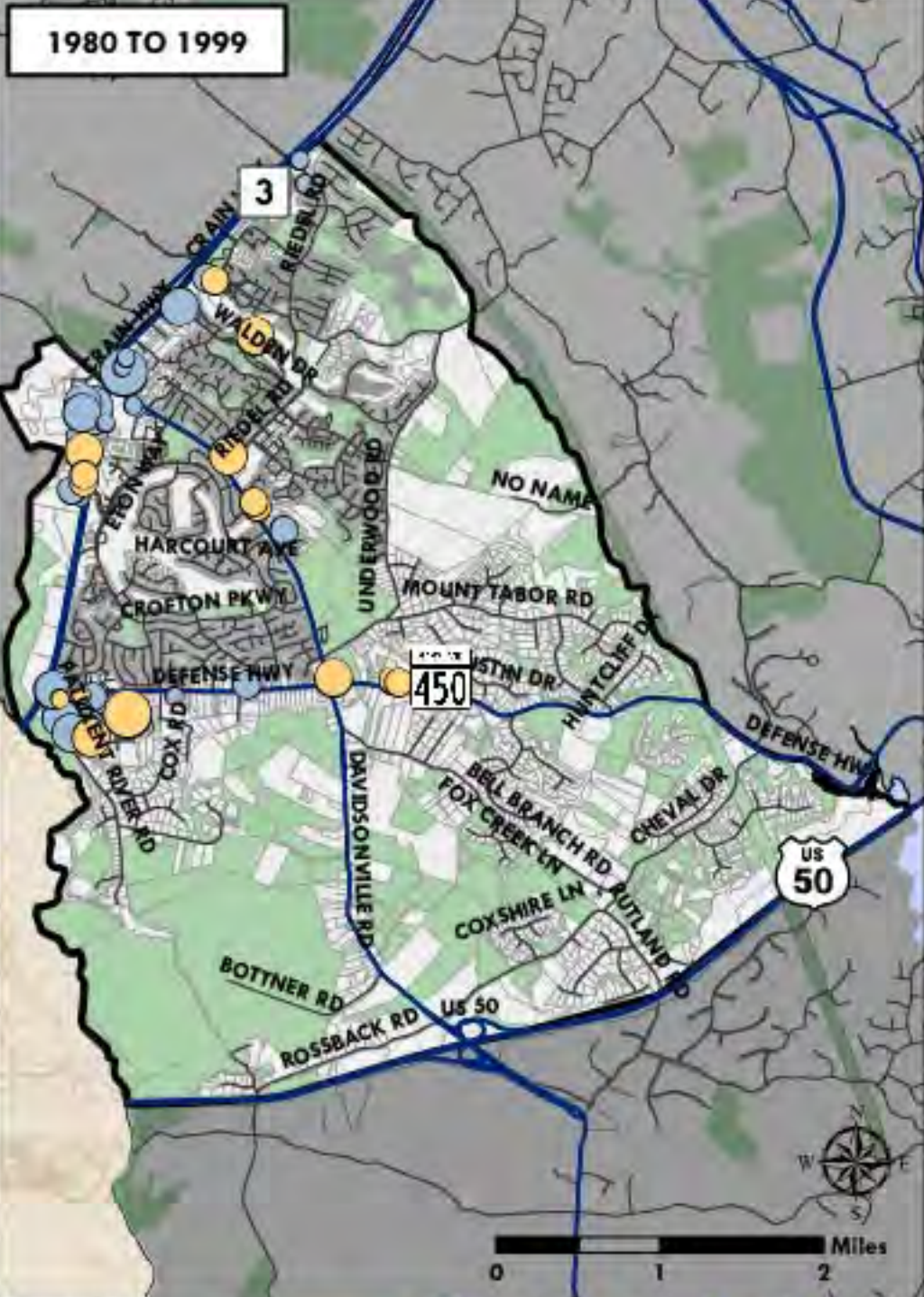
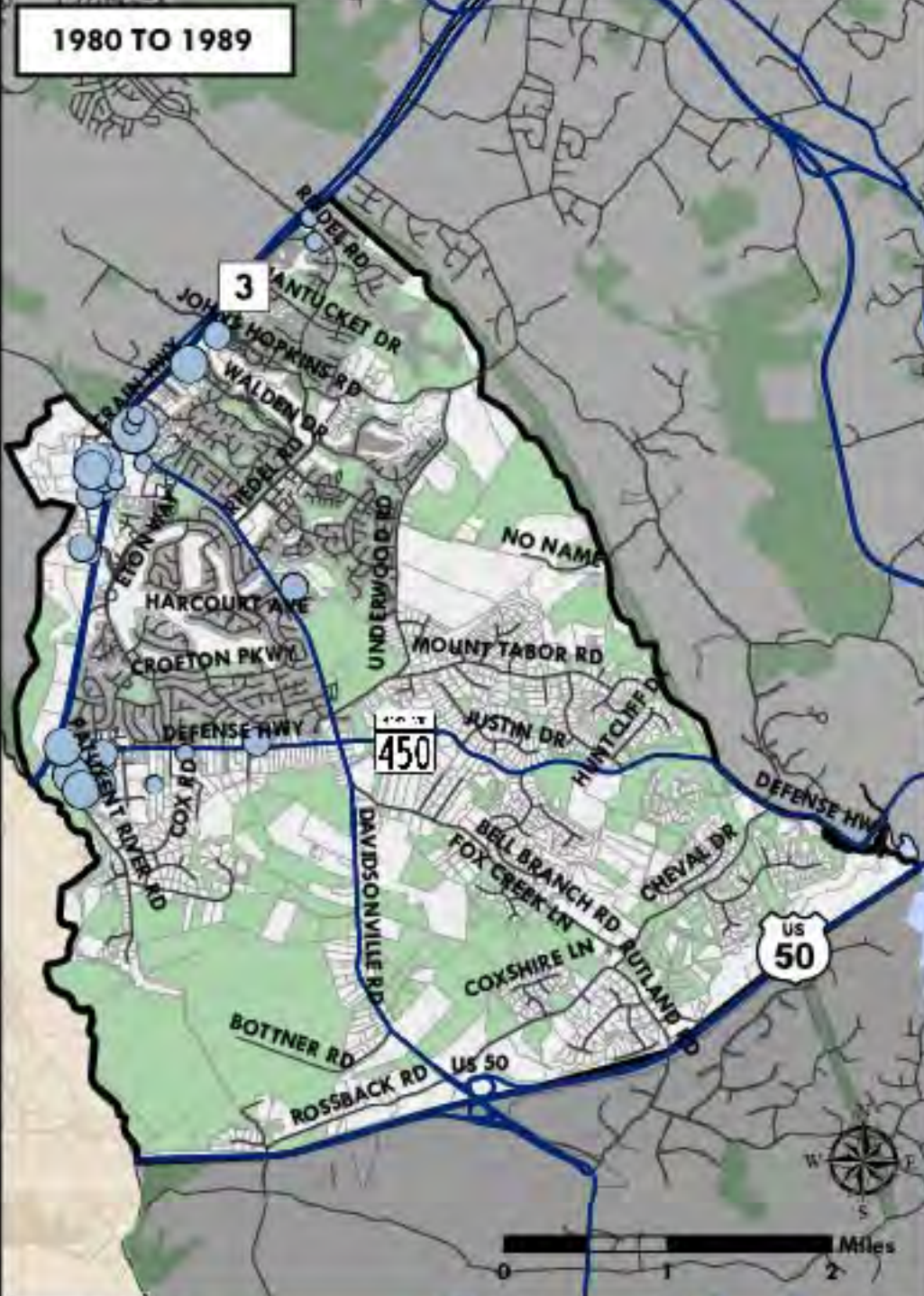




CROFTON RESIDENTIAL DEVELOPMENT ACTIVITY (10-YEAR TRENDS)
Anne Arundel County, MD

- CROFTON
- MAJOR ROADS
- SUBMARKET PARCELS
- OPEN SPACE/PARKS

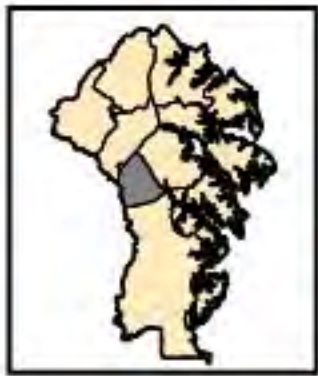


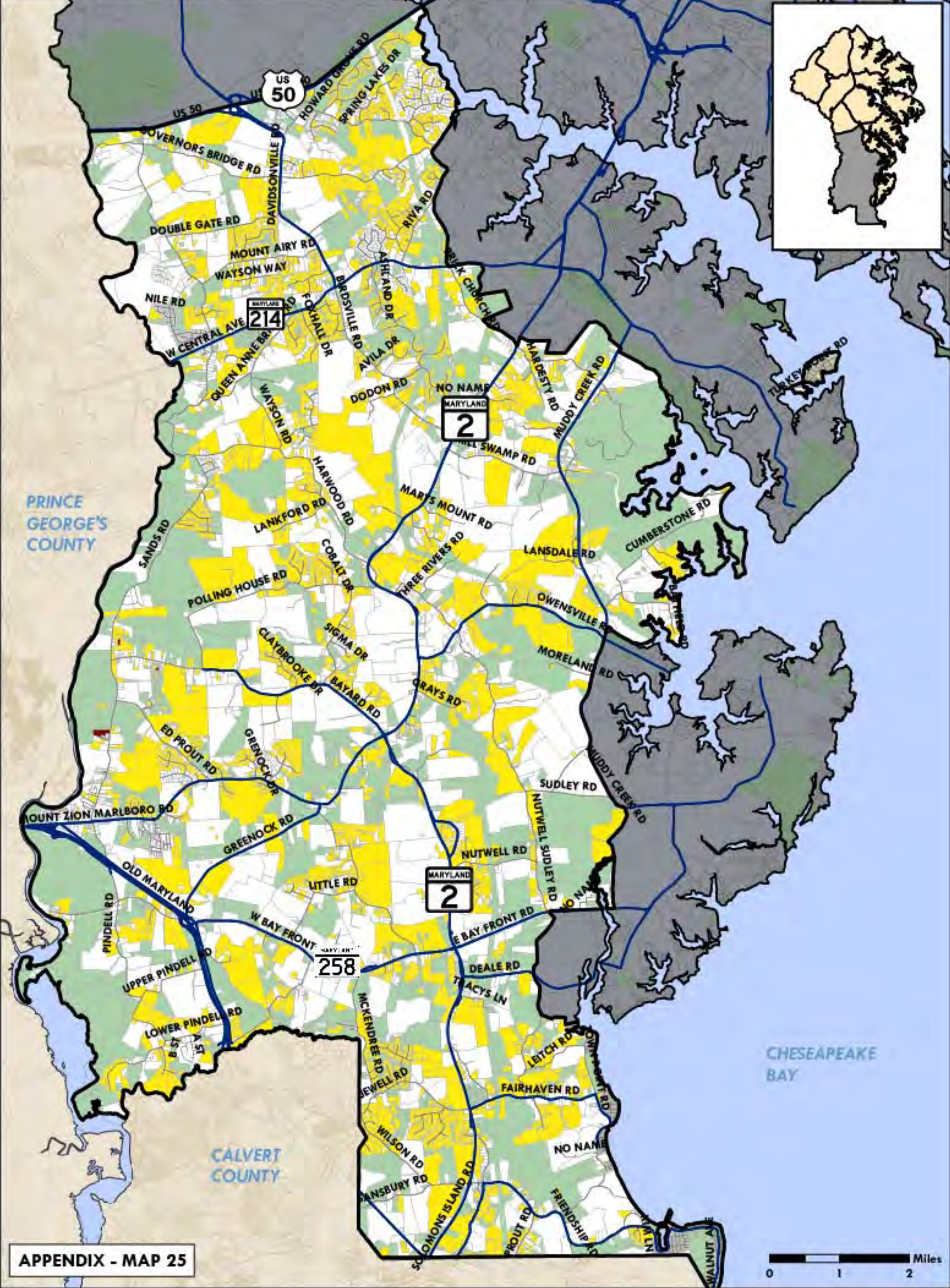


APPENDIX - MAP 24

CROFTON RESIDENTIAL DEVELOPMENT ACTIVITY BY SF (10-YEAR TRENDS)
Anne Arundel County, MD

TOTAL SF (1980-2017)	CROFTON
● 1,176 - 12,250 SF	INTERSTATE/MARYLAND HIGHWAY
● 12,250 - 26,900 SF	SUBMARKET PARCELS
● 26,900 - 50,600 SF	OPEN SPACE/PARKS
● 50,600 - 111,200 SF	CUMULATIVE NON-RESIDENTIAL SF
	NEW NON-RESIDENTIAL SF





APPENDIX - MAP 25

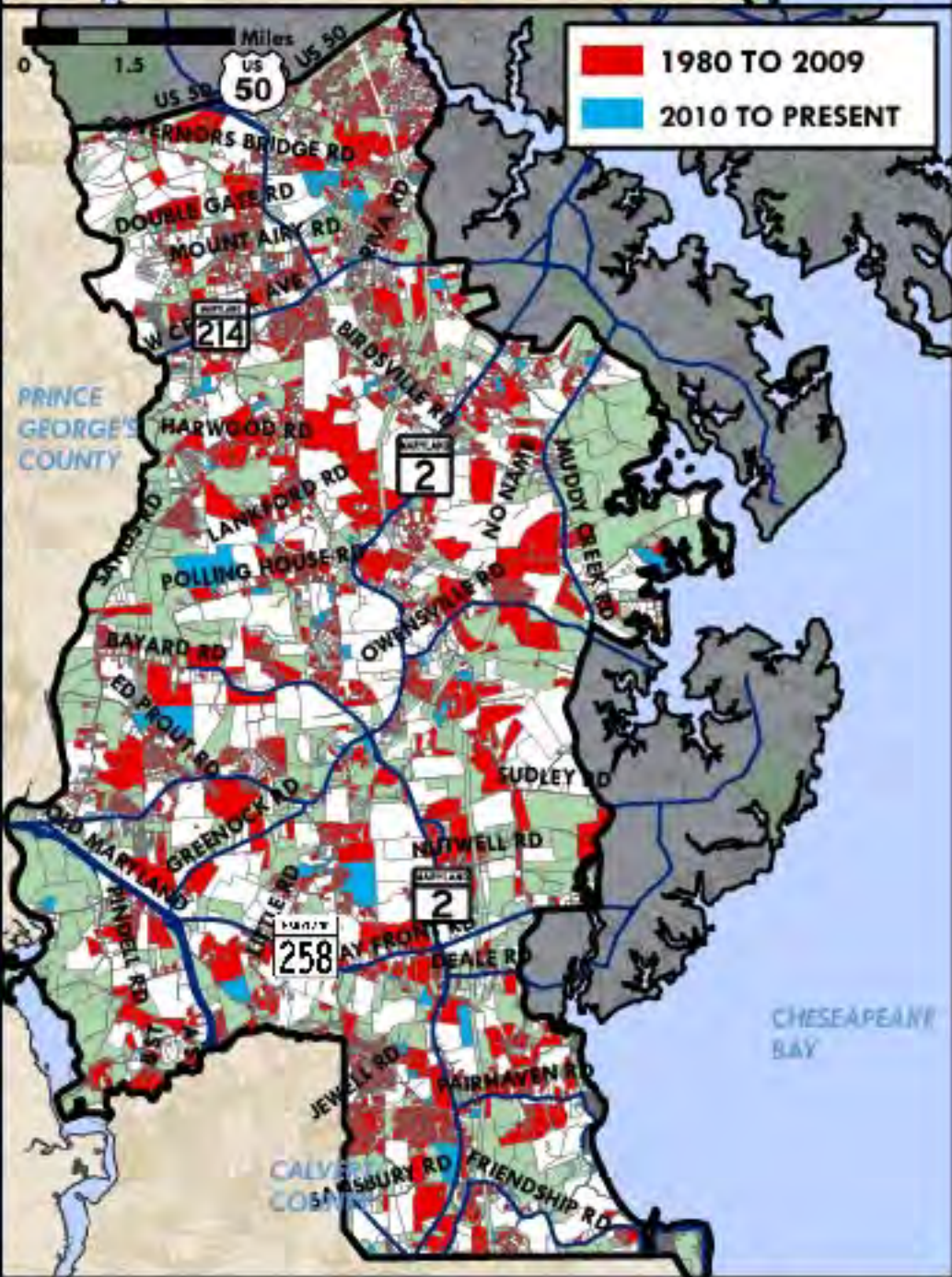
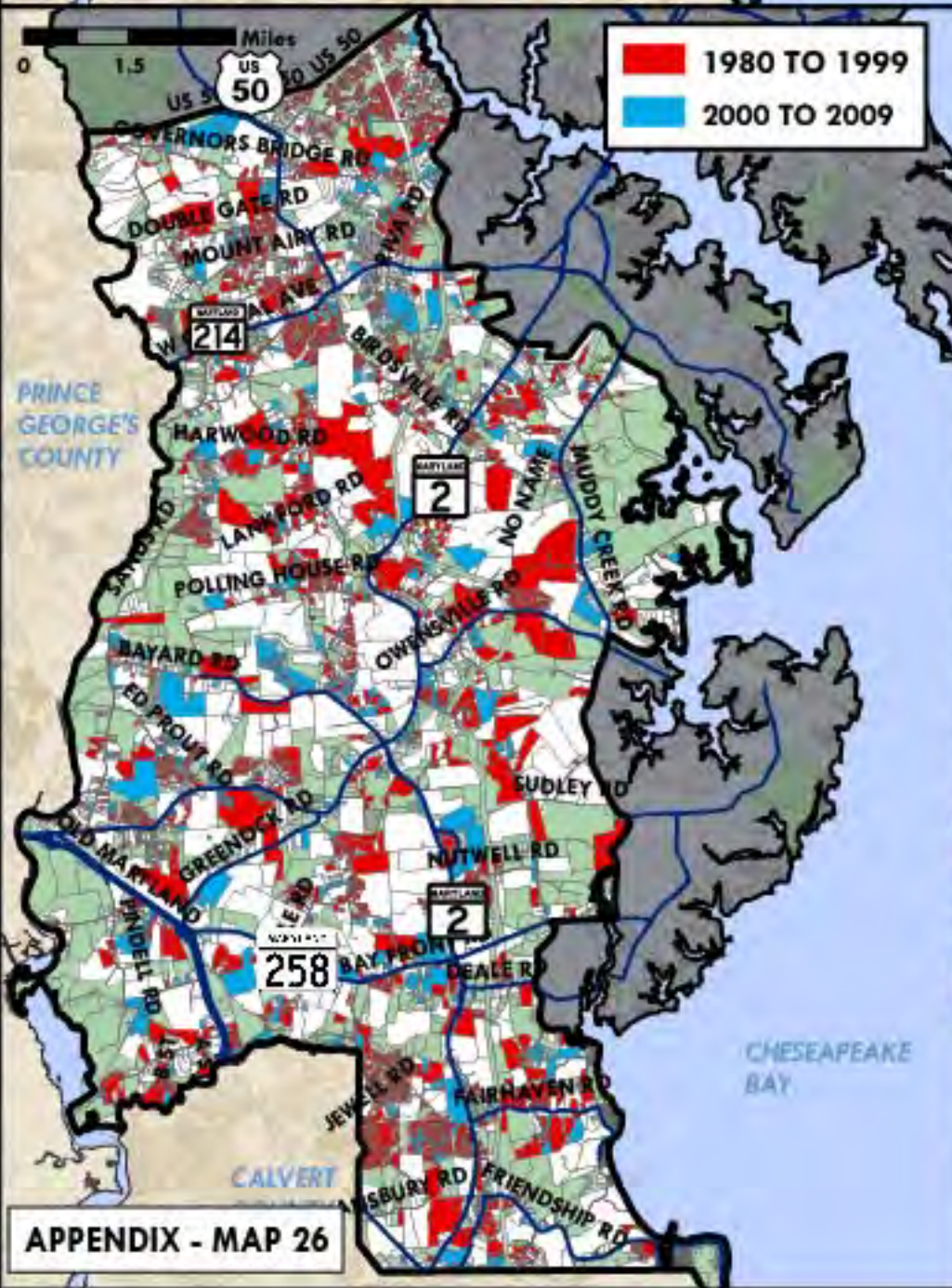
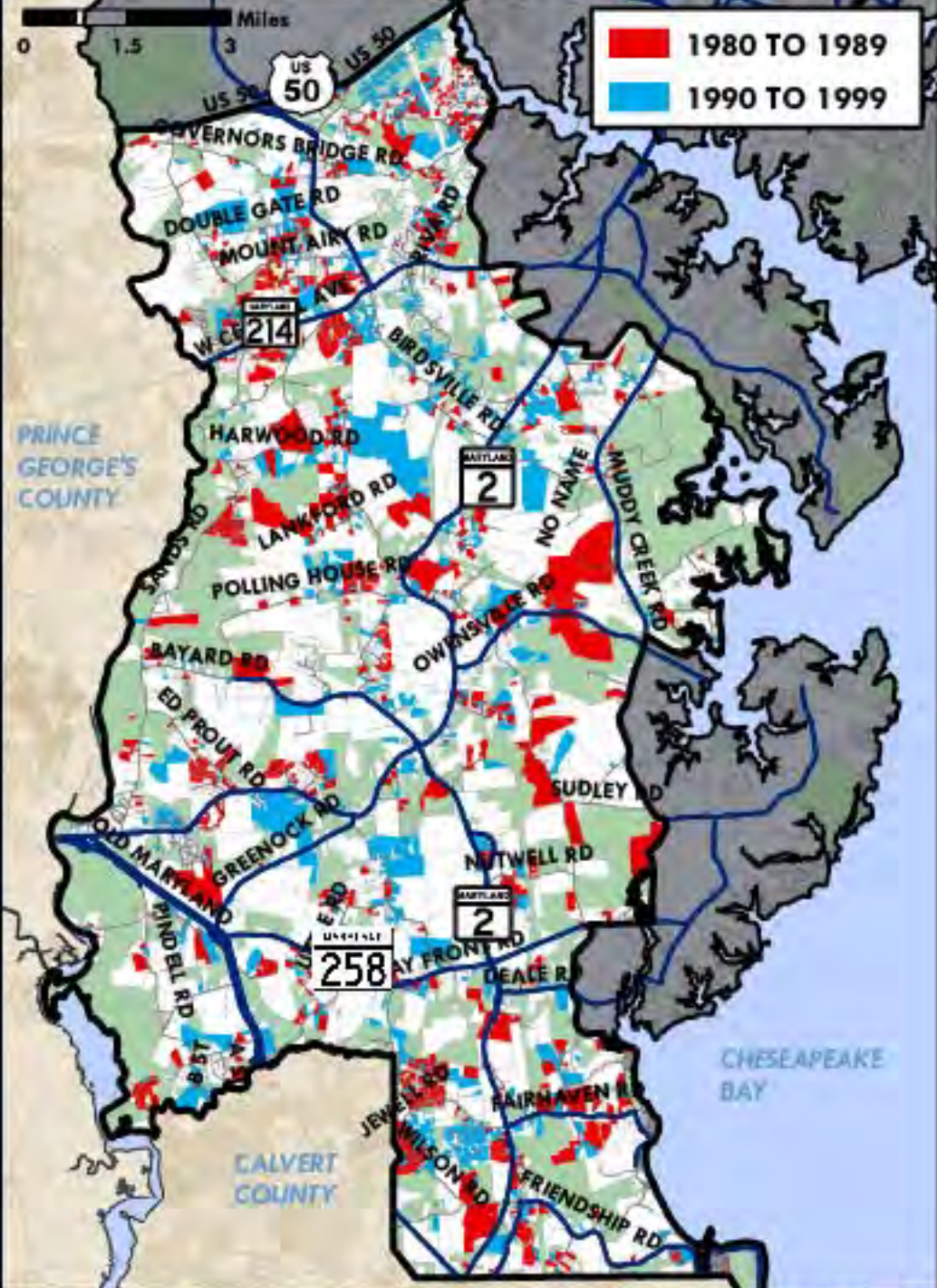
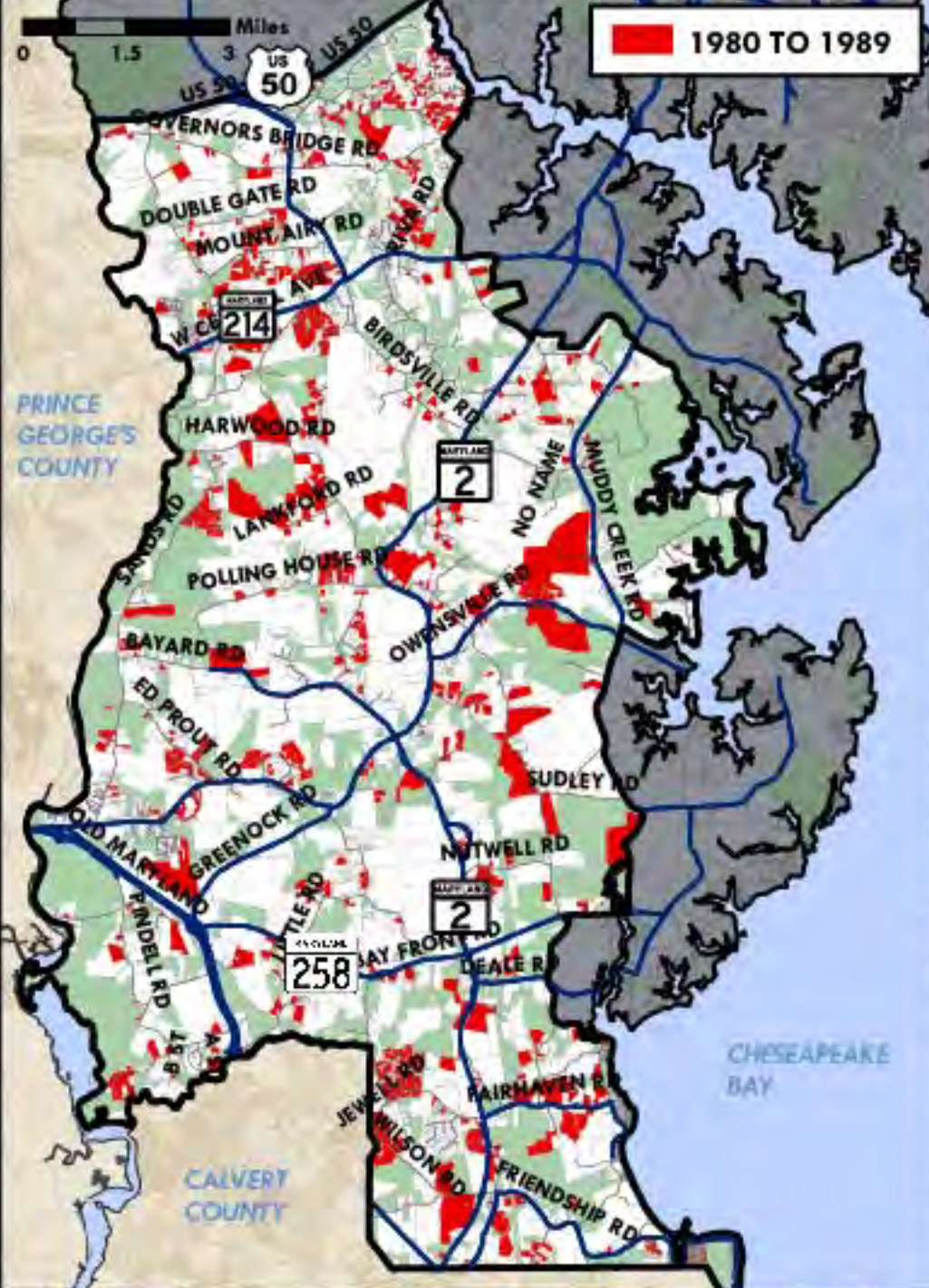
**SOUTH COUNTY
RESIDENTIAL
DEVELOPMENT ACTIVITY
BY PROPERTY TYPE
(1980 TO 2017)**

LEGEND

SOUTH COUNTY	INTERSTATE/MARYLAND HIGHWAY
SINGLE FAMILY	OPEN SPACE/PARKS
MOBILE HOME	
SUBMARKET PARCELS	



RKG
ASSOCIATES INC

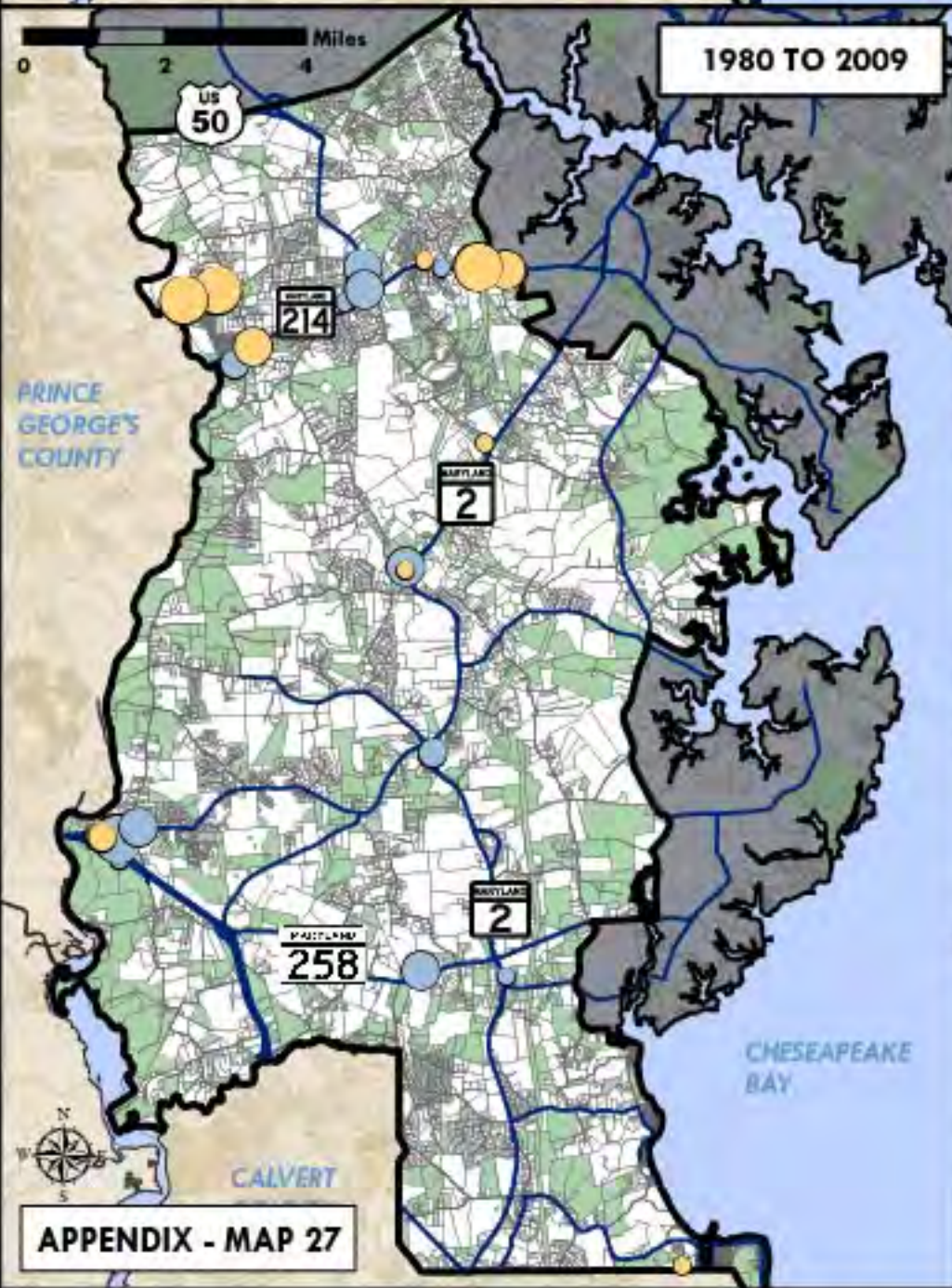
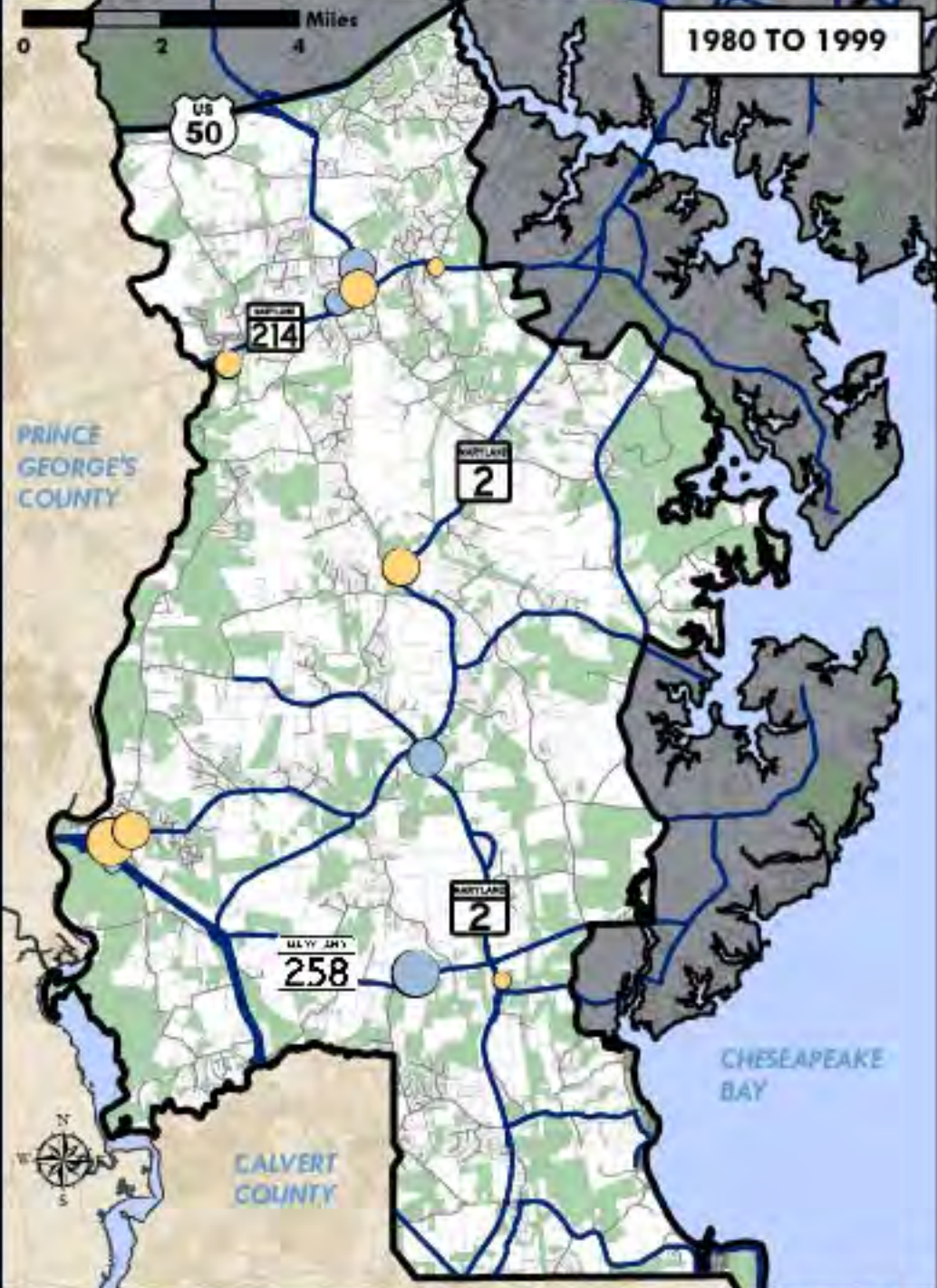
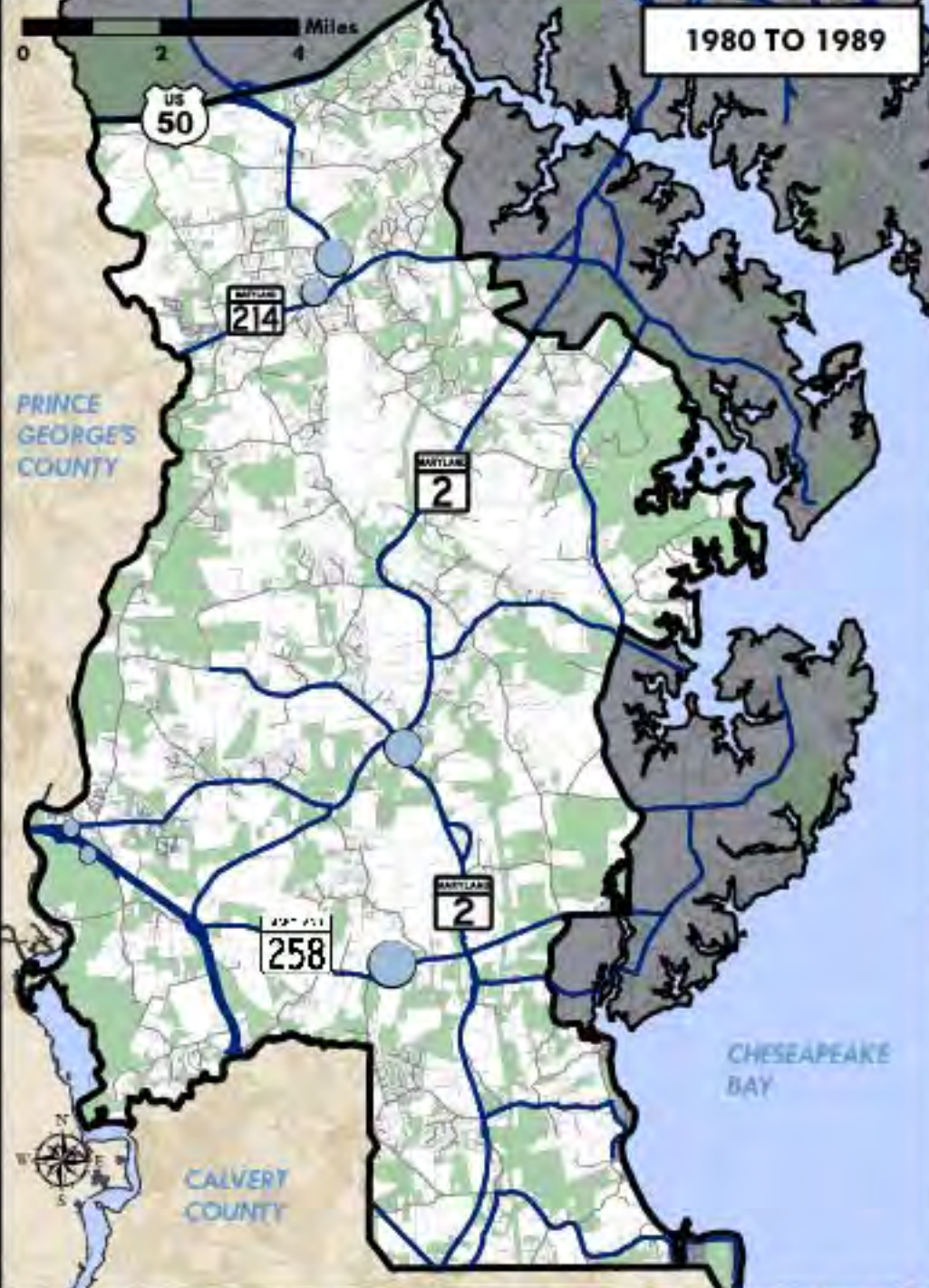


**SOUTH COUNTY
RESIDENTIAL
DEVELOPMENT
ACTIVITY
(10-YEAR TRENDS)**

Anne Arundel County, MD

- INTERSTATE/MARYLAND HIGHWAY
- SOUTH COUNTY
- OPEN SPACE/PARKS
- SUBMARKET PARCELS





APPENDIX - MAP 27

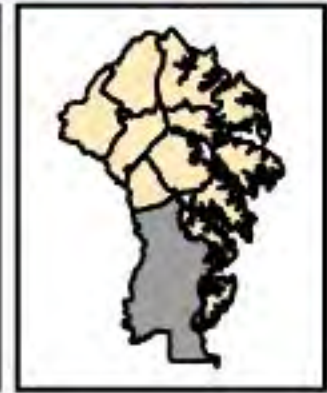
**SOUTH COUNTY
NON-RESIDENTIAL
DEVELOPMENT
ACTIVITY BY SF
(10-YEAR TRENDS)**

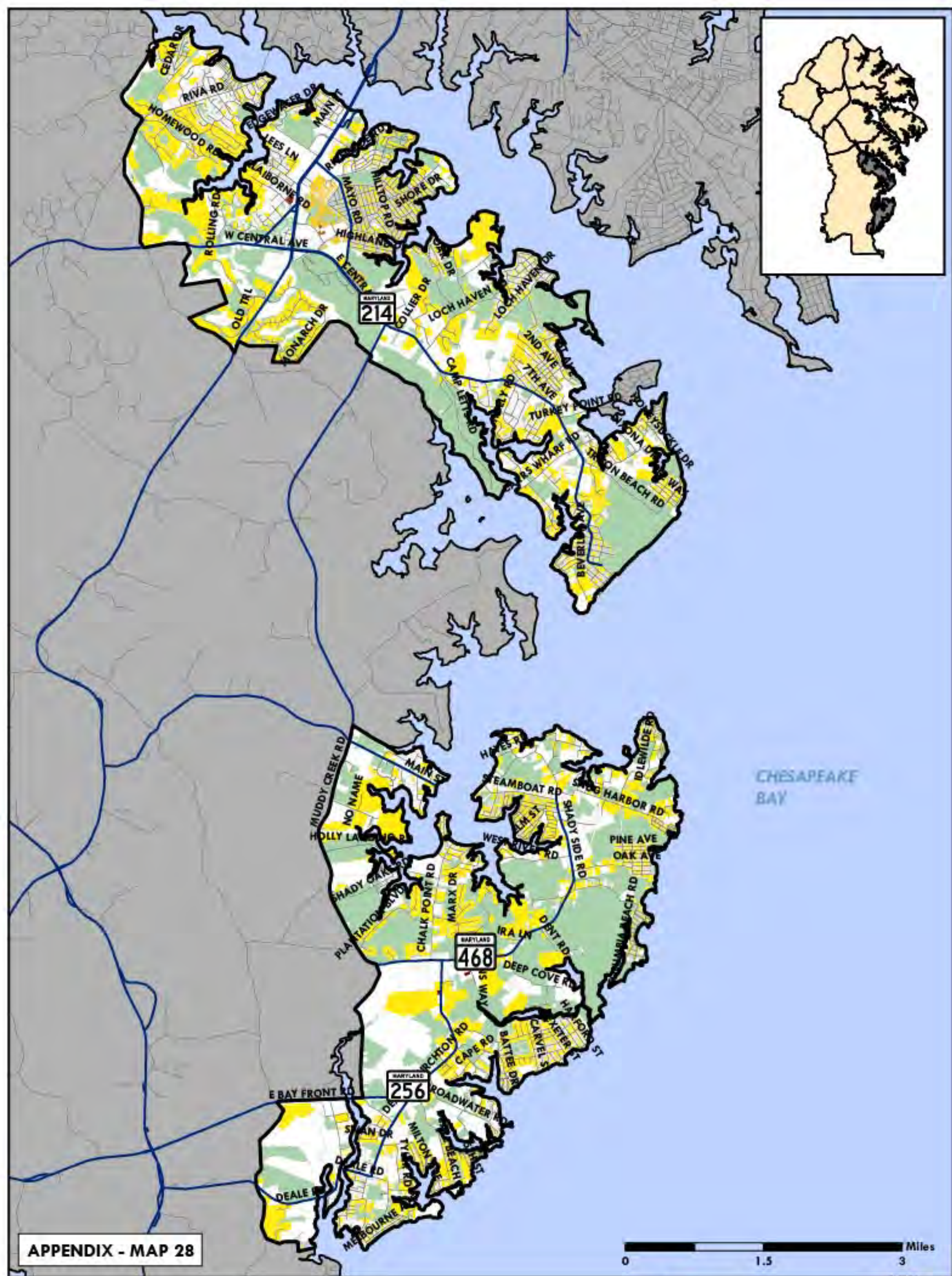
TOTAL SF (1980-2017)

- 1,100 - 5,800 SF
- 5,800 - 12,200 SF
- 12,200 - 18,540 SF
- 18,540 - 34,400 SF

LEGEND:

- ▭ SOUTH COUNTY
- INTERSTATE/MARYLAND HIGHWAY
- ▭ SUBMARKET PARCELS
- OPEN SPACE/PARKS
- CUMULATIVE NON-RESIDENTIAL SF
- NEW NON-RESIDENTIAL SF





APPENDIX - MAP 28

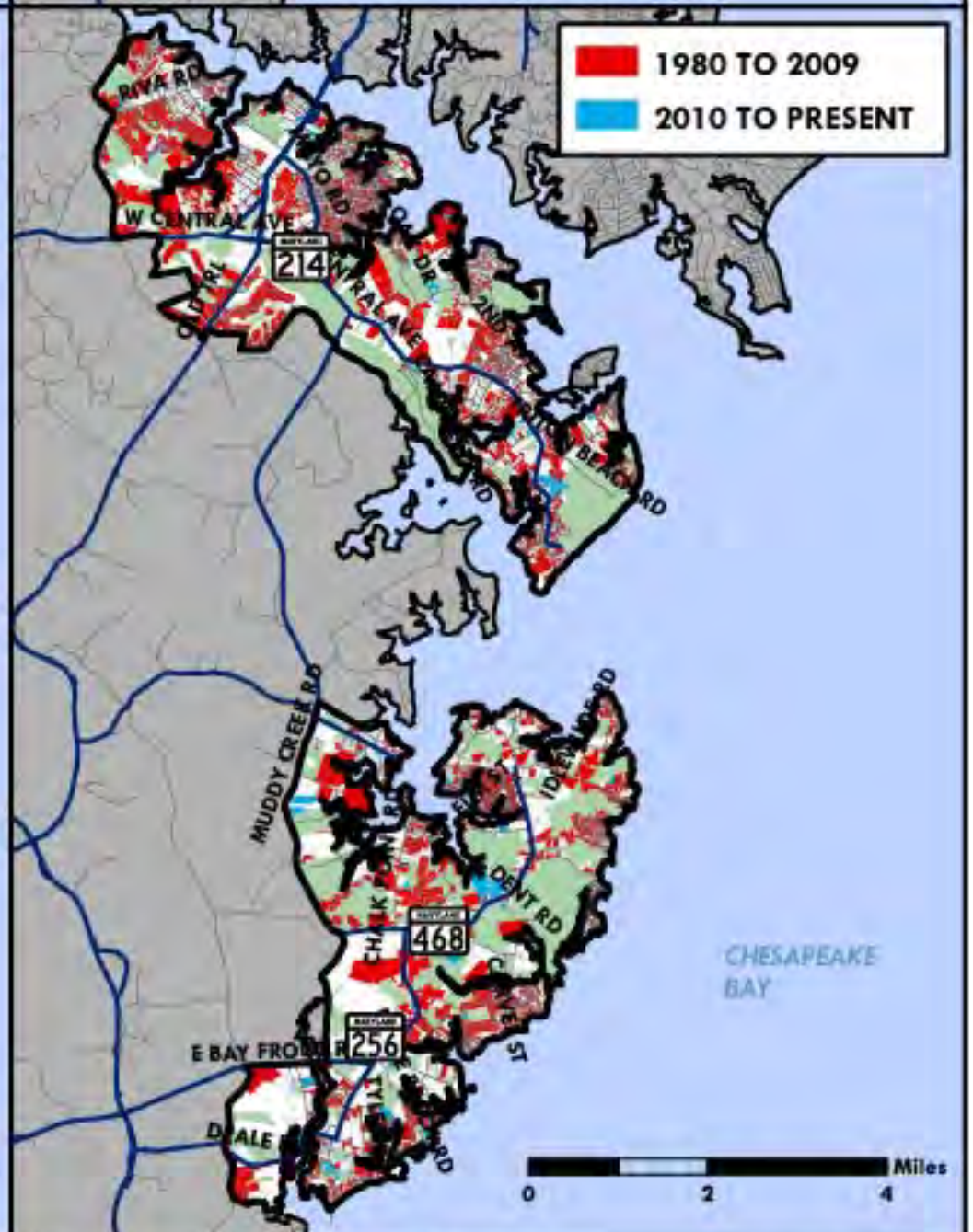
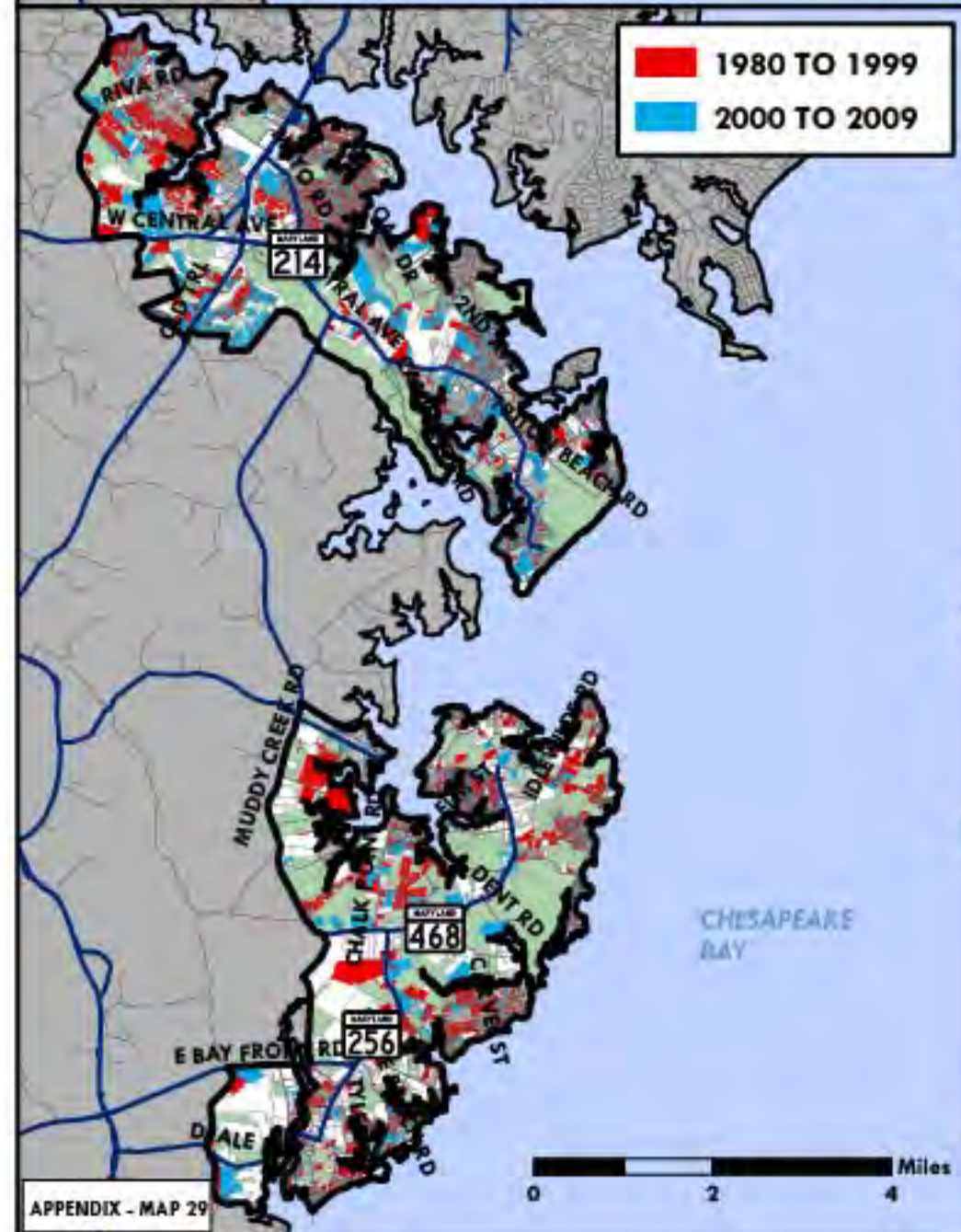
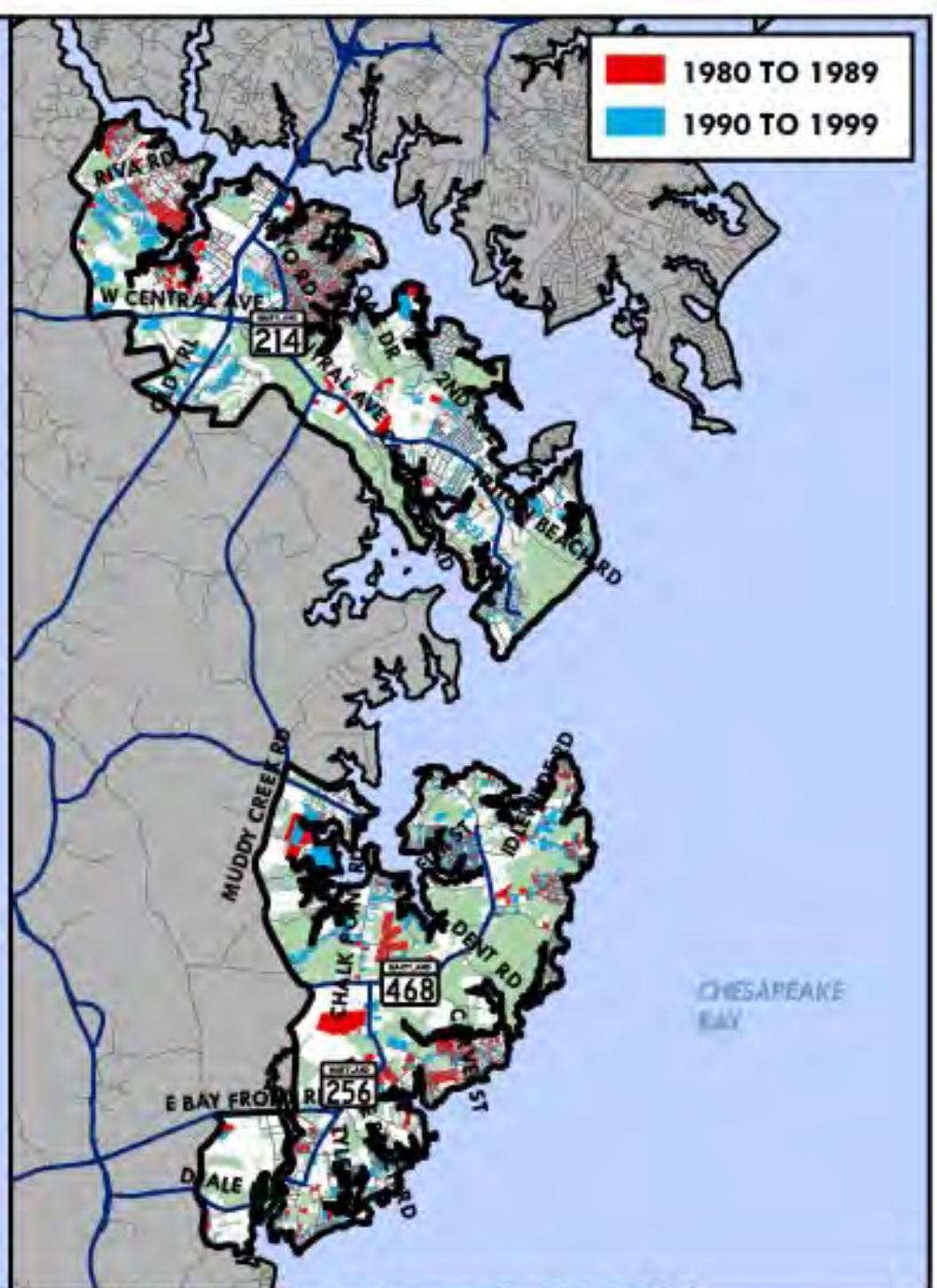
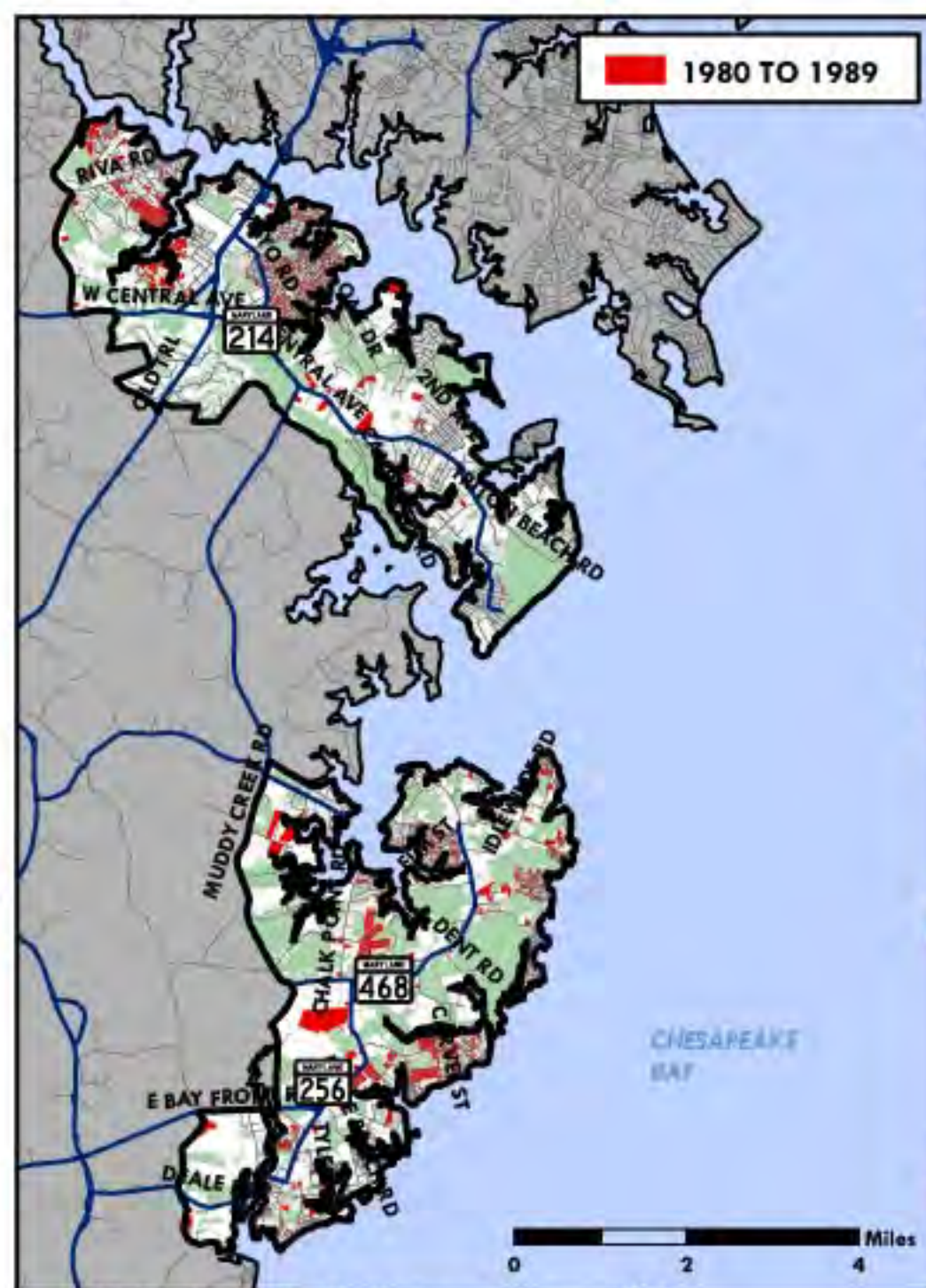
EDGEWATER-DEALE-SHADY SIDE RESIDENTIAL DEVELOPMENT ACTIVITY BY TYPE (1980 TO 2017)

Anne Arundel County, MD

LEGEND

- SINGLE FAMILY
- TOWNHOME
- CONDOMINIUM
- APARTMENT
- MOBILE HOME
- EDGEWATER-DEALE-SHADY SIDE
- INTERSTATE/MARYLAND HIGHWAY
- SUBMARKET PARCELS
- OPEN SPACE



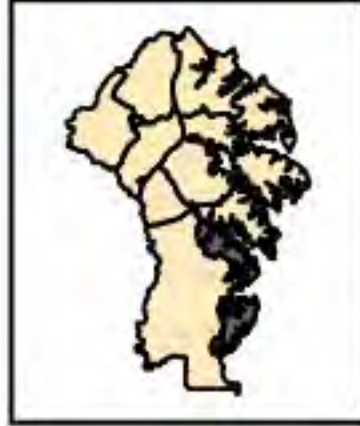


APPENDIX - MAP 29

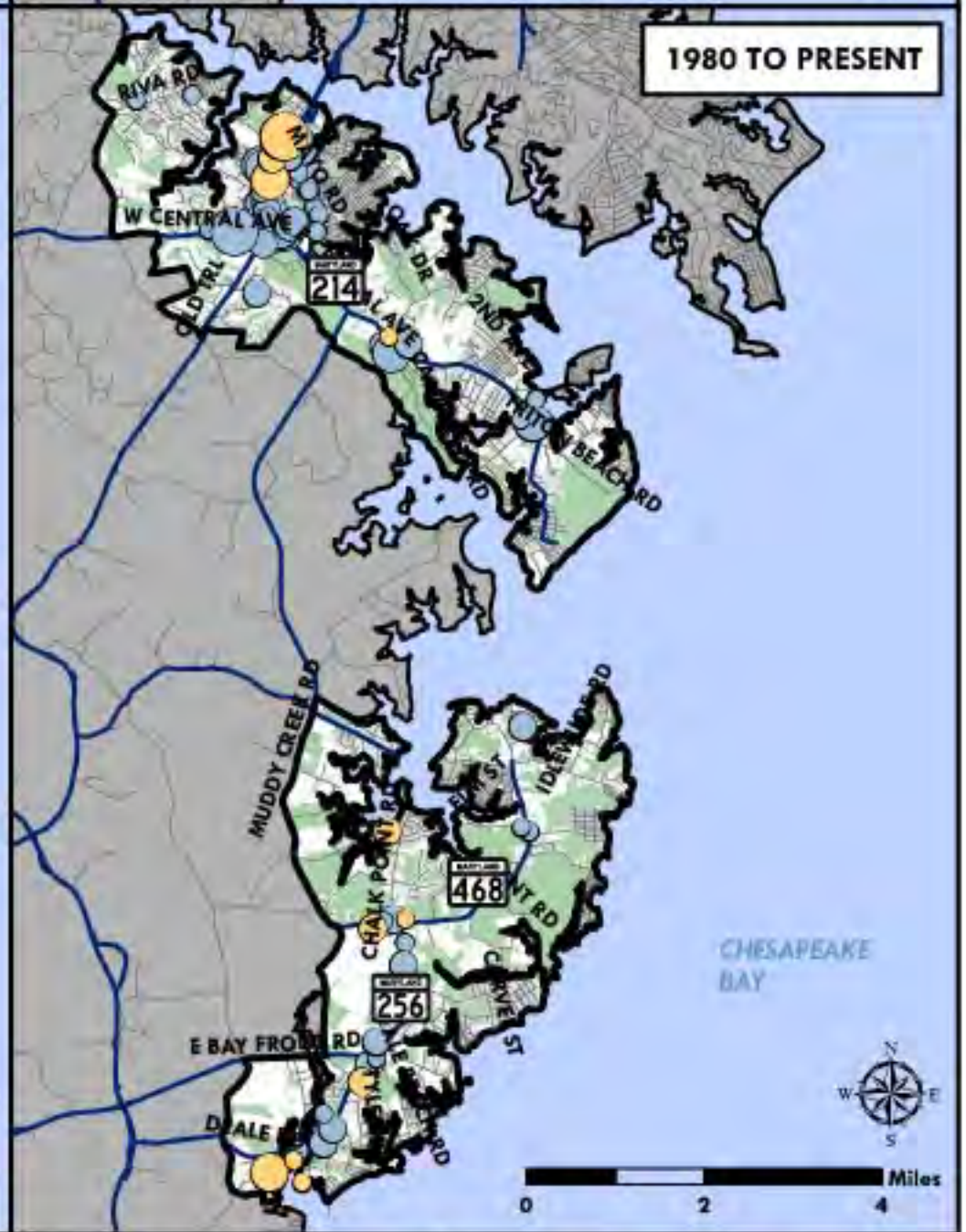
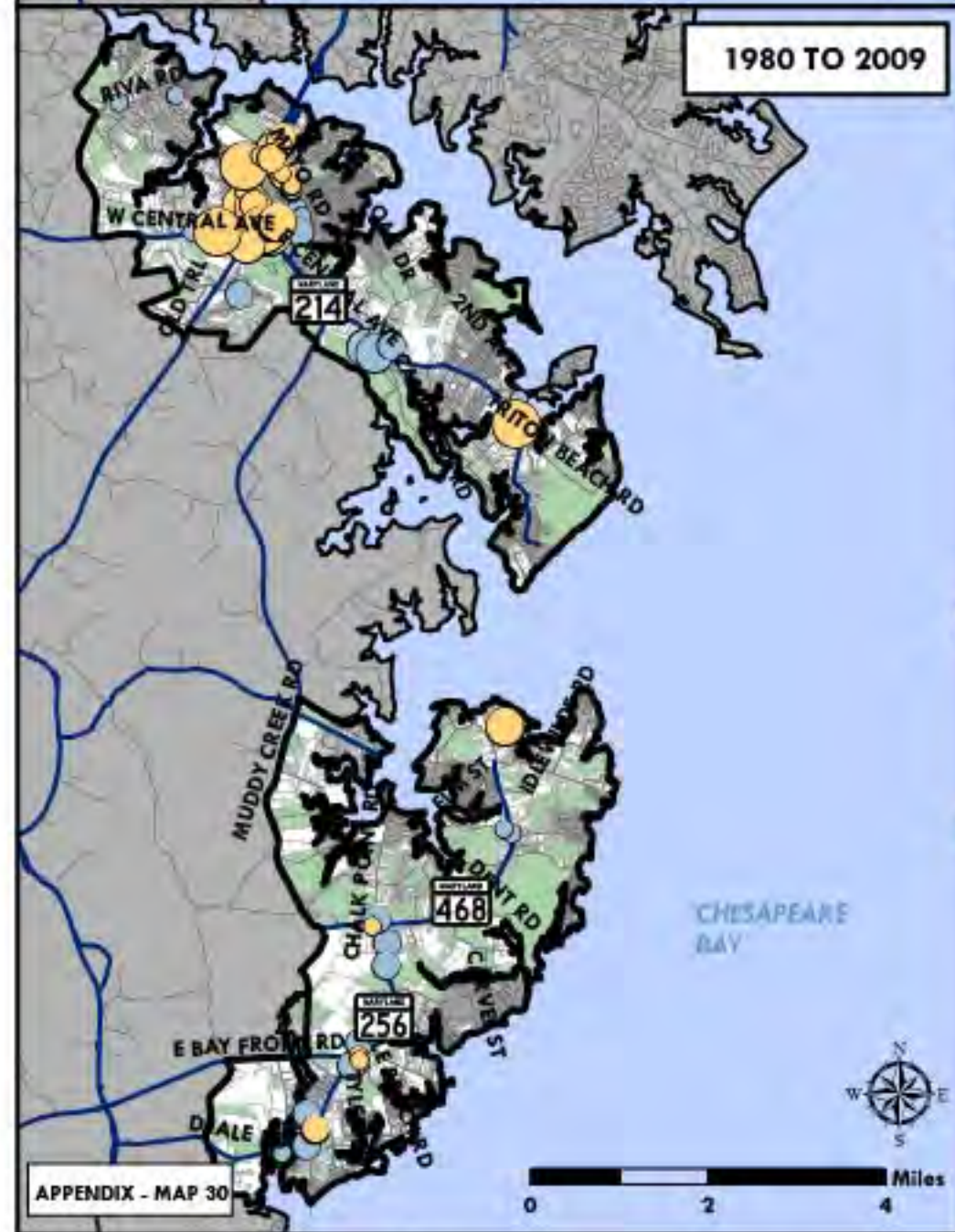
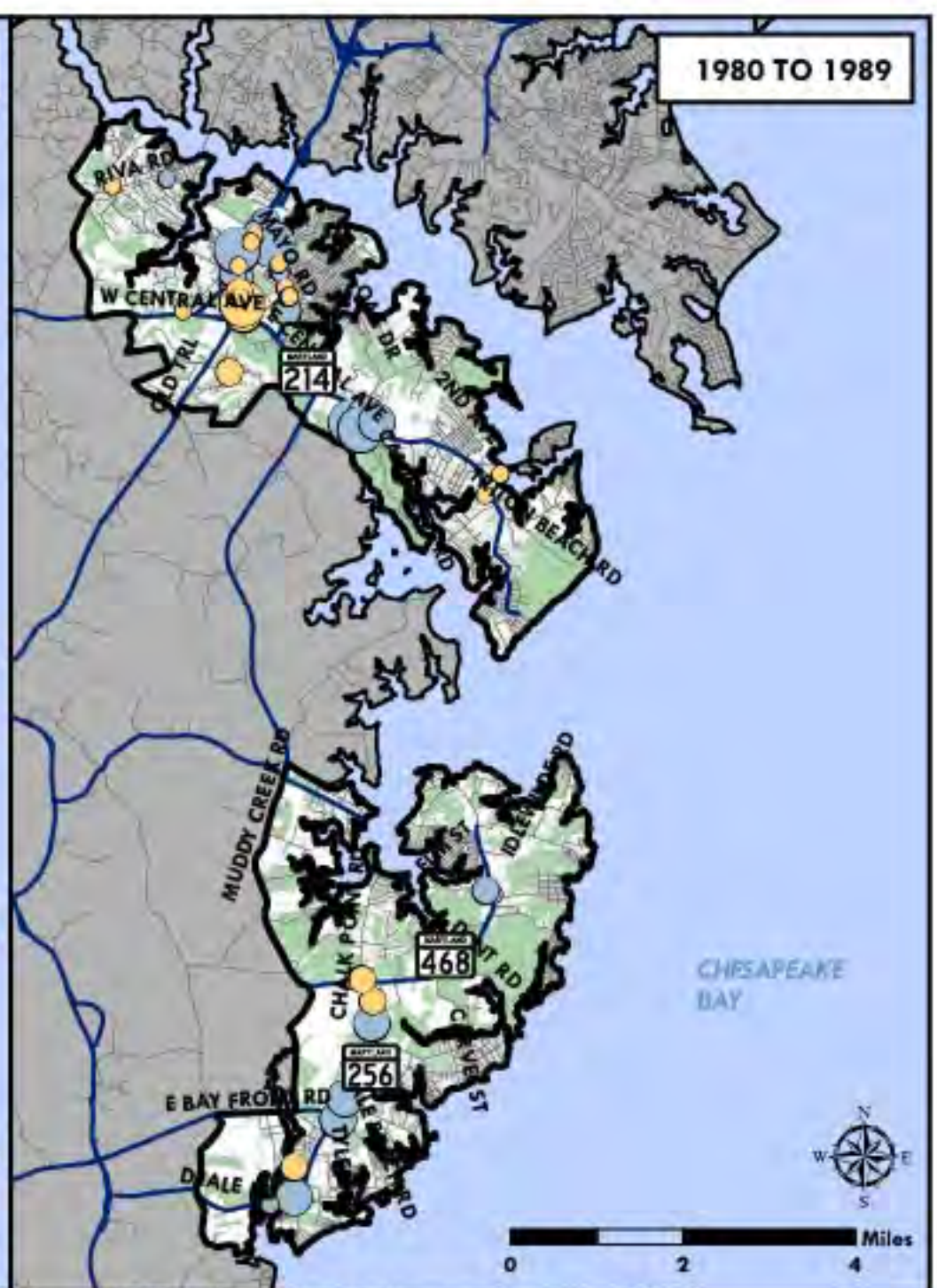
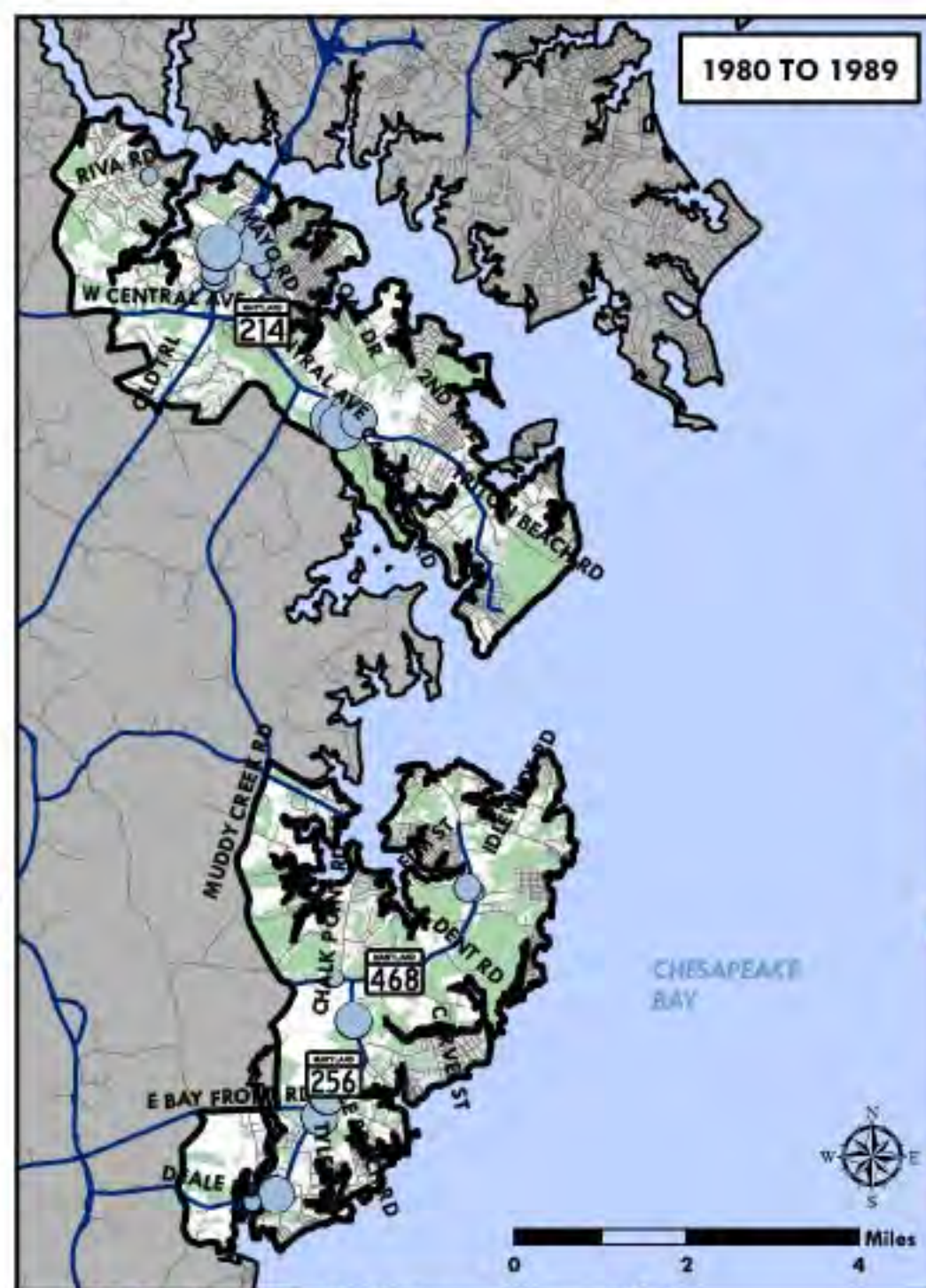
EDGEWATER-DEALE-SHADY SIDE RESIDENTIAL DEVELOPMENT ACTIVITY (10-YEAR TRENDS)

Anne Arundel County, MD

- INTERSTATE/MARYLAND HIGHWAY
- EDGEWATER-DEALE-SHADY SIDE
- OPEN SPACE
- SUBMARKET PARCELS



RKG
ASSOCIATES INC



APPENDIX - MAP 30

**EDGEWATER-DEALE-SHADY SIDE
NON-RESIDENTIAL
DEVELOPMENT
ACTIVITY
(10-YEAR TRENDS)**

- TOTAL SF (1980 - 2017)**
- 940 - 8,430 SF
 - 8,430 - 26,400 SF
 - 26,400 - 73,120 SF
 - 73,120 - 117,530 SF

- ▭ EDGEWATER-DEALE-SHADY SIDE
- INTERSTATE/MARYLAND HIGHWAY
- ▭ SUBMARKET PARCELS
- OPEN SPACE
- CUMULATIVE NON-RESIDENTIAL SF
- NEW NON-RESIDENTIAL SF



5 REDEVELOPMENT POTENTIAL ANALYSIS

A. INTRODUCTION

The following section identifies Anne Arundel County's best opportunity areas for new commercial redevelopment in the future. Over the years, Anne Arundel County has made it a priority to promote redevelopment and revitalization strategies involving older commercial districts and along highway corridors throughout the County. To identify these redevelopment opportunity areas, RKG Associates analyzed both residential and non-residential property types Countywide based on their relative assessed values. Although residential development is not the focus of this analysis, many of the commercial districts are surrounded by residential neighborhoods, which in some instances are negatively impacted by the decline of nearby commercial districts and corridors.

B. COUNTY-WIDE ASSESSED VALUE RATIO ANALYSIS

1. Methodology and Data Sources

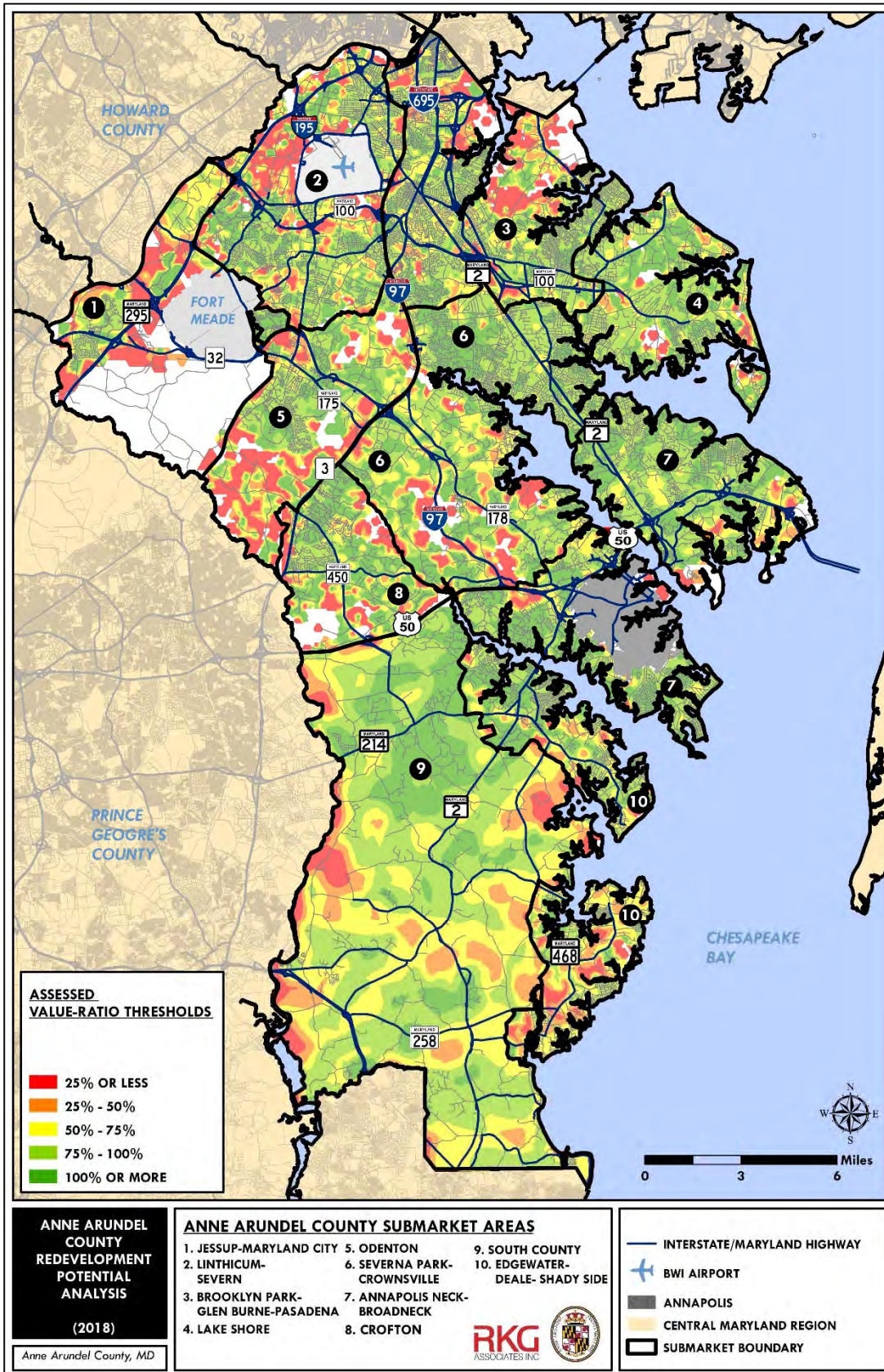
To evaluate the condition of non-residential and residential properties in Anne Arundel County and its submarket areas, RKG Associates conducted an analysis of building assessed values by building type (i.e., retail, office, industrial, etc.) on a per-square-foot basis. Each building value was then calculated as a percentage of the median assessed value of all other like building types. For example, a retail building assessed at \$50/SF would be compared against the median assessed value for all retail buildings in Anne Arundel County, let's say \$100/SF. Therefore, the assessed value ratio of the retail building would be .50 or 50% of the median assessed value for all retail buildings. The analysis is done on a per-square-foot basis to equalize the difference between very large and small buildings and allows comparisons throughout the County.

The consultant's underlying assumption is that a property's assessed value is strongly correlated to its condition. While a number of factors contribute to a property's value, it has been RKG's experience that comparing individual building values against the median value is one way to identify areas of high and low real estate values. Confirmation of these findings with on-the-ground field inspections is necessary to arrive at a more informed assessment.

The analysis compared all property types with the focus being non-residential (i.e., retail, office, industrial, services, and restaurant/hospitality) and compared them against their median value/SF. In addition, residential property types (single-family, townhomes, condominiums, apartments, and mobile homes) were also analyzed but were not the main focus of the analysis.

All building assessed values were converted into a percentage of the median value. In the above example, a non-residential property comprised of retail space valued at \$50/SF would equate to 50% of the median value (\$100/SF) of all properties classified as retail space. Properties were then arranged into five value groups (a) 0 – 25% of assessed value, (b) 25% - 50%, (c) 50% - 75%, (d) 75% - 100%, and (e) greater than 100%. Map 5-1 illustrates a geostatistical analysis that provides the assessed value-ratio calculation for all property types on a Countywide heat map. This approach gave the consultant a sense of which submarkets would be the focus areas.

Map 5-1



From a redevelopment perspective, the deepest red areas on the heat map denote properties that are at the low end of the value ratio of less than 25% of median value – regardless of the property type. Likewise, the green areas of the heat map denote areas of higher value; in some instances, above 100% of the median value per square foot. It is important to note that the assessed value ratio is only calculated on the building assessed value and not the land. While land can have a “condition value”, particularly environmentally contaminated land, most of the land parcels in the County are not impacted by such conditions and their value is more related to parcel size, zoning, and location rather than conditions.

2. Anne Arundel Assessed Value-Ratio Analysis by Property Type

- The Residential Properties in Anne Arundel County are Mostly Above Average to Excellent Condition

The analysis results indicate that 49.9% of Anne Arundel County’s residential properties are currently valued greater than 100% of the median assessed value/SF, or what is considered above average to excellent condition. An additional 48.4% range between 50% and 100% of the median assessed value/SF and are considered average to good. The final 1.6% of the County’s residential building stock has an assessed value ratio of less than 50% of the median assessed value/SF and are considered moderate to poor (Table 5-1).

**Table 5-1
 Assessed Value-Ratio Distribution by Residential Type
 Anne Arundel County Submarket Areas, MD (2018)**

Assessed Value-Ratio Thresholds	ANNE ARUNDEL COUNTY, MD					Total Inventory
	Single-Family	Townhome	Condo	Apartment	Mobile Home	
25% or Less	670	7	0	6	127	810
25% - 50%	1,665	16	0	32	19	1,732
50% - 75%	20,381	2,012	4	15	33	22,445
75% - 100%	39,728	11,707	167	18	13	51,633
100% or More	62,362	13,741	173	72	74	76,422
Total	124,806	27,483	344	143	266	153,042
PERCENT DISTRIBUTION						
25% or Less	0.5%	0.0%	0.0%	4.2%	47.7%	0.5%
25% - 50%	1.3%	0.1%	0.0%	22.4%	7.1%	1.1%
50% - 75%	16.3%	7.3%	1.2%	10.5%	12.4%	14.7%
75% - 100%	31.8%	42.6%	48.5%	12.6%	4.9%	33.7%
100% or More	50.0%	50.0%	50.3%	50.3%	27.8%	49.9%
Total	81.6%	18.0%	0.2%	0.1%	0.2%	100.0%

Source: MD Property View and RKG Associates, Inc., 2018

- Concentrations of Apartments are Considered to be in Moderate to Poor Condition
 Out of the 143 total estimated apartment developments as identified in the property assessment data (“development” does not equal to “building”, as each development can have more than one building; County’s study shows 302 apartment complexes in total), roughly 22.4% fall within the 25% to 50% of the assessed value/SF. This indicates that these 32 apartment developments are in moderate to poor condition due in part to age, deferred maintenance, and functional obsolescence. Based on recent development activity and the consultant’s on-the-ground field assessment, clusters of apartments have condition issues. A number of these apartment developments are comprised of 10 or more units, which was presented in Chapter 3 – Housing Submarket Analysis. Approximately 50.3% of apartment buildings have assessment ratios in excess of 100% or more of the assessed value/SF of all apartment properties. Typically, larger apartment communities offer various amenities, tenant services and lease out higher rent rates.
- Commensurate with Residential Development Activity, a Higher Concentration of Non-Residential Properties is Above Average
 As seen in Table 5-2, nearly 50% of all non-residential properties are above average in terms of assessment value ratio. This is largely due to the existing and additional SF dedicated to industrial and office space. Further, the County is comprised of large-scale industrial/business parks that have exhibited substantial growth in several major employment centers throughout the County.

- Parts of Anne Arundel County are Comprised of Older and Underutilized Retail Corridors

Roughly 25% of all non-residential properties are dedicated to retail space while nearly 20% of these property types are in fair to poor condition and are valued at less than 50% of the median assessed value. Similarly, 24.6% of service properties and 23.2% of restaurant/hospital properties are in fair to poor condition. As

discussed in previous chapters, Anne Arundel County has clusters of non-residential properties, often in secondary corridors that contain older and underutilized properties. This is largely attributable to the older shopping centers that are outdated and in need of renovation, thus resulting in higher vacancy and lower net operating revenues and sales prices. Areas with clusters of lower-valued properties have the potential for future redevelopment, particularly where the vacancy rate has risen, and lease rates have declined.

**Table 5-2
 Assessed Value-Ratio Distribution by Non-residential Type
 Anne Arundel County Submarket Areas, MD (2018)**

Assessed Value-Ratio % Thresholds	ANNE ARUNDEL COUNTY, MD					Total Inventory
	Retail	Office	Industrial	Services	Restaurant/ Hospitality	
25% or Less	72	37	44	25	33	211
25% - 50%	98	124	51	105	54	432
50% - 75%	130	157	107	80	58	532
75% - 100%	135	181	116	57	42	531
100% or More	409	492	310	261	188	1,660
Total	844	991	628	528	375	3,366
PERCENT DISTRIBUTION						
25% or Less	8.5%	3.7%	7.0%	4.7%	8.8%	6.3%
25% - 50%	11.6%	12.5%	8.1%	19.9%	14.4%	12.8%
50% - 75%	15.4%	15.8%	17.0%	15.2%	15.5%	15.8%
75% - 100%	16.0%	18.3%	18.5%	10.8%	11.2%	15.8%
100% or More	48.5%	49.6%	49.4%	49.4%	50.1%	49.3%
Total	25.1%	29.4%	18.7%	15.7%	11.1%	100.0%

Source: MD Property View and RKG Associates, Inc., 2018

C. TOP REDEVELOPMENT OPPORTUNITY AREAS

The following section provides the consultant's observations regarding the top redevelopment sites for non-residential properties. The results of the analysis are based on the assessed value ratio analysis, as well as RKG's field observations, which attempted to verify the statistical findings. The consultant's analysis identified ten total redevelopment opportunity areas in four of the ten submarkets. Some redevelopment areas incorporate the County's proposed commercial revitalization areas that were established in 2002¹ but others do not. RKG validated its findings by reviewing the results with Anne Arundel County's Office of Planning and Zoning. Overall, each of these submarket areas is characterized as major activity centers that have experienced development growth along commercial corridors as well as the surrounding residential neighborhoods. RKG prepared several maps identifying the rough boundaries of each redevelopment opportunity area in the following submarkets:

- Linthicum-Severn Submarket
- Brooklyn Park-Glen Burnie-Pasadena Submarket
- Odenton Submarket
- Crofton Submarket

¹ <https://www.aacounty.org/departments/planning-and-zoning/community-revitalization/commercial-revitalization-areas/index.html>

1. Linthicum-Severn Submarket Redevelopment Areas

Situated near many of the County's transportation corridors and in one of the more densely developed areas of the County, this submarket area can be characterized as a major employment center. A high concentration of non-residential development is driven by the location of the BWI Airport as well as the regional shopping center known as Arundel Mills Mall. Overall, roughly 65% of the Linthicum-Severn submarket is comprised of non-residential properties in above-average conditions. However, nearly a quarter of these property types are considered to be in moderate to poor condition. RKG identified three redevelopment opportunity areas within this submarket.

a. Site 1 – Stoney Run/BWI Airport Area Corridor

This redevelopment opportunity site is neighboring the BWI Airport area, which is comprised of several large-scale non-residential properties dedicated to industrial and office space. Additionally, there are various service/distribution centers associated with the airport area. Based on RKG's development activity analysis, development patterns throughout this corridor have led to the expansion of more non-residential development. In fact, the corridor has already established opportunities to deliver a mixed-use development, led by Heffner & Weber LLC, along Ridge and New Ridge Road, with plans currently under review by the County.² However, Map 5-2 implicates that the conditions of several properties are below 50% of the assessed value. The site maintains several concentrated vacant parcels that offer room for growth, but the location of the airport may limit its full capacity of redevelopment potential (Map 5-2).

b. Site 2 – MD Highway Route 176/100 Corridor

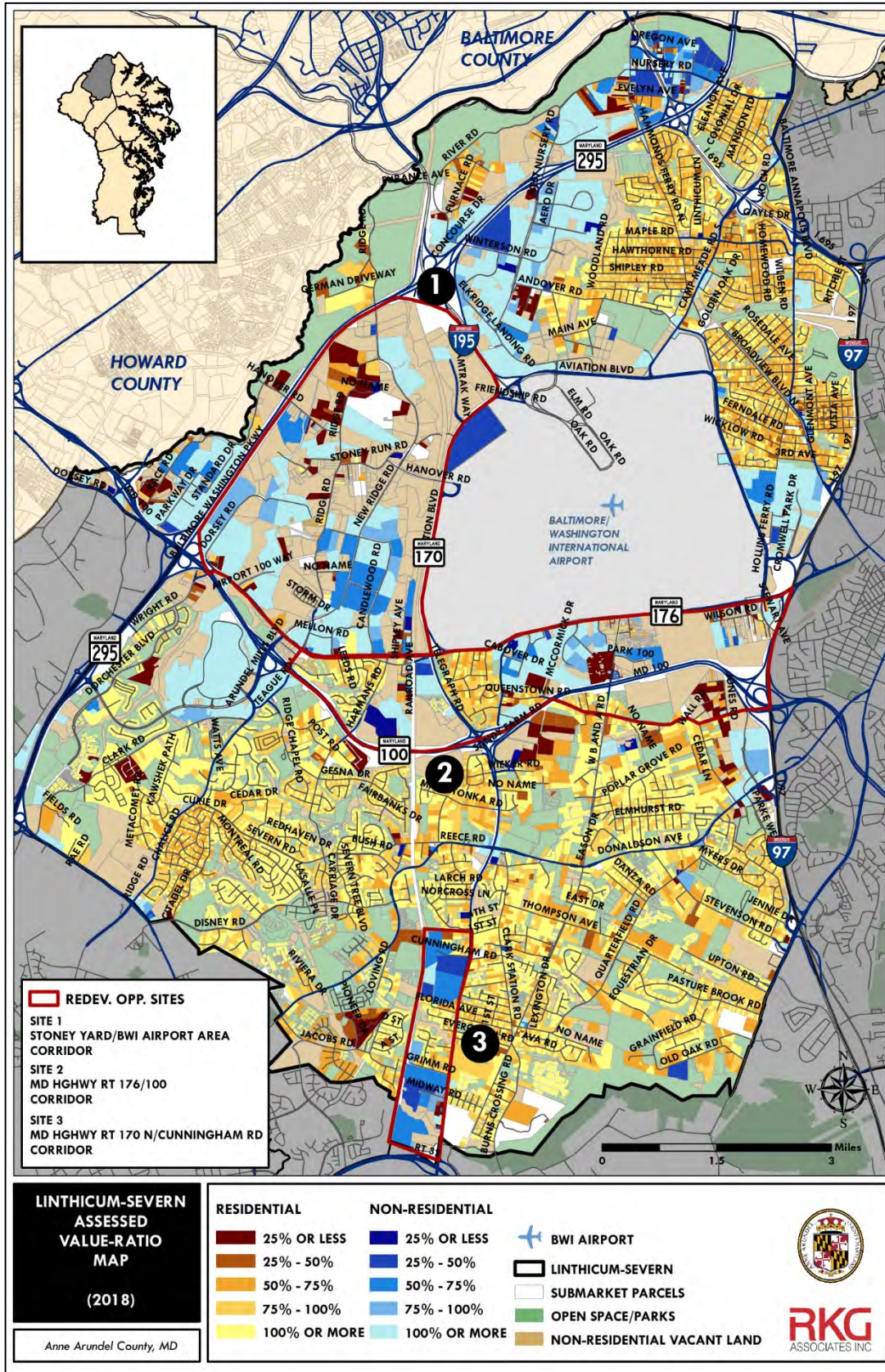
This site is surrounded by MD Highway Routes 176 and 100, with both heading east and west throughout the County. Its location is somewhat restricted due to its proximity near the airport area, but there are vacant parcels that have the potential for redevelopment, specifically near the intersection of MD Highway Route 100 and Telegraph Road. The corridor is surrounded by clusters of residential neighborhoods in addition to several manufacturing/distribution centers, such as Williams Scotsman Inc. as well as an office park heading east along MD Highway Routes 176 and 100. Despite the proximity of BWI airport, this site contains strategic transportation nodes that are utilized daily and surrounded by major employment centers that continue to exhibit patterns of growth and job opportunities.

c. Site 3 – MD Highway Route 170 N/Cunningham Corridor

The southern portion of this submarket area is comprised of residential communities that have experienced clusters of new residential development. The Site 3 corridor, however, has a higher concentration of older properties both residential and non-residential. This site extends along MD Highway Route 170 to Cunningham Road. Additionally, there is a concentration of non-residential properties that are performing at below 50% of the assessed value. These properties are dedicated to manufacturing companies in addition to a storage facility site. Further, this corridor most likely performed at a more efficient level in previous years, but due to the high concentration of surrounding residential development, has deteriorated. This deterioration in combination with usage presents opportunities for strategic redevelopment potential.

² <https://www.bizmonthly.com/the-bwi-aerotropolis-is-now-its-time/>

Map 5-2



2. Brooklyn Park-Glen Burnie-Pasadena Submarket Redevelopment Areas

This submarket is characterized as one of the most vibrant mixed-use communities in the County due to its efficient transportation connectivity and the location of the Glen Burnie Town Center. This activity center has continued to expand and is comprised of large commercial power centers along Ritchie Highway. This submarket has the highest concentrations of non-residential properties, which are largely defined by the major commercial corridors along Ritchie and Crain Highway as well as the industrial/office parks dispersed throughout the submarket. Over the years, the County has made it a priority to revitalize under-utilized commercial nodes. Only 37.9% of non-residential properties are considered to have an assessment ratio above 50%, with another 23.8% of properties classified as fair to poor condition. Combined, approximately 43.6% of non-residential properties dedicated to retail and office space are showing conditions below 50% of the median assessed value for those property types. The following redevelopment opportunity areas were observed in the Brooklyn Park-Glen Burnie-Pasadena submarket.

a. Site 1 – Ritchie Highway/Thomas Point Corridor

Situated on Ritchie Highway, this corridor is dominated by shopping centers/plazas and surrounded by residential neighborhoods (Map 5-3). The site is placed in a prime location giving consumers easy access to this commercial corridor. Each power center is anchored with big-box retail storefronts (Target, Costco, Home Depot, Walmart) and several food services/restaurants. A higher concentration of these establishments was built between 1980 and 1989, which may indicate why conditions are fair to poor but have continued to experience growth throughout the years.

Additionally, a portion of the redevelopment opportunity site along Dover Road NE is comprised of non-residential properties dedicated to industrial space and distribution centers. One is a portion of the U.S. Army Reserve Depot near Curtis Creek that is not being used for any purpose. Over the years, the County has identified suitable redevelopment opportunities as sites of this kind become available by monitoring their status. Overall, Anne Arundel County continues to promote redevelopment of brownfield sites and makes it a priority to retain the limited inventory of industrial zoned districts. To this point, this site would be complimentary for industrial uses that would benefit from its proximity to the Port of Baltimore. However, the County does not have control over the development of this site since it is still under Federal ownership.

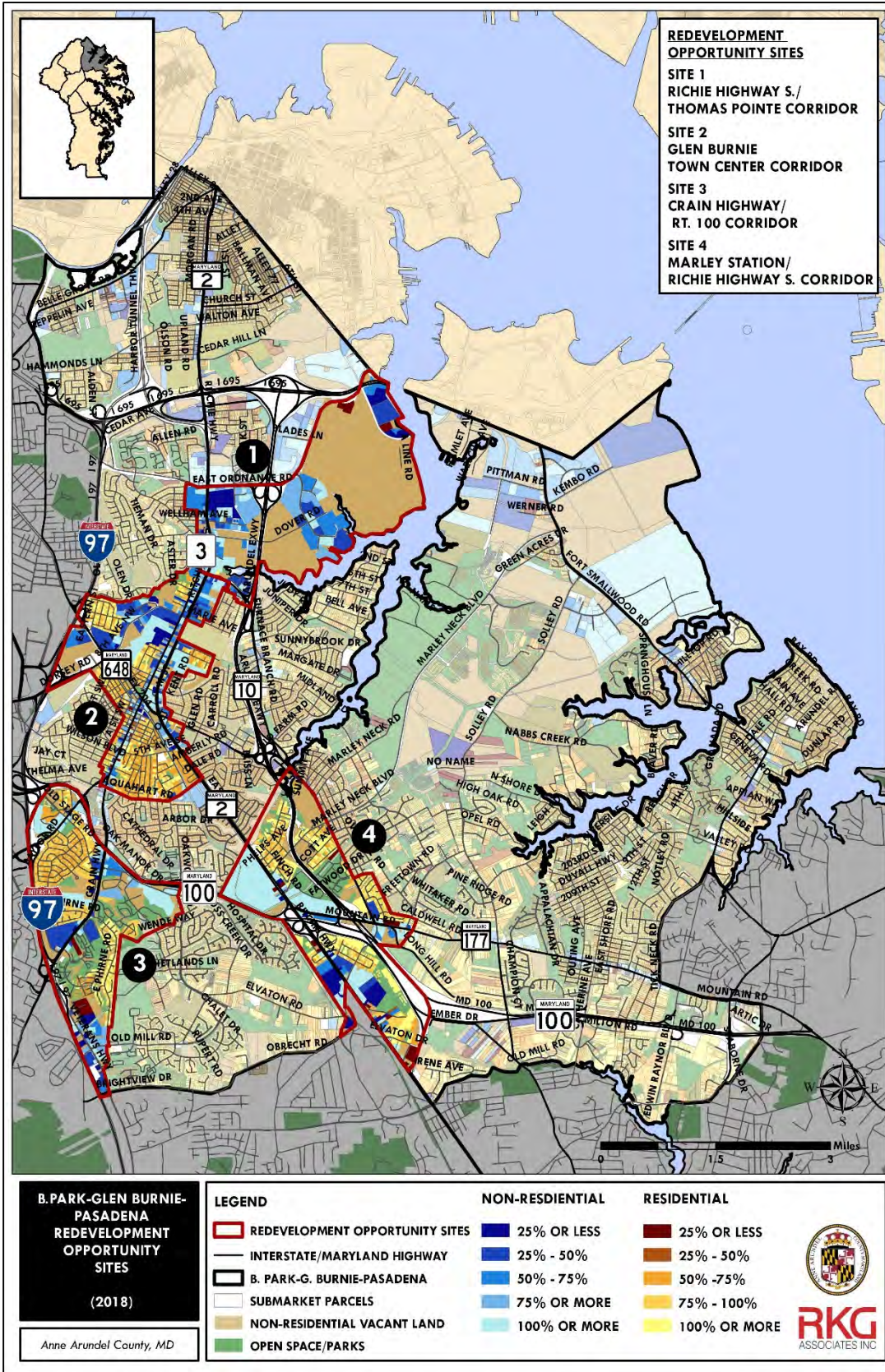
b. Site 2 – Glen Burnie Town Center Corridor

This corridor is concentrated in the heart of the Glen Burnie Town Center, one of the County's activity hubs. Additionally, this site incorporates some of the County's existing commercial revitalization overlays. Surrounded by residential communities, this corridor is anchored by small local businesses bounded by Ritchie and Crain Highway.

c. Site 3 – Crain Highway/MD Highway Route 100

Although a higher concentration of this corridor is dominated by residential communities and not in need of redevelopment, several non-residential properties are being underutilized impacting the performance and value of these specific areas. That said, the site is adjacent to the Quarterfield Crossing Shopping Center between Interstate 97 and Crain Highway. The location of the East Park Plaza Shopping Center and Target are steering the commercial activity; however, Map 5-3 illustrates that these properties are underperforming and below 50% of the assessed value. Based on RKG's development analysis, these properties are older which have resulted in condition problems and vacancy, ultimately impacting the performance of this commercial corridor.

Map 5-3



d. Site 4 – Marley Station/Ritchie Highway Corridor

Marley Station Mall, which was built in 1987, is a regional shopping center containing several big-box department stores such as Macy's, JC Penny, and Sears. However, based on the consultant's field observation a noticeable portion of the mall is closed. Tenant vacancies are prevalent, and the 800,000 SF mall recently sold to a Texas-based investor, Developer G.L. Harris of Fort Worth, for \$22.7 million.³ Looking at the short-term, there has not been much discussion regarding redevelopment as sales continue with the three anchors remaining fully occupied, however, new development surrounding the regional shopping mall could help the corridor meet its full potential.

3. Odenton Submarket Redevelopment Areas

The Odenton submarket area has continued to experience new development in most recent years. This is largely attributed to the Odenton Town Center, which has created redevelopment opportunities as well. According to RKG's development activity analysis, this submarket has experienced clusters of multi-family development, specifically townhomes and large-scale apartment complexes. From a non-residential development perspective, the Odenton submarket is comprised of several commercial retail corridors and industrial parks bounded by Annapolis Road and Maryland Highway Route 32, as well as Crain Highway, which is utilized by the neighboring submarkets throughout the County, such as Crofton and Severna Park-Crownsville. The data indicate that roughly 27% of non-residential properties are below 50% of the assessed value and are considered fair to poor condition. Many of these properties are in just two redevelopment opportunity areas identified by RKG Associates.

a. Site 1 – Annapolis Road/MD Highway Route 32 Corridor

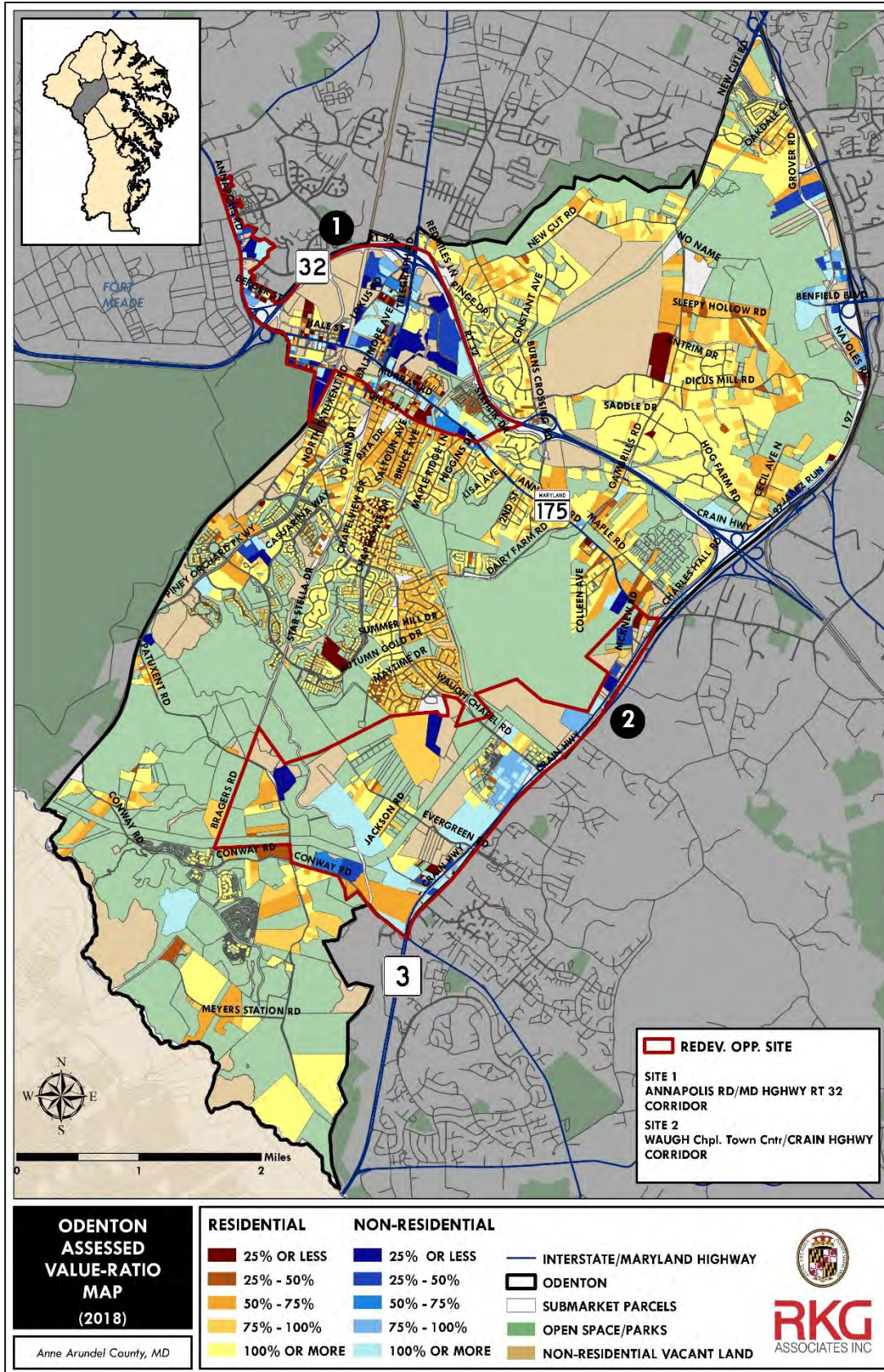
This corridor is comprised of the Odenton Growth Management Area, also known as the "Odenton Town Center", which is one of three designated Town Centers in Anne Arundel County. This site is located at the junction of Maryland Highway Routes 32, 170 and 175. In more recent years, the entire Odenton submarket has expanded due to local growth pressures, specifically at the Fort Meade Military Installation. The job creation occurring at Fort Meade, the largest employment center in the State of Maryland, has spun-off new development opportunities and revitalization activities along the major transportation corridors. This corridor is comprised of small local businesses and large-scale multi-family apartment communities such as the Village at Odenton Station and Flats 170 at the Academy Yard, managed by Bozzuto. Another portion of the corridor consists of manufacturing distribution centers, which have been in the area for quite some time.

b. Site 2 – Waugh Chapel Town Center/Crain Highway Corridor

The southeast portion of the corridor contains a redevelopment opportunity site along Crain Highway. The site is anchored by the Waugh Chapel Town Center, which is characterized as a power center. Additionally, this hub is comprised of various services as well as an age-restricted residential community. This transportation node is shared by the southern part of the County and is utilized by residents that live in communities such as Crofton, Severna Park-Crownsville and South County. Over the years, the Crain Highway corridor has continued to expand, and businesses continue to thrive and draw customers.

³ <http://www.baltimoresun.com/business/bs-bz-marley-station-sold-20170117-story.html>

Map 5-4



4. Crofton Submarket Redevelopment Areas

The Crofton submarket shares the same transportation corridor as Odenton and shares commercial development along Crain Highway. Crofton is characterized by established residential communities and the village/community centers in this area have experienced some declining conditions due to age, appearance, and usage. Overall, this submarket has a very small concentration of non-residential development with a total of 130 properties, mainly designated as office space, retail, and services. It is more than likely that most consumers commute up the corridor toward Odenton for shopping services and other entertainment. However, the southern portion of Crain Highway could potentially complement the Waugh Chapel Town Center.

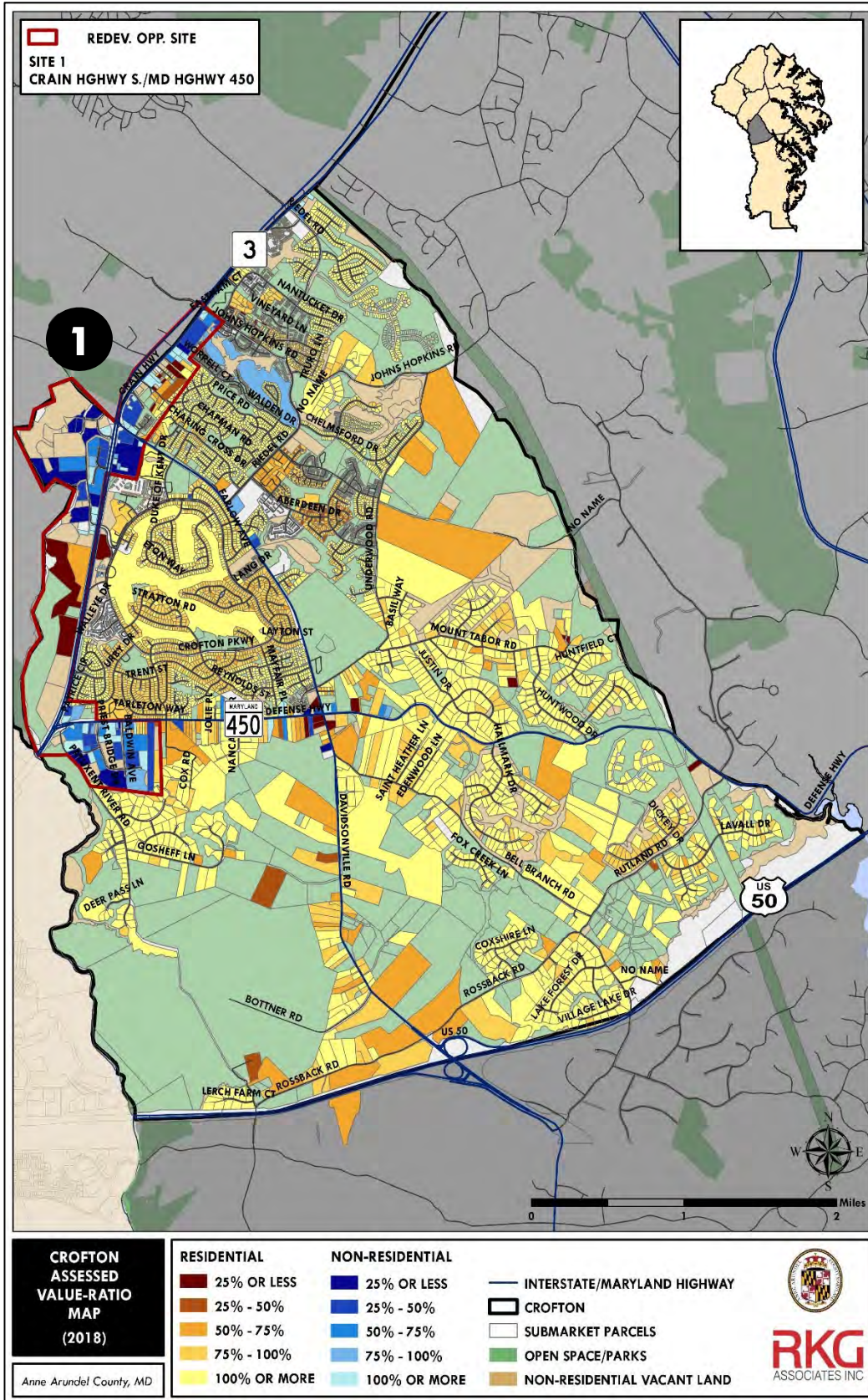
a. Site 1 – Crain Highway S./MD Highway 450 Corridor

Located below the Waugh Chapel Town Center, this site is comprised of The Crofton Centre and small local businesses consisting of mostly of service and distribution stores (Map 5-5). This corridor is in a prime location but is under-utilized. There are several distribution centers, such as FedEx, in the southern portion of the corridor. Further, MD Highway Route 450 extends east to west throughout the submarket and into another neighboring submarket. With most of the transportation node surrounded by residential neighborhoods, there is room for commercial redevelopment and revitalizing the village/community centers should be a priority as this would increase the value of the submarkets non-residential properties as well as create a more vibrant and balanced community.

D. IMPLICATIONS

Like many fast-growing suburban communities in the Greater Baltimore-Washington Metropolitan Area, the persistent growth pressures have resulted in rapid population gains that drive the demand for retail, office and other non-residential development. During the past 40 years, Anne Arundel County's ability to capture its fair share of this growth has resulted in tens of millions of square feet of new building space and these newer developments have steadily replaced older retail, office, industrial and multi-family communities that have lost the competitive advantage they once had. These older commercial/industrial areas and neighborhoods have continued to operate in many instances, but they can no longer command the top market sales values or lease rates and now show signs of decline and deferred maintenance. In the worst instances, these areas experience higher vacancy rates, lower rental rates, which reduce net operating income and assessed value. This analysis identifies ten areas where the non-residential tax base is being eroded over time and these areas are not able to compete with newer developments. In some cases, the existing uses are viable but represent an underutilization of the land and higher and better uses would emerge if the County took deliberate steps to partner with private development interests in a more strategic partnership arrangement.

Map 5-5



6 REAL ESTATE MARKET ANALYSIS

A. INTRODUCTION

The following section details the multi-family, retail, office and industrial market forces that are shaping Anne Arundel County’s development environment. This analysis reflects the most current market conditions and recent trends and includes information such as the current building inventories (i.e., existing and available building square feet), leasing, vacancy rates, and building absorption activity over a 12-month period for the different real estate market segments.

With the assistance of the Anne Arundel County Economic Development Corporation, RKG Associates obtained CoStar market analytic reports for retail,

office, multi-family and industrial property segments. The market reports are broken down into various submarket areas. CoStar’s submarket areas have similar boundaries to RKG’s submarket areas used in this analysis. Table 6-1 shows how CoStar’s six submarket areas for Anne Arundel correspond with RKG’s submarket areas and Figure 6-1 illustrates a geographical display of where the CoStar’s submarkets are concentrated. It should be noted that the boundaries for these submarkets apply to each of the market property segments. It should be noted that CoStar’s reference to the Route 2 Corridor is referring to what is locally known as Ritchie Highway North and South. The purpose of this analysis is to give a snapshot of recent market trends in each of the key market segments and relate those trends to other growth trends presented in this report. RKG utilized CoStar’s five-year average trends to reflect recent market health and activity.

In addition, RKG Associates set up a series of interviews with real estate professionals with experience and investment interests in Anne Arundel County. The purpose of the interviews was to obtain first-hand perspectives about the Anne Arundel County market that go beyond simple data analytics. The opinions of local real estate professionals are included in this section and deal with a wide range of real estate and growth topics. Additionally, the interviews provide some context behind some of the data presented in this section.

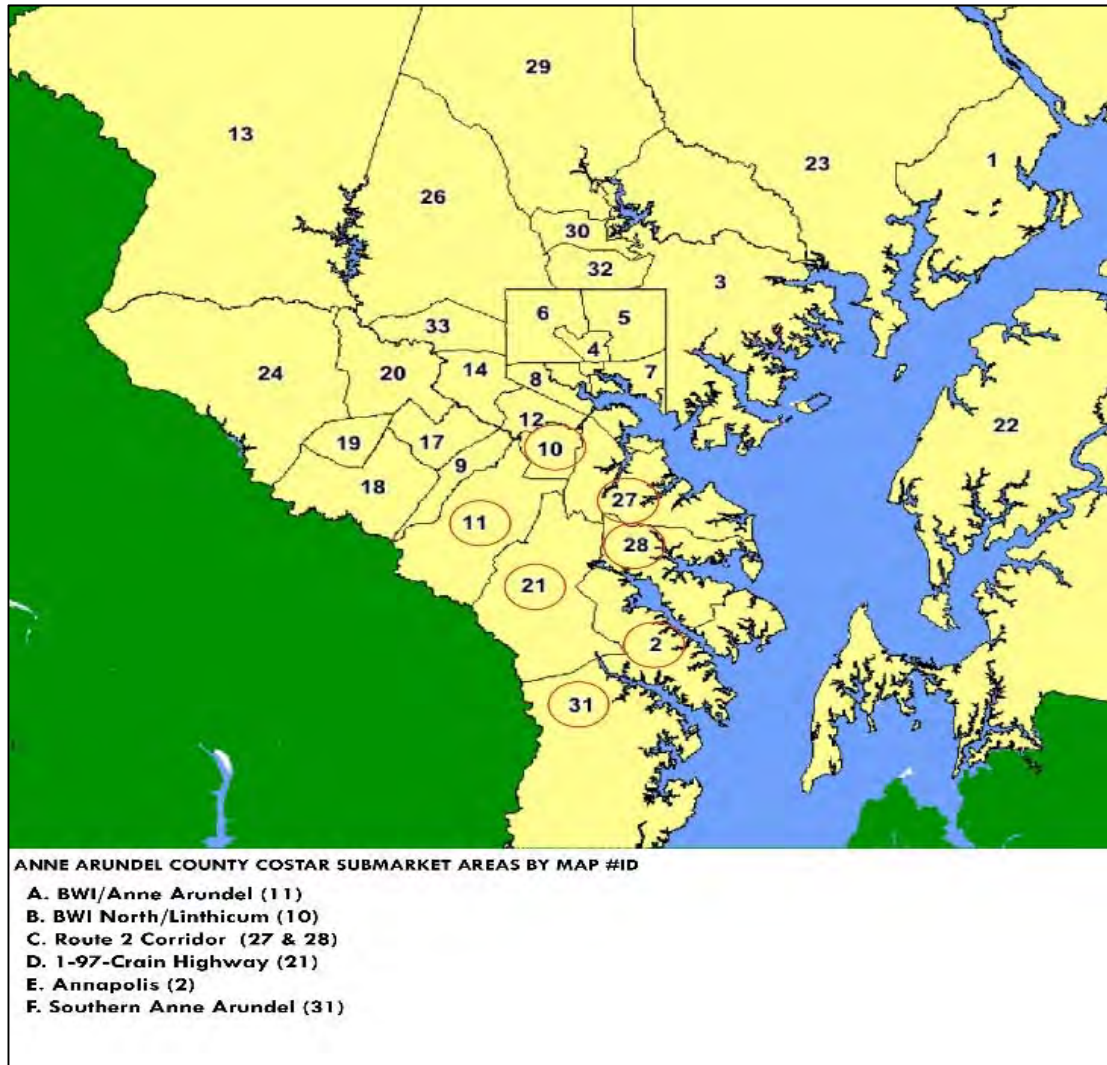
It should be noted that several reports for each submarket area were limited to the available data, which may alter the data results throughout the chapter. Additionally, the geographical framework of the Annapolis submarket includes Broadneck and the City of Annapolis. CoStar’s data for this area is largely influenced by the City’s supply and demand factors, which were excluded from RKG’s County-level analysis. However, this is the only submarket impacted by the City of Annapolis in this way.

Table 6-1
Submarket Breakout (CoStar vs RKG Areas)
Anne Arundel County, Maryland

CoStar Submarket Areas	RKG Submarket Areas
BWI/Anne Arundel	Jessup-Maryland City Linthicum-Severn
BWI North/Linthicum	Linthicum-Severn
Route 2 Corridor	Brooklyn Park-Glen Burnie-Pasadena Lake Shore Severna Park-Crownsville
I-97-Crain Highway	Odenton Crofton
Annapolis	Annapolis Neck-Broadneck
Southern Anne Arundel	South County Edgewater-Deale-Shady Side

Source: CoStar & RKG Associates, Inc., 2018

Figure 6-1: CoStar Market Supply Submarket Boundaries



Source: CoStar Group & RKG Associates, Inc., 2018

B. MULTI-FAMILY MARKET OVERVIEW

Throughout this study, the RKG team has identified an estimated total of 143 apartment developments (“development” does not equal to “building”, as each development can have more than one building; County’s study shows 302 apartment complexes in total) according to the state’s property assessment record data. Due to limitations in the data availability, it was difficult to estimate the total number of units, which is why the consultants utilized American Community Survey estimates in Chapter 3 of this study. In addition, data obtained from a current Anne Arundel County apartment study does not include a 100% inventory of the County’s multi-family inventory because not all apartment managers or management companies participated in the survey. It is the most current estimate of the County’s apartment supply.

Yet as discussed in Chapter 3, it should be noted that after data verification using the Maryland property assessment data and aerial maps from Google Maps, RKG believes the ESRI allocation of U.S. Census housing counts resulted in a misallocation of mobile homes and multi-family units in Submarket 4 Lake Shore

and Submarket 9 South County. RKG believes there should be 344 (instead of 478) units for housing properties with 10 or more units in structure in Lake Shore, as confirmed by MD PropertyView assessment data and confirmed with Google Maps. RKG also believes there should be no multifamily unit in South County, and the number of mobile homes/other units in this submarket should be 1,453 instead of 1,630. The following tables and discussions of data are based on the U.S. Census results as RKG cannot alter the Census data.

1. Multi-family Inventory by Structure and Unit Type

RKG Associates' use of multiple data sources indicates that the total inventory of multi-family units in Anne Arundel County is around 27,000 to 32,000 units. The consultants used American Community Survey 2012-2016 estimates to assess the total multi-family inventory by structure type and Anne Arundel County's recent apartment study by unit type to determine the multi-family inventory. The unit totals are similar and are believed to be reasonable estimates of the current number of multi-family units (Table 6-2). It should be noted, that the ACS unit supply includes structures with 2-4 units, which include duplex properties. An unknown percentage of duplex units are owned and occupied by their owners and they often rent their second unit to reduce their living costs. Despite the inclusion of some ownership units, the ACS unit estimates (32,390 units) are within 5,000 units of the County's survey results. In addition, CoStar data reports market performance averages over a five-year period (2014-2018), which includes multi-family inventory levels, rent rates, vacancy rates, and 12-month absorption trends in CoStar's designated submarket areas. CoStar's current (2018) multi-family inventory consists of 33,543 units but includes the City of Annapolis in its totals. While it is not possible to tease-out the City's multi-family units, the CoStar data support a multi-family inventory of around 30,000 units. CoStar typically only track investment-grade properties and would exclude many smaller apartment properties that do not meet that definition.

- Anne Arundel County's Multi-family Market Contains a High Concentration of Properties with 10 or More Units
Approximately 74.7% (24,209 units) of the County's multi-family inventory is in buildings with 10 or more units. A vast majority of these multi-family developments are clustered near major transportation networks in Annapolis, Glen Burnie and other areas in the northern part of the County. The conditions of these buildings vary and based on RKG's assessed value-ratio calculations, a portion of the multi-family supply is outdated and have condition issues that are reducing their market value. In contrast, the County has exhibited clusters of newly developed multi-family developments with 10 or more units. Typically, large-scale, luxury or higher-end multi-family properties offer various community amenities (i.e., pools, fitness facilities, community buildings, etc.) and tenant services, which are more attractive to tenants but carry higher rental rates, which is highly concentrated within the northern portion of the County and known as activity/power centers for various development types both residential and non-residential.
- Commensurate with Recent Development Activity, Concentrations of Multi-family Housing are Occurring in the Northern Part of the County
Submarkets 1 (Jessup-Maryland City), 2 (Linthicum-Severn), 3 (Brooklyn Park/Glen Burnie/Pasadena) 5 (Odenton) and 7 (Annapolis Neck/Broadneck) account for roughly 80% from the County Apartment Study. 94.6% of the total inventory of multi-family units and over 44% of these units are concentrated in the Brooklyn Park-Glen Burnie-Pasadena submarket (Table 6-2 and Figure 6-2). Anne Arundel County's apartment survey shows a similar distribution at roughly 40% from the County Apartment Study (44%) of the unit type in the same submarket area. Most of these multi-family developments are comprised of 10 or more units and located along major transportation corridors such as Ritchie Highway and Marley Neck Road, which have experienced growth in recent years.

Figure 6-2

- Anne Arundel County Market is Dominated by One- and Two-Bedroom Units

Collectively these unit types represent approximately 86.7% of the market share for each submarket (Table 6-2). This is largely attributed to the multi-family developments located in the northern portion of the County as well as its high concentration of townhome development.

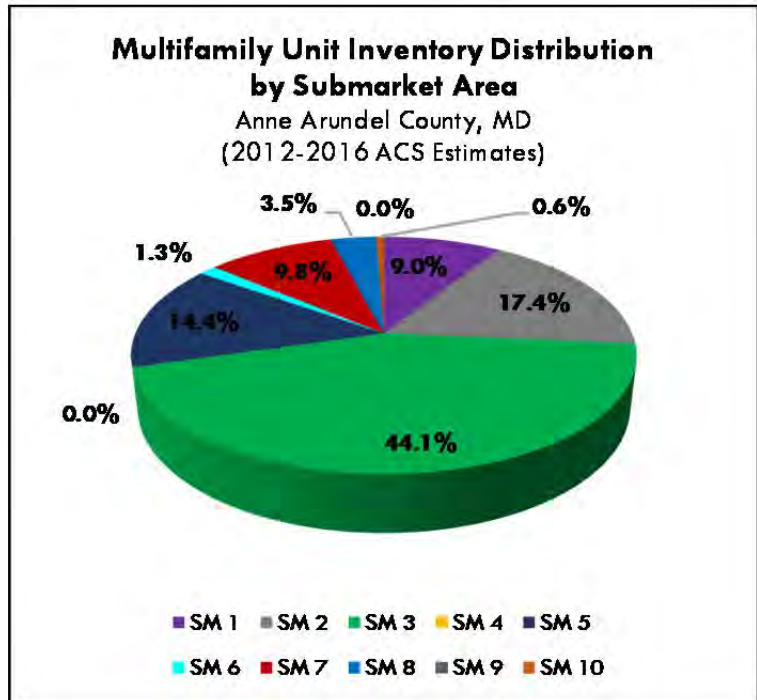
- There Has Been an Increase in the Number of Age-Restricted Apartments Over the Years

The County contains a total 2,959 units of other multifamily types, which include age-restricted apartments, rented households and FHA or ADA approved units. As for age-restricted units, these property

types are largely driven by a growing number of persons within the older age cohorts (55 years and older) and retirees who are looking to downsize their living space or are seeking long-term assisted living or retirement opportunities. There are roughly 981 age-restricted units and dispersed throughout the County, mainly in the northern submarkets of Jessup-Maryland City, Linthicum-Severn, Brooklyn Park/Glen Burnie/Pasadena and Annapolis Neck/Broadneck.

- Anne Arundel County has Delivered Close to 1,000 new Apartment Units per Year Over the Past Five Years

CoStar reports that on average, 970 new multi-family units have been delivered annually over the past five years. Most of these new units have occurred in the Annapolis, BWI/Anne Arundel and in the I-97/Crain Highway Corridor. In addition, these same submarkets are attracting the newest units under construction and new construction starts (Table 6-3).



Source: ACS 2012-2016 Estimates and RKG Associate, Inc., 2018

Table 6-2
Multifamily Inventory Distribution by Structure & Unit Type
Anne Arundel County Submarket Area, MD (2018)

SUBMARKETS	MULTIFAMILY STRUCTURE TYPE					Total Structure Inventory	Efficiency/Studio	MULTIFAMILY UNIT TYPE				Total Inventory
	2 to 4 Units	5 to 9 Units	10 or More Units	One-Bedroom	Two-Bedroom			Three-Bedroom	Four-Bedroom			
SM 1 - Jessup-Maryland City	174	617	2,830	748	1,403	3,621	2	304	0	0	2,457	
SM 2 - Linthicum-Severn	330	466	2,192	1,382	2,433	2,988	168	738	40	0	4,761	
SM 3 - Brooklyn Park-Glen Burnie-Pasadena	1,403	2,531	9,177	4,669	5,639	13,111	308	1,413	29	0	12,058	
SM 4 - Lake Shore	50	0	478	3	0	528	0	0	0	0	3	
SM 5 - Odenton	139	390	4,122	1,517	2,053	4,651	15	348	3	0	3,936	
SM 6 - Severna Park-Crownsville	120	29	718	233	113	867	12	7	0	0	365	
SM 7 - Annapolis Neck-Broadneck	304	996	3,694	1,415	1,107	4,994	64	85	1	0	2,672	
SM 8 - Crofton	189	342	734	360	522	1,265	0	67	0	0	949	
SM 9 - South County	0	11	26	0	4	37	0	0	0	0	4	
SM 10 - Edgewater-Deale-Shady Side	89	0	238	32	88	327	37	2	0	0	159	
TOTAL	2,798	5,382	24,209	10,359	13,362	32,389	606	2,964	73	0	27,364	
PERCENT DISTRIBUTION												
SM 1 - Jessup-Maryland City	6.2%	11.5%	11.7%	11.2%	10.5%	11.2%	0.3%	10.3%	0.0%	0.0%	9.0%	
SM 2 - Linthicum-Severn	11.8%	8.7%	9.1%	9.2%	18.2%	9.2%	27.7%	24.9%	54.8%	0.0%	17.4%	
SM 3 - Brooklyn Park-Glen Burnie-Pasadena	50.1%	47.0%	37.9%	40.5%	42.2%	40.5%	50.8%	47.7%	39.7%	0.0%	44.1%	
SM 4 - Lake Shore	1.8%	0.0%	2.0%	1.6%	0.0%	1.6%	0.0%	0.0%	0.0%	0.0%	0.0%	
SM 5 - Odenton	5.0%	7.2%	17.0%	14.4%	15.4%	14.4%	2.5%	11.7%	4.1%	0.0%	14.4%	
SM 6 - Severna Park-Crownsville	4.3%	0.5%	3.0%	2.7%	0.8%	2.7%	2.0%	0.2%	0.0%	0.0%	1.3%	
SM 7 - Annapolis Neck-Broadneck	10.9%	18.5%	15.3%	15.4%	8.3%	15.4%	10.6%	2.9%	1.4%	0.0%	9.8%	
SM 8 - Crofton	6.8%	6.4%	3.0%	3.9%	3.9%	3.9%	0.0%	2.3%	0.0%	0.0%	3.5%	
SM 9 - South County	0.0%	0.2%	0.1%	0.1%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	
SM 10 - Edgewater-Deale-Shady Side	3.2%	0.0%	1.0%	1.0%	0.7%	1.0%	6.1%	0.1%	0.0%	0.0%	0.6%	
% TOTAL	8.6%	16.6%	74.7%	100.0%	48.8%	100.0%	2.2%	10.8%	0.3%	0.0%	100.0%	

Source: U.S. Census American Community Survey 2012-2016 Estimates, Anne Arundel County & RKG Associates, Inc., 2018

2. Multi-family Rental Rates

- The Southern Portion of Anne Arundel County has a Limited Multi-family Market with Lower Rent Rental Rates

According to CoStar’s five-year averages, the Southern Anne Arundel County submarket is comprised of only 608 units. Rental rates were only captured for 1-2-bedroom units and range between \$430-766, which is well below the average for these unit types throughout the County (\$1,169 and \$1,399) (Table 6-3). The lower rental rates in these submarkets reflect a limited and older supply of apartment units that are smaller in size with condition issues. These conditions have likely reduced the demand for these units. These submarket areas include South County, Edgewater-Deale-Shady Side, and portions of Severna Park-Crownsville.

- Rental Rates Vary Considerably within the County and Vary Greatly Based on Location, Age and Amenities

Based on CoStar’s market data for the multi-family inventory, the average rental rates cover a wide range. Submarkets that have continued to exhibit growth and characterized as major activity centers are comprised of higher rents (Annapolis, BWI/Anne Arundel, BWI/North submarkets) (Table 6-3). Based on its location, studio asking rents range from \$1,356 to \$1,495 per month, one-bedroom units range from \$1,250 to \$1,453 per month and two or more bedrooms have lease rates ranging from \$1,400 to \$2,400 per month, depending on the submarket.

Table 6-3
Multifamily Market Supply - 5-Year Average
Anne Arundel County Submarket Areas (2018)

Submarket	ANNE ARUNDEL COUNTY SUBMARKETS							
	Annapolis	BWI/Anne Arundel	BWI/North	I-97/Crain Hwy Corridor	Route 2 Corridor North	Route 2 Corridor South	Southern Anne Arundel	Total/Total Avg.
INVENTORY								
Existing Units	8,024	8,688	595	6,726	7,870	1,032	608	33,543
12 Mo. Construction Starts	176	215	95	122	230	--	--	838
Under Construction	225	244	119	87	77	35	--	787
12 Mo. Deliveries	248	281	95	234	42	70	--	970
LEASING UNITS								
Vacant Units	465	424	71	397	403	57	27	1,844
Vacancy Rate	6.1%	6.2%	12.0%	5.9%	5.1%	5.5%	4.4%	6.5%
12 Mo. Absorption Units	85	179	58	158	40	65	1	586
RENTS								
Studio Asking Rent	\$1,386	\$1,495	\$1,445	\$1,356	\$868	\$423	--	\$1,162
1 Bed Asking Rent	\$1,397	\$1,453	\$1,351	\$1,252	\$993	\$1,310	\$430	\$1,169
2 Bed Asking Rent	\$1,573	\$1,656	\$1,618	\$1,409	\$1,224	\$1,550	\$766	\$1,399
3+ Bed Asking Rent	\$1,400	\$1,764	\$2,408	\$1,669	\$1,403	\$2,192	--	\$1,806
Concessions	1.5%	2.4%	5.4%	2.0%	2.9%	2.0%	0.3%	2.4%
SALES								
Sale Price Per Unit	\$173,551	\$202,226	--	\$202,652	\$156,011	\$156,011	\$49,116	\$156,595
Asking Price Per Unit	\$128,875	--	--	--	--	--	--	\$128,875
Sales Volume (Millions)	\$95	\$62	--	\$92	\$11	\$11	\$5.3	\$46
Cap Rate	5.7%	5.6%	--	5.9%	6.0%	6.0%	5.8%	5.8%

Source: CoStar Group and RKG Associates, Inc., 2018

3. Multi-family Vacancy Rates and 12-Month Absorption Rates

- Anne Arundel County is a Highly Desirable Place to Live, but Some Submarkets Contain Few Rental Housing Options

Despite recent multi-family development, the demand for such units is strong. CoStar reports that rental vacancy in the County is roughly 6.5%. This is largely due to the overall market conditions throughout the County and a limited supply. To this point, roughly 12% of the multi-family supply in the BWI/North submarket is vacant but is comprised of only 595 multi-family units. This submarket is mainly comprised of industrial and business parks associated with the airport, which is why the vacancy rate is high. In contrast, from a market perspective, sustained vacancy rates below 5% typically create opportunities for new multifamily development.

- Most Units are Being Absorbed in Just Three Submarkets

The BWI/Anne Arundel, I-97/Crain Highway, and Annapolis submarkets have been absorbing 72% of all new multi-family units over the past 5 years. CoStar reports that annual absorption has averaged 586 units per year over the past 5-year period and these three submarkets have accounted for 422 units annually.

C. RETAIL MARKET OVERVIEW

In general, Anne Arundel County's retail market supply is fairly healthy and comprised of several regional shopping centers and major retail corridors. Over the years, the County has made a strong effort of revitalizing outdated, deteriorating retail market areas. Most of these are located along major transportation corridors or key intersections that are accessible to regional consumers.

1. Retail Market Inventory

- The Retail Market Supply is Clustered in the Route 2 Corridor Submarkets

The Route 2 Corridor submarkets have a combined total of nearly 12 million SF of building space, which is nearly 40% of total retail square footage (30.2 million SF) in Anne Arundel County and half of the total retail building inventory (Table 6-4). Other than the Annapolis submarket with over 8 million SF, these two retail submarkets are important to the County's retail base. The Route 2 Corridor is considered one of Anne Arundel County's regional retail market corridors and competes directly with the BWI/Anne Arundel submarket where the Arundel Mills Shopping Mall and Maryland Live Casino are located.

- On a Five-year Average, Anne Arundel County Has Delivered Roughly 130,000 SF per Year of New Retail Space

According to CoStar, the Anne Arundel retail market has delivered roughly 130,000 SF of new retail space annually over the past five years. Nearly half of those new deliveries have occurred in the Route 2 South submarket with over 61,000 SF annually. As mentioned previously, the BWI/Anne Arundel submarket is considered a very strong regional retail player in the Washington-Baltimore Metro area. This submarket is comprised of 3.9 million SF of retail space, which is mostly concentrated within the regional shopping destination of Arundel Mills (roughly 1.4 million SF). Anne Arundel County is an important retail destination, particularly for communities located east of the County over the Bay Bridge. These communities are not as well served with retail options and are drawn to Anne Arundel County.

2. Retail Availability, Market Rents, and Vacancy Rates

- Rental Rates Vary Based on Location

According to CoStar's 2018 1Q National Retail Market Report, rental rates ended the first quarter of 2018 at \$19.39/SF with a vacancy rate at 3.9% in the Baltimore Metro area.¹ This is

¹ <https://static1.squarespace.com/static/56ca09ef2b8dde2314cf33b1/t/5b141e4970a6ad796ea6f3c3/1528045131291/2018-Q1-National-Retail.pdf>

below the national average of 4.5% and Anne Arundel County exhibits similar market characteristics. CoStar reports that average vacancy rates are 4.3% over the past five years. Typically, the low vacancy can signal the need for new retail space, which has been added at a modest pace of 130,000 SF per year.

Retail rental rates range from \$17.10 to \$28.39/SF, however, the high end of the market is mostly driven by rents reported in the City of Annapolis and the Parole area. Outside the Annapolis submarket, the highest rents are reported in the I-97/Crain Highway submarket (\$24.26/SF) and the BWI/Anne Arundel submarket (\$23.61/SF).

The Route 2 Corridor North submarket has some of the lowest rental rates at \$17.10/SF, which reflects its higher vacancy rates (7.2%) and its large supply of available space (776,000 SF). According to CoStar, "available space" includes any space that is available, regardless of whether the space is vacant, occupied, available for sublease, or available at a future date. CoStar includes only existing, under construction, and under renovation buildings in its statistical calculations of available space.

Table 6-4
Retail Market Supply - 5-Year Average
Anne Arundel County Submarket Areas (2018)

Submarket	ANNE ARUNDEL COUNTY SUBMARKETS							Total /Total Avg.
	Annapolis	BWI/Anne Arundel	BWI/North	I-97/Crain Hwy Corridor	Route 2 North Corridor	Route 2 South Corridor	Southern Anne Arundel	
INVENTORY								
Existing Buildings	521	162	87	250	632	189	181	2,022
Existing SF	8,027,541	3,949,342	691,922	3,892,733	8,934,728	3,062,894	1,653,290	30,212,450
12 Mo. Construction Starts	6,930	18,688	5,280	0	33,644	54,611	4,579	123,732
Under Construction	3,993	14,050	1,722	0	21,668	61,417	1,789	104,639
12 Mo. Deliveries	7,745	21,180	5,028	9,857	19,846	61,437	5,342	130,435
AVAILABILITY								
NNN Rent Per SF	\$28.39	\$23.61	\$17.50	\$24.26	\$17.10	\$21.84	\$20.02	\$21.82
Vacancy Rate	2.6%	2.6%	4.3%	4.2%	7.3%	3.8%	5.1%	4.3%
Vacant SF	208,742	104,395	29,862	161,101	650,943	117,715	83,622	1,356,380
Availability Rate	3.3%	3.3%	5.3%	6.1%	8.7%	5.1%	7.2%	5.6%
Available SF	267,396	129,274	36,883	237,316	775,861	158,667	118,330	1,723,727
Sublet SF	9,807	8,957	1,181	3,580	3,244	1,084	3,701	31,554
Months on Market	15.2	14.7	13.9	16.5	21.9	11.4	18.7	16.04
DEMAND								
12 Mo. Absorption SF	43,088	7,414	2,322	25,114	65,891	40,147	3,398	187,374
12 Mo. Leasing SF	101,583	39,967	11,620	122,159	236,777	89,485	25,398	626,989
SALES								
Sale Price Per SF	\$174.00	\$252.00	\$318.00	\$269.00	\$97.00	\$164.00	\$211.00	\$212.14
Asking Price Per SF	\$339.00	\$407.00	\$444.00	\$568.00	\$355.00	\$581.00	\$485.00	\$454.14
Sales Volume (Millions)	\$26.00	\$16.00	\$3.60	\$12.00	\$33.00	\$13.00	\$5.70	\$15.61
Cap Rate	7.3%	7.1%	7.1%	9.5%	8.2%	6.4%	7.0%	7.5%

Source: CoStar Group and RKG Associates, Inc., 2018

3. Retail Market Demand and 12-Month Absorption Activity

- Retail Absorption has Been Strong in the I-97/Crain Highway and Route 2 Corridor
Annual retail absorption has averaged approximately 626,000 SF annually through leasing activity over the past five years. The strongest absorption has occurred in the I-97/Crain Highway submarket (236,777 SF/yr.) and the Route 2 North submarket (122,159 SF/yr.). According to CoStar's Retail Statistics National Report, the retail net absorption was slightly positive in the U.S. throughout 2017 and slightly positive in the first quarter of 2018. In fact, retail net absorption across the nation peaked with 36.2 million SF in the third quarter of 2017.²

D. OFFICE MARKET OVERVIEW

1. Office Market Inventory

Anne Arundel County has a substantial office market. According to CoStar's five-year average data, the County contains 1,113 office buildings comprised of 22 million SF of space (Table 6-5). While office uses are spread throughout the County, there are higher concentrations within the County's major employment centers which have office/business parks. Further, the expansion of these employment centers has led to increased growth pressures in neighboring submarket areas. In fact, the location of Fort Meade and National Security Agency has projected another 10,000 new jobs over the next decade and Fort Meade currently accounts for over 56,000 jobs as the State of Maryland's largest employer.

Fort Meade generates \$22.3 billion in economic activity - 43 percent of the total output of 15 military installations throughout Maryland, according to a study released in May 2015 by the Maryland Department of Commerce. Fort Meade supported more than 190,000 direct, indirect and induced jobs and provided more than \$13 billion in wages annually, according to the study. These figures are expected to grow as Fort Meade builds out its East Campus and enlarges its cyber expertise center.³

- A Vast Majority of New Office Development is Concentrated Within the BWI/Anne Arundel and BWI/North Submarkets
This is commensurate with the non-residential development activity analysis conducted in previous chapters. A high concentration of the office/business parks are in association with the BWI Airport area and along the MD Highway 176 and 100 corridors. The data in Table 6-4 illustrates roughly 455,000 SF office market supply is under construction while 300,452 of the total will be delivered in these submarkets. Additionally, these submarkets exhibit a substantial amount of available SF accounting for more than half of the total of 3.3 million available SF.

2. Office Market Rental Rates

- Anne Arundel County has Competitive Office Rents
According to CoStar's 2018 1Q National Office Market Report, rental rates for office space in the Greater Baltimore market were \$22.71/SF with a vacancy rate of 9.9%. These average office rents for all classes of space are below the national average of \$25.03 per SF but local office vacancy is slightly higher than the national average at 9.3%⁴. This is consistent throughout

² <https://static1.squarespace.com/static/56ca09ef2b8dde2314cf33b1/t/5b141e4970a6ad796ea6f3c3/1528045131291/2018-Q1-National-Retail.pdf>

³ <http://www.mybaseguide.com/army/10-1387/fort-meade-employment-economy>

⁴ <https://static1.squarespace.com/static/56ca09ef2b8dde2314cf33b1/t/5b141ea9aa4a99a40524af59/1528045226838/2018-Q1-National-Office.pdf>

Anne Arundel County, which reports average office rents of \$23.70/SF. The only submarket that exceeds \$25.00 per SF for office space is the BWI/Anne Arundel submarket (Table 6-5). Office tenants in this submarket, many of them federal contractors, are willing to pay the \$30.13/SF rents because they need and desire proximity to Fort Meade and BWI/Marshall International Airport. In addition, office properties in these submarkets enjoy a prime location and access to regional highways serving the greater Baltimore/Washington region.

Table 6-5
Office Market Supply - 5-Year Average
Anne Arundel County Submarket Areas (2018)

Submarket	ANNE ARUNDEL COUNTY SUBMARKETS							Total/Total Avg.
	Annapolis	BWI/Anne Arundel	BWI/North	I-97/Crain Hwy Corridor	Route 2 North Corridor	Route 2 South Corridor	Southern Anne Arundel	
INVENTORY								
Existing Buildings	444	107	81	126	216	82	57	1,113
Existing SF	7,091,711	6,545,148	3,469,877	1,544,490	2,201,122	879,897	339,808	22,072,053
12 Mo. Construction Starts	95,185	151,440	118,614	47,059	18,878	0	0	431,176
Under Construction	101,910	181,838	118,614	40,588	12,158	0	0	455,108
12 Mo. Deliveries	47,540	164,503	0	78,131	23,073	0	0	313,247
AVAILABILITY								
Rent Per SF	\$25.48	\$30.13	\$21.74	\$24.53	\$20.76	\$20.25	\$23.00	\$23.70
Vacancy Rate	10.4%	10.6%	18.3%	11.0%	9.3%	12.8%	12.4%	12.1%
Vacant SF	739,911	691,548	634,857	169,573	205,180	112,788	41,964	2,595,821
Availability Rate	13.7%	12.9%	23.6%	16.2%	12.0%	14.4%	15.7%	15.5%
Available SF	988,718	868,515	821,842	255,489	264,280	126,684	53,239	3,378,767
Sublet SF	49,695	139,133	56,427	24,737	12,331	3,466	2,715	288,504
Months on Market	13.9	20.2	28.0	14.8	12.5	15.4	24.8	18.5
DEMAND								
12 Mo. Absorption SF	81,375	91,326	7,047	40,868	21,218	(1,091)	3,671	244,414
12 Mo. Leasing SF	317,781	270,534	181,083	117,110	80,310	43,699	14,622	1,025,139
SALES								
Sale Price Per SF	\$195.00	\$182.00	\$137.00	\$115.00	\$191.00	\$146.00	\$137.00	\$157.57
Asking Price Per SF	\$269.00	\$171.00	\$107.00	\$306.00	\$169.00	\$175.00	\$223.00	\$202.86
Sales Volume (Millions)	\$55.00	\$16.00	\$44.00	\$6.80	\$9.60	\$2.90	\$0.40	\$19.24
Cap Rate	8.5%	7.7%	7.3%	8.5%	8.0%	6.0%	0.0%	6.6%

Source: CoStar Group and RKG Associates, Inc., 2018

3. Office Market Vacancy Rates and 12-Month Absorption Activity

- Anne Arundel County is Experiencing High Office Vacancy Rates**
 Based on the consultant's analysis, numerous office/business parks are experiencing high office vacancy, particularly in the larger office submarkets. The BWI/Anne Arundel (868,515 SF) and BWI/North (821,842 SF) submarkets account for more than half of the 3.3 million available SF in the Anne Arundel office market. Available square feet include more than just vacant office space and include sublet space and space soon to come on the market. Additionally, BWI/North has the highest vacancy rate at 18.3% and absorption over the past five years has been limited with only 7,047 SF per year. Overall office vacancy rates in Anne Arundel County have averaged 12.1% over the past five years.
- Anne Arundel County has a Substantial Amount of Available Office Space but Demand is Slowing**
 Overall, Anne Arundel County has absorbed an average of approximately 244,000 SF per year over the past five-year period. The Route 2 South Corridor is the only submarket to experience a negative absorption of 1,100 SF. This could indicate that more companies and business services are choosing to downsize their office footprints and are seeking less space than in the past. While

submarkets near major employment centers have experienced positive absorption activity, such as BWI/Anne Arundel, Annapolis, and 1-97/Crain Highway corridor, these areas have higher rents and vacancy rates.

E. INDUSTRIAL/FLEX MARKET OVERVIEW

Anne Arundel County's industrial/flex space has thrived in recent years. According to the consultant's development activity analysis, industrial development accounts for roughly 38% of the County's building SF delivered since 1980. Additionally, industrial parks are clustered throughout the northern submarket areas served by the Baltimore/Washington Parkway.

1. Industrial Market Inventory

- Anne Arundel County's Industrial/Flex Market Inventory is Strong
As seen in Table 6-6, Anne Arundel County contains more than 750 buildings for industrial/flex use and has an inventory of roughly 35 million SF according to CoStar. However, those submarkets located in the southern portion of the County have limited industrial space. This is largely due to the residential nature of these southern submarkets, and the lack of transportation access and industrially-zoned land in these areas.
- Anne Arundel County has several Large-Scale Industrial/Business Parks
This is largely attributed to the industrial districts that are concentrated in the BWI/Anne Arundel and Route 2 Corridor North submarkets, which account for 22 million of the total building SF for industrial/flex use. Additionally, a vast majority of these buildings are clustered near the BWI airport area as well as the Annapolis Junction corridor, which is in proximity to the Jessup-Maryland City submarket. Other manufacturing/distribution centers are located along the waterfront, in association with the U.S. Coast Guard.

2. Industrial Market Rent Rates

- Industrial Uses are Attracted to Areas with Good Transportation Accessibility
Industrial/flex rental rates are combined with general industrial space and are likely pushing rental rates to \$9.28/SF for the industrial/flex space. According to CoStar's National Industrial Market report, rental rates for available industrial space are \$6.46 per SF while flex space is priced at \$12.43/SF and Warehouse rates are roughly \$5.58/SF⁵.

Land typically achieves higher rents as retail, office or residential developments. Based on RKG's research, various submarkets are comprised of mixed-use business parks, which include retail, office and even residential development. This type of development continues to increase nationally and is characterized as a work-live-play community concept. Additionally, the County has exhibited revitalization initiatives near the BWI Airport area and proposals have been submitted to the County by commercial and residential investors/developers (i.e. Heffner and Webber Mixed-Use Development Proposal).

3. Industrial Market Vacancy Rate and 12-Month Absorption Activity

- Anne Arundel County's Vacancy Rate for Industrial Use is Above the Baltimore Metro Area and National Average

⁵<https://static1.squarespace.com/static/56ca09ef2b8dde2314cf33b1/t/5a8897508165f58a195b596f/1518901076048/2017+Year+End+-+National+Industrial.PDF>

According to CoStar’s 2018 1Q National Industrial Report, the industrial vacancy rate has declined to 4.9%⁶. The Baltimore Metro industrial market is reporting a 6.7% vacancy rate while Anne Arundel County’s is nearly 7.3%. This suggests that industrial and warehouse/distribution properties in the County may be slightly underperforming. While it is typical for older industrial properties to experience a higher vacancy, most of Anne Arundel County’s industrial properties were built during the 1980-2000 period. Anne Arundel County contains roughly 3.6 million SF of vacant space, with a concentration of 1.75 million SF vacant in the BWI/Anne Arundel submarket. This is reflected in the submarket’s high vacancy rate of 14.1% over the past five years. According to RKG’s building assessed value-ratio analysis, there are several industrial properties in this submarket exhibiting condition issues. In recent years, there has been increased competition from Baltimore County, which has experienced a rapid expansion of its industrial/distribution base. Currently, 15 million SF of new distribution space is being constructed at Sparrow’s Point in south Baltimore County; roughly 17 miles from BWI.

- **Several of Anne Arundel County’s Submarkets Have a Substantial Amount of Available SF**
 The BWI/Anne Arundel submarket contains nearly half (2.4 Million SF) of the total available SF (5.4 million SF) in the County. This submarket has room to grow and has experienced moderate expansion over the years. To this point, in a 12-month period, this submarket has absorbed roughly 246,858 SF while other areas have absorbed less than 30,000 SF and some even exhibiting a net loss.

Table 6-6
Industrial/Flex Market Supply - 5-Year Average
Anne Arundel County Submarket Areas (2018)

Submarket	ANNE ARUNDEL COUNTY SUBMARKETS							Total /Total Average
	Annapolis	BWI/Anne Arundel	BWI/North	I-97/Crain Hwy Corridor	Route 2 Corridor North	Route 2 Corridor South	Southern Anne Arundel	
INVENTORY								
Existing Buildings	101	203	116	139	165	18	24	766
Existing SF	2,387,151	12,472,339	4,882,271	4,809,775	9,657,088	326,166	445,565	34,980,355
12 Mo. Construction Starts	0	210,347	41,340	2,950	13,275	1,920	0	269,832
Under Construction	0	201,610	35,325	16,390	258,806	960	0	513,091
12 Mo. Deliveries	0	262,934	19,848	3,933	17,700	2,400	0	306,815
AVAILABILITY								
Rent Per SF	\$14.23	\$7.24	\$10.10	\$7.96	\$5.63	\$12.07	\$7.74	\$9.28
Vacancy Rate	6.0%	14.1%	8.4%	8.9%	8.4%	2.0%	3.4%	7.3%
Vacant SF	142,728	1,753,022	410,423	425,950	812,692	6,669	14,911	3,566,395
Availability Rate	10.6%	19.7%	12.8%	14.1%	14.5%	3.8%	3.7%	11.3%
Available SF	252,226	2,498,059	628,673	677,739	1,412,311	12,540	16,613	5,498,161
Sublet SF	6,498	223,571	26,928	39,509	134,407	0	0	430,913
Months on Market	9.5	16.1	16.4	10.5	13.6	11.8	7.6	12.2
DEMAND								
12 Mo. Absorption SF	3,405	246,858	27,068	-7,693	-15,427	3,212	-18,300	239,123
12 Mo. Leasing SF	106,210	1,107,732	303,033	366,860	531,746	5,821	9,443	2,430,845
SALES								
Sale Price Per SF	\$96.00	\$93.00	\$40.00	\$111.00	\$72.00	\$108.00	\$74.00	\$84.86
Asking Price Per SF	\$93.00	\$98.00	\$91.00	\$153.00	\$88.00	\$190.00	\$145.00	\$122.57
Sales Volume (Millions)	\$15.00	\$64.00	\$2.60	\$7.00	\$34.00	\$0.50	\$1.40	\$17.79
Cap Rate	8.6%	6.7%	-	7.3%	6.1%	9.3%	9.3%	6.8%

Source: CoStar Group and RKG Associates, Inc., 2018

⁶<https://static1.squarespace.com/static/56ca09ef2b8dde2314cf33b1/t/5a8897508165f58a195b596f/1518901076048/2017+Year+End+-+National+Industrial.PDF>

F. REAL ESTATE BROKER/DEVELOPER INTERVIEWS

During the fall of 2018, RKG Associates, Inc. conducted a series of interviews with real estate professionals familiar with Anne Arundel County's commercial and industrial real estate markets. The interview participants were referred to the consultants by the Anne Arundel County Economic Development Corporation and they agreed to offer their observations relative to their current and past business ventures in the County. Most of the participants were either commercial real estate brokers, sales professionals or developers with business interests in Anne Arundel County, as well as other Baltimore/Washington Metropolitan area communities. The interviews were considered confidential to encourage participants to offer frank and honest observations about their Anne Arundel County experiences, but the statements are their opinions and RKG cannot confirm their factual accuracy. A general summary of the interview responses presented below under the appropriate interview question.

Q: How do you view Anne Arundel County's position within the regional real estate market?

- The County is located right in the middle of the Baltimore/Washington Metropolitan region and benefits from both real estate markets and access to the talented labor pool.
- Anne Arundel County has carved out a reputation for having a high quality of life with the City of Annapolis' history, boating and water sports culture, waterfront and Chesapeake Bay frontage, etc.
- Anne Arundel County primarily competes with Howard County, Prince George's County and Montgomery County for new investment, growth and economic development.
- Anne Arundel County's biggest competition is Howard County because they share many similarities; attract an affluent, professional class and have strong residential markets.

Q: What is at the core of demand driving Anne Arundel County commercial real estate markets?

- Anne Arundel County possesses several economic drivers such as U.S. Naval Academy, Fort Meade federal installation/NSA, Arundel Mills/Maryland Live, City of Annapolis, Maryland State Government and BWI-Marshall International Airport. This gives them a great competitive advantage over other regional competitors.
- Anne Arundel has traditionally benefitted from growth in the Federal Government sector and the military. This sector is less dominant today but still very important to the economy.
- The County has a strong commercial market; particularly Arundel Mills and Maryland Live, Downtown Annapolis and the Parole area (among others) which attract new development and sales growth.
- The Port of Baltimore and BWI International have driven regional demand for warehouse/distribution businesses. Warehouse/distribution space is operating with fairly low vacancy rates in recent years.
- The City of Annapolis and the Parole area have traditionally been Anne Arundel's commercial core. There has been a lot of new activity in the Severna Park area as well.
- Glen Burnie Town Center has attracted growth and is considered successful.
- There have been several successful town center developments in Anne Arundel County that are important to serving different submarket population.

Q: What do you believe are the best growth opportunities over the next 3-5 years?

- The County has experienced strong growth in the medical industry, which drives demand for medical office space near hospital facilities. Medical practices are being attracted to the County in a lot of different forms.

- This is resulting in the increased demand for vacant space in retail shopping centers, which is being converted to medical offices;
- Demand from dentists, physical therapists, and other healthcare providers has been prevalent;
- Medical practices want to be easily accessible to their customers/patients; and
- Small practices will typically occupy 2,000-3,000 SF of retail space in a shopping center and convert it into office space.
- Fort Meade/Cyber Security Center/NSA is the largest employer in the State of Maryland with over 56,000 employees with more employment growth projected over the next decade. These operations provide high paying jobs for highly skilled employees, with high education requirements for many jobs.
- There has been significant spin-off development at Fort Meade outside the fence for business support uses.
- Our company is looking near Fort Meade for new development opportunities, as well in other employment centers. That's where people want and need to be.
- Fort Meade is creating a nucleus of highly desirable jobs that pay higher wages. This is resulting in positive demographic changes. Higher wages drive the demand for retail shopping, services, and restaurants.
- Industrial/warehouse/distribution demand seems to be growing, which is driven by the presence of BWI-Marshall International Airport. The trend is moving towards a "direct to consumer" economy and you need to have a product near your consumers.
- The office market is not doing as well. Vacancy rates are high, and demand seems to be very soft.

Q: What is the potential for mixed-use development in Anne Arundel County?

- The community is becoming more receptive to mixed-use development, but they need to be educated on the benefits of mixed use.
- Mixed-use is a challenge to do in Anne Arundel County. Outside of Annapolis, we struggle to get the rent level's necessary to achieve the density we're seeking. This makes it difficult to underwrite a new development from a financing standpoint. When you are doing several stories above podium or may need structured parking, construction costs rise significantly, and rents need to follow. There just aren't that many places in Anne Arundel County where higher rents are achievable. It's a more suburban development culture in the County.
- Mixed-Use Development
 - Need to have a significant amount of land to create a dense development; perhaps as much as 200-300 acres. Need to create 1,500 to 2,000 rooftops to generate demand for retail, restaurants or entertainment uses.
 - You need to be able to achieve higher than average rental rates for retail, office, and multi-family to support the infrastructure investment
 - You need to be able to offer an attractive amenities package with the development to attract tenants or need to be located near other amenities
 - You can do a smaller scale version of mixed-use but need to be located next to nearby residential development.

Q: What experience have you had with the County's development entitlement process? Are there things the County needs to change to become more competitive?

- Our experience has been a mixed bag. The County is very cautious about development and exercises strict controls. Very sensitive to new "greenfield" development proposals. Would like to reinforce existing core development areas and keep commercial development away from residential areas.

- The County must balance a lot of different development interests. The entitlement process is cumbersome at times and is not as expedient as it could be. It's probably on par with other regional competitors but could be improved.
- Need to separate smaller development proposals from larger, more complex development proposals. The more complex projects require greater staff oversight and attention.
- Pre-application review meetings help get early department review of projects and help identify issues upfront. However, as the project moves through the review process, it can get bogged down and other outside reviews and public input can derail the process. This makes the entitlement process very unpredictable at times.
- The public hearing process does not seem consistent from project to project.
- We find that Anne Arundel County has been receptive to new development, but it is a challenging place to work.
- Impact fees in Anne Arundel County are too high and drive up the cost of development, rents and those costs are passed on to tenants.
- Anne Arundel County carries maybe a 20% higher operating cost premium than Baltimore and maybe 10% higher than Howard County for new office development. For industrial/warehouse it is roughly the same.
- There is a certain amount of NIMBY responses to new development in Anne Arundel County and this results in a push-back against new development projects. The response is not quite as strong as the City of Annapolis but creates some unpredictability and adds time and cost to the entitlement process.
- The County Executive, Steve Schuh, has provided good leadership in creating systems and some level of predictability. He is good at tasking staff with shepherding projects through the entitlement process, but I believe that is only for larger developments. I don't believe all projects get the same staff oversight. Perhaps there is a threshold size of the development project that justifies direct staff assignments.
- Permitting Expectations
 - In our experience there can be significant delays in the permitting process (4 to 8 mo. delays at times);
 - Usually, this is due to the size and complexity of the project;
 - Often, issues outside the site plan review process get introduced into the process, which can call for additional outside review.
- The pre-development review is helpful but can't always anticipate every issue that may arise. When other issues are raised, things can get off schedule.
- The County needs form-based codes to provide incentives for higher quality development to occur.
- The County needs to find ways to encourage and promote high-quality development.
- Would like to see high-performance tax credits using form-based requirements.
- We feel the County's impact fee system imposes exorbitant costs on development and the City of Annapolis is even more challenging.
- Development Incentives:
 - Needed to promote good urban development;
 - Retail is good but "dark" retail that is chronically vacant is bad;
 - Need to find ways to pay for impacts on development. Doing mixed-use is expensive
 - Would like to see impact fees more closely tailored to the type of developments being proposed. Projects that don't create impacts should be exempt from impact fees or lower impact fees.
- The permit and entitlement process is difficult and impact fees and sewer impact fees are high.
- Howard County does not impose impact fees on development and nor does Baltimore County.
- With most of our real estate portfolio in Anne Arundel County, we can see that the County's approach to development permitting is creating barriers for others trying to enter the local

market. This is giving us an advantage over the competition because they can't access Anne Arundel County.

- The entitlement process seems to be a chaotic process at times.
- Howard County has been the primary benefactor of Anne Arundel County's resistance to growth, but Howard is starting to see similar push-back from development opponents.
- Has noticed that some businesses have started to leave Anne Arundel County.

G. IMPLICATIONS

While the northern submarkets in Anne Arundel County have received much of the growth within certain commercial/industrial market segments, other parts of the County have not. This is largely consistent with the County's growth strategy, which concentrates growth in its northern submarkets. However, in time the County will have to consider the need for more contemporary and efficient development in these areas, which may be more suitable within the submarkets that contain redevelopment opportunity sites, discussed in the previous chapter. The rental residential market has increased its inventory in recent decades, but older properties will need to be repositioned and renovated to stay competitive.

Beyond the multi-family market, there are opportunities to accommodate new and repurposed non-residential inventory as well. Several commercial corridors have been underutilized leading to the deterioration of the previous generation and less competitive commercial sites which will require redevelopment or substantial reinvestment to remain competitive. These sites along Route 2 (Richie Highway) and near BWI/Anne Arundel and North submarkets can become transformative projects that increase consumer spending and decrease the excess retail space (through smaller retail footprints). These benefits will improve market conditions for all retailers, as local sales capture potential increases. This selective redevelopment also will improve the viability of the remaining retail demand, as the decreased supply will stabilize rent rates and financial performance. To this point, characteristics to measure include the size of the site, location, transportation access, proximity to stable neighborhoods, and current condition as well as occupancy.

In terms of the office market, there is sufficient office space in the County's major employment centers. Employment and job creation continues to increase while businesses continue to compete for space in prime locations. The available space in existing business parks suggests a softening of the office market, which is impacting property performance. Additionally, several office developments are showing signs of fair to poor condition in areas that contain higher rental rates and they will need renovation to achieve these higher rents.

Finally, the industrial market has immediate opportunities for redevelopment in Anne Arundel County. The market data indicate several submarkets experiencing declines due to a limited supply of industrial/flex space. However, revitalized or new industrial development will not generate the same tax base or jobs for Anne Arundel County as new, all-purpose business parks. Although there are notable vacant land resources to accommodate industrial development, this initiative is a challenge because of the low return involving industrial/flex space makes it difficult to create financially feasible redevelopment projects focusing on industrial uses.

7 LAND USE AND LAND CAPACITY ANALYSIS

A. INTRODUCTION

RKG Associates partnered with the firm Kimley-Horn LLC to provide land use and GIS-based analysis for various sections throughout the study. This chapter examines Anne Arundel County’s total land use mix and distribution among each of the submarket areas. The results of the data analysis will support RKG’s efforts of identifying both the existing land use shaping the County as well as identifying the supply/availability of developable land involving the County’s designated land use categories (Table 7-1). Based on this analysis and the development activity results, the consultants determined the amount of “unused” or vacant land in different land use categories based on existing zoning classifications to support the consultant’s efforts of measuring the land demand as well as forecasting the land capacity and availability over the next 20 years (discussed in detail in the next chapter).

Table 7-1
Land Use Category Breakout
Anne Arundel County, MD (2018)

MAJOR LAND USE CATEGORIES	
Residential	Cemetery
Commercial	Public
Office	Park/Recreation/Open Space
Industrial	Undeveloped
Agriculture	Other/Unknown
Transportation	

Source: Anne Arundel County, MD

RKG used MDPropertyView in addition to Anne Arundel County’s GIS land use file as data sources. Each of these data sources has its own way of defining land use and all sources were used in this analysis. Further, Kimley Horn and RKG agreed on a methodology to assign a categorization use to each parcel.

B. METHODOLOGY AND DATA SOURCES

Like the development trend analysis, the consultants analyzed data from MDPropertyView, which includes a complete inventory of the building’s primary use in addition to its association with the tax account. Regarding the building use descriptions, the State has established 20 major building use categories and the consultants were able to summarize the total building square footage for each parcel that contained a square footage value.

Additionally, Kimley Horn obtained the County’s land use GIS layer that had limited data attributes but contained the property identification numbers (PIN). The land use data offered several more records as well as different representation of the data in comparison to the State data, which is why the consultants could not merge these sources. To this point, a “many to many” relationship function was conducted where the building use data was queried to consolidate both the State and County data sources in order to create a master spatial database. For example, if a PIN contained more than one tax account, the buildings associated with that account would be further summarized on a square footage basis. Further, the master database contained a ratio to determine the dominant land use on each property. For example, if both automotive and dwelling uses existed on a single parcel and 55% of the total building square footage was dedicated to the dwelling use then the data results would associate the parcel with residential use. The building uses were then classified to its major land use categories as seen in Table 7-2.

During this analysis, Kimley Horn experienced limitations of the available data obtained from MDPropertyView. According to staff in charge of MDPropertyView data, Anne Arundel County was updating its property assessment records which led to several parcels with unavailable data attributes while the County’s land use screening was producing different results. Overall, this gave the consultants some clarification to where newly developed subdivisions were being built in addition to where available “undeveloped” land was concentrated in each of the County’s submarket areas.

This approach did not yield a land use classification for all County parcels and not every parcel without a value was considered a built-out subdivision or available vacant land, so an alternative approach was created to fill in gaps in the data. This included supplementing with County’s land use information in cases where there weren’t any buildings shown within State’s property assessment data, however, the County’s data would offer use descriptions for a specific parcel, such as parks and conservation areas where development cannot occur. Ultimately, the datasets obtained were problematically compared for consistency. If all attributes were different or missing notable information, the parcel was visually inspected via aerial and assigned a land use manually.

**Table 7-2
 Building Use and Land Use Category Breakout
 Anne Arundel County, MD (2018)**

DWEL	Residential
HOUSING	Residential
AUTO	Commercial
BANK	Commercial
BOAT	Commercial
CARE	Commercial
RESTAURANT	Commercial
STORE	Commercial
TRAVEL	Commercial
OFFICE	Office
INDUSTRY	Industrial
WAREHOUSE	Industrial
COMMUNITY	Public
PUBLIC	Public
SAFETY	Public
SCHOOL	Public
REC	Park/Recreation/Open Space
TRANSPORT	Transportation
BURIAL	Cemetery
Other	Unknown
N/A	Agriculture
N/A	Undeveloped

Source: MD Property View & Anne Arundel County, 2018

C. SUBMARKET AREA LAND USE PATTERNS

Over the years, Anne Arundel County has promoted growth that produces attractive and vibrant communities and a strong local economy and has tried to balance growth with land preservation goals. Several earlier plans and initiatives have designated areas for new growth, which is generally concentrated throughout the northern third of the County served by critical transportation infrastructure to support population growth.

However, rural preservation is still a major component to Anne Arundel County’s land use patterns and there have been major programs and initiatives to protect this natural resource throughout the southern portion of the County. To this point, RKG and Kimley Horn conducted a land use analysis for the 10 submarkets that have been examined throughout the study. For geographical references, Kimley Horn created several maps which identify the land use mix and distribution by land area (acreage) for each submarket, which are presented in the appendix section at the end of this (Appendix Map 7-1).

- Anne Arundel County’s Developed Land Area is Dominated by Residential Use
 As seen in Figure 7-1, developed land uses account for roughly 90.6% (215,070 acres) of the County’s total land area (237,387 acres) in 2018. This is largely attributed to the 87,073 acres of residential land concentrated in the South County, Annapolis Neck-Broadneck and portions of Severna Park-Crownsville submarkets. Identified throughout the study, these submarkets are comprised of low-density single-family units containing large lots and mostly rural areas.
- Major Commercial Concentrations are In the Jessup-Maryland City, Linthicum-Severn and Brooklyn Park-Glen Burnie-Pasadena Submarkets Near Strategic Transportation Nodes

Combined, these major land use categories account for 15,911 acres of the County’s total land mix. A vast majority of commercial, office and industrial land is designated in these submarkets where communities are more densely developed and have exhibited expansion and job growth which additionally led to higher density residential growth patterns (Table 7-3).

- Anne Arundel County’s Undeveloped Land is More than the County’s Total Commercial Land Uses

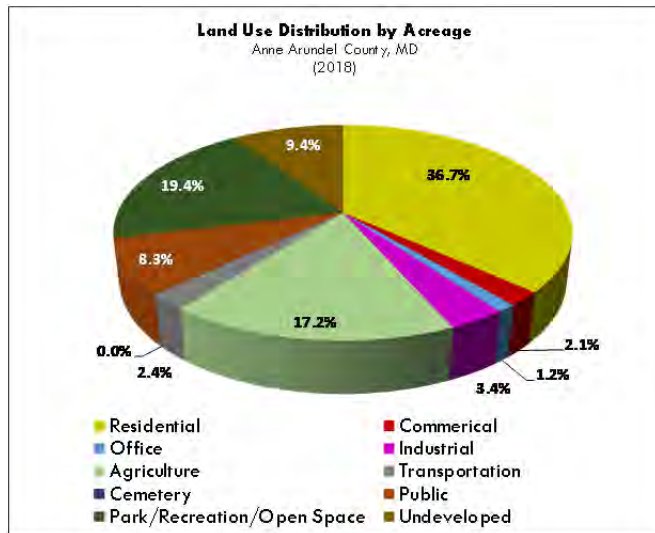
Anne Arundel County contains approximately 22,317 acres of undeveloped classified land, which is more than the County’s total major commercial developments (15,911 acres, including commercial, office and industrial uses). Higher concentrations of commercial uses are in the upper third of the County but are much more limited in the southern portions of Anne Arundel County. Approximately 4,065 acres of commercially-developed land is in the southernmost submarkets.

The greatest share (56%) of land classified as undeveloped is in South County and other submarket areas (Annapolis Neck-Broadneck, Crofton, and Severna Park-Crowsville as well as Edgewater-Deale-Shady Side.

- Rural Areas Consisting of Low-Density Development, Agricultural, Park, Recreational and Open Space Uses Comprise a Large Share of Anne Arundel County’s Total Land Inventory

A substantial amount of rural area is concentrated in the southern portion of the County consisting of large-lot, low-density residential developments. Overall, Anne Arundel has consistently preserved agricultural, park, recreational and open space land uses. These land use types account for 36.5% (86,667 acres) of the County’s total land area. A vast majority of submarket areas still maintain these land use types and are complementary to each of the submarkets land use mix and characteristics. Recreation uses, such as community parks and natural park areas have consistently been preserved and the County has continued work towards improving the environment. Additionally, access to the waterfront is one of the County’s strongest attractions both locally and regionally in which Anne Arundel’s peninsula communities truly benefit from the proximity of Chesapeake Bay.

Figure 7-1



Source: MD Property View, Anne Arundel County, Kimley Horn and RKG Associates, Inc., 2018

Table 7-3
Land Use Distribution by Acreage
Anne Arundel County & Submarket Areas (2018)

Submarket	MAJOR LAND USE CATEGORIES (ACREAGE)										Total Land Area
	Residential	Commercial	Office	Industrial	Agriculture	Transportation	Cemetery	Public	Park/Recreation/ Open Space	Undeveloped	
SM 1 - Jessup-Maryland City	2,095.56	873.29	378.32	312.76	0.00	605.23	0.82	6,593.29	10,220.01	1,371.71	22,450.97
SM 2 - Linnicum-Severn	6,953.18	795.79	802.91	1,841.79	1,401.17	3,512.72	9.98	9,444.43	3,247.56	2,320.96	20,569.49
SM 3 - Brooklyn Park-Glen Burnie-Pasadena	9,659.51	1,179.32	435.32	2,677.22	31.62	333.22	23.85	1,975.79	3,141.69	2,685.99	22,143.54
SM 4 - Lake Shore	8,001.89	204.85	52.65	27.92	292.96	52.72	3.57	379.90	2,994.95	961.04	12,972.43
SM 5 - Odenton	4,649.87	313.62	184.65	1,766.31	1,728.72	281.69	3.40	1,011.27	3,949.08	2,486.01	16,374.61
SM 6 - Severna Park-Crowsville	13,997.61	328.02	213.19	324.79	1,835.59	125.97	1.40	2,182.53	6,140.01	2,155.02	27,304.13
SM 7 - Annapolis Neck-Broadneck	12,458.88	693.75	441.06	248.32	1,071.34	175.51	9.89	2,000.81	4,193.53	1,463.46	22,756.54
SM 8 - Crofton	3,972.02	141.58	52.94	152.20	1,428.49	79.06	1.47	1,509.09	2,622.64	1,010.51	10,969.98
SM 9 - South County	18,189.75	77.00	126.72	746.71	32,498.86	273.82	14.39	2,336.63	5,975.57	5,989.30	66,228.74
SM 10 - Edgewater-Deale-Shady Side	7,095.13	417.24	49.62	51.52	1,684.52	146.77	6.65	821.92	3,470.29	1,873.04	15,616.71
TOTAL	87,073.40	5,024.48	2,737.39	8,149.53	40,712.26	5,586.71	75.41	19,755.64	45,955.33	22,317.03	237,387.16
PERCENT DISTRIBUTION											
SM 1 - Jessup-Maryland City	2.4%	17.4%	13.8%	3.8%	0.0%	10.8%	1.1%	33.4%	22.2%	6.1%	9.5%
SM 2 - Linnicum-Severn	8.0%	15.8%	29.3%	22.6%	0.3%	62.9%	13.2%	4.8%	7.1%	10.4%	8.7%
SM 3 - Brooklyn Park-Glen Burnie-Pasadena	11.1%	23.5%	15.9%	32.9%	0.1%	6.0%	31.6%	10.0%	6.8%	12.0%	9.3%
SM 4 - Lake Shore	9.2%	4.1%	1.9%	0.3%	0.7%	0.9%	4.7%	1.9%	6.5%	4.3%	5.5%
SM 5 - Odenton	5.3%	6.2%	6.7%	21.7%	4.2%	5.0%	4.5%	5.1%	8.6%	11.1%	6.9%
SM 6 - Severna Park-Crowsville	16.1%	6.5%	7.8%	4.0%	4.5%	2.3%	1.9%	11.0%	13.4%	9.7%	11.5%
SM 7 - Annapolis Neck-Broadneck	14.3%	13.8%	16.1%	3.0%	2.6%	3.1%	13.1%	10.1%	9.1%	6.6%	9.6%
SM 8 - Crofton	4.6%	2.8%	1.9%	1.9%	3.5%	1.4%	1.9%	7.6%	5.7%	4.5%	4.6%
SM 9 - South County	20.9%	1.5%	4.6%	9.2%	79.8%	4.9%	19.1%	11.8%	13.0%	26.8%	27.9%
SM 10 - Edgewater-Deale-Shady Side	8.1%	8.3%	1.8%	0.6%	4.1%	2.6%	8.8%	4.2%	7.6%	8.4%	6.6%
% TOTAL	36.7%	2.1%	1.2%	3.4%	17.2%	2.4%	0.0%	8.3%	19.4%	9.4%	100.0%

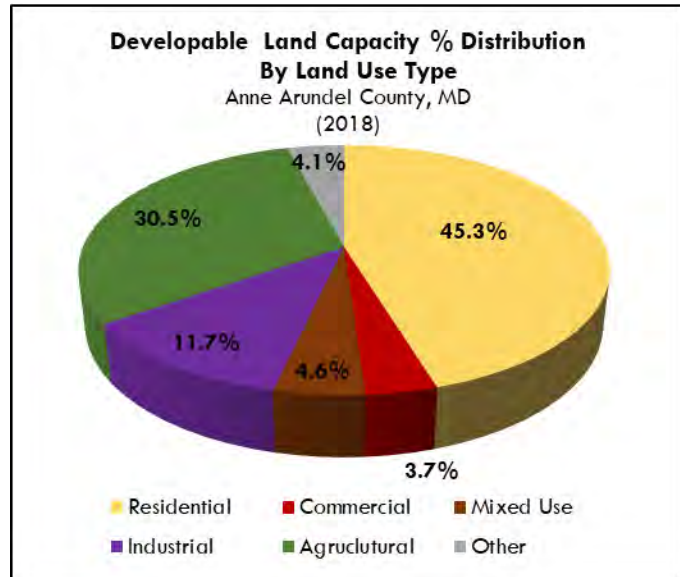
Source: MD Property View, Kimley Horn, LLC and RKG Associates, Inc., 2018

D. DEVELOPABLE LAND CAPACITY

1. Methodology

This portion of the land use analysis will estimate the potential and remaining development capacity in the County and each of its submarket areas. Using the land use data, the consultants extracted parcels containing potentially developable sites based on the “undeveloped” land use classification. Anne Arundel County has an estimated total of roughly 14,330 acres of developable land remaining. Approximately 45.3% of the County’s available land supply is classified as residential while 30.5% is classified as agricultural land (Figure 7-2). Available land supply was further analyzed to isolate the parcels that are proposed (either currently or in the past) as part of a platted subdivision development. Additionally, lands with constraints on development, such as wetland designations or other constraints were removed. These constraints included: bogs, stormwater best management practices (BMPs), cemeteries, merged wetlands, open water, marsh, parks, steep slopes, and stormwater drainage easements. An additional constraint included the Critical Area buffer. The results of this analysis produced an estimated supply of 13,736 acres of developable land for future development. In Chapter 8 of this study, RKG projects the demand for land arising out of future growth patterns.

Figure 7-2



Source: MDPropertyView, Anne Arundel County, Kimley Horn, LLC and RKG Associates, Inc., 2018

2. Supply/Availability of Developable Land

- Nearly a Quarter of Available Developable Land is Concentrated in South County**
 As seen in Table 7-4, approximately 3,300 acres land (24%) is concentrated in South County, which is largely characterized as agricultural land surrounding the low-density, large-lot residential development. To this point, development activity has been scarce in recent years indicating that future growth and expansion is not expected to occur throughout the projection period.
- Residential Use Makes up a Substantial Share of the Available Developable Land**
 Commensurate with the existing land use patterns throughout the County, the highest concentration of developable land is zoned for residential uses. Roughly 45.3% (6,487 acres) of the available land supply is considered residential. Nearly 21% of the total developable land is clustered within the Brooklyn Park-Glen Burnie-Pasadena submarket. Additionally, this submarket is comprised of high-density residential development which indicates more available land for development.
- Higher Concentration of Developable Land Dedicated to Industrial and Commercial Use is Clustered Near Anne Arundel County’s Major Employment Centers**
 In terms of industrial concentrations, approximately 12.2% of the total available land supply is considered for industrial use. A vast majority of the available land supply that would be

considered for industrial use is located within the Jessup-Maryland City, Linthicum-Severn and Brooklyn Park-Glen Burnie-Pasadena submarkets. Roughly 96% of the total available land for industrial use is concentrated within these submarkets. The industrial market in these areas is strong and over the years has continued to expand in various industrial business parks along the Baltimore-Washington Parkway corridor and near the BWI airport area.

Available land that is planned for commercial and mixed-use is not as substantial in terms of total acreage, however, a vast majority of these submarket areas contain Town Centers that have included mixed-use and commercial development that are complementary to other major land uses surrounding these activity centers along strategic transportation corridors. The Odenton submarket is considered one of the County's major town centers and has experienced higher concentrations of new residential and non-residential development.

Table 7-4
Developable Land Capacity Distribution by Major Land Use Categories and Submarket Areas
Anne Arundel County Submarkets, MD (2018)

Submarket	Land Capacity by Major Land Use Categories					Total Land Area
	Residential	Commercial	Mixed Use	Industrial	Agricultural	
SM 1 - Jessup-Maryland City	298.51	77.26	380.93	150.98	32.12	939.81
SM 2 - Linthicum-Severn	621.93	166.32	104.36	757.72	0.00	1,650.33
SM 3 - Brooklyn Park-Glen Burnie-Pasadena	1,345.01	130.65	0.00	707.82	0.00	2,183.48
SM 4 - Lake Shore	748.82	4.44	0.00	0.00	0.00	753.25
SM 5 - Odenton	853.40	41.23	176.97	35.61	365.67	1,472.89
SM 6 - Severna Park-Crownsville	809.87	39.79	1.36	2.31	226.75	1,080.07
SM 7 - Annapolis Neck- Braodneck	746.99	8.27	1.75	4.52	82.74	844.27
SM 8 - Crofton	140.41	13.00	0.00	13.30	372.50	539.22
SM 9 - South County	56.48	9.75	0.00	0.00	3,233.87	3,300.09
SM 10 - Edgewater-Deale-Shady Side	866.47	35.25	0.00	8.79	62.12	972.63
Total	6,487.89	525.96	665.37	1,681.06	4,375.77	13,736.05
PERCENT DISTRIBUTION						
SM 1 - Jessup-Maryland City	4.6%	14.7%	57.3%	9.0%	0.7%	6.8%
SM 2 - Linthicum-Severn	9.6%	31.6%	15.7%	45.1%	0.0%	12.0%
SM 3 - Brooklyn Park-Glen Burnie-Pasadena	20.7%	24.8%	0.0%	42.1%	0.0%	15.9%
SM 4 - Lake Shore	11.5%	0.8%	0.0%	0.0%	0.0%	5.5%
SM 5 - Odenton	13.2%	7.8%	26.6%	2.1%	8.4%	10.7%
SM 6 - Severna Park-Crownsville	12.5%	7.6%	0.2%	0.1%	5.2%	7.9%
SM 7 - Annapolis Neck- Braodneck	11.5%	1.6%	0.3%	0.3%	1.9%	6.1%
SM 8 - Crofton	2.2%	2.5%	0.0%	0.8%	8.5%	3.9%
SM 9 - South County	0.9%	1.9%	0.0%	0.0%	73.9%	24.0%
SM 10 - Edgewater-Deale-Shady Side	13.4%	6.7%	0.0%	0.5%	1.4%	7.1%
% Total	47.2%	3.8%	4.8%	12.2%	31.9%	100.0%

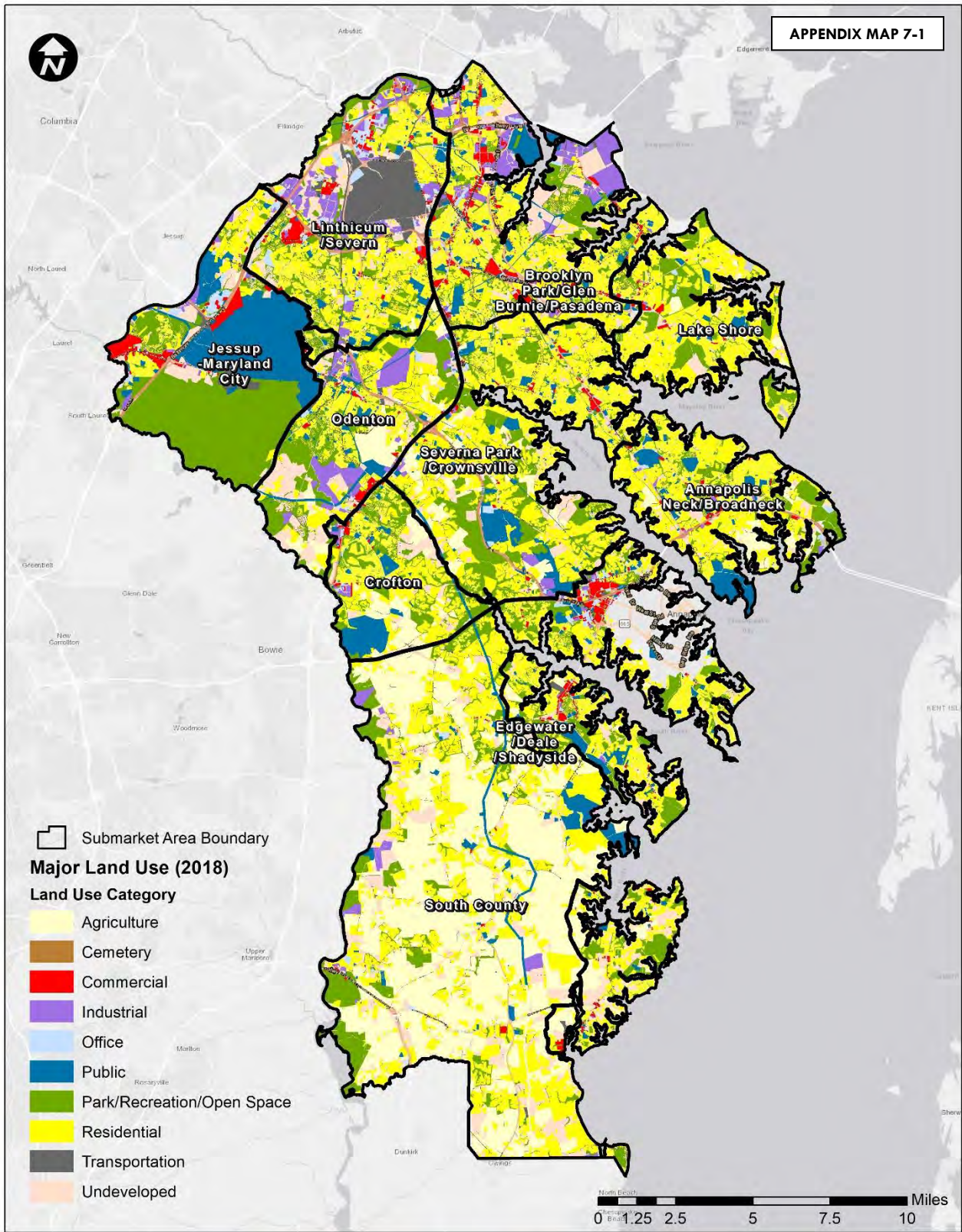
Source: Anne Arundel County, Kimley Horn & RKG Associates, Inc., 2018

Note: Marina, Water, and Open Space are not included in the developable land acres total

E. IMPLICATIONS

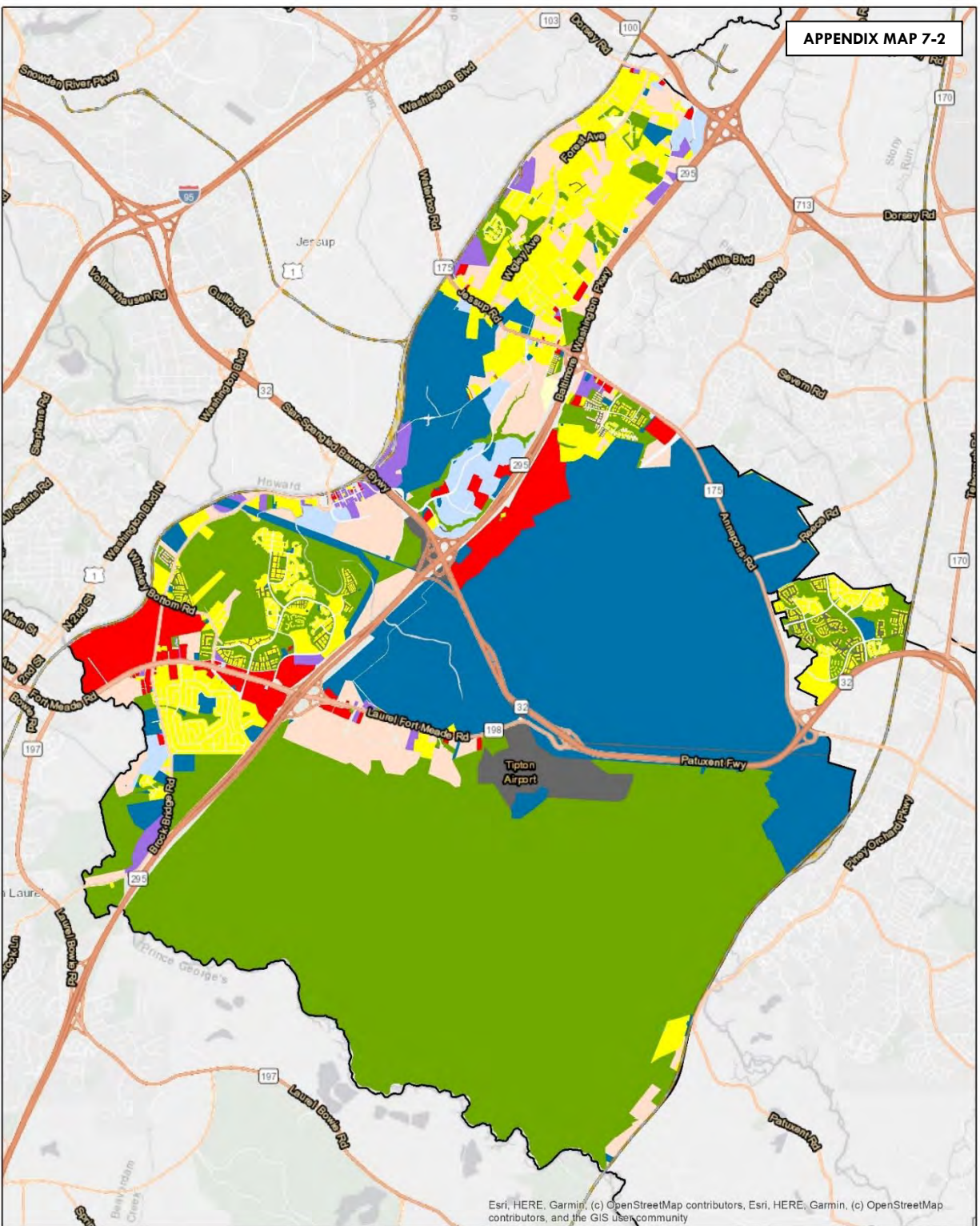
The County's development pattern has led to limited growth in the County's southern portion, which has concentrated development into targeted growth areas. The rural submarkets are largely viewed as rural and natural areas designated for conservation. The County has prioritized its growth areas in the central and northern submarkets and would like to preserve the character of its rural areas and natural resources. However, a substantial amount of developable land is concentrated within these rural submarkets and won't be developed in the future. The Jessup-Maryland City, Linthicum-Severn and Brooklyn Park-Glen Burnie-Pasadena submarkets will continue to expand due to increased employment and population growth. However, the data results show that availability of the existing land supply is limited due to zoning in certain areas of the County over the next 17 years. Projections of future land demand are included in Chapter 8.

F. APPENDIX SECTION – LAND USE MAPS



Sub Area Name	Major Land Use (Acres)									
	Agriculture	Cemetery	Commercial	Industrial	Office	Public	Park/Recreation /Open Space	Residential	Transportation	Undeveloped
Annapolis Neck / Broadneck	1,071.34	9.89	693.75	248.32	441.06	2,000.81	4,193.53	12,458.88	175.51	1,463.46
Brooklyn Park / Glen Burnie / Pasadena	31.62	23.85	1,179.32	2,677.22	435.32	1,975.79	3,141.69	9,659.51	333.22	2,685.99
Crofton	1,428.49	1.47	141.58	152.20	52.94	1,509.09	2,622.64	3,972.02	79.06	1,010.51
Edgewater / Deale / Shadyside	1,684.52	6.65	417.24	51.52	49.62	821.92	3,470.29	7,095.13	146.77	1,873.04
Jessup-Maryland City	-	0.82	873.29	312.76	378.32	6,593.29	10,220.01	2,095.56	605.23	1,371.71
Lake Shore	292.96	3.57	204.85	27.92	52.65	379.90	2,994.95	8,001.89	52.72	961.04
Odenton	1,728.72	3.40	313.62	1,766.31	184.65	1,011.27	3,949.08	4,649.87	281.69	2,486.01
Severna	140.17	9.98	795.79	1,841.79	802.91	944.43	3,247.55	6,953.18	3,512.72	2,320.96
Severna Park / Crownsville	1,835.59	1.40	328.02	324.79	213.19	2,182.53	6,140.01	13,997.61	125.97	2,155.02
South County	32,498.86	14.39	77.00	746.71	126.72	2,336.63	5,975.57	18,189.75	273.82	5,989.30
County Totals	40,712.26	75.41	5,024.48	8,149.53	2,737.39	19,755.64	45,955.33	87,073.40	5,586.71	22,317.03
Percent of County	17.15%	0.03%	2.12%	3.43%	1.15%	8.32%	19.36%	36.68%	2.35%	9.40%

Data Sources: Anne Arundel County, Maryland Property View



Esri, HERE, Garmin, (c) OpenStreetMap contributors, Esri, HERE, Garmin, (c) OpenStreetMap contributors, and the GIS user community

Land Use	Jessup-Maryland City	Percent of Area
Agriculture	-	0.00%
Cemetery	0.82	0.00%
Commercial	873.29	3.89%
Industrial	312.76	1.39%
Office	378.32	1.69%
Public	6,593.29	29.37%
Park/Recreation/Open Space	10,220.01	45.52%
Residential	2,095.56	9.33%
Transportation	605.23	2.70%
Undeveloped	1,371.71	6.11%
Total Land Area	22,450.97	100.00%

Jessup-Maryland City

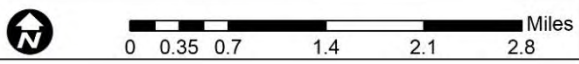
Submarket Area Boundary

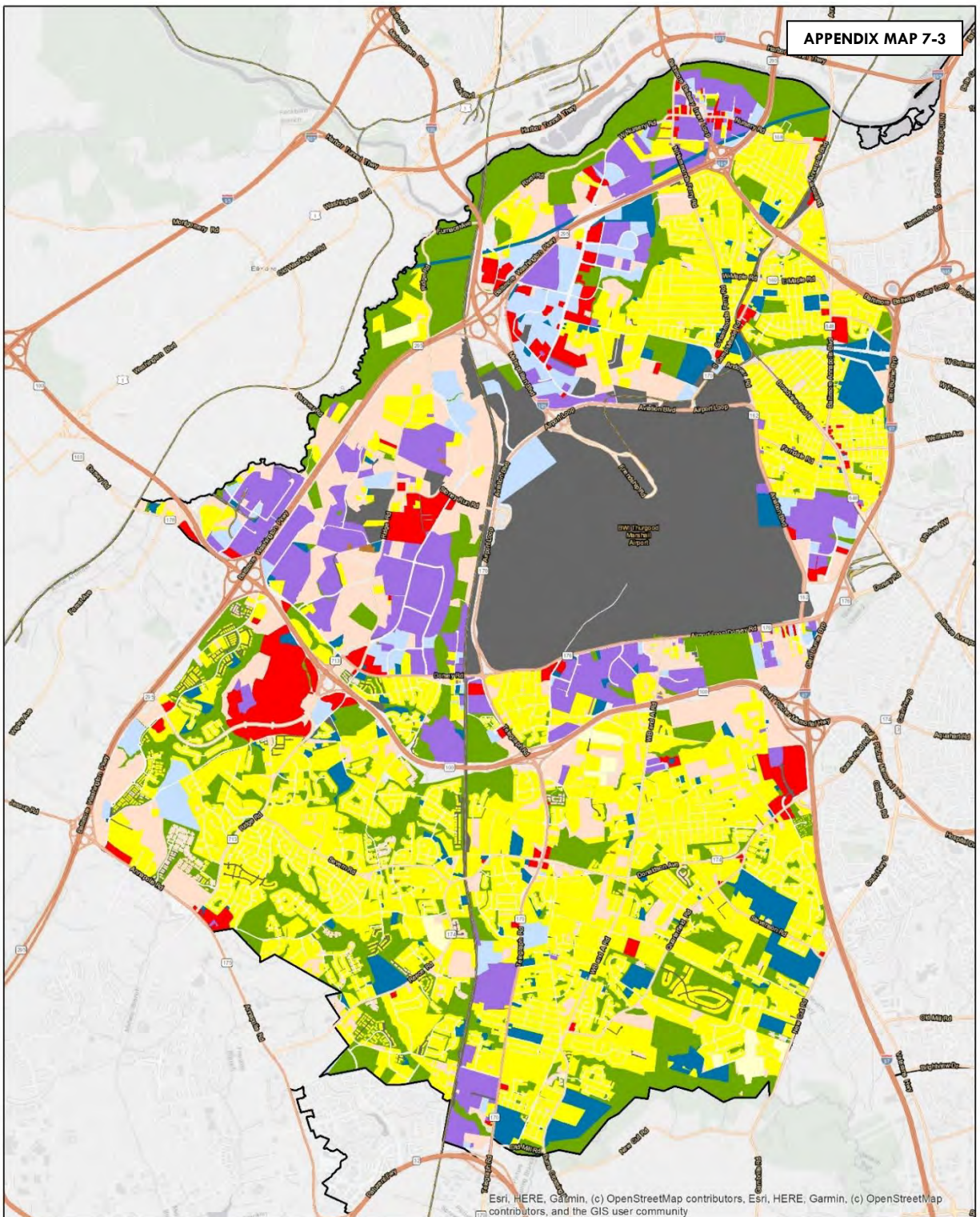
Major Land Use (2018)

Land Use Category

- Agriculture
- Cemetery
- Commercial
- Industrial
- Office
- Public
- Park/Recreation/Open Space
- Residential
- Transportation
- Undeveloped

Data Sources: Anne Arundel County, Maryland Property View





Esri, HERE, Garmin, (c) OpenStreetMap contributors, Esri, HERE, Garmin, (c) OpenStreetMap contributors, and the GIS user community

Land Use	Severn	Percent of Area
Agriculture	140.17	0.68%
Cemetery	9.98	0.05%
Commercial	795.79	3.87%
Industrial	1,841.79	8.95%
Office	802.91	3.90%
Public	944.43	4.59%
Park/Recreation/Open Space	3,247.56	15.79%
Residential	6,953.18	33.80%
Transportation	3,512.72	17.08%
Undeveloped	2,320.96	11.28%
Total Land Area	20,569.49	100.00%

Linthicum/Severn

Submarket Area Boundary
 Office

Major Land Use (2018)
 Public

Land Use Category
 Park/Recreation/Open Space

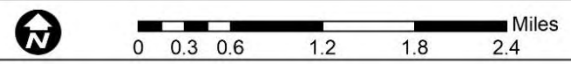
Agriculture
 Residential

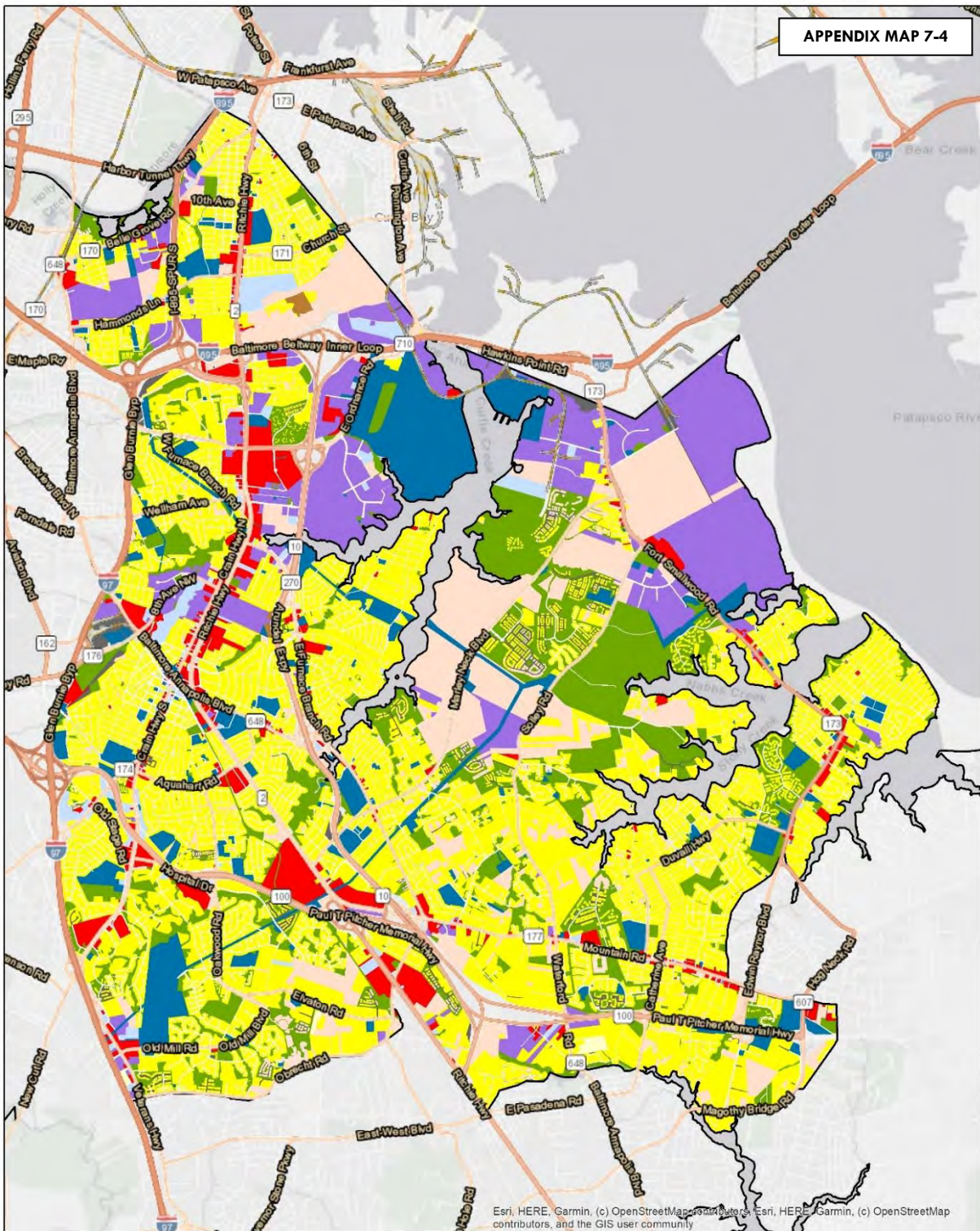
Cemetery
 Transportation

Commercial
 Undeveloped

Industrial

Data Sources: Anne Arundel County, Maryland Property View





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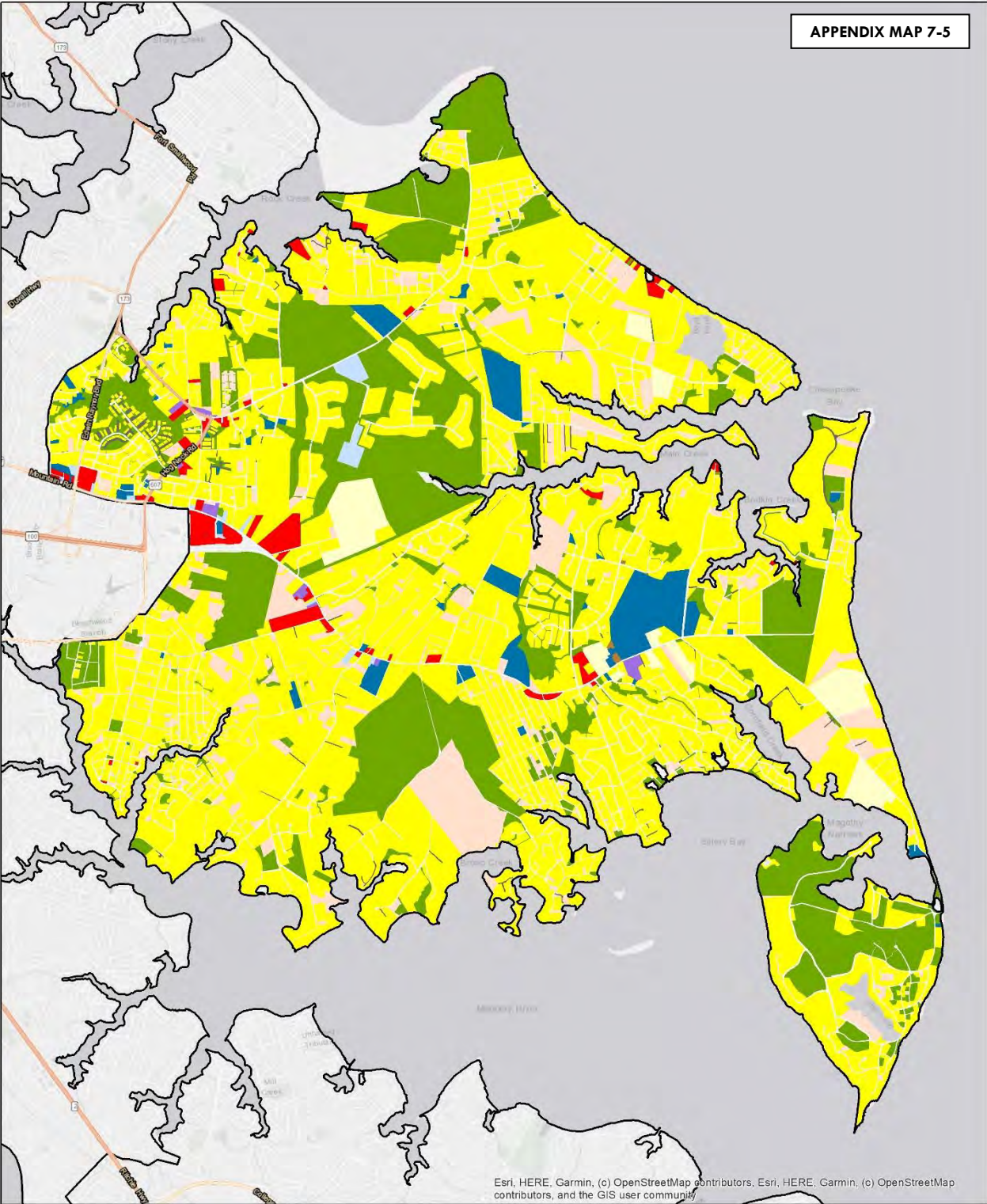
Land Use	Brooklyn Park / Glen Burnie / Pasadena	Percent of Area
Agriculture	31.62	0.14%
Cemetery	23.85	0.11%
Commercial	1,179.32	5.33%
Industrial	2,677.22	12.09%
Office	435.32	1.97%
Public	1,975.79	8.92%
Park/Recreation/Open Space	3,141.69	14.19%
Residential	9,659.51	43.62%
Transportation	333.22	1.50%
Undeveloped	2,685.99	12.13%
Total Land Area	22,143.54	100.00%

Brooklyn Park/Glen Burnie/Pasadena

- Submarket Area Boundary
- Major Land Use (2018)**
- Land Use Category**
- Agriculture
 - Cemetery
 - Commercial
 - Industrial
 - Office
 - Public
 - Park/Recreation/Open Space
 - Residential
 - Transportation
 - Undeveloped

Data Sources: Anne Arundel County, Maryland Property View





Esri, HERE, Garmin, (c) OpenStreetMap contributors, Esri, HERE, Garmin, (c) OpenStreetMap contributors, and the GIS user community

Land Use	Lake Shore	Percent of Area
Agriculture	292.96	2.26%
Cemetery	3.57	0.03%
Commercial	204.85	1.58%
Industrial	27.92	0.22%
Office	52.65	0.41%
Public	379.90	2.93%
Park/Recreation/Open Space	2,994.95	23.09%
Residential	8,001.89	61.68%
Transportation	52.72	0.41%
Undeveloped	961.04	7.41%
Total Land Area	12,972.43	100.00%

Lake Shore

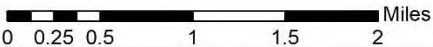
Submarket Area Boundary

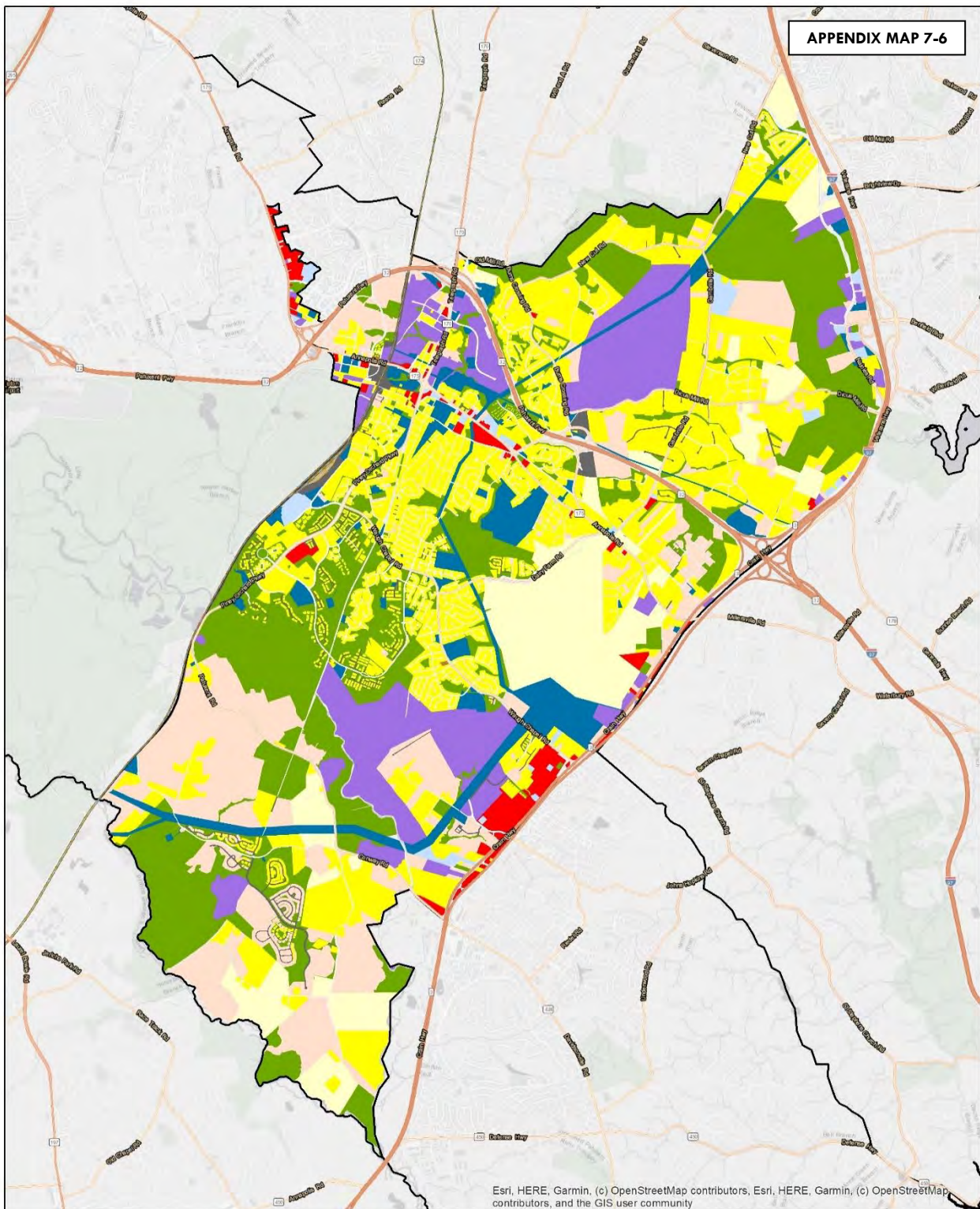
Major Land Use (2018)

Land Use Category

- Agriculture
- Cemetery
- Commercial
- Industrial
- Office
- Public
- Park/Recreation/Open Space
- Residential
- Transportation
- Undeveloped

Data Sources: Anne Arundel County, Maryland Property View





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Land Use	Odenton	Percent of Area
Agriculture	1,728.72	10.56%
Cemetery	3.40	0.02%
Commercial	313.62	1.92%
Industrial	1,766.31	10.79%
Office	184.65	1.13%
Public	1,011.27	6.18%
Park/Recreation/Open Space	3,949.08	24.12%
Residential	4,649.87	28.40%
Transportation	281.69	1.72%
Undeveloped	2,486.01	15.18%
Total Land Area	16,374.61	100.00%

Odenton

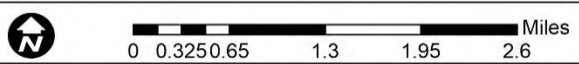
Submarket Area Boundary

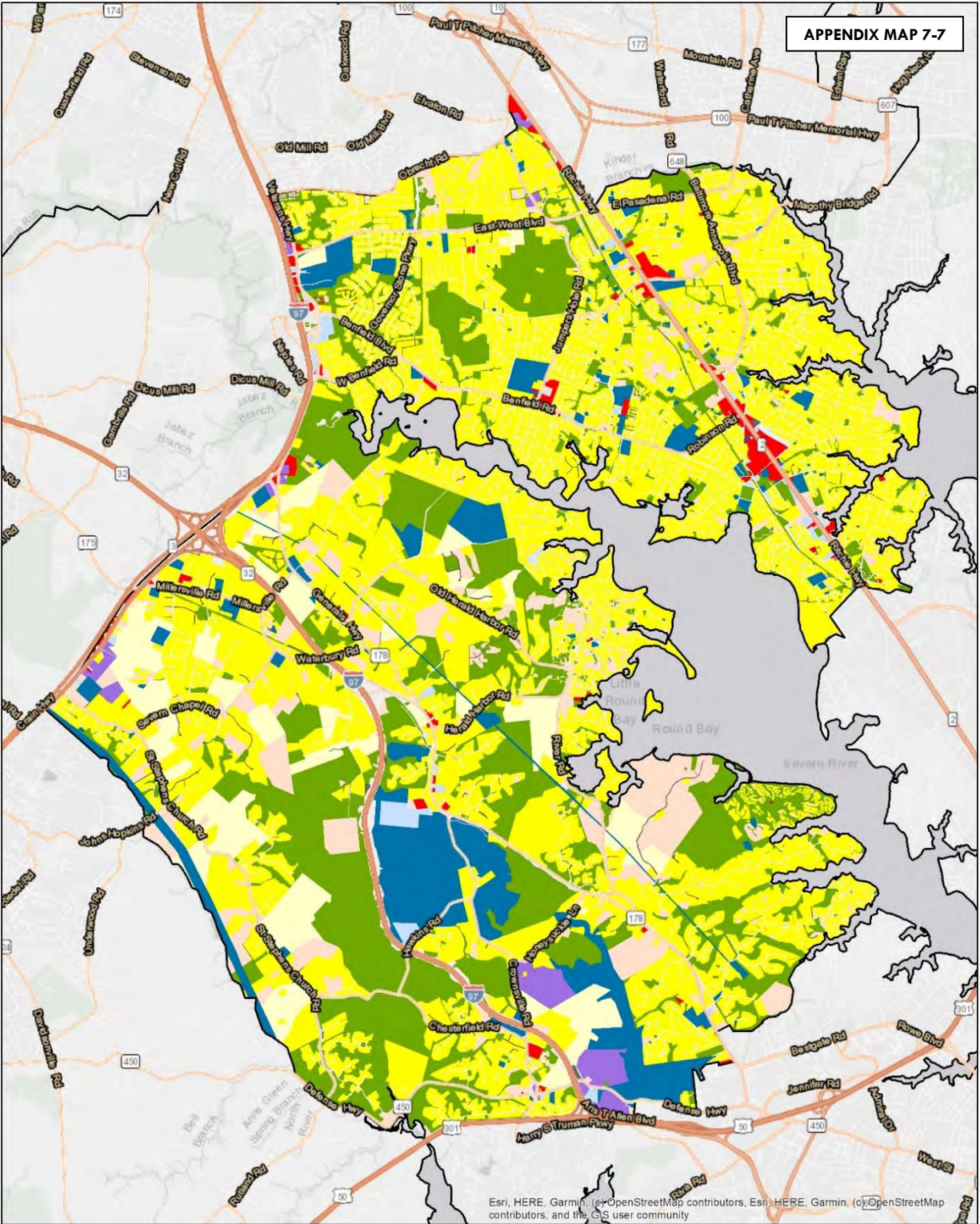
Major Land Use (2018)

Land Use Category

- Agriculture
- Cemetery
- Commercial
- Industrial
- Office
- Public
- Park/Recreation/Open Space
- Residential
- Transportation
- Undeveloped

Data Sources: Anne Arundel County, Maryland Property View





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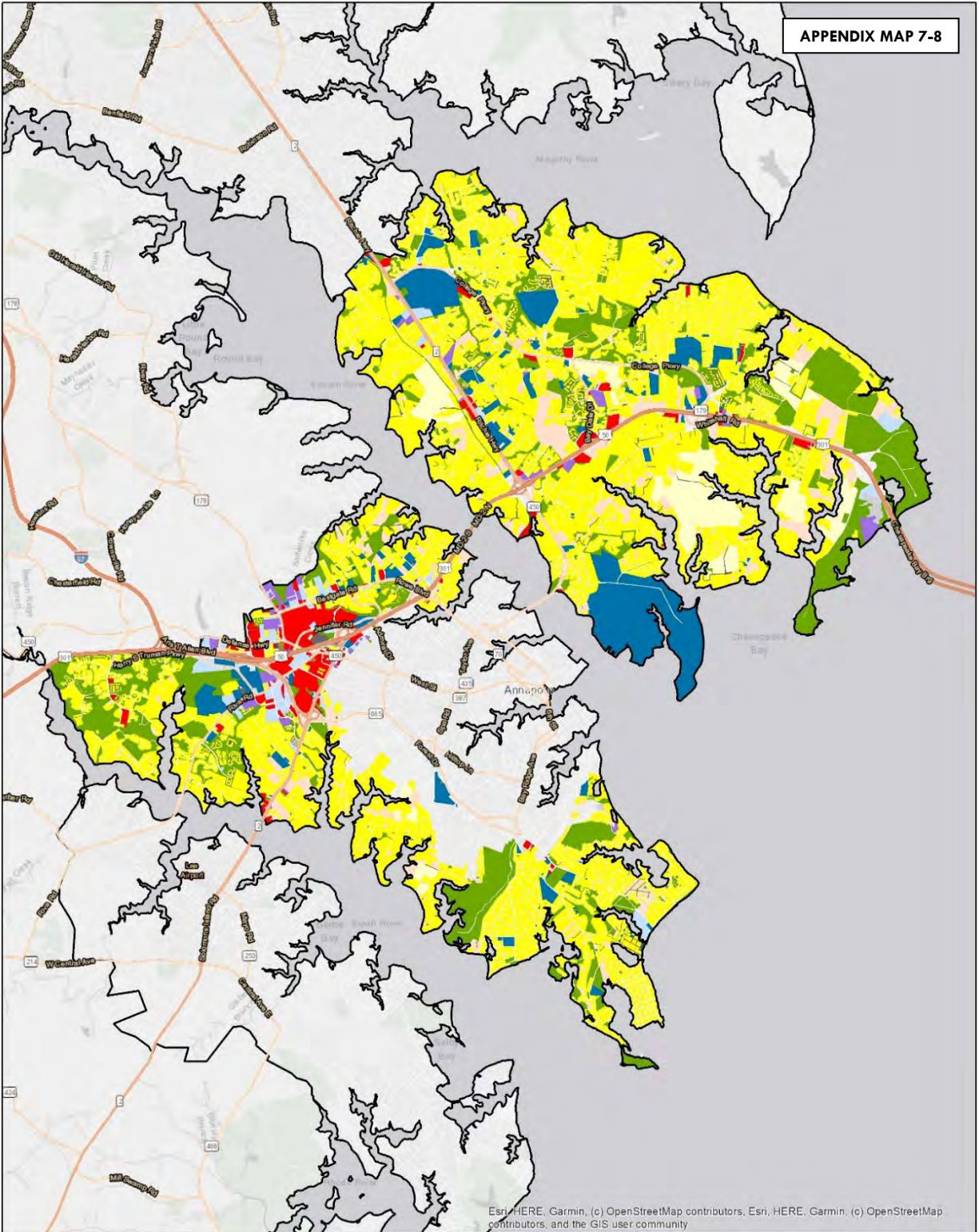
Land Use	Severna Park / Crownsville	Percent of Area
Agriculture	1,835.59	6.72%
Cemetery	1.40	0.01%
Commercial	328.02	1.20%
Industrial	324.79	1.19%
Office	213.19	0.78%
Public	2,182.53	7.99%
Park/Recreation/Open Space	6,140.01	22.49%
Residential	13,997.61	51.27%
Transportation	125.97	0.46%
Undeveloped	2,155.02	7.89%
Total Land Area	27,304.13	100.00%

Severna Park/Crownsville

- Submarket Area Boundary
- Office
- Public
- Park/Recreation/Open Space
- Residential
- Cemetery
- Transportation
- Commercial
- Undeveloped
- Industrial

Data Sources: Anne Arundel County, Maryland Property View





Esri, HERE, Garmin, (c) OpenStreetMap contributors, Esri, HERE, Garmin, (c) OpenStreetMap contributors, and the GIS user community

Land Use (Acres)	Annapolis Neck / Broadneck	Percent of Area
Agriculture	1,071.34	4.71%
Cemetery	9.89	0.04%
Commercial	693.75	3.05%
Industrial	248.32	1.09%
Office	441.06	1.94%
Public	2,000.81	8.79%
Park/Recreation/Open Space	4,193.53	18.43%
Residential	12,458.88	54.75%
Transportation	175.51	0.77%
Undeveloped	1,463.46	6.43%
Total Land Area	22,756.54	100.00%

Annapolis Neck/Broadneck

Submarket Area Boundary

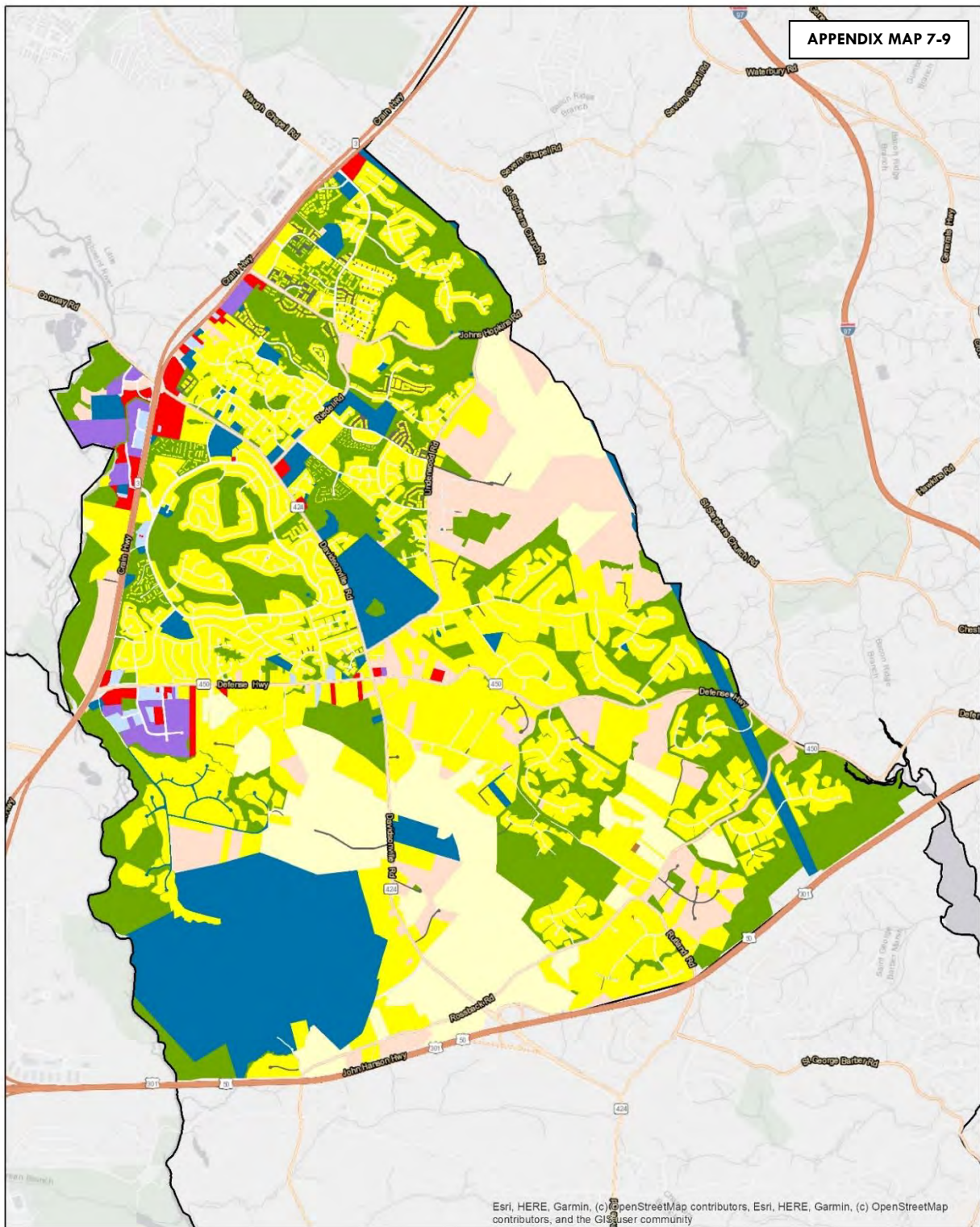
Major Land Use (2018)

Land Use Category

- Agriculture
- Cemetery
- Commercial
- Industrial
- Office
- Public
- Park/Recreation/Open Space
- Residential
- Transportation
- Undeveloped

Data Sources: Anne Arundel County, Maryland Property View





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Land Use	Crofton	Percent of Area
Agriculture	1,428.49	13.02%
Cemetery	1.47	0.01%
Commercial	141.58	1.29%
Industrial	152.20	1.39%
Office	52.94	0.48%
Public	1,509.09	13.76%
Park/Recreation/Open Space	2,622.64	23.91%
Residential	3,972.02	36.21%
Transportation	79.06	0.72%
Undeveloped	1,010.51	9.21%
Total Land Area	10,969.98	100.00%

Crofton

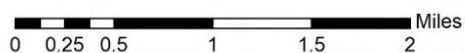
Submarket Area Boundary

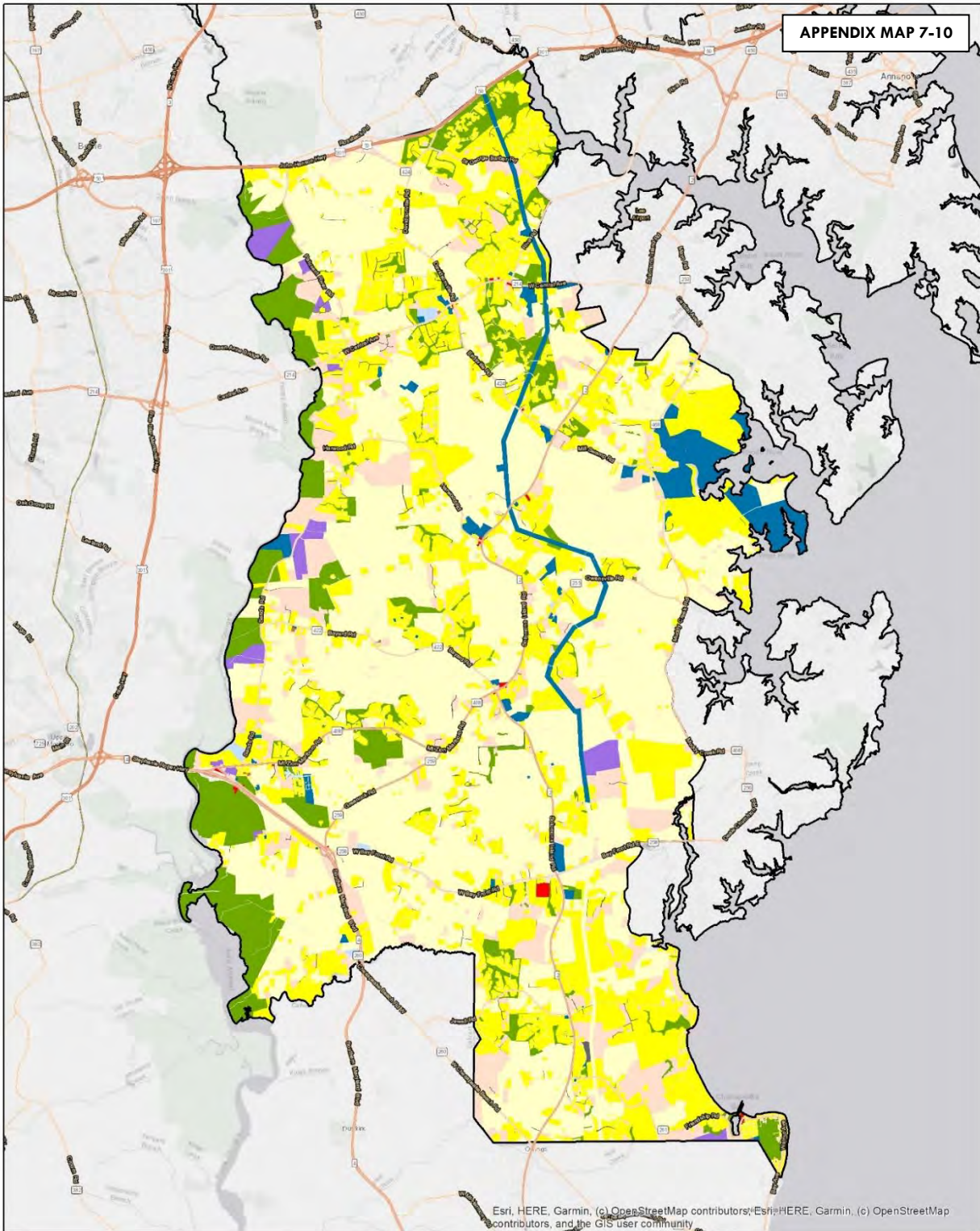
Major Land Use (2018)

Land Use Category

- Agriculture
- Cemetery
- Commercial
- Industrial
- Office
- Public
- Park/Recreation/Open Space
- Residential
- Transportation
- Undeveloped

Data Sources: Anne Arundel County, Maryland Property View





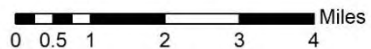
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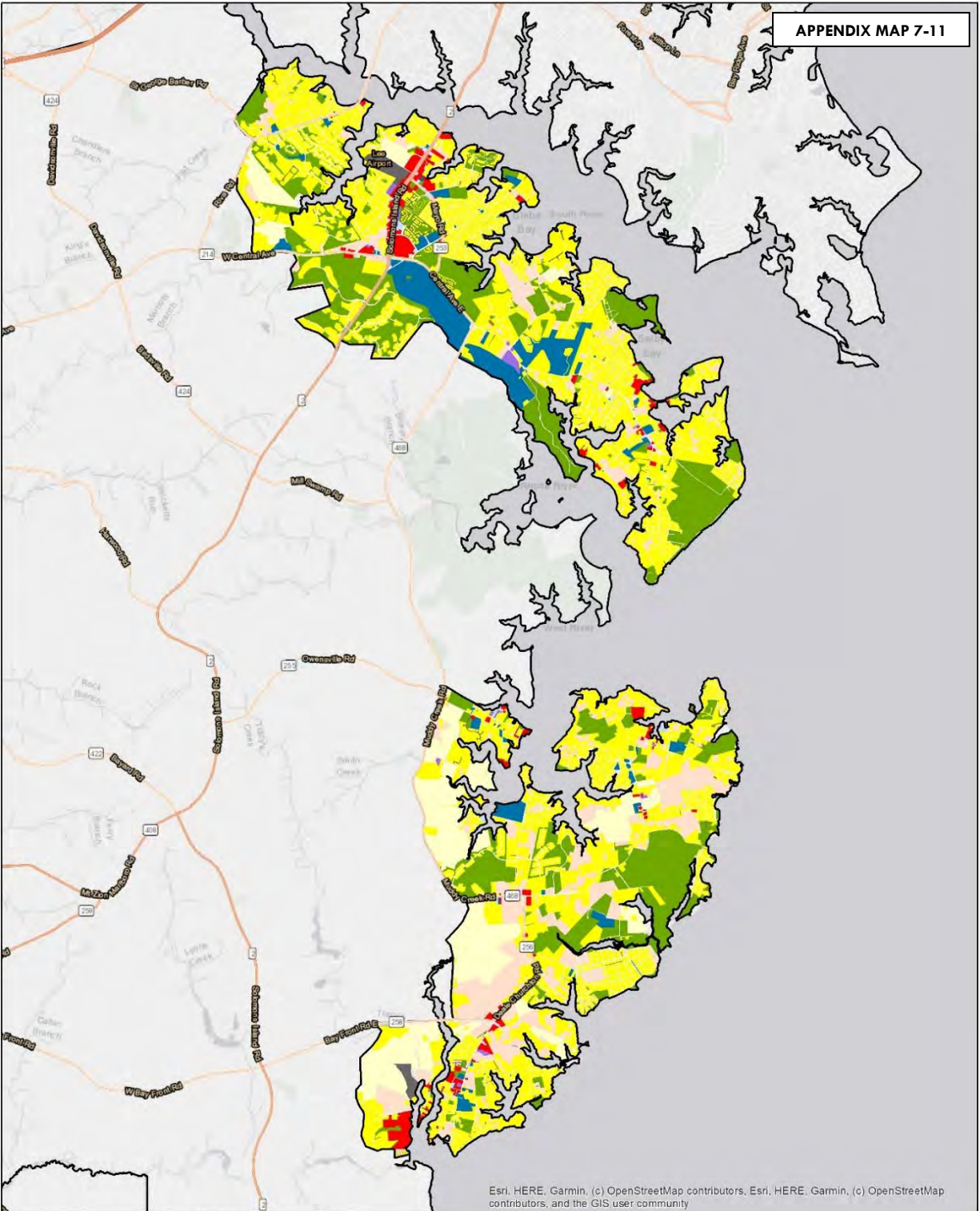
Land Use	South County	Percent of Area
Agriculture	32,498.86	49.07%
Cemetery	14.39	0.02%
Commercial	77.00	0.12%
Industrial	746.71	1.13%
Office	126.72	0.19%
Public	2,336.63	3.53%
Park/Recreation/Open Space	5,975.57	9.02%
Residential	18,189.75	27.47%
Transportation	273.82	0.41%
Undeveloped	5,989.30	9.04%
Total Land Area	66,228.74	100.00%

South County

- Submarket Area Boundary
- Major Land Use (2018)**
- Land Use Category**
- Agriculture
- Cemetery
- Commercial
- Industrial
- Office
- Public
- Park/Recreation/Open Space
- Residential
- Transportation
- Undeveloped

Data Sources: Anne Arundel County, Maryland Property View





Esri, HERE, Garmin, (c) OpenStreetMap contributors, Esri, HERE, Garmin, (c) OpenStreetMap contributors, and the GIS user community

Land Use	Edgewater / Deale / Shadyside	Percent of Area
Agriculture	1,684.52	10.79%
Cemetery	6.65	0.04%
Commercial	417.24	2.67%
Industrial	51.52	0.33%
Office	49.62	0.32%
Public	821.92	5.26%
Park/Recreation/Open Space	3,470.29	22.22%
Residential	7,095.13	45.43%
Transportation	146.77	0.94%
Undeveloped	1,873.04	11.99%
Total Land Area	15,616.71	100.00%

Edgewater/Deale/Shadyside

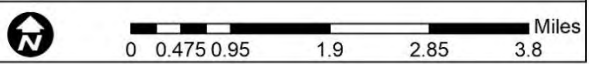
Submarket Area Boundary

Major Land Use (2018)

Land Use Category

- Agriculture
- Cemetery
- Commercial
- Industrial
- Office
- Public
- Park/Recreation/Open Space
- Residential
- Transportation
- Undeveloped

Data Sources: Anne Arundel County, Maryland Property View



8 LAND DEMAND PROJECTIONS

A. INTRODUCTION

RKG has identified several factors driving Anne Arundel County's growth patterns relative to changes in population, household formations, and employment. Anne Arundel County has experienced substantial growth over the past 50 years but has slowed in recent years. To this point, only a portion of the County has experienced expansion and new development, which is concentrated in the Jessup-Maryland City, Linthicum-Severn, Brooklyn Park-Glen Burnie-Pasadena, Odenton and Annapolis Neck-Broadneck submarkets. The County's existing land use pattern shows some areas capturing growth while other areas have not. The County's land use planning policies are designed to encourage development in growth areas and reduce development densities in rural or natural resource protection areas, which are mostly located in the southern portion of the County.

The following analysis projects Anne Arundel County's short- and long-term growth prospects based on demographic characteristics (population, employment, household formation) and the resulting land demand (expressed as land acres) over the next 17-year projection period (2018-2035). The consultants assessed the existing land use data presented in Chapter 7 of this report and identified the supply/availability of developable land by extracting parcels that were classified as "undeveloped" land. Furthermore, the results of this analysis address where land demand will be the greatest and compares it against the available supply of developable land in each submarket area.

B. POPULATION, HOUSEHOLD AND EMPLOYMENT PROJECTIONS

RKG Associates utilized various data sources and conducted several calculations to project population, household and employment growth between 2018 and 2035. Below is a description of the methodology for each of these growth metrics:

- Population and Household Growth Projections - There were several steps required to determine the total population and household growth projections in each of Anne Arundel County's submarket areas. To start, RKG Associated obtained population and household projection data from Woods & Poole Economics, Inc. for totals in the County and deducted totals for the City of Annapolis. As mentioned previously, the City is not included in these projections because the land use market analysis is focused on areas of the County outside Annapolis. RKG relied on ESRI's population/demographic reports for the City of Annapolis that provide population and household data for the current year (2018) and five-year projections out to 2023, which allowed the consultant to calculate the totals throughout the projection period along with assessing the distribution in each of the submarket areas as well. Additionally, the consultants determined the population growth in households by assessing the relationship between the total number of households and average household size in each submarket area in which the calculation was distributed throughout the projection period. ESRI is the only source that could provide population and household estimates for customized geographic areas such as the submarket boundaries.

The ESRI/Woods & Poole projections should not be confused with the Baltimore Metropolitan Council Cooperative Forecasting. The data are derived from different methodologies. In order

to prepare submarket level projections, RKG used ESRI household, household size, and population projections, along with Wood & Poole long-range population and household projections for Anne Arundel County. Similar data were used to project employment at the submarket level. The Metropolitan Council use the transportation analysis zone (TAZ) projections for population and employment to drive their transportation demand modeling projections. The projections are based on theoretical land build-out assumptions and were not relevant to this analysis. At the County's request, TAZ-level data were not used for this analysis.

- Employment Growth** - As seen in Table 8-1, RKG relied on multiple data sources to determine the most accurate employment estimates for Anne Arundel County and to distribute them at the submarket level. It should be noted, that jobs within the Fort Meade military installation, which is in the Jessup-Maryland City submarket, were not accounted for in ESRI's submarket employment data, as well as the U.S. Census Bureau's OnTheMap employment totals. These data sources only represented the private employment in each submarket and not federal or Department of Defense employment. In order to account for Fort Meade's employment, RKG Associates relied on employment data estimates contained in the County's Transportation Analysis Zones (TAZ). The TAZ employment data is used to drive transportation demand modeling. Approximately 59,981 jobs were estimated for Fort Meade in 2018. This total was applied to the ESRI and OnTheMap estimates for the Jessup-Maryland City submarket employment totals. Further, the consultants utilized the submarket areas employment percent distribution from ESRI data and applied it to 2018 employment totals for Anne Arundel County provided by EMSI, an economic and data analytics firm that provides county-level employment trends and projections for Anne Arundel County. EMSI data allowed the consultants to back out the City of Annapolis data to isolate the rest of the County and then apportion the jobs by all ten submarkets (Table 8-1).

Table 8-1
Employment Total Comparison by Data Sources
Anne Arundel County, MD (2018)

	Data Source w/ Submarket Distribution						Data Source w/o Submarket Distribution		
	2018 ESRI Employment		2018 Estimated TAZ Employment		2015 OnTheMap Employment		2018 Woods & Poole Economics Employment Totals	2018 (1st QTR) State of Maryland Dept. of Labor	2018 EMSI Employment Totals
	Totals	% of Total	Totals	% of Total	Totals	% of Total			
SM 1 - Jessup-Maryland City	76,625	23.4%	79,384	21.0%	80,574	25.4%	--	--	78,775
SM 2 - Linthicum-Severn	56,278	17.2%	75,509	20.0%	65,915	20.8%	--	--	57,857
SM 3 - Brooklyn Park-Glen Burnie-Pasadena	45,872	14.0%	56,920	15.1%	43,517	13.7%	--	--	47,159
SM 4 - Lake Shore	4,697	1.4%	6,621	1.8%	3,788	1.2%	--	--	4,829
SM 5 - Odenton	12,711	3.9%	20,465	5.4%	12,586	4.0%	--	--	13,068
SM 6 - Severna Park-Crownsville	17,161	5.2%	23,571	6.2%	15,173	4.8%	--	--	17,643
SM 7 - Annapolis Neck-Broadneck	58,799	17.9%	55,893	14.8%	49,404	15.6%	--	--	60,449
SM 8 - Crofton	10,481	3.2%	11,930	3.2%	9,117	2.9%	--	--	10,775
SM 9 - South County	5,718	1.7%	7,825	2.1%	3,893	1.2%	--	--	5,878
SM 10 - Edgewater-Deale-Shady Side	8,564	2.6%	9,452	2.5%	6,148	1.9%	--	--	8,804
Anne Arundel County (City of Annapolis Not Included)	296,906	90.5%	347,570	92.0%	290,115	91.4%	390,788	237,027	305,239
City of Annapolis	31,013	9.5%	30,152	8.0%	27,297	8.6%	29,487	29,487	31,883
Anne Arundel County (City of Annapolis Included)	327,919	100.0%	377,722	100.0%	317,412	100.0%	420,275	266,514	337,122

Source: ESRI, Anne Arundel County, U.S. Census OnTheMap, Woods & Poole Economics, Inc., State of Maryland, EMSI: Labor Market Analytics, 2018

Annapolis employment estimate of 29,487 derived from average of ESRI, TAZ and OnTheMap estimates

1. Population & Household Projections

- Anne Arundel County's Population is Projected to Grow by roughly 94,000 Persons, Which Equates to an Annual Growth Rate of 1%**
 Between 2018 and 2035, Anne Arundel County's population is projected to increase from 542,883 to 637,082 persons resulting in a growth rate equivalent to 1.0%. This annual growth

rate is commensurate within the Jessup-Maryland City, Linthicum-Severn and Brooklyn Park-Glen Burnie-Pasadena submarket areas and several exceed the County's annual growth rate (Table 8-2). Development policies throughout the submarket areas concentrated in the southern portion of the County have reduced the County's overall growth potential from both a population and development perspective.

Table 8-2
Population Projections
Anne Arundel County & Submarket Areas (2018-2035)

Submarkets	2018	2020	2025	2030	2035	Change '18 - '35		
						Actual Chg	% of Tot.	Ann % Chge
Anne Arundel County	542,883	554,005	582,157	610,528	637,082	94,199	100.0%	1.0%
SM 1 - Jessup-Maryland City	42,300	43,070	45,222	47,702	50,064	7,764	8.2%	1.1%
SM 2 - Linthicum-Severn	71,449	73,836	80,190	87,288	94,413	22,964	24.4%	1.9%
SM 3 - Brooklyn Park-Glen Burnie-Pasadena	140,556	143,292	150,321	157,542	164,286	23,730	25.2%	1.0%
SM 4 - Lake Shore	27,885	28,147	28,692	28,992	29,106	1,221	1.3%	0.3%
SM 5 - Odenton	41,293	42,887	47,162	52,022	56,957	15,664	16.6%	2.2%
SM 6 - Severna Park-Crownsville	55,831	56,713	58,786	60,560	62,056	6,225	6.6%	0.7%
SM 7 - Annapolis Neck-Broadneck	75,800	77,207	80,504	83,363	85,879	10,079	10.7%	0.8%
SM 8 - Crofton	31,286	31,635	32,404	32,930	33,263	1,977	2.1%	0.4%
SM 9 - South County	22,192	22,486	23,150	23,658	24,040	1,848	2.0%	0.5%
SM 10 - Edgewater-Deale-Shady Side	34,291	34,732	35,726	36,471	37,018	2,727	2.9%	0.5%

Household Projections
Anne Arundel County & Submarket Areas (2018-2035)

Submarkets	2018	2020	2025	2030	2035	Change '18 - '35		
						Actual Chg	% of Tot.	Ann % Chge
Anne Arundel County	197,621	201,474	210,914	219,133	225,773	28,152	100.0%	0.8%
SM 1 - Jessup-Maryland City	12,826	13,078	13,750	14,434	15,024	2,198	7.8%	1.0%
SM 2 - Linthicum-Severn	25,629	26,458	28,642	30,930	33,075	7,446	26.4%	1.7%
SM 3 - Brooklyn Park-Glen Burnie-Pasadena	52,815	53,752	56,088	58,160	59,805	6,990	24.8%	0.8%
SM 4 - Lake Shore	9,985	10,062	10,202	10,196	10,088	103	0.4%	0.1%
SM 5 - Odenton	16,317	16,929	18,562	20,320	22,003	5,686	20.2%	2.0%
SM 6 - Severna Park-Crownsville	19,417	19,683	20,271	20,629	20,809	1,392	4.9%	0.4%
SM 7 - Annapolis Neck-Broadneck	28,151	28,698	29,915	30,756	31,354	3,203	11.4%	0.7%
SM 8 - Crofton	11,449	11,544	11,720	11,728	11,620	171	0.6%	0.1%
SM 9 - South County	8,022	8,115	8,311	8,402	8,416	394	1.4%	0.3%
SM 10 - Edgewater-Deale-Shady Side	13,010	13,153	13,451	13,577	13,578	568	2.0%	0.3%

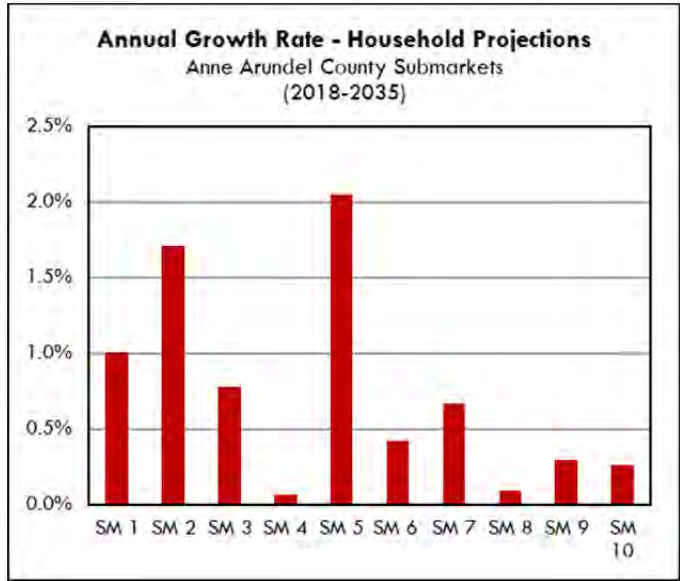
Source: Woods & Poole, Inc. and RKG Associates, inc., 2018

- **Submarkets 2, 3, 5 and 7 are Projected to Experience the Strongest Growth**
 As seen in Table 8-2, these submarket areas account for approximately 77% of the total population growth potential in Anne Arundel County. In contrast, the Lake Shore, Crofton, and South County submarkets all experienced population change of fewer than 2,000 persons throughout the projection period.
- **Household Growth is Projected to be Limited in the Southern Submarkets**
 Like the limitations with the population growth potential, the County's submarket areas concentrated in the southern portion along with the Lake Shore submarket have exhibited minimal household growth throughout the projection period. The Lake Shore, Crofton, South County, and Edgewater-Deale-Shady Side submarkets account for roughly 8.3% of the household growth potential. This is largely attributed to the Smart Growth policies that have occurred over the last 20-plus years.

- Submarkets 2, 3, 5 and 7 Accounts for Roughly 75.4% of Anne Arundel County's Household Growth Projections

Anne Arundel County has the potential to add roughly 28,152 new households throughout the projection period. This is largely attributed to the household growth projections which are concentrated in the Linthicum-Severn and Brooklyn Park-Glen Burnie-Pasadena submarkets as well as the Odenton and Annapolis Neck-Broadneck submarkets. Over 23,000 households are estimated to be added within these submarkets and the household growth projections are commensurate with the population growth that occurs within the more densely developed submarket areas (Figure 8-1).

Figure 8-1



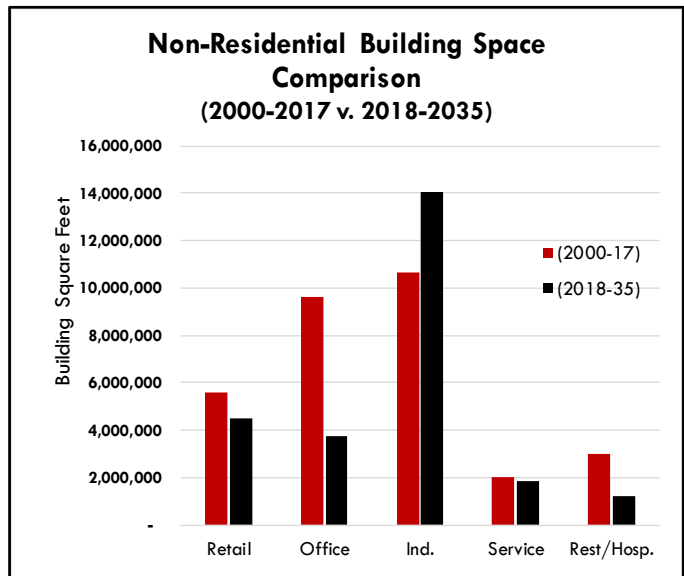
Source: ESRI, Woods & Poole & RKG Associates, Inc., 2018

2. Employment Projections

- Submarkets 1, 2, 3 and 7 Account For 77.6% of Anne Arundel County's Employment Growth Projections

The Jessup-Maryland City, Linthicum-Severn, Brooklyn Park-Glen Burnie-Pasadena, and Annapolis Neck-Broadneck submarkets and the Parole Town Center area exhibit strong employment growth potential during the projection period. This is largely attributed to the job opportunities presented near the Fort Meade, Glen Burnie Town Center and BWI Airport areas. Most of the new jobs created are expected to be industrial-related jobs, primarily located in submarkets 2 and 3 (Figure 8-2 and Table 8-3).

Figure 8-2



Source: RKG Associates, Inc., 2019

As shown in Table 8-4, the Jessup-Maryland City, Linthicum-Severn, Brooklyn Park-Glen Burnie-Pasadena, and Annapolis Neck-Broadneck submarkets are projected to exceed the remaining submarkets by roughly 26,000 jobs during the projection period. Approximately 77.6% of all new jobs over the next 17 years are likely to be created in these four submarkets.

Table 8-3
Non-Residential Projections by Building Square Footage (2018-2035)

Anne Arundel Submarkets

Submarket	Retail	Office	Industrial	Services	Rest./Hotel	Total Bldg. SF
SM 1 - Jessup-Maryland City	12,441	1,488,408	310,210	17,974	53,126	1,882,158
SM 2 - Linthicum-Severn	1,295,707	741,529	7,425,463	152,252	680,067	10,295,019
SM 3 - Brooklyn Park-Glen Burnie-Pasadena	1,111,438	509,469	3,671,219	201,273	152,988	5,646,387
SM 4 - Lake Shore	221,847	12,747	4,215	100,098	2,357	341,265
SM 5 - Odenton	563,993	145,843	1,026,248	278,749	22,021	2,036,854
SM 6 - Severna Park-Crownsville	90,642	138,469	611,781	381,280	9,971	1,232,142
SM 7 - Annapolis Neck-Broadneck	864,461	551,002	192,580	393,436	224,398	2,225,877
SM 8 - Crofton	76,753	11,065	540,854	160,556	9,256	798,484
SM 9 - South County	41,727	14,615	31,367	21,999	0	109,708
SM 10 - Edgewater-Deal-Shady Side	225,886	117,974	225,676	153,896	88,284	811,715
Total - Employment Projections	4,504,895	3,731,120	14,039,614	1,861,513	1,242,467	25,379,609

Source: RKG Associates, Inc., 2019

Table 8-4
Employment Distribution by Submarket and Projection Period (2018-2035)

Submarket Areas	PROJECTION PERIOD				Employment Totals	% Avg. Ann Growth	Employ. % of Total
	2018-20	2020-25	2025-30	2030-35			
SM 1 - Jessup-Maryland City	711	1,777	1,777	1,777	6,040	0.45%	12.9%
SM 2 - Linthicum-Severn	1,652	4,129	4,129	4,129	14,039	1.43%	30.1%
SM 3 - Brooklyn Park-Glen Burnie-Pasadena	1,251	3,128	3,128	3,128	10,637	1.33%	22.8%
SM 4 - Lake Shore	84	209	209	209	711	0.87%	1.5%
SM 5 - Odenton	457	1,142	1,142	1,142	3,883	1.75%	8.3%
SM 6 - Severna Park-Crownsville	286	714	714	714	2,428	0.81%	5.2%
SM 7 - Annapolis Neck-Broadneck	651	1,626	1,626	1,626	5,530	0.54%	11.8%
SM 8 - Crofton	163	407	407	407	1,385	0.76%	3.0%
SM 9 - South County	27	68	68	68	230	0.23%	0.5%
SM 10 - Edgewater-Deale-Shady Side	214	535	535	535	1,820	1.22%	3.9%
TOTAL	5,494	13,736	13,736	13,736	46,702	0.90%	100.0%

Source: RKG Associates, Inc., 2019

C. LAND DEMAND PROJECTIONS

1. Methodology

As presented in Chapter 7, the consultants estimated the remaining development capacity by land use categories in the County and each of its ten submarket areas. Using Anne Arundel County's GIS land use data, developable land parcels were grouped by their major land use categories (residential, commercial, mixed use, industrial and agriculture) to identify potential future development areas. RKG and Kimley Horn estimate that approximately 13,736 acres of land are currently undeveloped and relatively free from constraints in the ten submarkets, which does not include the City of Annapolis.

Several methods were used to arrive at Anne Arundel County's land demand projections. RKG Associates analyzed recent development (both residential and non-residential) activity in the submarkets between 2010 and 2017 1st QTR. This resulted in the calculation of recent development trends, in terms of new building square feet constructed during that period. In addition, the density of development by land use was calculated based on the floor-area-ratio (FAR), which creates a relationship between building square footage and land square footage on a given parcel. The FAR was used to estimate future land demand based on recent development densities, calculated based on the number and type of residential unit and the type of non-residential land use. Non-residential land demand was driven by projected changes in employment by land use type within each submarket. For example, if 100 new warehouse/distribution jobs require roughly 1,500 SF per worker, then 100 workers would result in the need for 150,000 SF of building space. Based on historical FARs for warehouse/distribution uses, RKG then calculated the resulting

land demand for a 150,000 SF building of this type. If the FAR for a warehouse/distribution building is .15, or 15% of the total land area, then the land demand would equal 468,750 (150,000 SF/15%) or 10.76 acres. In very rural areas of the county, RKG used county average FAR's for various uses to represent typical development densities that more accurately reflect future land demand. For example, while a convenience store may currently sit on a 5-acre plot of land, it's future FAR should reflect a more conventional use of land. Typically, a 2,500 SF convenience store with a FAR of .30 would demand a lot of only 8,333 SF or 1/5th of an acre.

It should be noted, that agricultural land capacity was not assessed in this analysis, which ultimately would alter the results and implications. Overall, Anne Arundel County contains an agricultural land capacity of over 4,375 acres, however, not all the County's submarket areas contain agricultural land. For those submarket areas that do, there is potential to re-zone and utilize this available land supply for different uses.

2. Residential Demand by Type

- Anne Arundel County has the potential to Consume Over 100% of Developable Residential Land During the 17-Year Projection Period

Anne Arundel County has an estimated total of roughly 6,500 acres dedicated to new residential development. Between 2018 and 2035, Anne Arundel County is projected to consume roughly 142% of residential land, which is largely attributed to the land demand designated towards single-family units (9,200 acres). To this point, residential land throughout the County has potential availability in the Jessup-Maryland City, Brooklyn Park-Glen Burnie-Pasadena, Lake Shore and Edgewater-Deale-Shady Side submarkets while the rest of the County's submarket areas will run out of developable residential land by 2035 (Table 8-5).

- An Excessive Amount of Residential Land is Consumed Throughout Submarket 9 Due to High Concentrations of Low-Density, Large Lot Developments

The South County submarket is projected to capture very little development between 2018-2035. However, with 5-acre minimum lot size requirements for residential development, this results in the consumption of large amounts of land for relatively little development. The purpose of the low-density zoning in this area is to preserve the rural/agricultural character in this submarket.

3. Non-residential Demand by Type

- Anne Arundel County's Commercial and Industrial Land Capacity is Overly Consumed Throughout the Projection Period

According to the data results shown in Table 8-5, eight of the ten submarkets have the potential to consume all their developable land during the 17-year projection period. Overall, Anne Arundel County is projected to consume nearly 115.9% of developable land planned for commercial uses (i.e., retail, office, service and hospitality). Similarly, seven of the 10 submarkets are projected to consume roughly 93% of all industrial land, but 5 of 10 submarkets are projected to demand more than 100% of available acres, unless additional lands are zoned for industrial uses. It is unlikely that the submarkets in the southern portion of the County would add new development of this type. However, the rest of the County's submarkets that already are comprised of a notable supply will continue to demand new commercial and industrial development.

This is largely attributed to the location of several employment centers, major commercial corridors and higher concentrations of industrial parks. Further, the northern submarkets do not show projected land availability for additional commercial and industrial development that would lead these activity hubs and power centers to have the potential for future growth. However, land use changes and redevelopment strategies could enhance non-residential development activity in these areas.

Table 8-5
Net Land Capacity by Land Use Segment
Anne Arundel County & Submarket Areas (2018 - 2035)

Submarket	Land Capacity by Use (Acres)					Total Developable Land Acres	Residential Demand by Type (Acres)					Net Land Capacity (Residential)	Non-residential Demand by Type					Net Land Capacity (Commercial)	Net Land Capacity (Industrial)
	Residential	Commercial	Mixed Use	Industrial	Agriculture		Single Family	Townhome	Condo	Apartment	Mobile Home		Retail	Office	Service	Restaurant/Hospitality	Industrial		
SW 1 - Jessup-Maryland City	299	77	381	151	32	940	182	49	0	24	0	44	2	88	6	3	28	359	123
SW 2 - Linthicum-Severn	622	166	104	758	0	1,650	1,466	95	0	15	0	(954)	153	87	10	35	677	(15)	81
SW 3 - Brooklyn Park-Glen Burnie-Pasadena	1,345	131	0	708	0	2,183	1,025	112	0	37	0	171	126	91	68	21	545	(175)	162
SW 4 - Lake Shore	749	4	0	0	0	753	200	1	0	0	0	548	28	28	19	0	0	(43)	(0)
SW 5 - Odenton	853	41	177	36	366	1,473	1,424	93	1	42	0	(707)	65	14	53	3	98	84	(62)
SW 6 - Severna Park-Crownsville	810	40	1	2	227	1,080	1,248	0	0	1	0	(439)	41	14	53	2	44	(69)	(41)
SW 7 - Annapolis Neck-Broadneck	747	8	2	5	83	844	2,108	25	0	4	0	(1,390)	69	49	58	21	7	(187)	(2)
SW 8 - Crofton	140	13	0	13	373	539	220	3	0	0	0	(83)	10	1	30	1	58	(28)	(45)
SW 9 - South County	56	10	0	0	3,234	3,300	463	0	0	0	0	(407)	5	1	4	0	3	(11)	(3)
SW 10 - Edgewater-Deale-Shady Side	866	35	0	9	62	973	358	5	0	0	0	504	49	19	69	12	110	(114)	(101)
TOTAL	6,488	526	665	1,681	4,376	13,736	8,695	381	1	123	0	(2,713)	548	366	369	97	1,570	(189)	111
PERCENT DISTRIBUTION (2018-2035)																			
SW 1 - Jessup-Maryland City	4.6%	14.7%	57.3%	9.0%	0.7%	6.8%	2.1%	12.8%	--	19.1%	100.0%	85.2%	0.4%	24.1%	1.5%	3.0%	1.8%	21.6%	18.7%
SW 2 - Linthicum-Severn	9.6%	31.6%	15.7%	45.1%	0.0%	12.0%	16.9%	24.8%	--	12.1%	0.0%	253.4%	27.9%	23.8%	2.8%	36.1%	43.1%	105.5%	89.3%
SW 3 - Brooklyn Park-Glen Burnie-Pasadena	20.7%	24.8%	0.0%	42.1%	0.0%	15.9%	11.8%	29.2%	--	30.1%	0.0%	87.3%	23.1%	24.8%	18.4%	21.6%	34.7%	234.2%	77.1%
SW 4 - Lake Shore	11.5%	0.8%	0.0%	0.0%	0.0%	5.5%	2.8%	0.2%	--	0.0%	0.0%	26.8%	5.0%	0.3%	5.1%	0.2%	0.0%	1075.5%	--
SW 5 - Odenton	13.2%	7.8%	26.6%	2.1%	8.4%	10.7%	16.4%	24.3%	--	34.2%	0.0%	182.8%	11.8%	3.8%	14.2%	3.1%	6.2%	61.5%	275.3%
SW 6 - Severna Park-Crownsville	12.5%	7.6%	0.2%	0.1%	5.2%	7.9%	14.4%	0.0%	--	0.7%	0.0%	154.2%	7.5%	3.9%	14.4%	1.7%	2.8%	267.8%	1897.2%
SW 7 - Annapolis Neck-Broadneck	11.5%	1.6%	0.3%	0.3%	1.9%	6.1%	24.2%	6.5%	--	3.6%	0.0%	286.1%	12.7%	13.3%	15.7%	21.1%	0.4%	1963.8%	145.0%
SW 8 - Crofton	2.2%	2.5%	0.0%	0.8%	8.5%	3.9%	2.5%	0.9%	--	0.0%	0.0%	159.2%	1.7%	0.3%	8.1%	0.6%	3.7%	317.3%	434.9%
SW 9 - South County	0.9%	1.9%	0.0%	0.0%	73.9%	24.0%	5.3%	0.0%	--	0.0%	0.0%	820.1%	0.9%	0.4%	1.1%	0.0%	0.2%	108.2%	--
SW 10 - Edgewater-Deale-Shady Side	13.4%	6.7%	0.0%	0.5%	1.4%	7.1%	4.1%	1.2%	--	0.2%	0.0%	41.9%	8.9%	5.3%	18.6%	12.5%	7.0%	422.9%	1245.3%
% TOTAL	47.2%	3.8%	4.8%	12.2%	31.9%	100.0%	100.0%	100.0%	--	100.0%	100.0%	141.8%	100.0%	100.0%	100.0%	100.0%	100.0%	115.9%	93.4%

Sources: MD Property View, Anne Arundel County and RKG Associates, Inc., 2018
Note: Marina, Water, and Open Space are not included in the developable land acres total

D. IMPLICATIONS

Anne Arundel County is poised to capture growth in the northern and central submarkets over the 17-year projection period. Although population growth has slowed since 2010, the data indicate notable pressures within the County growth centers. This is driven by projected employment growth and future housing demand in these submarkets and along major transportation corridors. Additionally, Anne Arundel County's Town Center areas continue to expand but have limited land supply to grow. The Odenton submarket is one of the areas that has the potential to expand in terms of new commercial development but is constrained for residential and industrial development. Based on RKG's development trend analysis, this submarket has attracted growth along transportation corridors and nodes (MD Highway 3/32 and Interstate 97/Crain Highway). Additionally, this submarket is benefitting from the employment growth occurring at and around Fort Meade area as well. The submarkets best positioned for growth are the Jessup-Maryland City, Linthicum-Severn and the Brooklyn Park-Glen Burnie-Pasadena submarkets, which have developable land available, but not in all land use categories. Land availability throughout Anne Arundel County will become strained over the next 17 years, which is exacerbated by low-density suburban growth densities. This may speak to the need to encourage greater development densities and redevelopment in certain targeted locations, as identified in and consistent with the County's comprehensive plan and vision that will allow the County to expand in the future.

9 POLICY RECOMMENDATIONS

A. INTRODUCTION

The following section summarizes a number of recommendations that could be pursued by Anne Arundel County to address some of the more substantive issues highlighted in this analysis. While this document is not considered a strategic action plan, there are a number of findings that require policy changes or new policy initiatives that should be incorporated into the County General Plan.

B. HOUSING CONDITIONS, DEVELOPMENT AND AFFORDABILITY

1. Improve Existing Housing Stock through Housing Rehabilitation

Based on the conventional lending assumptions, roughly 29,000 (18%) of owner-occupied housing units are priced affordable for households earning 60% of AMI or less, which represents homes priced at \$228,792 or lower. Given the County's lack of affordably-priced housing at the lower price ranges, the County should expand upon or provide additional funds and resources to enhance or supplement its housing rehabilitation program in targeted lower income neighborhoods experiencing housing value declines. Many of these areas have older housing stocks built before 1980 that were purpose-built to house a workforce population. There are a number of good models for housing rehabilitation programs across the country and both ownership and rental housing should be included.

2. Increase the Number of Higher Density Rental Housing in Areas that can Support Growth

The County should encourage higher density rental development in certain areas that are best suited to support this development. High quality rental communities consisting of buildings with 10 or more units per building should be viewed as a priority to diversify the County's housing stock and to offer more efficient ways to accommodate new growth. Mid-rise residential buildings (5-7 stories) in urban mixed-use districts would be appropriate as well. These developments should be clustered in proximity to major transportation corridors with access to regional employment centers, schools, parks and other public amenities. Submarkets such as Odenton, Crofton, Annapolis Neck-Broadneck, Linthicum-Severn and Brooklyn Park-Glen Burnie-Pasadena are areas that could support addition rental housing.

3. Reduce Housing Competition for Mid-Priced Housing by Encouraging Higher Value Housing Developments

The lack of housing priced at the higher end of the market is forcing many households earning above 120% of AMI to compete for housing that does not maximize their buying power. Consequently, they purchase homes below their ability-to-pay (30% of gross monthly income), and effectively compete for housing with other households with lower income and fewer choices. This issue also applies to rental properties at the high end of the market.

4. Encourage Rental Housing Development within Anne Arundel County Opportunity Zone

Of the 149 designated Opportunity Zones in Maryland, four tracts are located in Anne Arundel County; one in Odenton and three in Brooklyn Park. The Opportunity Zones program is designed to incentivize patient capital investments in low-income communities nationwide. All the underlying incentives relate to the tax treatment of capital gains, and all are tied to the longevity of an investor's stake in a qualified Opportunity Fund, providing the most upside to those who hold their investment for 10 years or more.

There are several incentive programs provided to developers who expand housing opportunities for lower-income households. That include:

- Maryland Mortgage Program
- Low Income Housing Tax Credit Program (9%, 4%)
- Multifamily Revenue Bond Loan Program
- Rental Housing Programs

C. URBAN REDEVELOPMENT

1. Target Redevelopment in Areas that Show Signs of Property Value Decline, Increased Vacancy and Functional Building Obsolescence

Out of the 143 total estimated apartment buildings, roughly 22.4% fall within the 25% to 50% of the assessed value/SF. This indicates that these 32 apartment buildings are in moderate to poor condition due in part to age, deferred maintenance, and functional obsolescence. Roughly 25% of all non-residential properties are dedicated to retail space while nearly 20% of these properties are in fair to poor condition and are valued at less than 50% of the median assessed value. Similarly, 24.6% of service properties and 23.2% of restaurant/hospital properties are in fair to poor condition. Accordingly, the County needs to adopt a more targeted approach to redevelopment in urban corridors and districts where properties are under-performing. The submarkets with the greatest need for redevelopment include the following:

Linthicum-Severn Submarket

- Site 1 – Stoney Run/BWI Airport Area Corridor
- Site 2 – MD Highway Route 176/100 Corridor
- Site 3 – MD Highway Route 170 N/Cunningham Corridor

Brooklyn Park-Glen Burnie-Pasadena Submarket

- Site 1 – Ritchie Highway/Thomas Point Corridor
- Site 2 – Glen Burnie Town Center Corridor
- Site 3 – Crain Highway/MD Highway Route 100
- Site 4 – Marley Station/Ritchie Highway Corridor

Odenton Submarket

- Site 1 – Annapolis Road/MD Highway Route 32 Corridor
- Site 2 – Waugh Chapel Town Center/Crain Highway Corridor

Crofton Submarket

- Site 1 – Crain Highway S./MD Highway 450 Corridor

D. LAND USE REGULATIONS AND DEVELOPMENT REVIEW

This section summarizes Kimley Horn's analysis and findings of Anne Arundel County's existing land use codes and review procedures. The goal is to present feasible regulatory recommendations to the County to improve and expedite its land use development efforts. Detailed recommendations are organized by theme as follows.

1. Improve Review and Approval Process

a. Develop A More Specific Small Project Review and Approval Process

The existing provisions within Article 17 of the County Code need to distinguish the requirements or process between smaller development proposals and larger, more complex projects. The County should consider a small project threshold for an expedited review process to distinguish those applications from larger, more complex projects, as the current requirements can potentially put a disproportionate level of scrutiny or cost upon a small project or discourage an applicant in favor of a competing location.

b. Improve Predictability in the Process

This is an overarching goal that staff has made a priority over the years. The realities of funding and staff resources are integral to crafting an approach to addressing efficiency and service and must be supported by improvements in the code. The following are some examples of actions that might be considered in response to this review and feedback from staff and stakeholders:

- c. Develop a strategy to manage community input
- d. Consider case planner leads or teams to process applications
- e. Consider creation of an evaluation process to assess the effectiveness of applications
- f. Update published calendars and process flow charts

2. Update County Code

a. Consider Combining Articles 17 and 18

The lack of prompts for critical cross references between Zoning and Development regulations and challenging interpretations between the two articles are often identified as problematic and confusing to applicants. It also requires a higher level of experience or sophistication on the part of applicants to identify, and avoid oversight of, key requirements that might apply to an application. Thus, simplification of the code by combining articles 17 and 18 can make the code more user friendly and eliminate some of the complicated cross-references. This can also help address some of the inherent vagaries of roles and responsibilities between staff in development and zoning.

b. Create More Readily Available Links to Text Amendments

Currently, past and recent text amendments are not obvious to users of the code and thus, applicants are at risk of not planning based upon the most current regulations. Creating links or embedded references in the code to a catalog of most recent changes for applicants is important to ensure they are using the most current version of the code. A link on the Planning home page to announce changes can be a useful tool.

c. Review and Update Definitions

Both staff and stakeholders commented on the need for more, and better definitions to distinguish between terminology for various uses. A regular review and update of definitions is important to stay relevant to code changes and descriptions for new elements or text changes. Additionally, conducting a review of the current language to identify definitions that are missing, could be simplified, clarified and are routinely misinterpreted can be a useful approach.

d. Consider Various Form-Based Code (FBC) Strategies

While there is no need or appetite to abandon the code for a form-based version, there are some elements of a hybrid code that can be useful to deal with changing demand and patterns of development. The mixed-use district could benefit the most from this type of approach and help simplify some of the prescriptive language toward a focus on form, building placement and public realm elements. Stakeholders have commented that form-based codes may also provide incentives for higher quality development.

e. Consider Eliminating FAR as A Regulating Standard

FAR as a metric or standard to regulate development intensity is less commonly applied today in contemporary municipal codes. The fundamental decision to use FAR should be tied to intent. In most codes, density and intensity of development can effectively be controlled with adequate regulations relative to height, building setbacks, lot coverage, and parking. The County may want to consider eliminating FAR as a productive means of control where other land use and bulk regulation standards collectively are adequate to achieve the desired results.

f. Review and Update Bulk Regulations

A more detailed dive into site development standards may suggest some modifications to standards in response to current development forms and changes in land use patterns. For example, Lot Coverage and minimum Setbacks may still reflect primarily suburban forms of development. The County should review bulk regulations within each zoning district to reaffirm intent and clarity of purpose. *Lot Coverage*, for example, could be directed at regulating land use density or impervious surface. That clarification, in turn may inform whether the standard should account for all impervious areas, not just building or parking areas. Building Setback requirements should be viewed with respect to the type of street frontage and desired character of the public realm. As such, some flexibility in setbacks or build-to lines can provide flexibility to be creative with site plan solutions and street amenities.

g. Review and Update Parking Standards

Parking standards appear in both Articles 17 and 18 of the County Code. The County should conduct a market review of standards and consider modification of requirements to better reflect current development patterns and driving habits. Some examples of specific items to consider might include the following:

- Developers need more parking than standards suggest;
- Townhome parking never seems to be enough;
- Residential development: consider a ratio of 2 or 2.5 per unit for 3-bedroom units or more;
- Clarify existing provisions for off-site parking and shared parking in mixed-use and high-density environments, including use of on-street parking and use of parking inventory within a certain walking distance.

h. Consider the Need or Refinements to the PUD in Article 17

According to County staff, only four PUD have been filed since 2012. The PUD approach is somewhat archaic and founded on a suburban development model with a primary incentive being applicants could write some of their own standards. Given that most PUD plans envision a mix of uses, and most often reside in the Zoning Ordinance, consider integrating the PUD with Mixed-Use zoning districts to provide similar flexibility, or eliminating the PUD completely. The ability to write specific modifications and standards into the application should be retained in some form, even within the Mixed-Use district. Alternately, the PUD could be redefined as a district within the Article 18.

i. Consider Consolidation and Refinements to Mixed-Use Development Options

Most stakeholder input suggests that it is a challenge for mixed-use developments in Anne Arundel County, in part, due to basic market forces and lower pricing indicators (i.e., rent levels). Outside of the City of Annapolis, developers cannot get the rents that are necessary to achieve the densities that make project financials and underwriting viable. There are limited places in Anne Arundel County where those higher rents are achievable. Beyond small, urban infill sites, developers need significant amount of land to create a dense development and those sites are not generally available in areas that will support that type of development model.

As mixed-use developments and districts are referenced in both Articles 17 and 18, the County should consider consolidating the related contents in Article 18 and reviewing the standards to create more flexibility. The County should review land use percentage combinations and consider modification to give more flexibility, with more focus on form than use. Additionally, providing flexibility to convert uses within a development without additional review process if certain conditions are met (e.g., not in excess of approved trip generation for the whole development) can be a useful approach.

3. Review Internal Resources

a. Review Staffing Size and Capabilities Relative to Code and Process

The County will benefit from conducting a review to right-size staffing based upon the complexity of the code and the entitlement process. Budget constraints will play an important role, but the key is to be realistic about what the goals are and to organize staff accordingly. There are two approaches to accomplish the goal of staffing that aligns with process: 1) assess achievable staff levels with budget constraints and then structure codes and process to align with those capabilities, or 2) establish the ideal code and process and work to gain support and resources to build the staff to execute accordingly.

b. Assess Impact Fee Schedule

There is no broad agreement as to whether the current impact fee structure is fair or overreaching. Feedback from the County suggests that fees are not adequate in proportion to costs and impacts on public infrastructure and the County is undercharging to account for actual impacts. There are also no stormwater fees at this time to offset costs associated with developing and maintaining that infrastructure.

The County should conduct an analysis of current fee schedules to assess how well fee categories align with the type of developments being proposed. The County should also assess the types and levels of fees relative to revenue generation needed to help offset public infrastructure costs and the magnitude of cost to the developer in proportion to development impacts. Additionally, the County may want to consider lowering fee schedules, or exemptions, for projects that do not create impacts requiring mitigation.