City of Cambridge
Comprehensive Plan

Adopted by City Council
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Acknowledgements

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BMP	Best Management Practices
DNR	Maryland Department of Natural Resources
DPW	Department of Public Works
EMS	Emergency Medical Services
EDU	Equivalent Dwelling Unit
ENR	Enhance Nutrient Removal
ESD	Environmental Site Design
FEMA	Flood Emergency Management Agency
FIDS	Forest Interior Dwelling Species
GI	Green Infrastructure
HH	Household
IDA	Intensely Developed Area
LDA	Limited Development Area
LEED	Leadership in Environmental Design
LQ	Location Quotient
MALPF	Maryland Agricultural Land Preservation Foundation
MDE	Maryland Department of Environment
MDP	Maryland Department of Planning
MGPD	Million Gallons Per Day
MUC	Cambridge Municipal Utilities Corporation
NOAA	National Oceanic and Atmospheric Administration
NRCS	Natural Resources Conservation Service
PWCD	Planned Water Community District
RCA	Resource Conservation Area
SHA	Maryland State Highway Administration
SLOSH	Sea, Land, and Overland Surges from Hurricanes
TMDL	Total Maximum Daily Load
TN	Total Nitrogen
TP	Total Phosphorous
USDA	United States Department of Agriculture
WWTP	Waste Water Treatment Plant

This Comprehensive Plan has been prepared, in part, based on public-domain information furnished by others. While this information is believed to be reliable for planning purposes, the city cannot verify its accuracy and therefore, assumes no responsibility for any errors or omissions incorporated into it.

Chapter 1

Introduction

1.1 The Highlights of this Plan

Allowing long-range goals and adopted policies to guide day-to-day decision-making is not the norm; it is admittedly difficult. Yet thoughtful comprehensive city planning can help prioritize community needs and investments. It can help uncover and legitimize interests and goals that improve the well-being of all. It can publicly announce and renew commitments to people, places, and to ideas. In fact, comprehensive planning can help drive a civic agenda and give direction to all who would accept responsibility for the well-being of their city.

Comprehensive city planning can achieve these things if it provides a framework for achieving long-range goals. This Plan for Cambridge provides such a framework. From the initial design of the planning process itself to the presentation of the policies in this report, the Cambridge Comprehensive Plan focuses on implementation. The Map illustrating a composite of the main recommendations of the Cambridge Comprehensive Plan is shown on the following page.

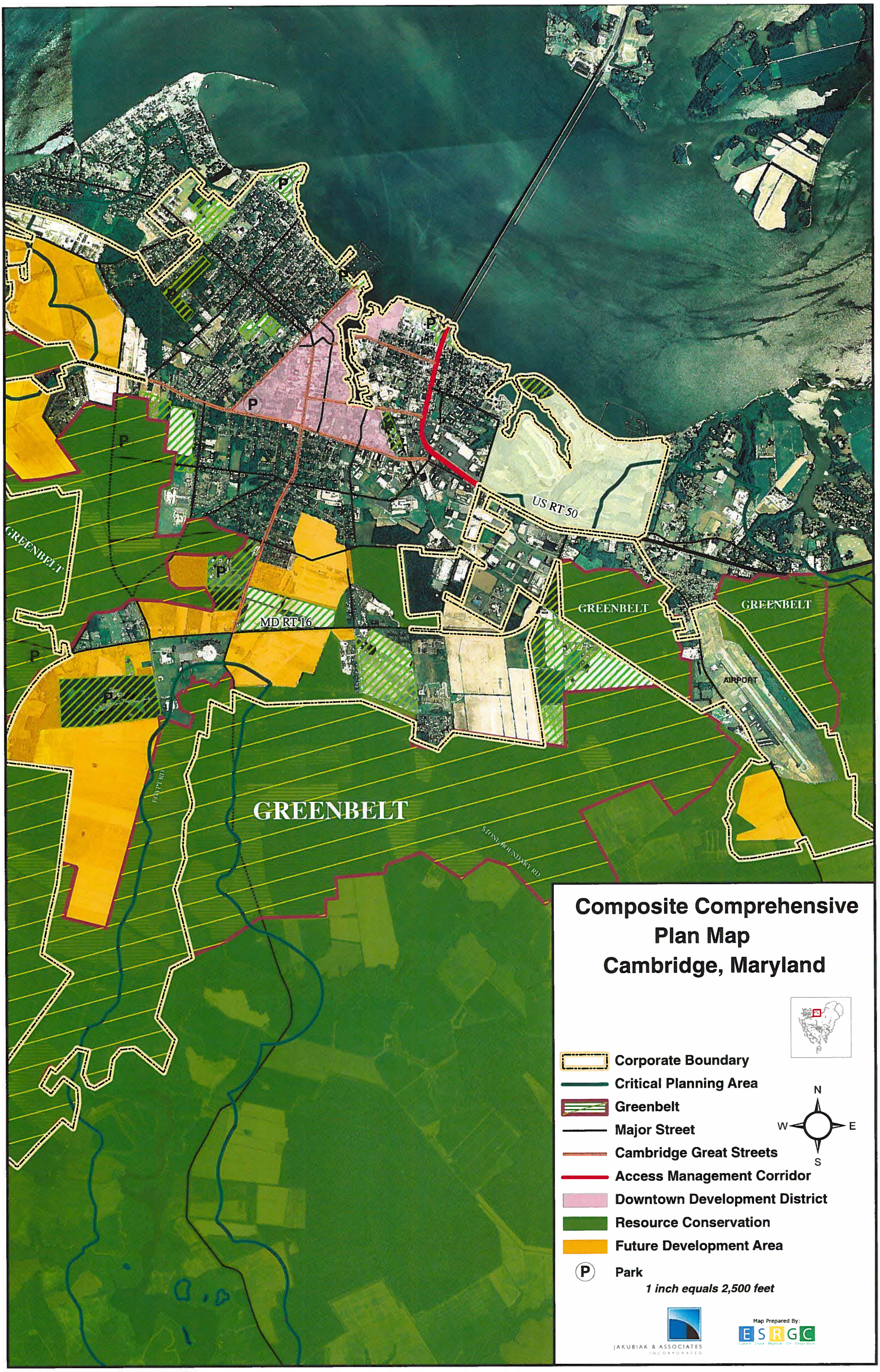
More importantly, however, this Plan affirms those things, which Cambridge has said "yes" to. This Plan is not a comprehensive listing of suggestions or collection of generally worded goals. Instead, it sets forth only those things, which the community of Cambridge accepts responsibility for, obligates itself to work towards, and understands it will be held accountable for. This document, its text, maps, and illustrations, provide the basis for and guidance to decision making through the year 2030. The highlights of this Plan include:

- Through 2030, urban development will occur within existing City boundaries, not on the farmlands and woodlands that surround Cambridge. The City will resize water and sewer service districts and prevent the expansion of municipal facilities beyond present City boundaries. It will work with Dorchester County, based on shared interests, to prevent development beyond the edge of Cambridge.

- The City will optimize currently underused areas; areas where infrastructure is available and development has already occurred. The core of Cambridge will be in-filled and revitalized. Allowable housing densities within a new and expanded "downtown district" will increase significantly. The City will streamline any regulations that slow or prevent this. In areas targeted for redevelopment, the City will raze condemned buildings and consolidate developable parcels. The City will solicit proposals for redevelopment.

Map Insert

Composite Comprehensive Plan



Composite Comprehensive Plan Map
Cambridge, Maryland

- Corporate Boundary
- Critical Planning Area
- Greenbelt
- Major Street
- Cambridge Great Streets
- Access Management Corridor
- Downtown Development District
- Resource Conservation
- Future Development Area
- (P) Park

N W E S

1 inch equals 2,500 feet

JAKUBIAK & ASSOCIATES INCORPORATED

Map Prepared By: ESRGC

- The City will work in partnership with others to protect and preserve valuable natural areas, woodlands, wetlands and floodplains. The City will remove these areas from planned water and sewer service districts. The City will not grant approvals for urban development on resource lands; instead, it will apply new conservation zoning. There is no public-interest justification for expanding development beyond current City boundaries. Over the next twenty years, the City will work to create a greenbelt of natural areas and parklands around the City; a permanent recreational and natural resource for future generations.

- The business and civic community, with the aid of the City, will commit to local economic development strategies that engage local banks and business experts in micro-financing, training, and mentoring local entrepreneurs who commit to opening or continuing businesses in Cambridge. Downtown will be the incubator of the City's entrepreneurs. By 2030, the community will reduce its poverty rate for families and especially those families with children, to no higher than the statewide average.

- The City will upgrade and modernize its street infrastructure with special emphasis on pedestrian and cycling routes and improvements. The City will create a program of "small projects that make a big difference" to install and/or repair sidewalks, curbs and gutters, crosswalks, bicycle lanes, and street trees. Sixty percent of households in the downtown area do not own a car; the downtown district will be the priority for these improvements.

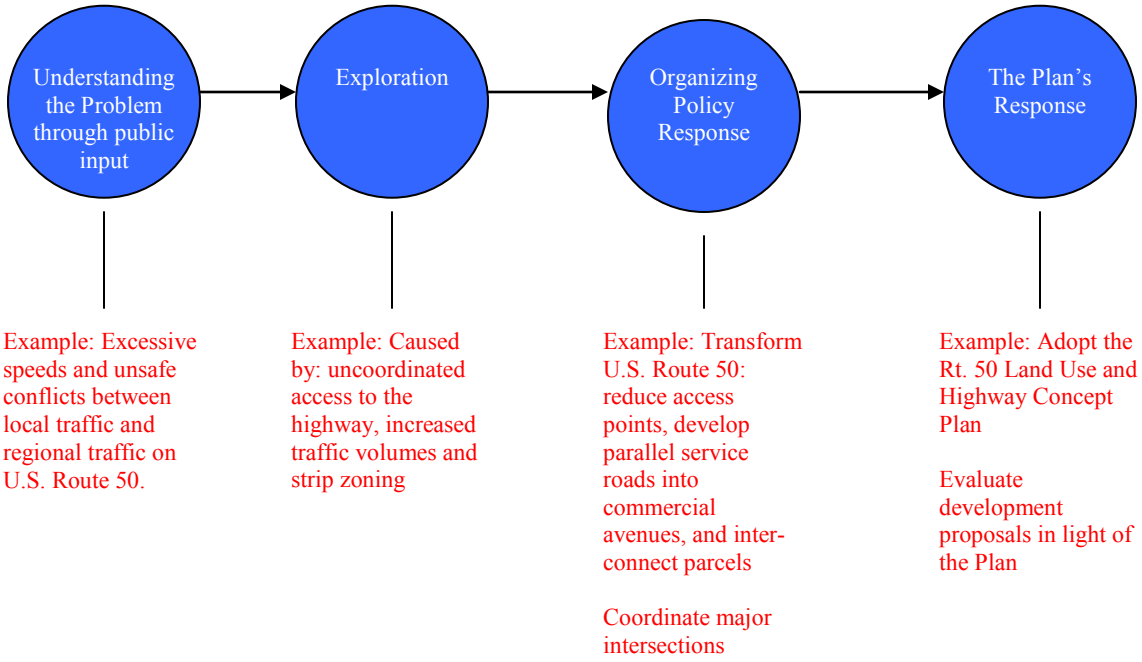
- The City will work in concert with the State Highway Administration to transform U.S. Route 50 and prevent congestion and the projected failure of key intersections. Private driveways will be closed or consolidated, parallel streets—Dorchester Avenue and Rambler Road—will be converted into commercial service avenues, new inter-parcel connections will be made, and the clutter of signs will be replaced with trees and landscaping.

- The City will build on its special relationship with the waterfront, promoting a mix of water related development with broad, accessible public open spaces, and a new medical campus; transforming the gateway along Maryland Avenue.

1.2 The Planning Process

The Planning Process is summarized in Exhibit 1.1 with an example from this Plan. It begins with the premise that citizen participants in the work of planning know the challenges the community faces and the opportunities on which to capitalize. It is also premised on the belief born out of experience that citizen-planners have the capacity to evaluate policy issues in light of future conditions and appreciate the interconnected nature of urban problems. The planning process was designed to facilitate a comprehensive and broadly supported response to challenges and opportunities identified by the community.

Exhibit 1.1: The Planning Process



Local residents and property owners—citizen planners—participated in formulating challenges, critically exploring the causes and implications of challenges, and deliberating on policy responses. The Cambridge Planning Commission created three large open workgroups under the following themes: A City that Moves, Growth of the City, and Our Comparative Advantages. These workgroups met three times each, before spokespersons for each group reported their respective findings and priorities to the Cambridge Planning Commission at a public meeting. The Planning Commission accepted their findings and directed that this Comprehensive Plan be drafted for public review and comment.

The Planning Commission held multiple work sessions on the draft report during which time public comments were received and discussed. The Commission also hosted a day long Planner-in-Residence Day on Saturday June 20 2009 to provide an open house of sorts for informal but detailed review and discussion between citizens and the City Planner and her consultants. On August 18, 2009 the Planning Commission held a public hearing on the Plan.

1.3 Guiding Principles

Work on this Comprehensive Plan began with the Planning Commission's approval of three guiding principles. It could be said that these principles are universal and being universal, they are unimportant or poorly suited to the tasks at hand in the City of Cambridge. This would be wrong. These principles are in fact applicable everywhere citizens engage in participatory community planning and they have special resonance in Cambridge. These principles have taken on imperative meaning for this Plan.

The Human Dimension

There is a profound human dimension to planning, development, growth, and change in a city. Decisions about development have a direct bearing on the quality of life and indeed, the living standards and aspirations of residents, especially the poor and others whose options for housing, transportation and employment are limited. The same decisions have a direct bearing on a city's entrepreneurs whose efforts can improve an area economically.

Thoughtful planning can help prioritize needs and advance the shared interests of a community. It can affirm a community's commitment to its resources, such as its waterfront, and to its cultural heritage in the face of change.

Underlying Natural Resource Base

The underlying qualities of the land help determine which uses of the land are viable and sustainable. The natural capability and characteristics of the land should guide land use development.

Some land areas help by storing flood waters until those waters soak into the ground. Some areas help filter stormwater running from urban landscapes before that water can carry pollutants into rivers and bays. Some remaining lands are forested and help clean the air, provide room for wildlife, and support wood-products resources for forest management. Some areas are valuable because they are beautiful and scenic and provide recreational opportunities.

Natural areas also provide form to urban development. They can define the edges of developed areas and they can provide wide, open spaces. Natural areas can also connect various parts of a city and in so doing can become useful elements in city planning. They can become a city's "environmental corridors" or its "natural respiratory system".

Interconnectedness, the Physical City

A city is a physical expression of culture and its development. A city's traditional layout of neighborhoods, streets, places, parks, buildings, and architecture can inform and guide future change. And change on the landscape can reinforce the best elements of a city's layout. A city can be knitted together as it grows with sometimes modest improvements such as a new street or traffic pattern, a new park, or even a new sidewalk. Over time, important ideas can take shape on the landscape.

1.4 Report Organization

This report is organized into seven chapters. Following this introduction:

- Chapter 2 - The People and Economy of Cambridge, provides demographic and economic information drawn from multiple sources, including a fairly detailed assessment of the structure of the local economy.

- Chapter 3 - Municipal Growth, Community Facilities, and Water Resources, addresses recent updates to Article 66B of the Annotated Code of Maryland, which require city plans to assess municipal growth and water resources.

- Chapter 4 - A Plan for City Growth and Conservation, provides the results of a detailed Ecological Assessment and recommendations for sensitive area protection, land use, and zoning through 2030.

- Chapter 5 - A Plan for Streets and Pathways provides an assessment of the local circulation system and recommendations for improving mobility and accessibility in Cambridge through 2030.

- Chapter 6 - A Plan to Capitalize on the City's Comparative Advantages, addresses a new downtown/waterfront development district~~s~~, the U.S. Route 50 corridor, the waterfront, civic appearance and local economic development.

- Chapter 7 - Implementation of the Plan-The Essential Work of the Planning Commission. Addresses the five essential measures the Cambridge community can take to implement the Comprehensive Plan.

Chapter 2

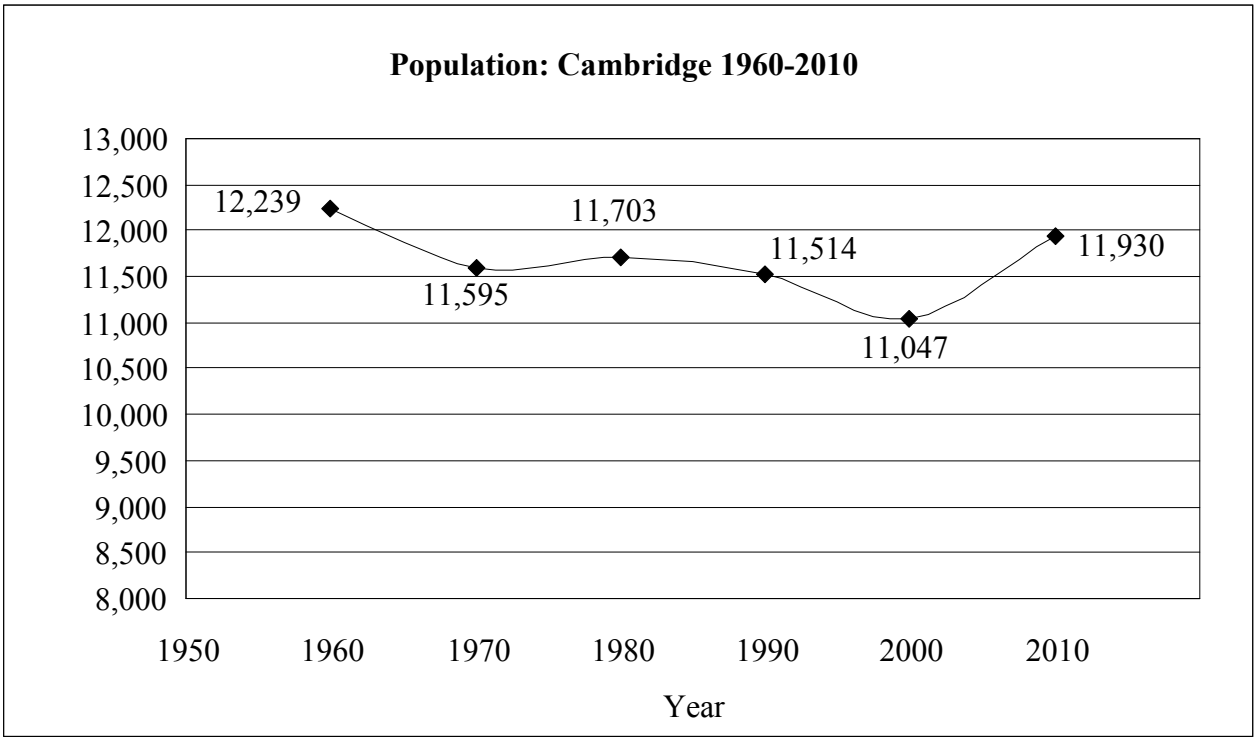
The People and Economy of Cambridge

2.1 Population and Households

Exhibit 2.1 shows decennial Census population counts for Cambridge from 1960 through 2000 and an estimated 2010 population.[1] With growth averaging about one percent per year since 2000, Cambridge has reversed a decades-long population decline that corresponded to the loss of local jobs, especially during the 1990's. Between 2000 and 2010, the City will have added nearly 880 new residents. The 2010 population estimate, used in this report as the "existing condition" is 11,930 persons.

The recent population increase mirrors an increase in jobs in Cambridge and Dorchester County. The latest data available indicates that jobs both in the City and in Dorchester County increased seven and eight percent respectively, between 1998 and 2005. This is discussed further in Section 2.2.

Exhibit 2.1: Population: Cambridge 1960-2010



[1]The 2010 population estimate is derived by applying the actual rate of increase between 2000 and 2006 to the period of 2007 – 2010 population estimates for Cambridge are: 2000, 11,057; 2001, 10,969; 2002, 10,880; 2003, 10,834; 2004, 10,945; 2005, 11,075; and 2006 11,468. The average annual rate of growth between 2000 and 2006 is 0.99 percent.

Age

In 2000, the median age of the Cambridge population was 38.8 years. Dorchester County had a median age of 40.7; about two years older. As shown in Table 2.1, in Cambridge nearly one in four residents was under the age of 18.

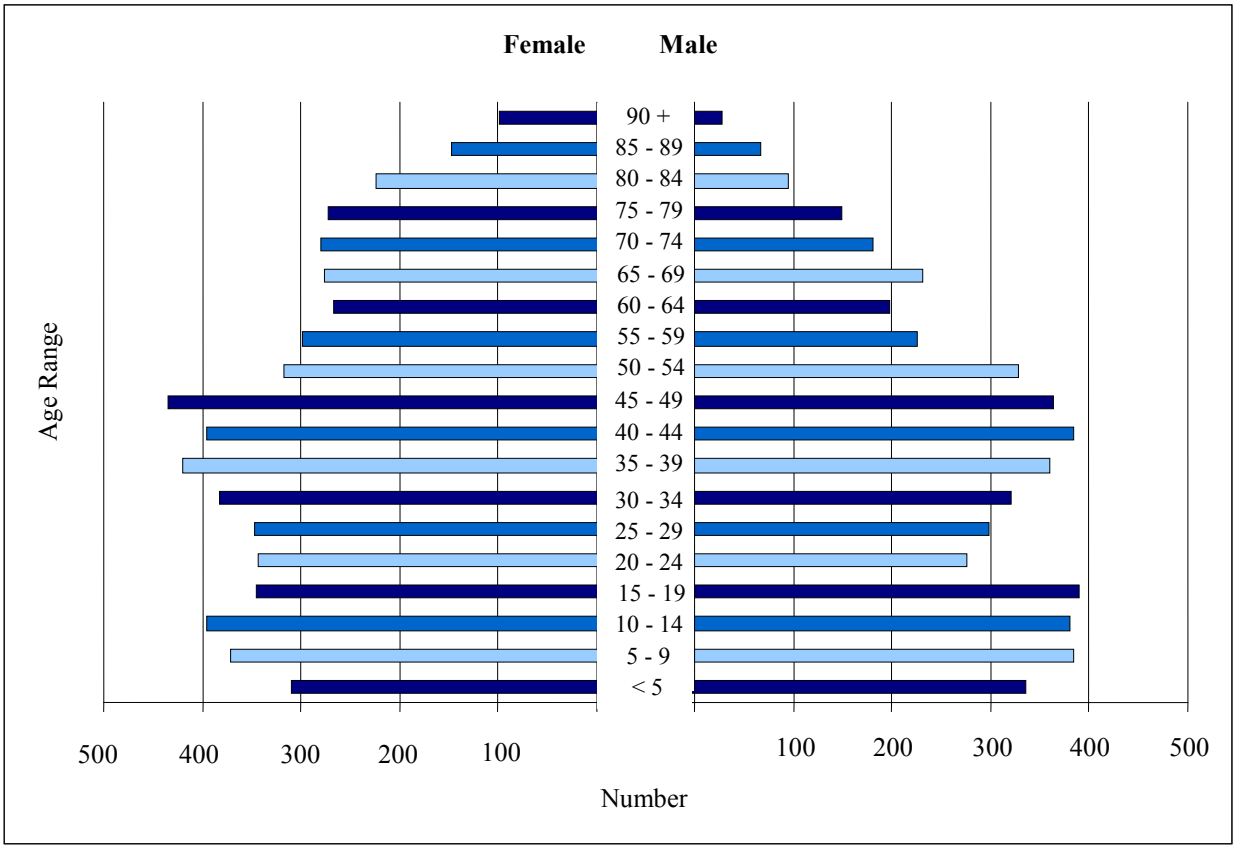
Table 2.1 Population by Age Group (2000)

	Cambridge		Dorchester County	
Under 18	2,666	24.4%	7,151	23.3%
Over 65	2,044	18.7%	5,423	17.7%
Total Population	11,057	-	30,674	-

Source: U.S. Census Bureau and Jakubiak & Associates, Inc

Exhibit 2.2 shows a large share of the City's population in the youngest age groups. By 2010, nearly 800 of these youngest residents will have already entered the high school years presenting the Cambridge community with the near-term challenges of meeting employment and advanced educational and training opportunities.

Exhibit 2.2: Age Groups



Households and Families

In 2000, the City contained 4,629 households. A household is an occupied housing unit (a house, apartment unit, etc.). As shown in Table 2.2, about 58 percent of these households or 2,697 were family households. A family household is composed of persons related to the householder by birth, marriage, or adoption. Non-family households (single-persons or un-related occupants) made up the other 42 percent of all households.

Family households were nearly evenly split between married couple families (53 percent) and families with no spouse present (47 percent). This is an important descriptive data set for Cambridge and contrasts sharply with the State of Maryland as a whole, where 75 percent of all families are married-couple families.[2] In Cambridge poverty is concentrated in those families where only one spouse is present (and presumably one potential wage earner). This is particularly the case with single parent households with children.

The 2000 Census recorded that 17 percent of all families and 20 percent of all people in Cambridge had household incomes that placed them below the designated poverty level.[3] By comparison, six percent of families in Maryland had incomes below the poverty level. Poverty was most concentrated, however, in those family households with children but with only one parent present; nearly 34 percent of these families had poverty level incomes. By comparison, in Maryland as a whole, 16 percent of single-parent families had incomes that placed them below the poverty level.

The census data is nearly 10 years old. However, although dated, the 2000 Census data do indicate that the typical family in Cambridge is not a married couple with children. Instead, it is as likely to be a single person with children. The data also indicate that in Cambridge, these families—single parent households—find it especially difficult to earn incomes above poverty level.

Table 2.2: Households in Cambridge (2000)

Household Type	Children in Household		Sum	% of Total Households
	Yes	No		
Family Households				
Married Couple Families	481	939	1,420	30.7%
Male Householder, no wife	102	106	208	4.5%
Female Householder, no husband	675	394	1,069	23.1%
Subtotal	1,258	1,439	2,697	58.3%
Non-Family Households	248	1,684	1,932	41.7%
Total Households	1,506	3,123	4,629	100%

Source: U.S. Census Bureau and Jakubiak & Associates, Inc.

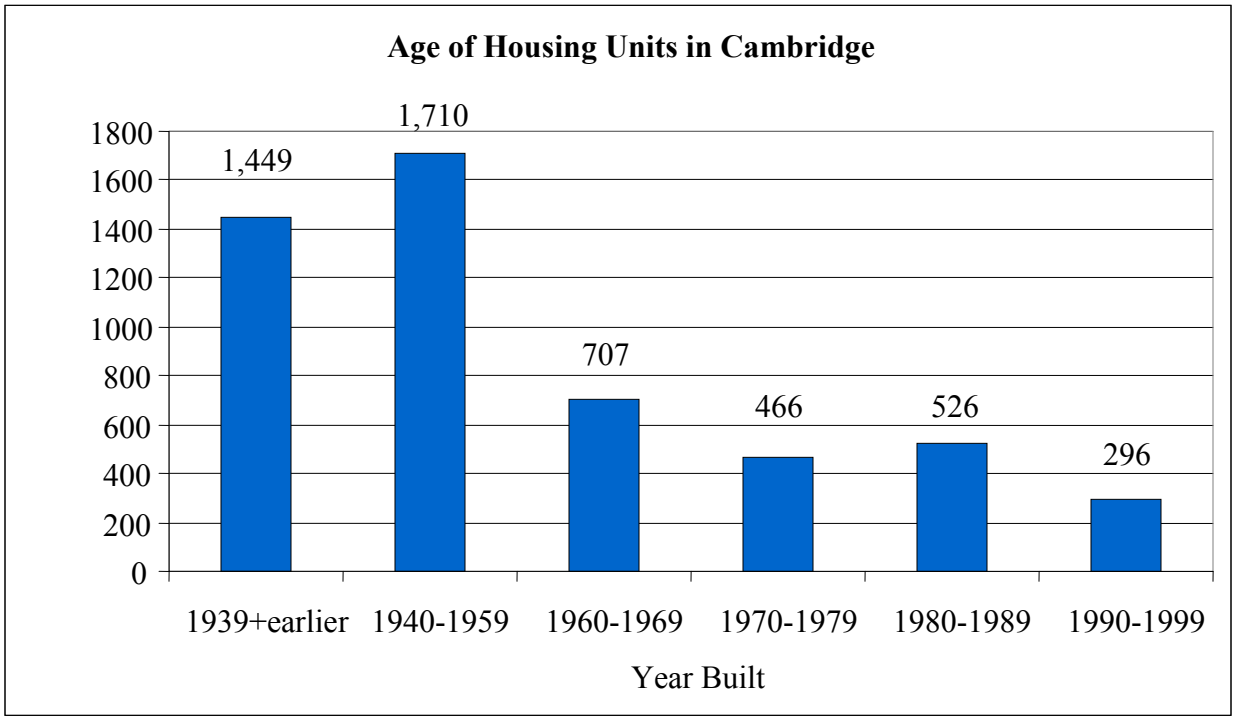
[2] 2000 U.S. Census for Maryland: 1,368,647 families, with 1,015,033 (74 percent) married couple and 353,614 (26 percent) combined female and male headed families with no spouse present.

[3] In 1999, the U.S. Census Bureau poverty level for family of two adults and two related children was $16,895.

Housing Units

In 2000, there were 5,230 housing units in Cambridge. Exhibit 2.3 illustrates when the City's existing housing units were built. About 60 percent of the housing stock was constructed before 1960. Nearly 28 percent was constructed before 1940. Only about six percent of the City's housing stock, or 296 units, were constructed during the 1990's.

Exhibit 2.3: Age of Housing Units in Cambridge



Source: U.S. Census Bureau & Jakubiak & Associates, Inc

The housing stock in Cambridge is largely comprised of single-family units. Sixty percent are single-family detached and about three percent are single-family attached. Mobile homes comprise about one percent of the housing stock. Two-family dwellings, such as duplexes, comprise 13 percent. The remaining 23 percent are in multi-family structures–that is, they are in buildings that contain three or more units. Construction since 2000 has added single-family detached and attached units (townhouses) and many more multi-family units.

Tenure and Homeownership

In 2000, owner occupied housing units comprised about 40 percent of all housing units. Renter occupied units comprised nearly 49 percent of all units.[4] Vacant units comprised 11.5 percent. Table 2.3 provides housing occupancy statistics for Cambridge and Dorchester County. Housing in Cambridge is significantly weighted towards rentals. Not only are nearly half of all units renter occupied in Cambridge, those units, totaling 2,541, comprise two-thirds of all occupied rental units in Dorchester County (even though only 36 percent of all housing units in the County are located in Cambridge). Cambridge is the principal location in Dorchester County for rental housing owing in part to its lower household incomes and to the accessibility and mobility advantages that an urban center provides to lower income residents.

Table 2.3: Tenure Status of Housing Units (2000)

	Cambridge		Dorchester County	
Occupied Housing	4629	88.5%	12,706	86.5%
Owner-Occupied	2088	39.9%	8,906	60.7%
Renter-Occupied	2541	48.6%	3,800	25.9%
Vacant	601	11.5%	1,975	13.5%
Seasonal/Recreational/ Occasional use	38	0.7%	613	4.2%
Total Housing Units	5230	-	14,681	-

Source: U.S. Census Bureau and Jakubiak & Associates, Inc.

2.2 Workforce and Employment

Table 2.4 shows where the workforce in Cambridge was employed in 2000. Nearly three-quarters of the City's employed persons worked in Dorchester County and about 55 percent (or 2,504) worked in the City of Cambridge itself. For over half of the City's labor force therefore, the daily commute was local. About 23 percent of households—more than one in five, did not own a car in 2000, so local access to employment is critical.

[4] If only occupied housing units are considered, then 55 percent of occupied units are renter occupied and 45 percent are owner occupied.

Table 2.4: Place of Work (2000)

	Number	% of Total
Total	4,565	
Worked in Maryland	4,498	98.5%
worked in Dorchester County	3,398	74.4%
worked in Cambridge	2,504	54.9%

Source: U.S. Census and Jakubiak & Associates, Inc.

Employment in the region has grown in both Dorchester County and Cambridge during the seven-year period between 1998 and 2005. Between 1998 and 2005, the City added 495 jobs. About two thirds of the job growth occurred in Cambridge. Table 2.5 shows the number of employees that worked in Cambridge and Dorchester County in 1998, 2000, and 2005.

Table 2.5: Number of Employees (1998, 2000, 2005)[5]

	1998	2000	2005	1998-2005
Cambridge (21613 zip code)	6,890	7,153	7,385	7%
Dorchester County	9,451	9,651	10,246	8%

Source: County Business Patterns: U.S. Census Bureau and Jakubiak& Associates

Cambridge's 2000 median household income was lower than that of Dorchester County as well and surrounding municipalities. It was nearly $10,000 lower than that recorded in the County. Median income for the State, County, City, and surrounding municipalities is shown in Table 2.6

Table 2.6: Median Household Income by Area (1999)

Area	Annual Income
Maryland	$52,868.00
Dorchester County	$34,077.00
Cambridge	$25,967.00
Easton	$36,464.00
Federalsburg	$24,266.00
Hurlock	$40,435.00

Source: U.S. Census Bureau and Jakubiak & Associates, Inc.

[5] County Business Patterns includes only private employment. It does not include employment in the public sector.

2.3 Economic Overview

This section assesses economic structure. It considers employment and earnings at the County level because this is the smallest level for accurate and reliable economic data readily available. Given that Cambridge is the center of employment and population in Dorchester County, the countywide data and trends are fairly representative.

Employment

Table 2.7 shows the number of jobs in Dorchester County in 1980, 1990, and 2000 by industry sector. This begins to illustrate the economic structure of Dorchester County. There are several points worth mentioning.

- The structure of the Dorchester County economy has changed since 1980. There has been a pronounced shift from a manufacturing economy to retail and service based economy. These two sectors accounted for 24 percent of jobs in 1980, but 36 percent in 2000. Manufacturing declined from 34 percent of jobs to 23 percent in the same timeframe.
- Total employment declined between 1990 and 2000. Although there were increases in the number of jobs in Finance, Insurance, and Real Estate and Services, they could not make up for the loss of over 1,000 manufacturing jobs. In response, the City lost four percent of its population during the 1990's (as shown in Exhibit 2.1).
- Finance, Insurance, and Real Estate is a rapidly growing sector of the economy. This sector nearly doubled its employment between 1980 and 2000.
- The largest total job growth occurred in the Retail Trade and Services sectors. These two sectors combined saw increases in the number of jobs of nearly 70 percent between 1980 and 2000.
- Government employment has increased slightly but remained fairly constant over the twenty year period.

Table 2.7: Dorchester County Employment, Past Trends (1980-2000)

	Number			Percent Change	
Sector	**1980**	**1990**	**2000**	**'80-'90**	**'90-'00**
Total Employment	14,367	16,695	16,292	16.2	-2.4
Farm Employment	864	576	562	-33.3	-2.4
Private Employment	13,503	16,119	15,730	19.4	-2.4
Non-Farm Employment	11,538	13,859	13,414	20.1	-3.2
Agricultural Serv., Other	839	749	781	-10.7	4.3
Mining	12	3	5	-75.0	66.7
Construction	805	958	865	19.0	-9.7
Manufacturing	4,943	5,001	3,740	1.2	-25.2
Transport, Comm. & Public Util.	690	567	815	-17.8	43.7
Wholesale Trade	338	492	488	45.6	-0.8
Retail Trade	1,449	2,309	2,322	59.4	0.6
Finance, Ins. & Real Estate	422	543	833	28.7	53.4
Services	2,040	3,237	3,565	58.7	10.1
Government Employment	1,965	2,260	2,316	15.0	2.5
Federal Civilian	54	76	142	40.7	86.8
Federal Military	160	175	114	9.4	-34.9
State and Local	1,751	2,009	2,060	14.7	2.5

Source: Woods & Poole and Jakubiak & Associates, Inc.

Table 2.8 shows the forecast change in employment by sector between 2010 and 2030. Overall employment is projected to grow by about 15 percent. Increases are expected in the Retail Trade; Finance, Insurance, and Real Estate; and Services sectors. These three sectors will account for half of the jobs in Dorchester County in 2030. Construction will also see substantial increases.

Table 2.8: Dorchester County Employment, Forecast (2010-2030)

	2010		2030		% Change
Sector	**#**	**% of Total**	**#**	**% of Total**	**'10-'30**
Total Employment	17,760		20,412		14.9
Farm Employment	491	2.8	442	2.2	-10.0
Private Employment	17,269	97.2	19,970	97.8	15.6
Non-Farm Employment	14,965	84.3	17,623	86.3	17.8
Agricultural Serv., Other	708	4.0	728	3.6	2.8
Mining	4	0.0	5	0.0	25.0
Construction	1,137	6.4	1,666	8.2	46.5
Manufacturing	3,294	18.5	3,175	15.6	-3.6
Transport, Comm. & Public Util.	967	5.4	1,010	4.9	4.4
Wholesale Trade	536	3.0	669	3.3	24.8
Retail Trade	2,799	15.8	3,100	15.2	10.8
Finance, Ins. & Real Estate	1,147	6.5	1,482	7.3	29.2
Services	4,373	24.6	5,788	28.4	32.4
Government Employment	2,304	13.0	2,347	11.5	1.9
Federal Civilian	134	0.8	142	0.7	6.0
Federal Military	96	0.5	100	0.5	4.2
State and Local	2,074	11.7	2,105	10.3	1.5

Source: Woods & Poole and Jakubiak & Associates, Inc.

Earnings Per Worker

Employment data illustrate the relative size of each industry and the historic growth or decline by industry. The data only suggest the impact of economic structure on economic performance. A review of workers' earnings, however, provides a sense of the impacts these changes have on individuals and families in Cambridge.

Table 2.9 shows data on earnings per worker from 1990 to 2000.[6] There were declines in the average wage per worker in Mining, Construction, and Retail Trade. In the same timeframe, Manufacturing, a declining sector with regard to employment saw an increase in the average wage. These two statements, in the context of changes in overall employment, illustrate an economic problem that is not unique to Dorchester County: well-paying manufacturing jobs have been replaced by lower wage retail jobs.

After a decline between 1980 and 1990, other growing sectors of the economy—Services and Finance, Insurance, and Real Estate—showed modest increases in earnings per worker between 1990 and 2000.

[6] Arrived at by dividing annual payroll earnings by the number of workers in each sector. Earnings are in constant 2004 dollars.

Table 2.9: Dorchester County Earnings per Worker, Past Trends (1980-2000)

	Earnings ($)			Percent Change		
Sector	**1980**	**1990**	**2000**	**'80-'90**	**'90-'00**	**'80-'00**
Total Employment	23,681	27,889	29,901	17.8	7.2	26.3
Farm Employment	-4,323	39,870	26,781	1,022.3	-32.8	719.5
Private Employment	25,473	27,461	30,012	7.8	9.3	17.8
Non-Farm Employment	24,653	25,549	27,796	3.6	8.8	12.7
Agricultural Serv., Other	10,243	10,315	10,525	0.7	2.0	2.8
Mining	114,083	74,333	32,600	-34.8	-56.1	-71.4
Construction	34,826	33,996	26,532	-2.4	-22.0	-23.8
Manufacturing	25,616	30,988	41,013	21.0	32.4	60.1
Transport, Comm. & Public Util.	39,874	47,019	50,118	17.9	6.6	25.7
Wholesale Trade	31,456	32,581	35,203	3.6	8.0	11.9
Retail Trade	21,041	16,753	14,346	-20.4	-14.4	-31.8
Finance, Ins. & Real Estate	17,002	15,267	18,557	-10.2	21.5	9.1
Services	21,578	21,295	22,814	-1.3	7.1	5.7
Government Employment	30,288	39,184	42,851	29.4	9.4	41.5
Federal Civilian	50,519	57,355	52,599	13.5	-8.3	4.1
Federal Military	14,425	15,880	19,658	10.1	23.8	36.3
State and Local	31,114	40,527	43,462	30.3	7.2	39.7

Source: Woods & Poole and Jakubiak & Associates, Inc.

Increases in earnings per worker between 2010 and 2030 are projected in all sectors. As shown in Table 2.10 the greatest increases are expected in Farm Employment and Federal Military earnings. Earnings growth is projected in the Retail Trade; Finance Insurance, and Real Estate; and Service sectors.

Table 2.10: Dorchester County Earnings per Worker, Forecast (2010-2030)

Sector	Earnings ($) 2010	2030	Percent Change '10-'30
Total Employment	34,608	41,433	19.7
Farm Employment	31,035	43,118	38.9
Private Employment	34,709	41,396	19.3
Non-Farm Employment	32,381	38,882	20.1
Agricultural Serv., Other	13,089	15,354	17.3
Mining	80,500	93,800	16.5
Construction	33,442	38,641	15.5
Manufacturing	49,826	63,025	26.5
Transport, Comm. & Public Util.	51,863	60,384	16.4
Wholesale Trade	41,974	50,371	20.0
Retail Trade	16,603	18,906	13.9
Finance, Ins. & Real Estate	25,977	34,754	33.8
Services	28,337	35,295	24.6
Government Employment	49,835	60,274	20.9
Federal Civilian	81,754	104,324	27.6
Federal Military	30,344	42,140	38.9
State and Local	48,675	58,164	19.5

Source: Woods & Poole and Jakubiak & Associates, Inc.

The wages earned by workers in Dorchester County provide a recycling effect within the region as wage earners spend locally, invest locally, or invest in opportunities outside of the area. Higher wage jobs heighten the positive recycling effect. This is why economic development policies usually attempt to cultivate high wage industries and why a comprehensive land use plan must be ensure that adequate land, quality infrastructure, and appropriate development policies are in place to support the expansion of high wage industries.

Industry Concentrations

Industrial specialization occurs when local firms enjoy a competitive advantage in a particular industry due to proximity of suppliers, markets or demand, labor conditions, transportation infrastructure, or other factors. Using official United States employment data, we estimated the degree of local industry specialization. This measurement is known as the location quotients (LQ).[7] A location quotient greater than 1.0 for a certain industrial sector implies that Dorchester County has a larger proportion of employment in that sector than does the Nation.[8]

[7] The location quotient is the ratio of the share of local employment in a particular sector to the share of national employment in that sector: % local employment in the sector / % national employment in the sector.

[8] A location quotient approximate to 1.0 implies a local self-sufficiency—that is, local supply matches local demand.

Table 2.11 ranks those sectors in Dorchester County with positive location quotients. The sectors are ranked "high", "mid", and "low". The high category includes all sectors with location quotients greater than 2.0, which implies that in Dorchester County, the sector has specialized to the extent that it proportionally employs at least twice the number of people than the national economy. Note that Food Manufacturing is at this highest level with a location quotient of 12.2. Wood Product Manufacturing and Truck Transportation have strong concentrations in the local economy as well. Services, including Hospitals and Social Assistance, also have specializations in Dorchester County relative to the nation.

Table 2.11: Dorchester County Location Quotients by Greatest Concentration

LQ Rank	Primary Sector	NAICS Code	Business Sector Description	Location Quotient 1998	Location Quotient 2006
			Total		
High	Manuf.	311	Food Manufacturing	13.26	12.22
(LQ>2)	Retail	447	Gasoline Stations	2.33	2.16
	Const.	236	Construction of Buildings	-	3.50
	Manuf.	321	Wood Product Manufacturing	1.36	2.08
	TCU	484	Truck Transportation	3.09	2.13
Mid	Services	623	Social Assistance	1.47	1.90
(LQ>1.5)	Services	622	Hospitals	1.86	1.63
Low	Services	623	Nursing and Residential Care Facilities	0.86	1.23
(LQ>1)	TCU	493	Warehousing Storage	-	1.15

Abbreviations: TCU: Transportation, Communications, and Public Utilities; Const.: Construction, Manuf.: Manufacturing.

Source: U.S. Census and Jakubiak & Associates

Base Industries

Businesses in many industry sectors make positive economic contributions, but one class of industries particularly drives local employment growth. These industries, called base or basic industries provide the greatest recycling effect of earned wages and can help inject vitality into the local economy.

A local economy is robust when it has strong ties with regional and even national and international economies. A base industry is an industry that is largely dependent on factors outside the local economy for its market demand. When a business supplies its local market and exports its products, outside money is introduced into the local economy. Export dollars in growing basic sectors especially can also spur job creation in other businesses as demand for goods and services increases.

The basic sector's capability to produce local jobs makes it centrally important to the local economy and to comprehensive planning. Because of their specialization, all base industries have a location quotient greater than 1.0.[9]

[9] This does not suggest however that all sectors with location quotients above 1.0 are base industries.

Application of the Base Industry Concept

Recall that Table 2.11 listed those industry sectors with a specialization in Dorchester County. Not all of those sectors however are part of the County's economic base. Base industries are defined by their output of durable goods or specialized services for an export market. Therefore, in defining the basic sector, we omit those businesses whose markets are predominately local, whose specialization is due to an excess local demand for goods or service (such as gasoline stations, owing to U.S. Route 50 traffic), or who do not produce durable or specialized goods or services. Table 2.12 shows the industry sectors that comprise the basic sector of Dorchester County. Also shown are estimates of the export share of total employment in each sector. For example, 92 percent of the Food Manufacturing jobs, or 1,485 jobs, are servicing external demand.

Table 2.12: 2006 Basic Sector Employment

NAICS Code	Industry	Employment (jobs)[1] Total	Export	% Export
311	Food Manufacturing	1,617	1,485	91.8
321	Wood Product Manufacturing	109	57	52.0
484	Truck Transportation	296	157	53.0
493	Warehousing Storage	62	8	12.9

[1] Employment to service export demand is estimated as follows: [(1-1/LQ)*employment in I].
The percent of jobs in export is estimated as follows: [(1-1/LQ)*100]

Source: U.S. Census Bureau and Jakubiak & Associates, Inc.

The total number of jobs in the basic sector, 2,085, amounts to 19 percent of total Dorchester County jobs. With the exception of the Hospital sector, the basic sector is largely made up of manufacturing or light industrial industries.

Underrepresented Sectors

When a local industry sector has a location quotient less than 1.0 it implies that it does not produce enough goods or services to serve local demand.[10] It signifies that a community has less employment in that particular sector than the national average and that non-local firms are meeting local demand. This may mean that the local economy is able to accommodate more firms and/or more jobs in that sector. Dorchester County is underrepresented in the Professional, Technical, and Scientific sector.

[10] In may also mean that the sector within the particular community is especially productive—that is, the local industrial sector is capable of servicing local and external demand with fewer employers on average than the sector does nationally. No example of this is observable in the data for Dorchester County.

The Professional, Technical, and Scientific Services sector comprises firms that specialize in performing services with a high degree of expertise and training including law, accounting, and services in architecture, engineering, specialized design, computers, consulting, photography, advertising, veterinary service, and scientific and technical research. In 2006, this sector employed only 207 persons in the entire Dorchester County.

Conclusions

- The economic base of Dorchester County includes the Hospital and firms in Manufacturing and Transportation. These industries produce and export goods and services for and help bring income into the community. As measured by employment, the overall manufacturing sector is projected to be declining.
- Per employee earnings in the Retail sector have declined steadily since 1980; as the county's center for shopping, the disproportionate weighting of jobs in retail may be an economic liability for Cambridge because of the sector's disproportionate share of low wage jobs.
- The Professional, Technical, and Scientific Services sectors which are growing both in Maryland and nationally and provide relatively high wages but under-represented in the local economy.

Chapter 3

Municipal Growth, Community Facilities and Water Resources

A Comprehensive Plan provides the framework for accommodating change and the expansion of municipal limits if necessary. It also addresses the impacts that change and growth will have on community facilities, infrastructure, and natural resources.

In 2006, the Maryland General Assembly amended Article 66B, the code of statutes dealing with planning and zoning. State law now requires that comprehensive plans contain an element addressing municipal growth, the expansion of municipal limits and water resources. This chapter combines the treatment of municipal growth and water resources with the assessment of and recommendations pertaining to community facilities, most notably public water and sewerage facilities. The recommendations pertaining to water resources will help ensure that drinking water and streams and rivers are properly cared for in light of city growth and development.

This Comprehensive Plan calls for only modest expansion of City limits. It essentially rationalizes the shared city-county boundary along the City's northeastern edge where past annexations have left developed parcels under County jurisdiction. The City and County planning commissions met jointly to review growth area plans in Cambridge and the recommendations of this chapter. The purpose of this chapter is to:

- Forecast the level of household, population, and employment growth through 2030;
- Identify where annexations would be advisable;
- Document the potential impact of growth on community facilities,
- Recommend policies pertaining to community facilities through 2030;
- Identify water resources; and
- Recommend policies for protecting water resources.

3.1 Factors Bearing on Growth

Historic Residential Growth Trends

Between 1990 and 2000, the number of households in Cambridge decreased from 4,737 to 4,629. Since 2000 however, households have been developed at a rate of nearly one percent per year, such that by the printing of this report, it is estimated that Cambridge is home to roughly 5,100 households.[11] This estimate of 5,100 households is used as a 2010 estimate in this report.

Report of Capacity Analysis

The Maryland Department of Planning (MDP) completed a development capacity analysis for the City of Cambridge with the assistance of city planning staff. A "development capacity analysis" is a rough technique for estimating how many housing units can be built under current zoning[12]. MDP projected that the development capacity of Cambridge approximates 6,920 housing units (inclusive of the 4,698 units remaining in the development "pipeline". This number is useful in that it provides context to understanding why this Plan does not propose the growth of the City's limits new residential use.

MDP's estimate represents the theoretical number of units that could be built within the City's current boundaries and under the City's existing zoning. A certain amount of "infill" development is typically allowed in cities. "Infill" refers to the new housing units that could reasonably be expected to be built under current zoning. Sometimes infill can come about when an existing lot is subdivided to create another buildable lot. Sometimes infill can come about when single-family lots are converted into multi-family development projects. However, for the most part, infill happens when vacant tracts of land are developed and/or large lots are subdivided into residential lots.

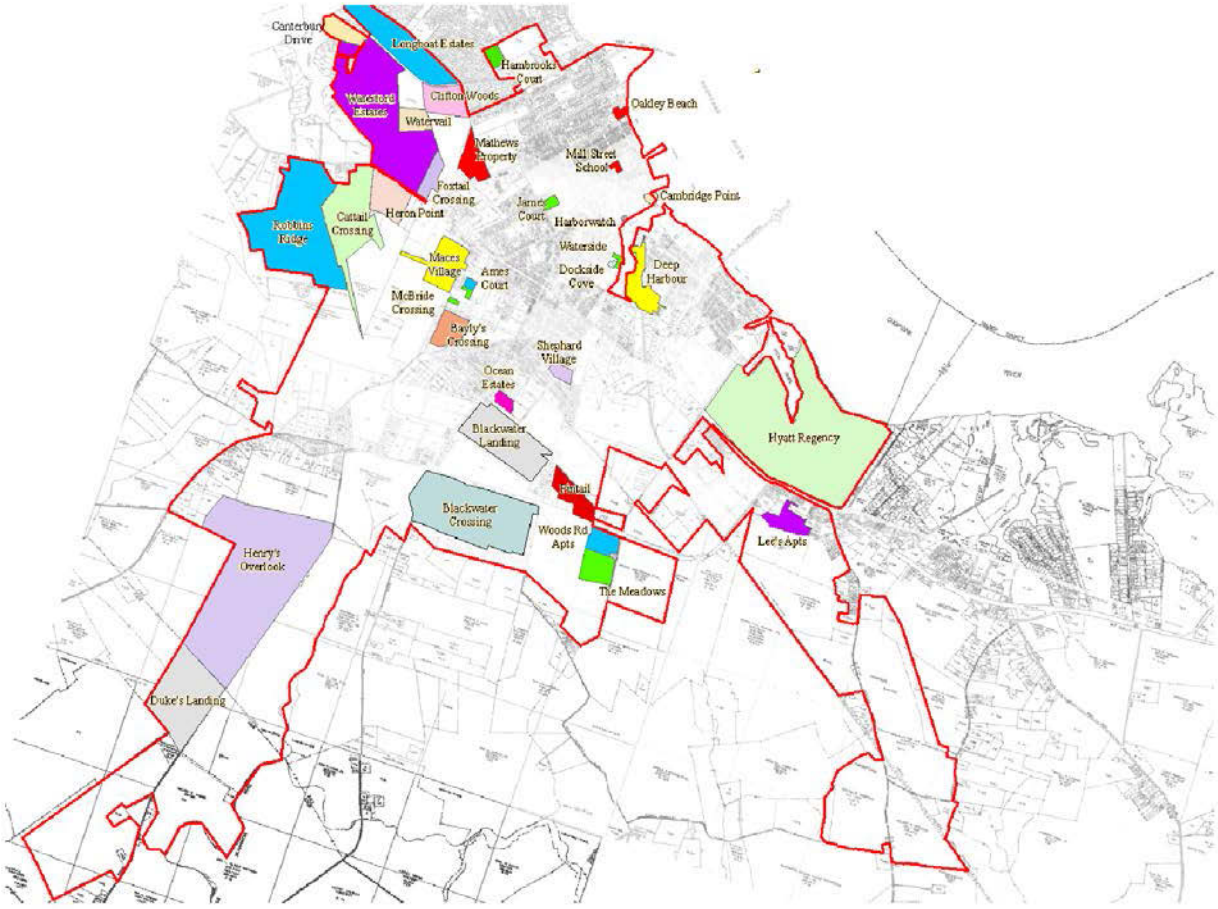
Pipeline Units, Projects with Approvals

Exhibit 3.1 locates each of the residential development projects that the Planning Commission has approved in recent years. Table 3.1 provides the approximate number of housing units in each project. It is not meant to indicate this Comprehensive Plan's acceptance or approval of these projects. It is provided for informational purposes. In total, nearly 4,400 housing units were approved, though some projects have since been withdrawn prior to final approval. City staff estimates that 4,698 units remain in the development pipeline to be developed—that is, they are part of a project that has received final Planning Commission approval.

[11] This general accuracy of this estimate is confirmed by the Maryland Department of Planning's 2007 estimate of the City population—11,796. If the roughly 600 person group-quarter population—non-households population is removed from this 2007 estimate, the remaining roughly 11,200 persons and the estimated 5,100 households equates to an average household size of 2.2 persons.

[12] The City Zoning Ordinance generally establishes the maximum residential density allowed on any given parcel—that is, the number of housing units per acre—therefore, is a tool for estimating the amount of development currently possible within a given area.

Exhibit 3.1: Cambridge Development Projects[13]



[13] The City Planner maintains this exhibit and it can be made available upon request of the planning department.

Table 3.1: Cambridge Development Projects[14]

	Total (acres)	Total Units	Status
Ames Court Subdivision	2.3	10	Approved
Blackwater Crossing	131.5	793	Under Construction
Blackwater Landing, LLC	70.8	185	Under Construction
Cambridge Commons	21.4	96	Under Construction
Cambridge Harbor	-	10	Approved
Cambridge Point Condominium	2.4	29	Approved
Cambridge Schoolhouse	1.9	11	Approved
Cattail Crossing	78.8	203	Under Construction
Deep Harbour	25.3	384	Under Construction
Dockside Cove	-	17	Approved
Duke's Landing	56.0	40	Approved
Foxtail Crossing/Conifer Village	15.9	242	Under Construction
Glenburn Village	22.0	71	Approved
Henry's Overlook	263.4	635	Approved
Heron Point	30.0	131	Under Construction
Hyatt Regency	85.0	619	Approved
James Court	2.3	16	Approved
Longboat Estates LLC	66.6	166	Under Construction
Maces Lane	33.1	64	Approved
Pintail	16.0	109	Under Construction
Reverend J.J. Green's Crusade	2.0	22	Under Construction
Robbins Ridge	162.9	164	Preliminary Approval
Sheppard Village	6.7	44	Under Construction
The Meadows at Cambridge	19.2	192	Under Construction
Waterford	176.2	420	Approved
Watervail Subdivision	13.0	25	Approved
TOTAL	**1,305**	**4,698**	

[14] The list presents information available during the production of this plan. The City Planner maintains and periodically updates this list. The latest version can be made available upon request of the City Planner's Office.

Projections of Growth for Dorchester County

The Maryland Department of Planning (MDP) projects that Dorchester County will grow from 13,825 households in 2010 to 17,175 by 2030, or by 3,350 households.[15] This represents an annual average growth rate of one percent.

3.2 2030 Forecast of Future Households, Population, and Employment

A forecast is an essential step in preparing a comprehensive plan. A good forecast allows Cambridge to properly anticipate and prepare for the likely impacts and needs that may arise from change. Understanding the impacts of future growth in particular on community facilities and services helps ensure that adequate facilities are in place to meet future needs.

This Plan recognizes that accurate forecasting for a city can be difficult and therefore the Plan reviews alternatives growth scenarios. As shown in Exhibit 3.2 three scenarios for future growth were considered; Strong, Moderate, and Low[16]. These scenarios bracket the amount of growth that is reasonable to expect in Cambridge by 2030. Each scenario is described herein.

The City wishes to plan for the greatest reasonable potential in order to fully anticipate the impacts, needs, and opportunities that could arise. The selection of the Strong Growth forecast suggest not only what the City has determined is possible but also what it is found to be most desirable. The Planning Commission ultimately selected the Strong Growth Scenario finding that:

- Water and sewer services are more than adequate to accommodate residential growth under the strongest scenario plus a reasonable forecast of non-residential growth therefore there is little risk that the City could over commit its remaining water and sewer capacity.

- Cambridge is and should continue to be the center of population and employment growth and should accommodate a substantial share of County growth in future decades. It has made investments over many decades in infrastructure and community facilities to support development.

- The Maryland Department of Planning has projected that 3,350 households will be added to the Dorchester County between 2010 and 2030. It is reasonable to expect and indeed critical to good planning that at least 70 percent of those households locate in Cambridge where all manner of community facilities and infrastructure are already in place to serve development.

[15] Dorchester County's Water Resources Element projects a much higher level of growth, 6,153 new households between 2010 and 2030. This Plan defers to the Maryland Department of Planning's projections for household growth in the County finding it a more reasonable context for viewing potential growth in Cambridge.

[16] It is important to note that all three scenarios assume "growth" over the next two decades. This is despite the fact that the Census records population declines in Cambridge over time. Indeed, as shown in Exhibit 2.1, the period between 1980 and 2000 saw a 20-year decline and a more drastic decline occurred between 1960 and 1970. The current city population is still smaller than that recorded in 1960. It preparing projections, it also humbling to recall that the 1962 Cambridge Comprehensive Plan projected a doubling of population between 1960 and 1980, not having anticipated the collapse of the manufacturing base and the ensuing decades-long economic restructuring.

- Dorchester County has projected a growth rate that by historical standards is high especially as compared to the MDP projection indicating County-wide acceptance and planning for residential growth.

- There are about 4,700 potential dwelling units (pipeline units) located in already approved development projects, many of which are now under construction in the City. There is also substantial infill and redevelopment potential throughout Cambridge.

The three growth scenarios are described below and summarized in Table 3.2.

1. Strong Growth Scenario. This scenario forecasts a growth rate of two percent per year, which is one percent per year higher than that recorded between 2000 and 2010. Even at this strong growth rate only seventy percent of the pipeline units could be absorbed by 2030.

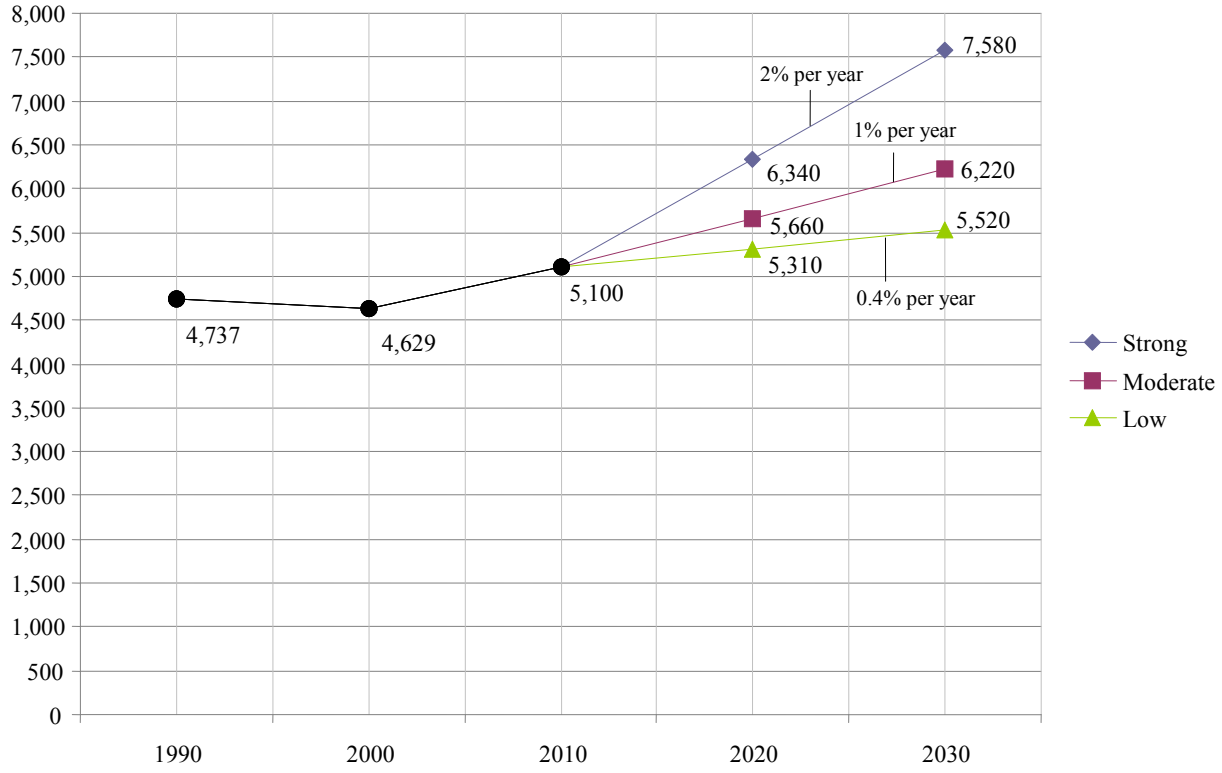
2. Moderate Growth Scenario. This scenario forecasts a growth rate of one percent per year, which is comparable to the growth experienced in Cambridge since 2000. At this rate of growth, about 32 percent of the pipeline units could be absorbed by 2030.

3. Low Growth Scenario. This scenario forecasts a growth rate of about 0.4 percent per year, which is comparable to the growth rate experienced in Cambridge since 1990. (Recall that between 1990 and 2000, the City actually lost population. At this rate of growth, only about 12 percent of the pipeline units could be absorbed by 2030.

Table 3.2: Household Forecast 2010-2030

	Total Households		New Units	Growth Rate
	2010	2030	2010-2030	2010-2030
Strong	5,100	7,580	2,480	2.00
Moderate	5,100	6,220	1,120	1.00
Low	5,100	5,520	420	0.40

Exhibit 3.2: Alternative Household Growth Scenarios for Cambridge 1990-2030



Under the Strong Growth Scenario, the City will grow at a rate of two percent per year between 2010 and 2030, adding 2,480 new households. Table 3.3 provides the forecasts of households and population. The population forecast is arrived at by multiplying the number of future households by an average household size of 2.21 persons per household, which is the projected household size for Dorchester County in 2030.[17]

This projection assumes that all new units built are occupied year round. The Plan recognizes that this is not likely as development along the Creek has been marketed as second homes. However, the Plan attempts to provide for the most conservative estimates, which means, in this case, that it evaluates the full potential for growth. For instance, it is possible that dwelling units marketed as "second homes" will actually become fully occupied year round. A plan must consider the impacts of all dwelling units on public facilities and services in order to prepare appropriately for the future.

[17] MDP: Historical and Projected Household Size for Maryland's Jurisdictions, 2009. This forecast of population growth does not include population growth that may come about through expansion of the City's current group-quarter population (mainly people who live in institutions) which in 2000 stood at between 550 and 600 persons.

Table 3.3: Household and Population Forecast: 2010-2030

			Change		
	2010	2030	Number	Percent	Annual Average rate
Households	5,100	7,580	2,480	48.6	2.0
Population	11,930	16,752	4,822	40.4	1.7

Source: U.S. Census Bureau and Jakubiak & Associates, Inc.

Future Employment

Chapter 2 discusses employment in Dorchester County and Cambridge. Between 1998 and 2005 private sector employment in Cambridge made up 73 percent of the private sector employment in the County.[18] The Plan therefore forecasts that Cambridge will maintain its high share of County employment, accounting for about 75 percent of Dorchester County's projected jobs through 2030. Table 3.4 shows the number of jobs that Woods & Poole Economics, Inc. projects for Dorchester County through 2030[19]. It also shows that the number of jobs in the City may increase by nearly 2,000 from about 13,320 in 2010 to 15,309 in 2030.

Table 3.4: Projected Jobs (2010-2030)

	Dorchester County			Cambridge		
	2010	2030	2010-2030 # change	2010	2030	2010-2030 # change
Total Employment	17,760	20,412	2,652	13,320	15,309	1,989

Source: Woods & Poole and Jakubiak & Associates

[18] Not including public sector employment.

[19] At the time of preparing this report the Maryland Department of Planning had not released updated employment projections for the jurisdictions in Maryland. Woods & Poole Economics, Inc. is a reliable source of demographic and economic data and projections used in public planning and economic analyses.

3.3 Physical Expansion: A Course Correction

Up to this point, this chapter has discussed numerical projections and forecasts. It has documented that there are more housing units in the development "pipeline" than even the Strong Growth Scenario forecasts will be constructed through 2030. It has also shown that there is great added potential for infill development within current City boundaries. These findings indicate that there is more land ready for development in Cambridge than is needed for at least 20 years.

Now, this chapter turns to physical growth and municipal expansion. The main policies meant to guide City growth and development are presented in other chapters of this report (see Chapter 4, for example). The main focus here is to state that, with few exceptions, the expansion of City limits is no longer needed through the foreseeable future. First the exceptions:

There are several parcels of land already developed that are almost entirely contained within the City yet retain County jurisdiction. These parcels are outlined in blue in Exhibit 3.3. Each area is eligible for annexation and the land use of each area should be consistent with the Land Use Plan (Chapter 4). Annexation in each case would rationalize the city-county boundary, provide clarity in the provision of city services, and support the municipal tax base. Further, the City has an interest in promoting the compatibility in subarea or neighborhood land use development that can be achieved when only one set of subdivision, zoning, and engineering regulations and standards govern.

Exhibit 3.3: Municipal Growth Areas

By adoption of this Plan, the City confirms and reaffirms the general policy adopted and encouraged by this Comprehensive Plan, that Annexations are to be discouraged and are disfavored, as it is the belief of the authors of this Plan that sufficient undeveloped, under-utilized or under-developed property exists within the existing corporate boundaries of the City of Cambridge for the foreseeable future. However, in the event that a development opportunity arises which the City determines warrants consideration of annexation because (1) the proposed development generates significant employment opportunities for the community and is determined to be a desirable use/development and in the best interest of the residents of the City, and (2) the developer/applicant clearly demonstrates that there is not sufficient property within the corporate limits of the City to accommodate the proposed development, then in such event: The Plan affirms the City's right to annex properties within the area between Maryland Route 16 and the newly developed Dorchester Tech Park, SUBJECT, HOWEVER to the following: (1) the proposed land use/development must be industrial and/or non-retail commercial use, such as office park/business park, the need for which is supported by an independent economic analysis; (2) the annexation must preserve and dedicate to the City for public use a portion of the property to be designated as Greenbelt, as herein defined; (3) the development must be designed to protect high value ecological resources; and (4) the development must be designed to provide for sufficient and ample highway and utility/infrastructure connections between Maryland Route 16 and Bucktown Road. Nothing herein shall obligate the City to approve or recommend any annexation. The City, in its sole discretion, retains the right to reject any request for annexation, even if the proposed annexation meets all of the conditions listed above.

This Plan recognizes that the County Comprehensive Water and Sewer Plan (CWSP) was last amended in a comprehensive manner in 2004. Since then the County has made several map and/or text amendments that relate to service areas of the City. The County CWSP should be updated to reflect the future growth and land use patterns described by the 2011 Cambridge Comprehensive Plan.

As part of the process in preparing this Plan, the Cambridge City Planner advised the Dorchester County Planning Commission that the draft County Comprehensive Plan includes recommendations for growth and development in the Cambridge area that are inconsistent with the policies of this Plan. The County has made several modifications to its "growth area" planning in the Cambridge vicinity, yet its "growth area" mapping still largely coincides with the Comprehensive Water and Sewer Plan as illustrated in the above exhibits. This indicates that the County anticipates the outward expansion of urban development. However, municipal growth and development on these rural and resource lands is inconsistent with this Cambridge Comprehensive Plan (see Chapter 4). The City will not extend water and sewer services. This Cambridge Comprehensive Plan proposes an expansive Greenbelt around Cambridge, instead of the continued outward expansion of urban development and/or suburban sprawl.

The course correction envisioned by this Plan would be accomplished when the planned water and sewer service areas are made to coincide with the 2030 Land Use Plan Map contained within this Comprehensive Plan. With the exceptions noted above, no expansions beyond the current municipal borders are supported by this Plan. This Plan recommends that the areas shown as Open Space on the Comprehensive Land Use Plan Map (Chapter 4) not be eligible to receive water and sewer service until after 2030. Those areas shown as Resource Conservation should not be included in planned service areas, even after 2030[20].

Upon adoption of this Comprehensive Plan, the current County Comprehensive Water and Sewer Plan as it relates to Cambridge will no longer be valid for or supported by Cambridge and will need to be amended. The City Planning Commission will review any updates to the County water and sewer master plan and coordinate with Dorchester County and the Maryland Department of Environment to ensure that water and sewer master planning supports the implementation of the City Comprehensive Plan.

[20] Recreational, institutional, or educational uses in the planned Greenbelt that are consistent with the Comprehensive Plan may be eligible to receive municipal water and sewer services as need warranted.

3.4 Assessment of 2030 Growth Impacts and Recommendations for the Future

This section of the Plan assesses the impact of the forecast population and household growth on key community facilities in Cambridge. It asks: What will be the impact when in 2030, 2,480 new households and 5,070 new residents call Cambridge home. It also provides recommendations for improvement.

Schools

Residents of Cambridge attend one of three elementary schools: Choptank Elementary, Maple Elementary, or Sandy Hill Elementary. Residents attend one middle school, Mace's Lane, and one high school, Cambridge-South Dorchester High School. These are both located in Cambridge. Although the schools are all under capacity, Sandy Hill Elementary is at 95 percent of its capacity.

The Dorchester County School system uses historic and projected graduation and birth rates to project the number of pupils its school system will serve in the future. This method is useful and accurate for the ten year planning horizon used by the Board of Education. For the purposes of this Comprehensive Plan's 20-year planning horizon, it is necessary to use a method that relates pupil growth to planned development. For this reason pupil generation rates (pupils per household) were used to estimate the number of students that could be added to the school system by 2030.

Table 3.5 indicates that expansion of the school system may need to be planned by 2030. Enrollment at Maple Elementary, Sandy Hill Elementary, and Mace's Lane Middle School may each exceed capacity before 2030. The remaining schools will be approaching capacity in 2030 as well.

Table 3.5: Projected School Enrollment

	Capacity	Enrollment		New pupils*	Percent of Capacity
		2008	2030		
Elementary Schools					
Choptank Elementary	459	248	417	169	91%
Maple Elementary	435	386	547	161	126%
Sandy Hill Elementary	470	447	620	173	132%
Middle School					
Mace's Lane Middle School	770	543	828	285	108%
High School					
Cambridge-South Dorchester High School	1300	909	1236	327	95%

Source: Dorchester County Public Schools and Jakubiak & Associates

*Pupil generation rates used to project enrollment by new households were : 0.203 Elementary, 0.115 Middle, and 0.132 High. In projecting enrollment for or elementary schools, the current percent distribution of students to the three schools was held constant

Library

The Cambridge branch of the Dorchester County Library is located in downtown Cambridge. It is currently operating a maximum capacity. It will be necessary to expand the library to serve the population projected under this Plan. The library should remain in downtown either as an expanded facility or as the main branch, in which case another library should be added elsewhere.

Parks

Table 3.6 shows the National Recreation and Park Association standards for parks.

Table 3.6: Park Standards

	Function	Location	Size	Per 1,000 people
Mini-park	Serve a concentrated or limited population or special group (such as tots or senior citizens).	Less than ¼ mile radius	1 acre or less	0.25 – 0.5 acres
Neighborhood Park	Recreational and social focus of neighboorhoods. Area for both passive and active recreation	¼ to ½ mile radius (uninterrupted)	5 – 15 acres	1 – 2 acres
Community Park	Meeting community recreation needs and preserving landscapes and open space.	1 to 2 mile radius	30 – 50+ acres	5 – 8 acres

Source: National Recreation and Park Association

The City currently does not have a Community Park per se, though the Waterfront as unified recreational resource has great potential. The combination of Great Marsh Park, Long Warf, and Sailwinds and the open spaces between them are addressed in the Chapter 6 of this Report. This Comprehensive Plan calls for the development of a new Community Park along the western edge of the City – a Natural Resource Park and Environmental Science Center (see Chapter 4)—as the gem in new system of Greenbelt parks, trails, and open spaces.

Neighborhood parks are located in much of the traditional development parts of Cambridge and several new parks are planned throughout the City. The general locations of existing and proposed parks are shown on the Land Use Plan map in Chapter 4. New development should be required to bring mini parks online to serve new residents and to contribute to creating neighborhood level parks.

Police

Police service is provided by the City's police department. The department has 47 police officers. This indicates a standard of one officer for every 250 residents. Therefore, eight additional officers would be necessary to maintain the same standard of service in 2030. The City could consider future neighborhood police substations to address policing needs.

Fire & EMS

Fire and Emergency Service is provided by the Cambridge Rescue Fire Company located on Washington Street near U.S. Route 50. In planning for Fire and Emergency Services, the City should monitor response times to ensure response times and service levels remain adequate or are improved over time.

Water & Sewer

A description of the City's water and sewer systems and an assessment of the impacts of forecast growth on water and sewer facilities are discussed in detail in the section on water resources. Water and sewer facilities are sufficient to serve the forecast growth in Cambridge.

3.5 Water Resources

Water Quality

The City of Cambridge is in many ways defined by, and alternatively influences the water bodies that surround it. The Lower Choptank River and the downtown Cambridge Creek are the primary receiving water bodies for non-point sources (such as runoff) and point sources (such as wastewater treatment plants) of impairments to water quality, including nutrients, bacteria, sediment, toxics, and metals. While much of the impact is due to untreated stormwater runoff, the City's wastewater treatment facility discharges to the Choptank River and has a direct effect on nutrient loadings.

The Little Blackwater River, in the Fishing Bay watershed, and Fishing Creek, in Little Choptank River watershed, are also impacted by non-point sources in Cambridge[21].

Non-point source water pollution occurs when nutrients enter a stream system in stormwater runoff. Agriculture is the largest contributor to nutrient runoff in the Chesapeake Bay area but developed areas also contribute to runoff as a result of impervious surfaces, or surfaces which water cannot pass through.

Under the Clean Water Act, states are required to identify and list waters that are too polluted or otherwise degraded to meet water quality standards. These waters are considered "impaired". Waters that are listed as impaired must then have a Total Maximum Daily Load evaluation, or TMDL, developed for them. A TMDL is a calculation of the maximum amount of a pollutant that a water body can receive and still safely meet water quality standards. TMDLs consider the amount of nutrients that enter a stream from both point and non-point sources. Table 3.7 shows the impairment of the stream / rivers in the Cambridge area and indicates which ones have been evaluated for TMDLs.

Table 3.7: Impairments of Cambridge Area Rivers

		Impairment Type					
Watershed	**Cambridge Area Rivers**	**Bacteria**	**Biological**	**Metals**	**Nutrient**	**Sediment**	**Toxic**
Lower Choptank	Lower Choptank	TMDL	x	-	x	x	-
Little Choptank	Little Choptank, Fishing Creek	TMDL	-	-	x	-	-
Fishing Bay	Little Blackwater	x	-	-	-	-	-

Source: Maryland Department of the Environment

Drinking Water

Drinking water in Cambridge is provided by the Cambridge Municipal Utilities Corporation (MUC). The source is groundwater in the Piney Point, the Magothy, and the Raritan-Patapsco aquifers. There are nine wells: one in the Magothy aquifer, two in the Raritan-Patapsco aquifer, and six in the Piney Point aquifer. These wells have the capacity to draw a total of 7.1 million gallons per day (mgpd) from the three aquifers. Although MUC does not draw from all the wells at once, it is currently permitted to withdraw a total of 3.5 mgpd from the nine wells combined. Water use in 2007 was 2.2 mgpd. There are no water quality issues with the City's drinking water supply.

Two elevated tanks provide a total storage capacity of 1.5 mgpd. There are four ground storage tanks, one at each pumping station. The combined storage capacity of these ground storage tanks is 2.52 mgpd. No major concerns were found in the water system during a recent model of the system. The Cambridge and Vicinity Comprehensive Water Service Plan Map (Exhibit 3.4) shows the existing and currently

[21] The impacts of past decisions on the Lower Choptank River Watershed in particular can be seen in the records of the River's water quality. For the last year reported (2007) the Lower Choptank River received a grade of D+ (37%) for the Bay Health Index developed by the National Oceanic and Atmospheric Administration (NOAA) and the University of Maryland Center for Environmental Science. The overall Water Quality Index[21] was 47% and the overall Biotic Index[21] was 25%. Of all the water quality and biotic parameters evaluated, only dissolved oxygen[21] scored above 50% with a score of 81%.

planned water service areas. The area now planned for water service is more extensive than the area planned for development in this Comprehensive Plan.

Wastewater

The Wastewater Treatment Plant (WWTP) has a capacity of 8.1 mgpd. An upgrade in treatment technology to Biological Nutrient Removal was completed in 2003. Because the elevation is relatively level there are 16 pumping stations needed to carry wastewater to the WWTP: four pump directly to the treatment plant and three to gravity systems. The current collection system includes combined sewer and storm drain connections. The City is in the process of separating the storm drain collection from the sanitary sewer system. This project is expected to be completed by 2010. Separation will reduce stormwater flow to the WWTP. In 2007 the plant treated 3.0 mgpd, which is 0.8 mgpd more than used in the public water system. While there are no other major problems with the system, it is aging. Modernization and regular maintenance will be necessary.

The Cambridge and Vicinity Comprehensive Sewer Service Plan Map (Exhibit 3.5) shows the existing and currently planned sewer service areas. The area planned for sewer service is more extensive than the area planned for development in this Comprehensive Plan.

2030 Demand for Water and Sewer Services

Water and sewer demand is largely a function of growth, both residential and non-residential. As discussed throughout this Chapter, Cambridge is forecast to grow by 2,480 households between 2010 and 2030, resulting in an estimated 7,580 households in 2030. The 2,480 households will create a demand 620,000 gpd of water and sewer service.

Over the next 20 years, the demand for water and sewer from commercial and other non-residential growth will also grow. Table 3.4 provided a forecast of employment growth; nearly 2,000 jobs. The building space need to accommodate job growth in a community can be estimated using standard ratios of new employees per square feet, which of course differs depending on the industry sector or type of work anticipated[22]. For example, businesses in the Service sector concentrate more workers on a per square foot basis than businesses in the Wholesale Trade or Manufacturing sectors. Estimates of building space can in turn be used to estimate the demand for water[23]. The projected non-residential growth in Cambridge and its demand for water is presented in Table 3.8.

As shown the projected jobs by industry sector are converted into building space requirements and water demand estimates. The water consumption of non-residential growth is estimated in Equivalent Dwelling Units, or EDUs. An EDU is equal to the water use or water discharge of a typical household—250 gallons of water per day. Table 3.8 shows that the Plan projects a demand for 130,000 gpd or 520 additional EDUs by 2030. As noted on the table, this total includes, an additional 20,075 gpd, or about 80 EDU's added to the demand to provide a more conservative estimate of demand potential

[22] This analysis is fairly straightforward in a newly developing area, i.e. new employment translates into new building space. But in an existing community with commercial vacancies and underutilized commercial sites, reasonable assumptions need to be made to discount the "demand" for new building space. Some share of new demand will be met by existing buildings and sites which are already connected to the water and sewer systems and are counted toward current use. Depending on the industry sector, the "Projected Demand for New Floor Area" in Table 3.8 has been reduced from 25 to 40 percent in recognition of the current availability of commercial space.

[23] Using as this Plan does water demand factors provided by the Maryland Department of Environment.

Combined, residential and non-residential growth would result in a total of 3,000 new EDUs that would need to be served by the Cambridge water and sewer systems.

Table 3.8: Non-Residential Water Demand by Sector[24]

Cambridge Industry Sectors	Projected Jobs	Projected Demand: New Floor Area (sq. ft.)	Water Demand (gpd)	factor	Projected Water Use & Discharge (gpd)	(EDUs)
Agricultural Serv., Other	15	1,500	0.495	per sq ft	743	3
Construction	397	-	50	per job	19,838	79
Manufacturing	-89	-53,550	70	per job	-6,248	-25
Transport, Comm. & Public Util.	32	18,679	0.06	per sq ft	1,121	4
Wholesale Trade	100	150,652	0.03	per sq ft	4,520	18
Retail Trade	226	50,794	0.18	per sq ft	9,143	37
Finance, Ins. & Real Estate	251	48,994	0.09	per sq ft	4,409	18
Services	1,061	204,291	0.37	per sq ft	75,588	302
Government Employment	32	9,030	0.09	per sq ft	813	3
Estimate		**430,390**			**109,925**	**440**
Added Demand Potential	-	-	-		*20,075*	*80*
Revised Estimate	-	-	-		***130,000***	***520***

Drinking Water: Table 3.9 shows the impact that forecast growth would have on the MUC water system. This table shows that there is sufficient capacity in the existing system to serve the City's residential and non-residential growth through 2030. In 2030 there would be sixteen percent of capacity remaining within MUCs appropriation permit.

[24] This table indicates the non-residential growth projected in Cambridge in 2030. This projection is based on a projection of jobs in Dorchester County provided by Woods & Poole. From this, the percent of new County jobs that would be in Cambridge was calculated. From this estimate of new jobs an estimate of square feet necessary to support those jobs (minus a percentage for those jobs which could be reasonably expected to be accommodated within existing active business space) was derived for each sector. From this information, water demanded was projected (based on gpd estimates per square feet/jobs from MDE's Wastewater Capacity Management Plan Guidance Document Appendix).

Table 3.9: Impacts to Drinking Water

	2007		2030	
	mgpd	**EDUs**	**mgpd**	**EDUs**
Permitted Capacity (gpd)	3.5	14,000	3.5	14,000
Use				
Existing (2007)	2.2	8,800	2.2	8,800
New Residential	-	-	0.6	2,480
New Non-residential	-	-	0.1	520
Total Use	2.2	8,800	2.9	11,800
Remaining Capacity (gpd)	**1.3**	**5,200**	**0.6**	**2,200**

Sewer: Table 3.10 shows the impact of growth on the capacity of the municipal sewer system. This table shows that there is sufficient capacity in the existing system to serve the City's projected residential and non-residential growth through 2030. In 2030, the WWTP would have nearly 54 percent of its capacity remaining.

Table 3.10: Impacts to Sanitary Sewer

	2007		2030	
	mgpd	**EDUs**	**mgpd**	**EDUs**
WWTP Capacity (gpd)	8.1	32,400	8.1	32,400
Discharge				
Existing (2007)	3.0	12,000	3.0	12,000
New Residential	-	-	0.6	2,480
New Non-residential	-	-	0.1	520
Total Discharge	3.0	12,000	3.7	15,000
Remaining Capacity (gpd)	**5.1**	**20,400**	**4.4**	**17,400**

The Cambridge WWTP has caps on the amount of nitrogen (98,676 lbs/year) and phosphorus (7,401 lbs/year) it can discharge. Dorchester County estimates that the TMDL caps for the Cambridge WWTP will be achievable with upgraded treatment technology. The Cambridge WWTP is currently undergoing this upgrade to ENR technology, the highest treatment technology available today. Table 3.11 shows the projected nutrient discharges and caps on discharge from the WWTP once this ENR upgrade is completed. It is projected that future discharges will be substantially below nutrient caps.

Table 3.11: WWTP nutrient discharges (Point Source Loading)

	2030 lbs/year	cap lbs/year
Nitrogen	33,355	98,676
Phosphorus	3,335	7,401

Impacts to Water Quality / Stormwater Runoff

The City has coordinated with Dorchester County and will continue to coordinate in what the City hopes will be an ongoing joint water quality management program. Nitrogen and phosphorous are the primary contributors to degraded water quality in the Chesapeake Bay Region. Excess nutrients from farm land and urban development cause algae blooms in waterways which can block sunlight and also deplete oxygen, causing harm to both aquatic plants and wildlife. Agricultural run-off is the major contributor to nutrient loading in the Chesapeake Bay region and the watersheds of Dorchester County.

The City is centered in the Lower Choptank River Watershed and impacts the waters of the Choptank River and Cambridge Creek. The City's Wastewater Treatment Plant and the stormwater run-off from impervious surfaces contribute nutrients to this Watershed. Cambridge also, but to a lesser extent, influences the water quality of the Little Blackwater River, which is in the Fishing Bay watershed, and Fishing Creek, which is in Little Choptank River watershed.

State law and policies require that planning take into account the assimilative capacity of the water bodies that receive runoff and discharges from wastewater treatment plants. Assimilative capacity refers to the level of nitrogen and phosphorus that a water body can receive while still maintaining acceptable quality. A Total Maximum Daily Load, (TMDL) is the maximum amount of pollutant that a stream can absorb without impairing the water quality appropriate to its use. TMDL's can be viewed as cap on the discharge from a WWTP or a limit on the amount of runoff from urban development and farmland.

Unfortunately, at this time there are no nutrient based TMDL data for the watersheds near Cambridge and no available assimilative capacities for non-point source pollutants. When the Maryland Department of Environment compiles and releases these data, the County and City should cooperate to comprehensively address sources of water pollution.

This cooperation may take the form of continued discussion with the County to promote greater consistency with the City's land use plan provided in Chapter 4 of this report. The City's goal is to promote land use development decisions that improve water quality in the three watersheds it influences. As described previously, as part of this planning process the City has sought to reduce the areal extent of the development potential planned by the County on the City's edge. As described in Chapter 4 of this report, Cambridge is adopting land use and sensitive area stewardship plans focused on optimizing its current land use pattern and limiting the expansion of development beyond its current limits. The City is adopting strong policies in favor of low impact development and redevelopment, the restoration of developed riparian areas and the protection of natural areas. These policies will provide localized improvements to water quality in the Lower Choptank Watershed as well as the Fishing Bay and Little Choptank Watersheds. They reflect adjustments the City has made in its land use planning with a better understanding of water resources.

The City proposes a land use plan that is smaller in scale—that is, it converts smaller amounts of open space to impervious surface area and developed use than each of the alternative development scenarios studied by the County and presented in its Water Resources Plan. The County's draft water resource plan contains estimated non-point nutrient loadings under three different future countywide land use scenarios[25]. The three scenarios consider the county-wide distribution of the 6,153 new households that the County projects for 2030. The scenarios—Trend, Priority Funding Area (PFA) Focused, and a Hybrid—are briefly summarized below.

- The **trend** scenario evaluates the continuation of past growth trends. The scenario projects that 50 percent of all residential growth will be directed to areas in the County served by public water and sewer systems. The other 50 percent would go into areas of the County not served by public systems and would have private well and septic systems. Under the trend scenario, 2,379 households, 39 percent of projected County growth, would locate in what the County proposes as the Cambridge growth area, inclusive of the current City limits.

- The **PFA Focused** scenario directs all new growth to Priority Funding Areas (PFAs)—those areas that have been designated as target areas for growth because they are a municipality or because they can accommodate higher densities of development and public water and sewer systems. Areas considered PFAs in Dorchester County include the municipalities of Cambridge, Secretary, East New Market, Hurlock, and Vienna. Under the PFA Focused scenario, the County would direct 4,755 households, 77 percent of projected County growth to its Cambridge growth area.

- The **Hybrid** scenario is a combination of the Trend and PFA Focused scenarios in which 75 percent of County residential growth would be directed to PFAs and 25 percent would occur in areas of the County not served by public water and sewer systems. Under the hybrid scenario the County would direct 3,595 households, or 58 percent, of the County's projected growth into its Cambridge growth area. This is the scenario the County selected as the preferred approach to land use.

As shown in Table 3.11 the County's analysis showed some discernable difference in the three scenarios in terms of the amount of total nitrogen (TN) loading in each watershed but no real difference related to total phosphorus (TP). Under each scenario the loadings would be lower in 2030 than they are today. These "reductions" however are due not to any special land use trade-offs but occur because each assumes the implementation of agricultural best management practices which would reduce nutrient runoff from farms. Cambridge supports the implementation of measures to reduce agriculture runoff.

[25] The County used the methodology developed by the Maryland Department of Environment as modified by the County to provide comparative estimates.

Table 3.12: Non-Point Source Nutrient Loadings by Watershed Under County Land Use Scenarios

Watershed	Existing		Trend		PFA Focused		Hybrid	
	TN	TP	TN	TP	TN	TP	TN	TP
Lower Choptank River (Choptank River, Cambridge Creek)	489,408	36,444	310,059	24,472	303,235	24,557	306,585	24,515
Little Choptank River (Fishing Creek)	345,347	24,162	226,499	16,355	219,951	16,193	223,123	16,273
Fishing Bay (Little Blackwater River)	339,627	21,975	229,719	14,929	226,283	14,806	228,067	14,866

Source: Water Resources Element, Dorchester County, 2009

While on a countywide scale, changes in land use pattern in Dorchester County cannot provide meaningful improvements in area water quality absent reductions in agricultural runoff, at the scale of the City, improvements can and should be made. Future growth will continue to be subject to strict stormwater management best management practices. In the case of redevelopment, nutrient impacts will be reduced especially in areas where existing development has substandard retention.

This Plan's focus on ecologically sound re-development and environmental site design in particular will contribute to long term improvements in water quality. The ecological assessment included in Chapter 4, identifies areas for preservation based on their ecological value, including their value in protecting water quality. The City will coordinate with the County to study potential reductions in nutrient loading that can be achieved using a variety of measures such as implementation of enhanced stormwater management.

The Lower Choptank River is considered impaired for nutrients; however, no TMDL has been completed to identify the limits of the River for receiving nutrients. Absent a TMDL, the City seeks to minimize the amount of nutrients from point and non-point sources, as is evident in the inventory of natural resources which guides land use recommendations throughout this document. When a TMDL is completed, the City should compare this to its point and non-point source loading of nutrients and consider appropriate action if impacts exceed limits.

The Little Choptank River and Fishing Bay are not impaired by nutrients and therefore do not have TMDL limitations to compare in order to determine if these water bodies are suitable to receive the non-point source discharge outlined in Table 3.12.

3.6 The Plan for Water Resources

The City of Cambridge seeks to ensure that all residents have access to safe drinking water and sanitary sewer facilities. The City has based this land use plan in an ecological assessment in part to protect the quality of future water resources. The recommendations that in this Water Resources Plan and those in the following Chapter address water resource protection. The following chapter discusses the uses of Low-Impact Development (LID) techniques and conservation of lands that contribute to protecting water quality. The following actions are necessary to further the City's goals with respect to water resources.

- Upgrade the WWTP to ENR treatment technology within the timeframe of this Plan. Keep current with improvements in wastewater treatment technology and study the feasibility of applying treatment technologies that will improve the quality of discharge to the Cambridge WWTP.
- Work with Dorchester County to study the feasibility of tertiary treatment wetlands, constructed wetlands that could receive the discharge from the WWTP. These tertiary treatment wetlands could receive the plant's discharge and further remove nutrients and pollutants.
- Work with Dorchester County in its effort to study the re-use of wastewater to recharge the County's aquifers and address saltwater intrusion into the County's aquifers. The County plans to study the feasibility of a water reuse system with MDE. As the largest municipal WWTP in the County, Cambridge should participate in this study.
- Re-evaluate the point source loading analysis of this Plan when nutrient loading caps are promulgated.
- Work with Dorchester County to implement actions of MDE's source water assessment for Dorchester County.
- Work with MUC to host educational programs on low cost methods to reduce and slow stormwater flows (for example: rain barrels, tree planting, and rain gardens).
- Work with MUC to identify potential ways to reduce water consumption.
- The LID techniques described in Chapter 4 of this Plan are used in all new development.
- The separation of the City's combined sewer/storm drain system is completed.
- Development is concentrated in those areas that will have the least impact on the natural environment, thereby protecting those areas that provide filtering of stormwater runoff.

Chapter 4

A Plan for City Growth and Land Conservation

This Plan is a guide to the location and pattern of land use development and conservation in and around Cambridge for the next 20 years.[26] It provides recommendations on protecting sensitive natural areas, promoting sustainable development practices, and protecting water resources. It is as much about the physical form of the City as about protecting the natural resources that shape that form. Chapter 3, Municipal Growth, Community Facilities, and Water Resources, has shown that Cambridge can accommodate projected growth without further expansion of City boundaries. The outward expansion of urban development is not inevitable. This Plan is, at its heart, about reinvestment in and beautification of the existing City.

4.1 Introduction

In the Chesapeake Bay region, settlements were based on natural resources, primarily waterways, because they facilitated trading, communication, and economic activity. In the late 1600s, tobacco dominated the local export market and its trade brought diverse goods and people to the Eastern Shore. The Choptank River connected places throughout the region making the shoreline a promising site for trading and settlement. Cambridge was established at such an advantageous location; a location long home to Native American Nanticoke Nause-Waiwash settlements.

Today, we have more information about the valuable services our ecosystems provide. They not only provide opportunities for economic gain, but also filter the water, store the rush of floodwaters, clean the air, and support an array of living organisms. In past efforts to optimize the advantages of location, we have altered our landscapes and waterways to serve material and economic needs, sometimes at the expense of our natural resource needs.

[26] This Plan for Land Development and Conservation includes three of the main elements that Maryland statutes (Article 66B of the Annotated Code of Maryland) require be included in municipal comprehensive plans: Land Use, Sensitive (environmental) Areas, and Water Resources. It also provides recommendations concerning ordinances and regulations.

While the location of Cambridge is fixed, the City has been growing. Along the outer edges of the traditional City, lands that were once forested and later became farmland are now being put to urban uses. So there are decisions still to make; not about the location of our City per se, but about where and how the City will grow. Good planning begins with describing the natural resource base, which should then influence decisions about how other cultural and economic needs are met. We look at Cambridge, not just as a city, but also as a unique set of ecological systems and processes, natural though altered.

Cambridge is located along the south bank of the Choptank River. The City covers approximately ten square miles (6,575 acres) and is the population and employment center for Dorchester County.

Overall, the landscape is relatively flat with the urban core rising along a ridge with upper elevations reaching 20 feet above sea level. Moving southeast, the land is low and a network of tidal streams scores the landscape. Many of these stream channels and natural drainage ways have long ago been lost to poor land management and urban development. A combination of high water tables, soils that do not drain well, low elevations, subsidence and sea level rise creates a situation where rainwater and tides heavily influenced the landscape. Rain events during high tides and strong southerly winds lead to substantial flooding throughout parts of Cambridge.

As the flow of water influences the City, so too does the City influence the waterways. The Choptank River and Cambridge Creek are primary receiving waters for runoff of nutrients, bacteria, sediment, toxics, and metals from urban land. Cambridge influences the water quality of the Little Blackwater River, which is in the Fishing Bay watershed, and Fishing Creek, which is in Little Choptank River watershed.

4.2 Application of a Principle

The work of the Cambridge City Planning Commission began with this statement of principle:

> The underlying qualities of the land help determine which uses are viable. To the extent possible, the natural capability and characteristics of the land should guide land use development. Natural areas should provide form to urban development; defining the edges of intensely developed areas and providing wide, open spaces. Together natural areas are resources and they add to scenic beauty. Natural areas can connect various parts of a City and in so doing can become useful elements in city planning; they become environmental corridors—areas for stormwater management, flood control, wildlife habitat, recreation and even transportation.

The work of developing this Comprehensive Plan then began with systematic study of natural resource values: an Ecological Assessment. This assessment informed the ideas and recommendations in this Plan. The city planners identified and assigned resource values to all areas based on their relative suitability for development or conservation using the principles of landscape ecology, a natural resource value ranking system, and mapping. The methodology is detailed in a companion report.[27] The following summarizes the approach:

[27] The City of Cambridge Comprehensive Plan Ecological Assessment report is available upon request of the office of the Cambridge City Planner.

1. We mapped existing datasets on soils, wetlands, riparian areas, flood prone areas, habitat, forested areas, and Chesapeake Bay Critical Areas. Each of these resource elements is described in this section of the report.

2. We analyzed each individual dataset and selected specific attributes based on their potential to influence the ability of the landscape to recover from disturbance, that is—whether they are critical to the area's long-term ecological stability and integrity.

3. We assigned these attributes a suitability value. Valuation was determined on a scale whereby the higher the potential to influence the ecological stability and integrity of a site, the higher the value.

4. Using geographic information systems mapping, all datasets with their assigned values were combined by overlaying them on maps and then summing their attribute values.

5. We then prepared composite maps and presented these maps at public workshops. The final maps visually display areas based on their relative suitability for development or conservation. They are described in this Chapter.

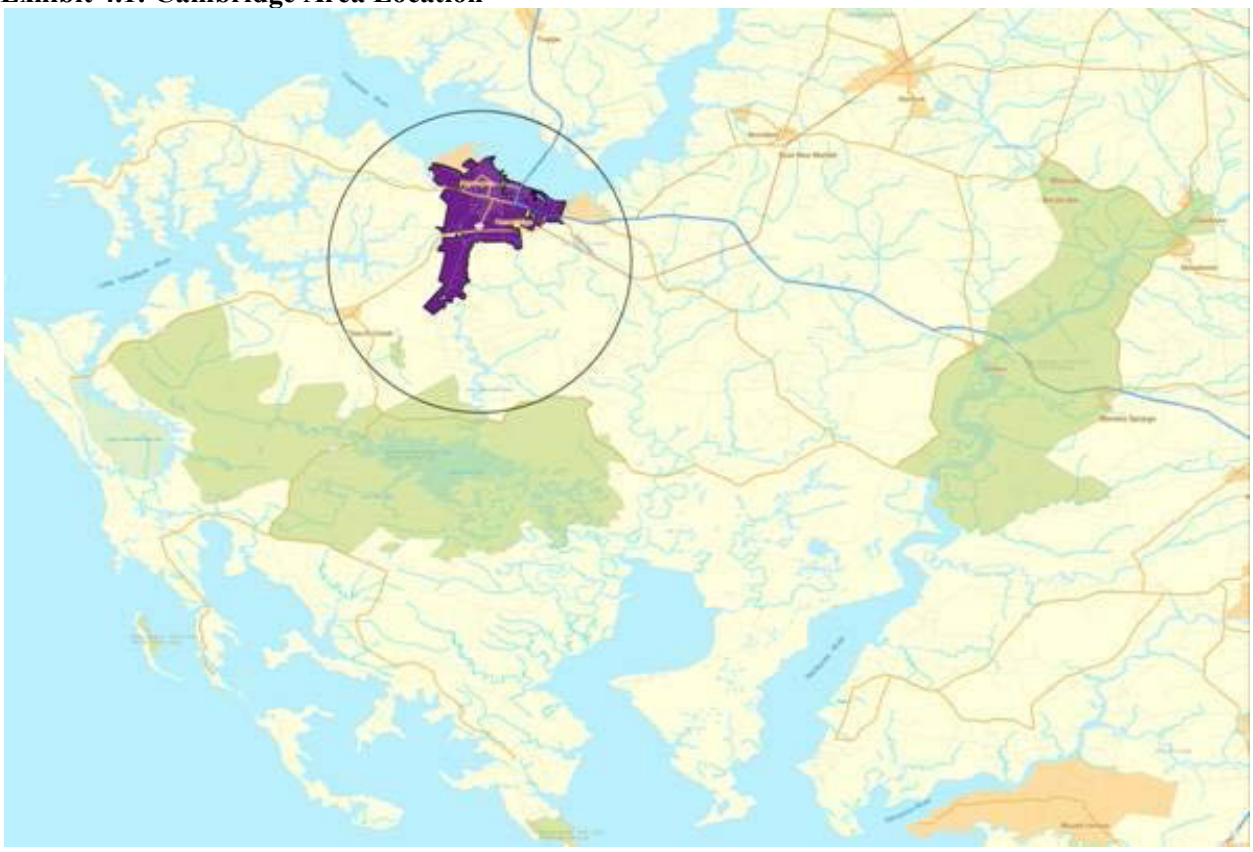
In summary, the Ecological Assessment differentiated areas that are most conducive to land development from those areas most conducive to land conservation. The factors considered relate to ecological processes, natural functions, and resiliency. This study ties the City's long term planning to a greater understanding of the area's natural resource base than has ever been contemplated. As noted in the Planning Commission's statement of principle: the underlying qualities of the land help determine which uses are viable. The next section describes the resource attributes and sensitive natural areas present in and around Cambridge. It also provides a primer of sorts on the role of function of these resources.

4.3 Inventory of Natural Resources[28]

This Comprehensive Plan recognizes that development decisions in Cambridge are interconnected with the natural resources well beyond municipal boundaries. For this reason Cambridge has a long-term interest in this area. Exhibit 4.1 shows a circle with a diameter of eleven miles; this is the study area for the Ecological Assessment. It encompasses areas that are influenced by the Choptank River, Little Choptank River, Fishing Creek, and the Little Blackwater River. This diameter was used for assessing the City's natural resources as shown on the mapping exhibits in this section.

[28] An inventory of natural resource in a comprehensive plan is not the definitive or location specific documentation of all sensitive environmental areas. The boundaries of natural resources are subject to natural change over time and indeed can be impacted by area wide development activities. Further, a variety of agencies document environmental resources with varying levels of technical capability and for varying purposes. An environmental resource inventory and its maps should guide the community (a planning commission and those interested in land development and/or conservation). For example, the Planning Commission should refer to the maps in this document when reviewing a subdivision plan or infrastructure proposal and finding that certain resources may be generally present or likely impacted by such a project, assert its right to require definitive and field-tested information and surveys.

Exhibit 4.1: Cambridge Area Location



The State of Maryland considers certain natural areas as "sensitive areas" because they are susceptible to permanent damage if developed or impacted by development and/or misuse. An individual element (a wetland, for example) or a larger ecological system (a wetland in a wooded stream and floodplain buffer) may have difficulty recovering from serious disturbances. If disturbed or destroyed, the value derived from the resource, (good water quality, flood and storm surge mitigation, wildlife habitat, etc.) may be impaired, or lost.

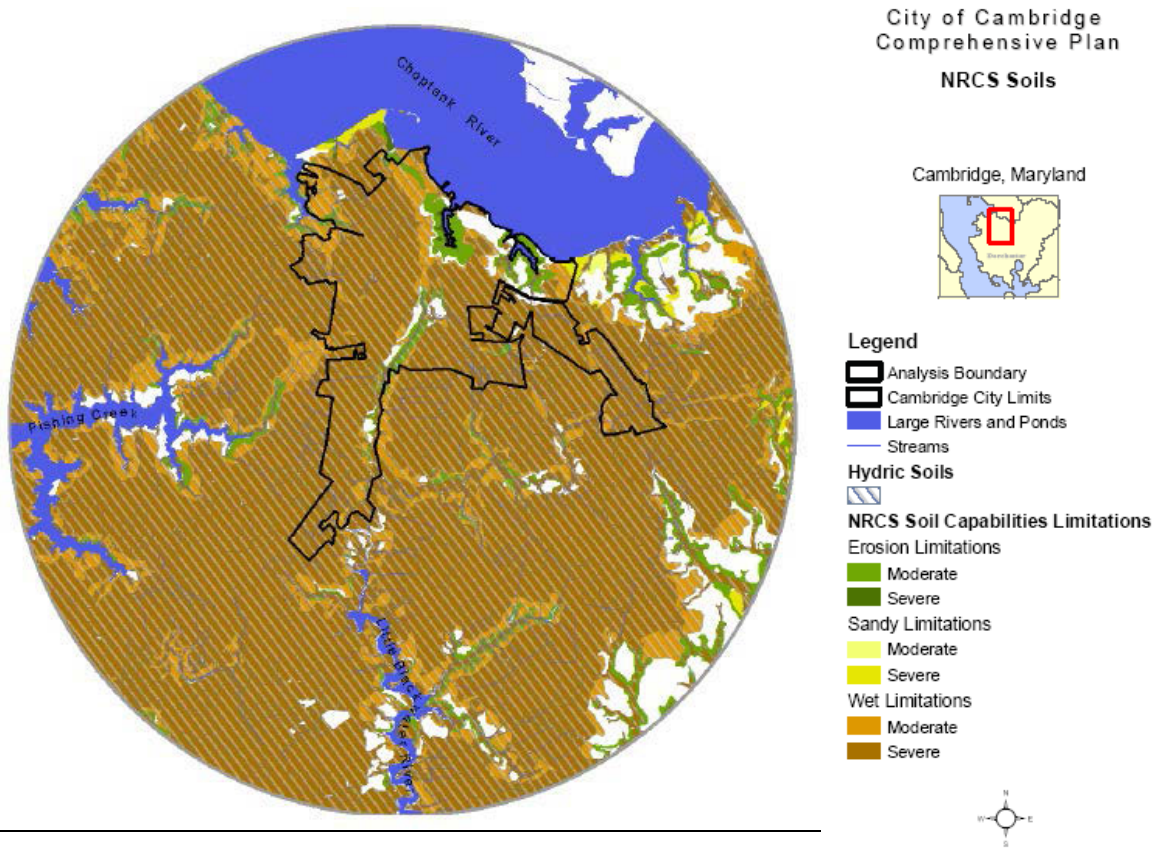
Soils

The biological and physical components of soils affect nearly all ecosystem processes. Soils are typically characterized by their water holding capacity, nutrient availability, particle size (i.e. sand, silt and clay), and susceptibility to erosion. Exhibit 4.2 shows the location soils susceptible to erosion or limited due to sandy or hydric (or wet) conditions.

Erosion can contribute to the degradation of natural areas such as streams. Riparian area (stream environments) in the Cambridge area, are most susceptible to erosion. Excessive erosion can remove surface soil that contains organic matter and nutrients necessary for plant growth. Therefore, identifying and protecting soils susceptible to erosion is an important step in protecting ecosystems and water quality especially.

Most of the soil units within the Cambridge area have some hydric soil components that are poorly drained and have a water table at a depth of one foot or less during the growing season. This does not mean that the entire soil unit is hydric, but some portion of it is.[29] Hydric soils are formed under conditions of saturation, flooding, and/or ponding long enough during the growing season to develop anaerobic conditions and typically support wetland vegetation. Soils and water table information are critical pieces to locating wetlands and areas conducive to wetland restoration.

Exhibit 4.2: NRCS Soils



Wetlands[30]

Wetlands are valuable due to the wide array of services they provide. The services, often taken for granted, include pollutant removal, flood and storm surge attenuation, groundwater recharge and discharge, shoreline protection, and wildlife habitat. Wetlands filter sediment, nutrients and chemicals from stormwater runoff as it moves across land to waterways or seeps into groundwater reserves. They absorb water during storm events and release it slowly.

[29] Field investigation is necessary to determine the exact location of hydric soils.

[30] Within Maryland, the greatest percentage of wetlands per county (28.3%) is found in Dorchester County (Somerset County has the next highest coverage at 13.6%). Furthermore, 44% of the land cover in Dorchester County is considered wetland. Thus, wetlands are a prominent component of the local landscape ecology.

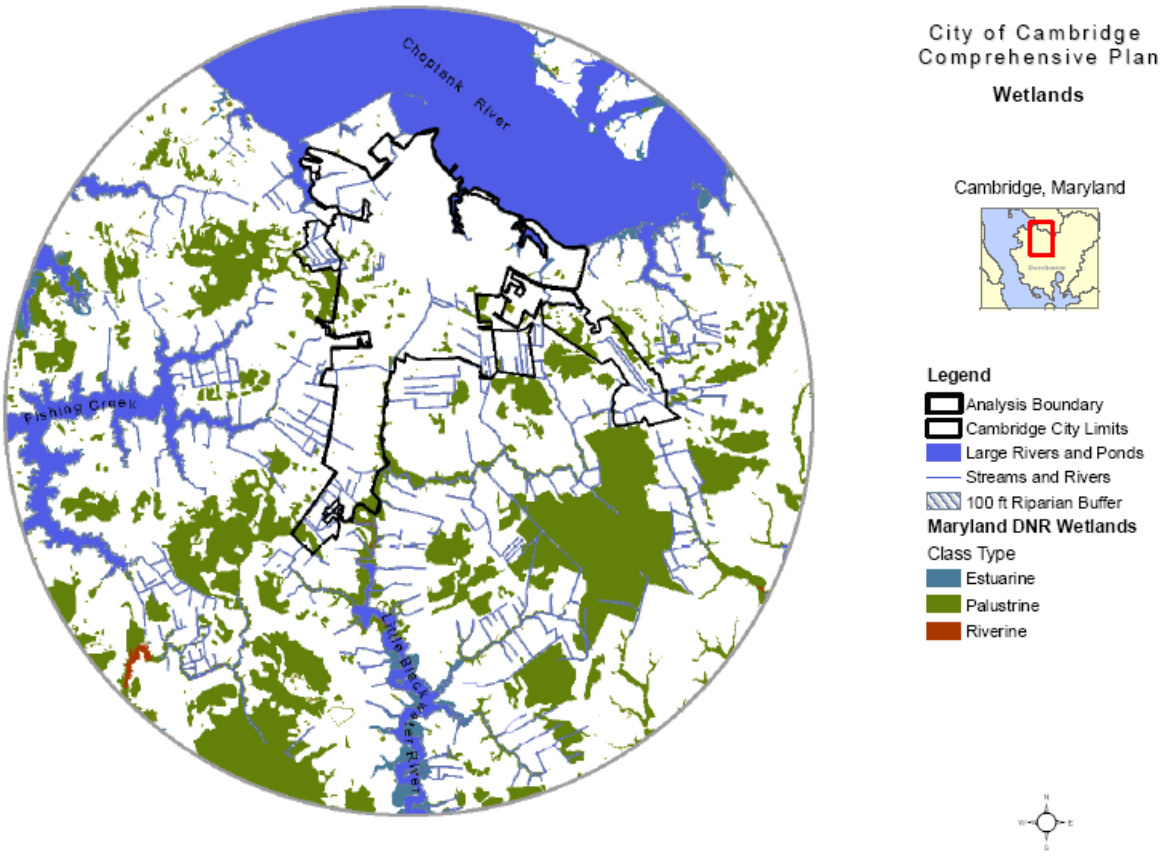
Coastal wetlands buffer shorelines from wave action and reduce erosion. The range of water levels and mix of vegetation provide food and cover for fish, birds, mammals, reptiles, amphibians and invertebrates.

The presence of water greatly influences the type and specific characteristics associated with wetlands in Cambridge. Alteration to ground or surface water (inflow and outflow) changes the dynamics of the wetland system and can impact the very quality of water itself. When land development removes or degrades wetlands, we must replace if possible, the services nature provides with costly water treatment or flood control infrastructure. When we protect and restore wetlands, we increase opportunities to benefit from the natural landscape. Wetlands are shown on Exhibit 4.3.

Three of the main wetland types are found in and around Cambridge Most of the wetlands within the assessment area are palustrine. The wetland types are defined below.

> *Palustrine* – These wetlands are mostly non-tidal, but do include tidal wetlands associated with freshwater. They are typically vegetated and located along floodplains, in isolated depressions, in areas with soil saturated by groundwater, or in areas where precipitation saturates the soil for at least a season.
> *Estuarine* – These tidal wetlands cover the transition between salt water and land and are located where freshwater occasionally dilutes the saltwater (coastal areas for example, associated with oceans).
> *Riverine* – includes wetlands within a river channel.

Exhibit 4.3: Wetlands



Riparian Areas (Stream Buffers)

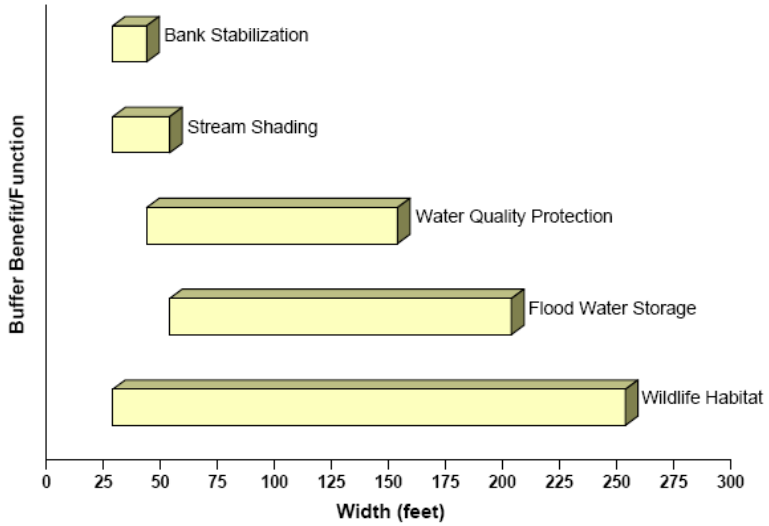
Riparian areas include the land adjacent to a body of water such as a stream, river, marsh or shoreline and essentially make up the transition zone (not unlike wetlands) between aquatic and terrestrial environments.[31]

Like wetlands, riparian areas support a range of plants that have adapted to conditions heavily influenced by water and they play a major role in stormwater management. Riparian areas are an important ecological feature because they improve water quality and provide habitat. Exhibit 4.4 shows the important buffer benefits associated with the width of the stream buffer. Riparian areas that are forested for a minimum of 75 to 100 feet from the water's edge provide the greatest range of services and have three major functions:

1. Maintaining stream habitat features such as temperature, light, woody debris and stable banks.
2. Removing excess nutrients and pollutants from stormwater and groundwater.
3. Slowing the velocity of stormwater runoff and stabilizing floodplains.

The first 75 to 100 feet of forested riparian buffer from the water's edge is critical to preserve and/or restore as it provides the largest range of ecological services that include stream bank protection, water quality treatment, thermal protection (shade), and habitat. Buffers that extend beyond this inner zone, for example 200 to 300 feet and wider or 100 feet beyond the 100-year floodplain are also important as these outer zones serve as conservation corridors for the movement and use of a wider range of animals and plants and provide a greater degree of protection of biological diversity and ecosystem function. Even if not forested, shrub or meadow habitat provides increased water quality and habitat functions when extended beyond the first 75 to 100 feet of riparian forested buffer.

Exhibit 4.4: Buffer Widths and Associated Functions



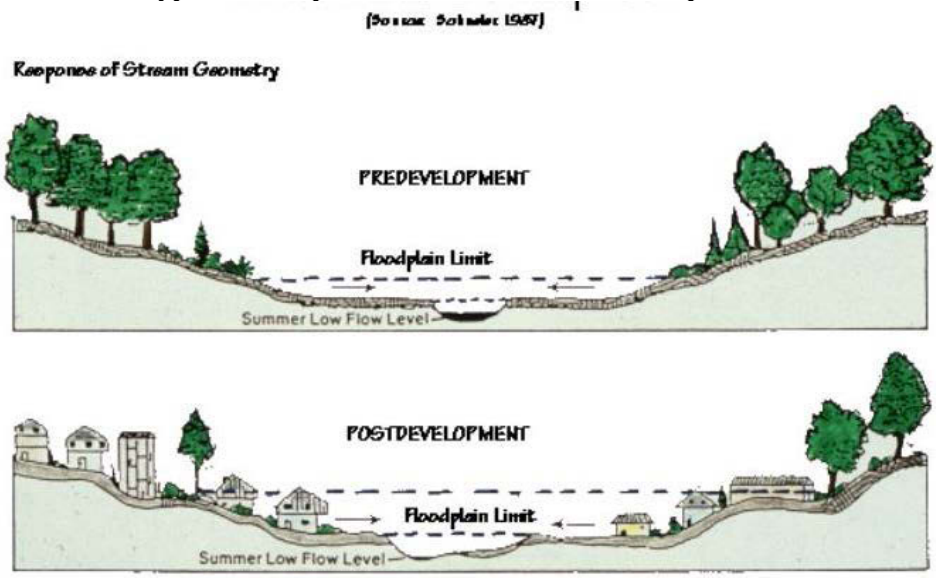
Adapted from USDA Natural Resources Conservation Service. *Where the Land and Water Meet: A Guide for Protection and Restoration of Riparian Areas First Edition.* USDA NRCS, September 2003.

[31] Current City regulations (2003 Zoning Ordinance, Section 199: Habitat Protection Areas) include provisions for regulating manmade disturbances within 100 feet from the edge of mean high water line or the edge of wetlands of tidal waters, tributary streams and tidal wetlands. In addition, a 100-foot natural buffer from all perennial streams is required for all development (Part III Environmental Standards for Sensitive Areas, Section 359, Environmental Standards for all Subdivisions and Development Requiring Site Plan Approval).

Floodplains

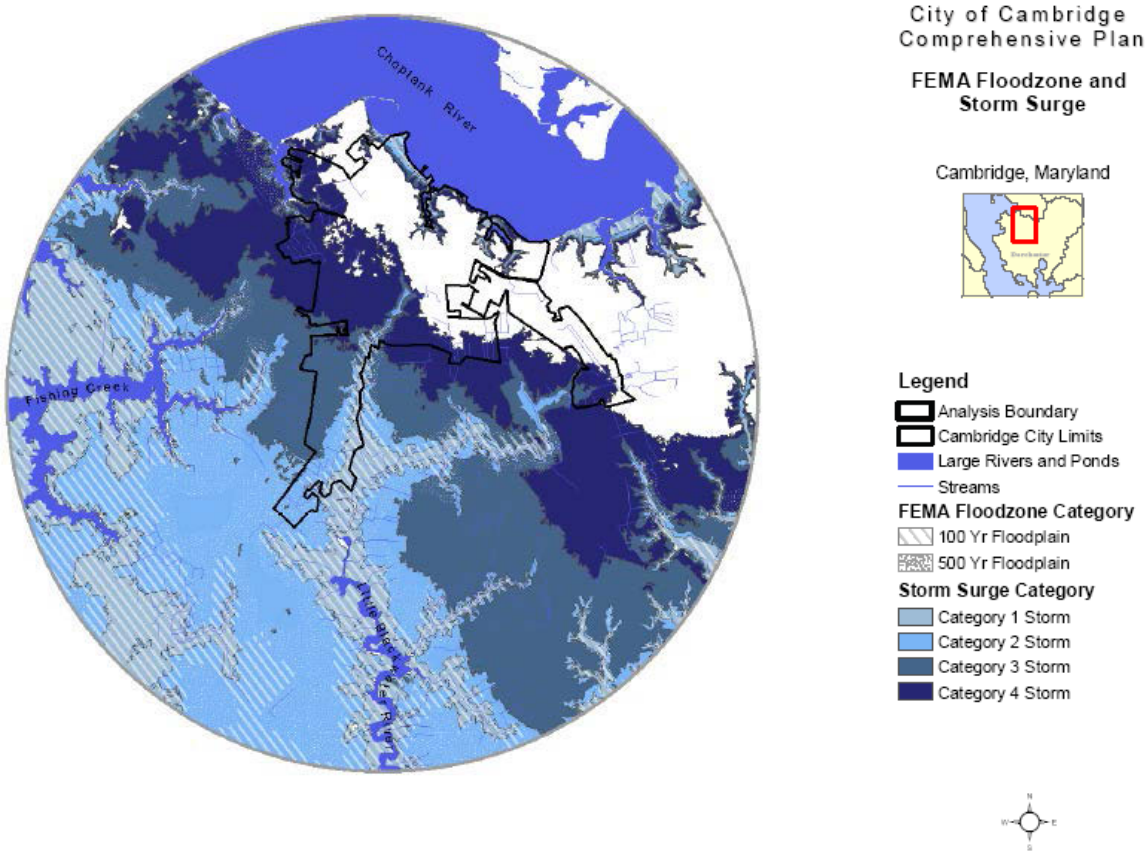
Floodplains are low, flat areas adjacent to streams and rivers that fill with water during and after periods of high precipitation. Due to the high probability for floodplains to inundate with water, development in floodplains is a mistake. Not only do floodplains absorb and slow stormwater, they also often include riparian buffer areas and wetlands. When floodplains are filled and encroached upon and/or when upland areas are developed and generate greater volumes and rates of stormwater runoff, floodwater surfaces will typically rise and spread out, impacting a larger area. Exhibit 4.5 illustrates this condition.

Exhibit 4.5: Typical Floodplain Before and After Development



The Federal Emergency Management Agency (FEMA) defines FEMA flood zones according to varying levels of flood risk according to elevation above sea level and flood zones are often congruent with floodplains. Exhibit 4.6 shows the FEMA 100-year and 500-year flood zones. The 100-year flood zone is that area that has a one percent chance of flooding in any single year. The 500-year flood zone is that area that has a 0.2 percent chance of flooding in any single year.

Exhibit 4.6: FEMA Floodzone and Storm Surge



Storm Surge

Another type of flooding in addition to the non-tidal flooding (accumulation of water from precipitation) described above, is tidal flooding associated with tides and storm surges. Intense winds and heavy rains induced by hurricanes or on-shore winds and elevated tides cause coastal flooding. The combination of wind and high tides can elevate typical flood levels an additional four to eight feet. Thus, not only can flooding occur due to heavy rainfall, but it can be compounded as tidal water surges up rivers and streams, essentially blocking the flow of storm water gathering on the land.

The Maryland Department of Natural Resources (DNR) created a dataset based on the SLOSH (Sea, Lake and Overland Surges from Hurricanes) model from the National Hurricane Center, which predicts storm surge from a hurricane and is accurate within +/- 20 percent. The model takes into consideration pressure, size, forward speed, track and wind speed.

Saffir-Simpson Hurricane Scale (NOAA, 2008):

Category 1: 4 to 5 feet above normal
Category 2: 6 to 8 feet above normal (Isabel-2003, Floyd-1999 and exceeded 500yr flood levels)
Category 3: 9 to 12 feet above normal
Category 4: 13 to 18 feet above normal
Category 5: greater than 18 feet above normal (Andrew, 1992)

As shown on Exhibit 4.6, storm surge comes from the south. Diagonal bands that run northwest to southeast define the varying severity of potential storm surge. In a Category 4 hurricane for example, storm surge flooding may cover most of the Cambridge area extending south of the diagonal line connecting Jenkins Creek in the northwest to the Woods Road / MD Route 16 intersection in the southeast. The storm surge associated with a Category 3 Hurricane would cover less area but still inundate parts of the MD Route 16 corridor, likely including the High School. Storm surge flooding associated with smaller storm events in the City is limited to the riparian areas and their associated tributary drainage ways. However, as shown on Exhibit 4.6, storm surge inundation in Cambridge extends beyond standard floodplains.

Wildlife Habitat

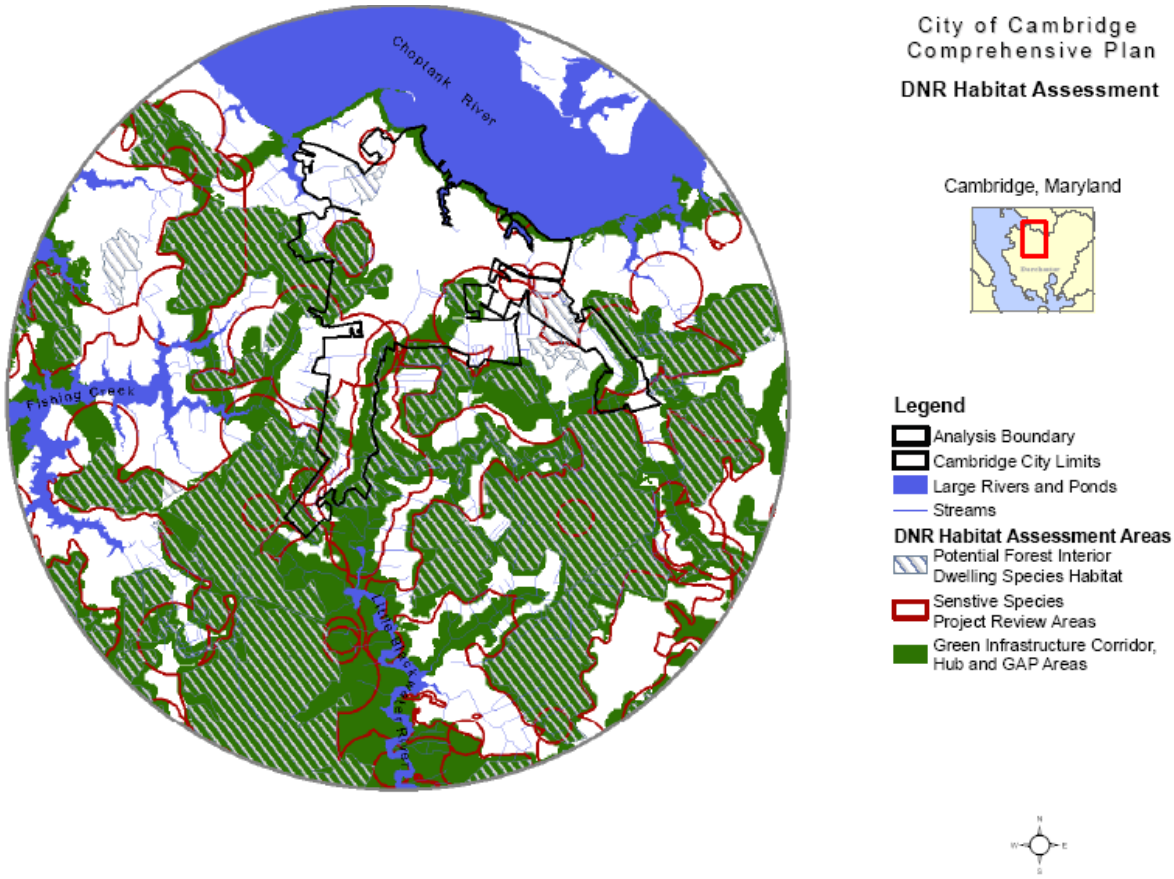
Natural systems help convey, store and filter stormwater, but they also have a value associated with biodiversity. Biodiversity is the measure of variety of all levels of life from genetics to species and their interaction within a given ecosystem.

Biodiversity is often used as a measurement of health within the system and the complexity of an ecosystem which is able to support a variety of species of plants and animals at differing trophic levels[32]. A high level of biodiversity and trophic overlap helps to support the self-sustaining nature and resilience of a habitat type so that it may accommodate climate change and associated sea level rise, allowing plant and animal communities the ability to migrate as site conditions change.

The primary habitat types within the Cambridge area include forests and wetlands. Three datasets, created by DNR, were used to assess habitat based on green infrastructure (hubs, corridors, and gaps), potential habitat for Forest Interior Dwelling Species (FIDS), and areas of concern associated with protected species. The three datasets provide a comprehensive assessment of habitat including scientific criteria as well as regulatory criteria. These are shown on Exhibit 4.7.

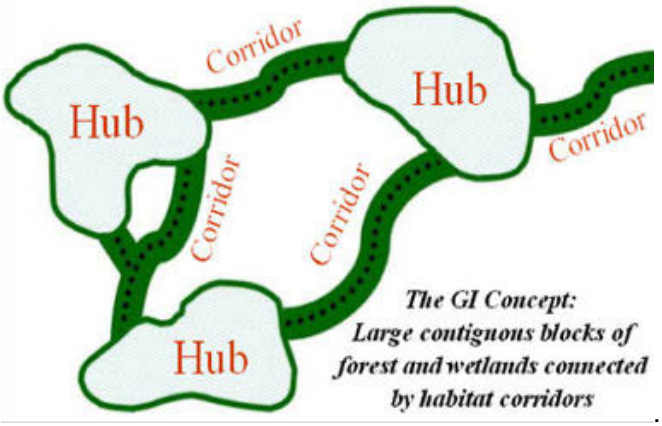
[32] Trophic levels refer to the feeding levels in a natural food chain.

Exhibit 4.7: DNR Habitat Assessment



Green Infrastructure (Hubs, Corridors, and Gaps): DNR has developed a Green Infrastructure Assessment to guide a comprehensive, statewide strategy for land conservation and restoration. Green infrastructure (GI) refers to the land and water that provide the natural foundation needed to support diverse plant and animal populations. The Green Infrastructure Assessment identifies three types of important resource lands – "hubs", "corridors", and "gaps" (Exhibit 4.7).

Exhibit 4.8: Schematic of Hub and Corridor Relationship



- Hubs are typically large contiguous areas, separated by major roads and/or land uses, that contain one or more of the following:

    1. Large blocks of contiguous forest (at least 250 acres, plus a transition zone of 300 feet).
    2. Large wetland complexes with at least 250 acres of unmodified wetlands.
    3. Important animal and plant habitats of at least 100 acres, including rare, threatened, and endangered species locations, unique ecological communities and migratory bird habitats.
    4. Relatively pristine stream and river segments.
    5. Existing protected natural resource lands that contain one or more of the above.

- Corridors are linear features connecting hubs together; usually they connect hubs of similar type (forest to forest, wetland to wetland). They follow the best ecological or "most natural" routes, which are typically streams with wide riparian buffers, ridges, and forested valleys.
- Gaps are developed areas, agricultural lands, or cleared lands within the green infrastructure network that could be targeted for restoration to forests, wetlands, or riparian buffers.

Forest Interior Dwelling Habitat[33]: A wide variety of birds (both migratory and resident) require large tracts of forest for successful breeding and maintaining viable populations. Interior forest habitat is the area of forest that is at least 300 feet from the edge of the forest. As forests have become increasingly fragmented and whittled down in size, large tracts have become scarce and are high priority conservation areas. When forests become fragmented, they lose the interior habitat characteristics such as higher humidity and complex vegetative structure.

The Chesapeake Bay Critical Area Program includes provisions for protecting FIDS. DNR created a dataset that identifies areas with potential to provide FIDS habitat. The data is designed to be used as a conservation and protection tool for local jurisdictions like Cambridge to regulate activities in or near FIDS habitat.

[33] While forest interior dwelling species (FIDS) typically focuses on birds, they also act as an "umbrella" for other species whereby their habitat needs encompass a wide range of forest benefits for other species and processes. Thus, the preservation of interior dwelling is far-reaching and critical to maintaining local ecological processes.

Exhibit 4.7 shows the location of forests meeting the FIDS habitat criteria. Forest tracts that meet either of the following conditions qualify as potential FIDS habitat:

1. The forest is greater than 50 acres in size and contains at least 10 acres of forest interior (forest greater than 300 feet from nearest forest edge).
2. For, riparian forests, the forests are, on average, at least 300 feet in total width and greater than 50 acres.[34]

Endangered/Sensitive Species Habitat: The third habitat element includes habitat for endangered or sensitive species. Protecting habitat is essential for maintaining viable populations of both plant and animal species. The Maryland Natural Heritage Program is responsible for identifying, ranking and protecting nongame species throughout the State.[35] The Natural Heritage Program created the dataset of Sensitive Species Project Review Areas shown on Exhibit 4.7. It delineates the general location of documented rare, threatened, and endangered species. This is for guidance purposes only and does not provide specific locations of or strictly represent habitats of threatened and endangered species.[36]

Land Cover

Land cover classifications in the Cambridge area showing wetlands, forests and developed open space were also studied.[37] Exhibit 4.9 illustrates, perhaps better than most, the relationship between wetlands and large woodland areas in the Cambridge area—the remaining large intact woodland areas are all associated with and/or contain wetlands. Exhibit 4.9 also shows the extent of the stream network and watershed drainage in the Cambridge area.

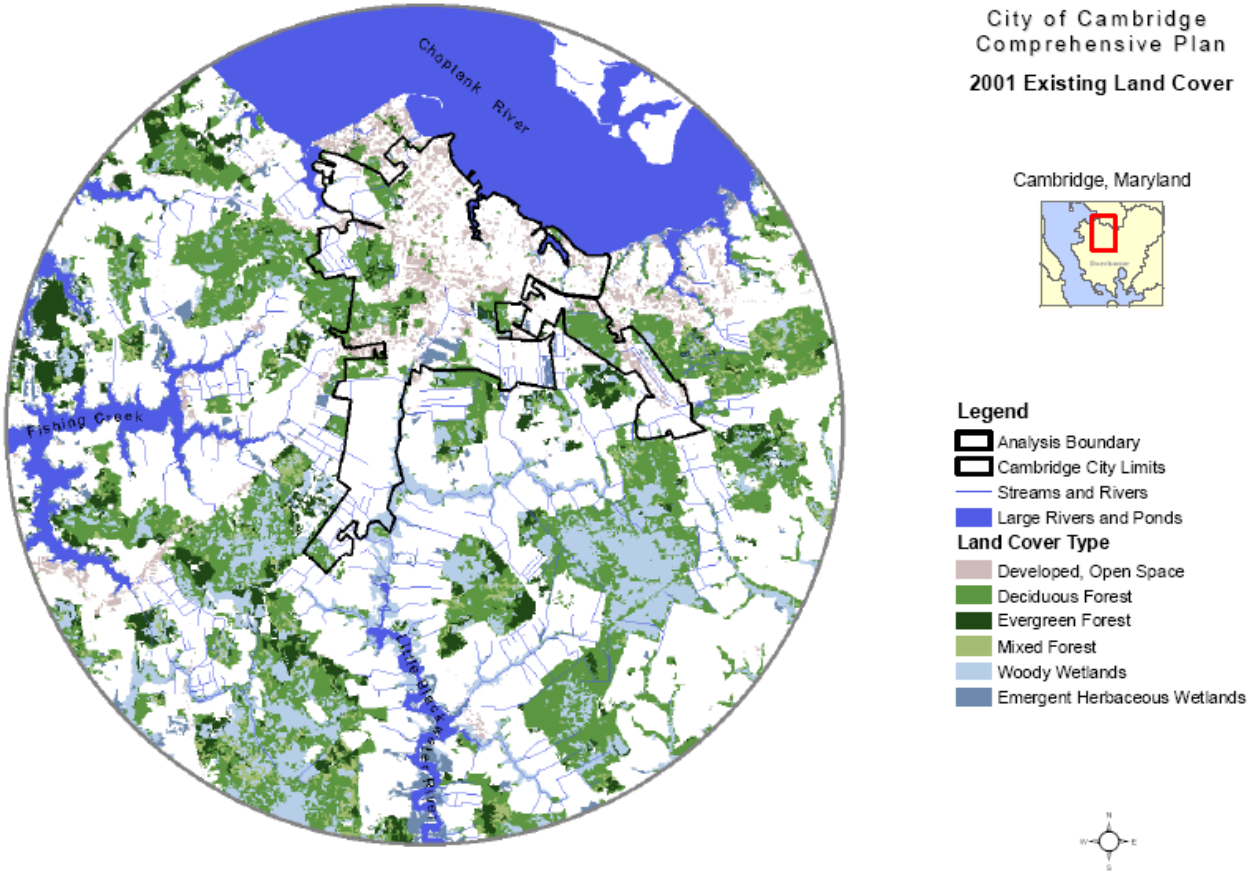
[34] To meet this criterion, the stream in the riparian forest, must be perennial (DNR, 2000).

[35] The Maryland Natural Heritage Program gathers species and habitat information to guide land management decisions and regulations designed to protect and conserve biological diversity.

[36] The dataset is comprehensive and includes various types of regulated areas and other areas of statewide concern including: Natural Heritage Areas, listed species sites, other or locally significant habitat areas, colonial waterbird sites, waterfowl staging and concentration areas, non-tidal wetlands of special state concern, and geographic areas of particular concern.

[37] The 2001 National Land-Cover Database provides a consistent inventory of land cover for all 50 states.

Exhibit 4.9: Existing Land Cover (2001)



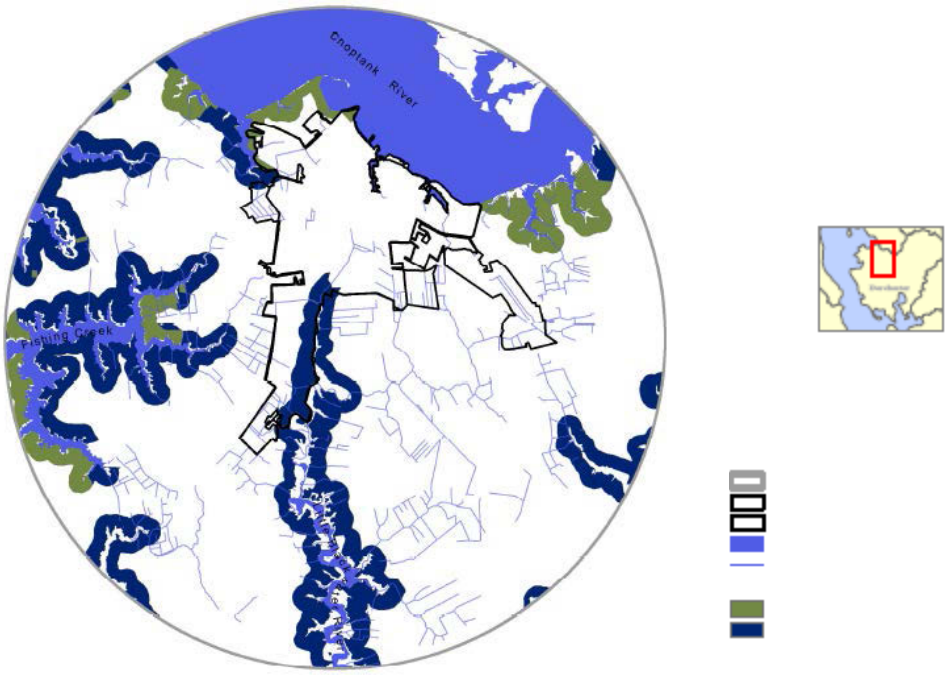
Chesapeake Bay Critical Area

In 1984, to safeguard the Chesapeake Bay from the negative impacts of land uses, the Maryland General Assembly enacted the Chesapeake Bay Critical Area Protection Program, a far-reaching effort to control land use and development in the Chesapeake Bay watershed. The ribbon of land within 1,000 feet of the tidal influence of the Bay was determined to be crucial because development in this "critical area" can have direct and immediate effects on the health of the Bay[38]. As shown in Exhibit 4.10, the City of Cambridge is excluded from Critical Area regulations except with respect to critical areas that the City may annex, or have annexed since 1984.

From an ecological perspective the Critical Area is of significant importance, thus a 1,000 foot buffer was included in the Ecological Assessment. Values were assigned based on RCA, LDA and IDA classification (Resource Conservation Areas, Limited Development Area, and Intensely Developed Area, respectively).

[38]The Maryland Chesapeake Bay Critical Area Commission, Critical Primer.

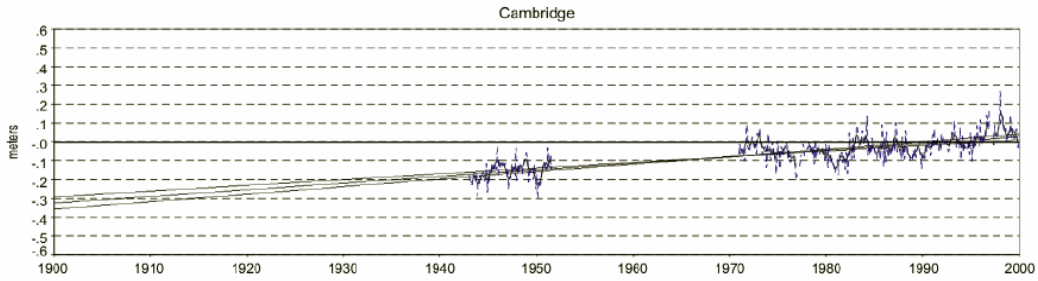
Exhibit 4.10: Critical Area Boundary



Sea Level Rise

Sea level rise in the Cambridge area is an important consideration for long range comprehensive planning. Historic sea level rise for the City of Cambridge has averaged about 3.52 mm/yr or 1.15 feet/century as shown in Exhibit 4.11 below.[39]

Exhibit 4.11: Historic Sea Level



The sea level is predicted to rise another two to three feet by the year 2100 in the Chesapeake Bay region--that is, two to three over the life span of a child born today. Two composite resource value maps are shown in the next section. Note the area extent of a potential sea level rise of two feet in the Cambridge area.[40] The sea level rise itself is largely contained within areas of high or medium resource value reinforcing the importance of preserving these resource areas.

[39] Cambridge Historical Sea Level Rise (Carlisle, Conn, and Fabijanski, 2007).

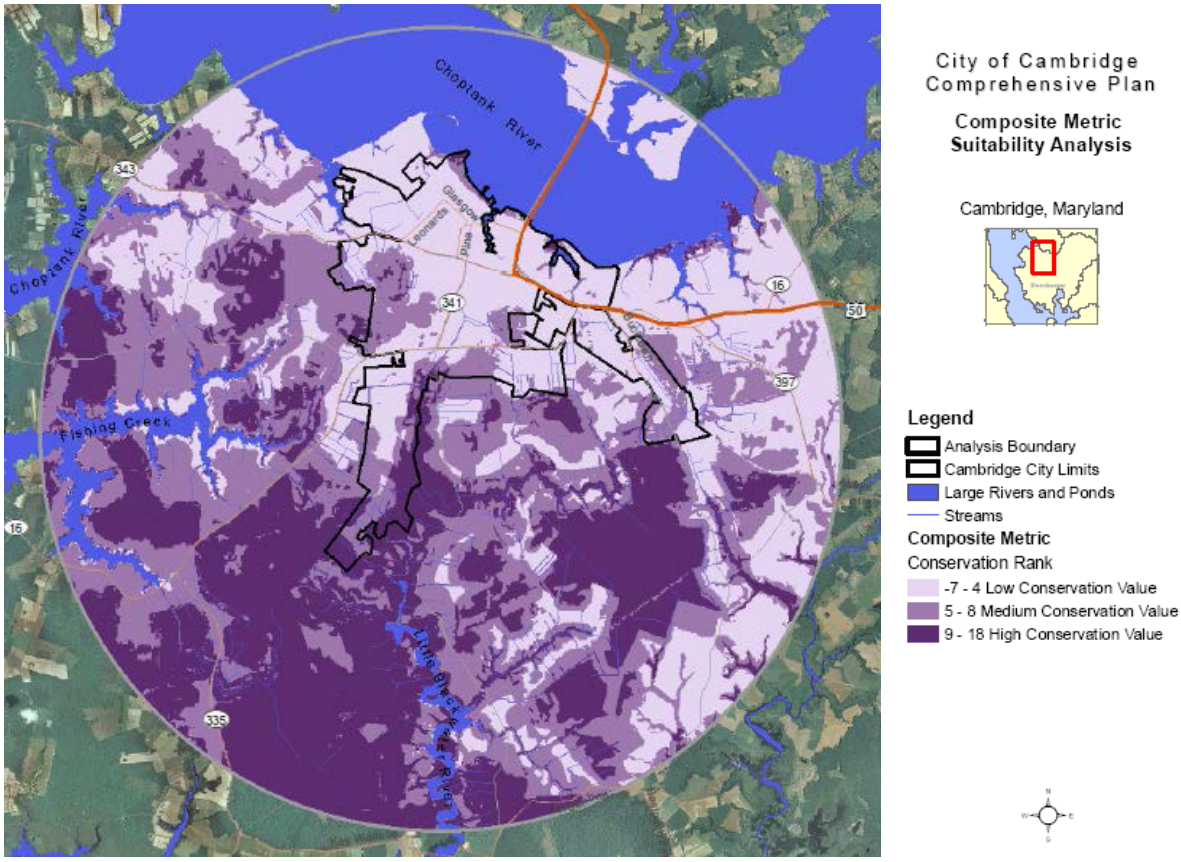
[40] For the Ecological Assessment, the sea-level rise information was used as a static dataset overlay and was not modified so that it could be combined with the other attributes analyzed. The location / elevation of future sea level will inevitability affect the relative resource value of certain natural areas through the Cambridge area. It may increase the extent of storm surge or regular flooding events or enlarge the current area extent of wetlands or riparian areas, for example.

4.4 Composite Resource Values

The Composite Resource Value Map is the key input into this Plan for City Growth and Land Conservation. As shown in Exhibit 4.12, the relative suitability of the land is organized into three groups distinguished by shades of color:

- The light shade represents areas more suitable for development, where disturbances will have no or marginal ecological impact;
- The medium shade represents areas where some disturbance is acceptable but only as long as appropriate and applicable Best Management Practices (BMPs) and Environmental Site Design (ESD) measures are used to mitigate impacts;
- The dark shade represents areas most suitable for conservation, where disturbance will compromise ecological stability or integrity.

Exhibit 4.12: Composite Metric Suitability Analysis



The assessment shows that the southern section of the study area is most suitable for conservation. Medium to high resource value lands extend from the south into the City limits to MD Route 16. This area is influenced by the Little Blackwater River and its associated floodplain and wetland systems. This includes the recent extension of the City south along the Little Blackwater River. The influence of the Little Blackwater River is especially apparent when sea level rise and storm surge is considered (see Exhibit 4.6).

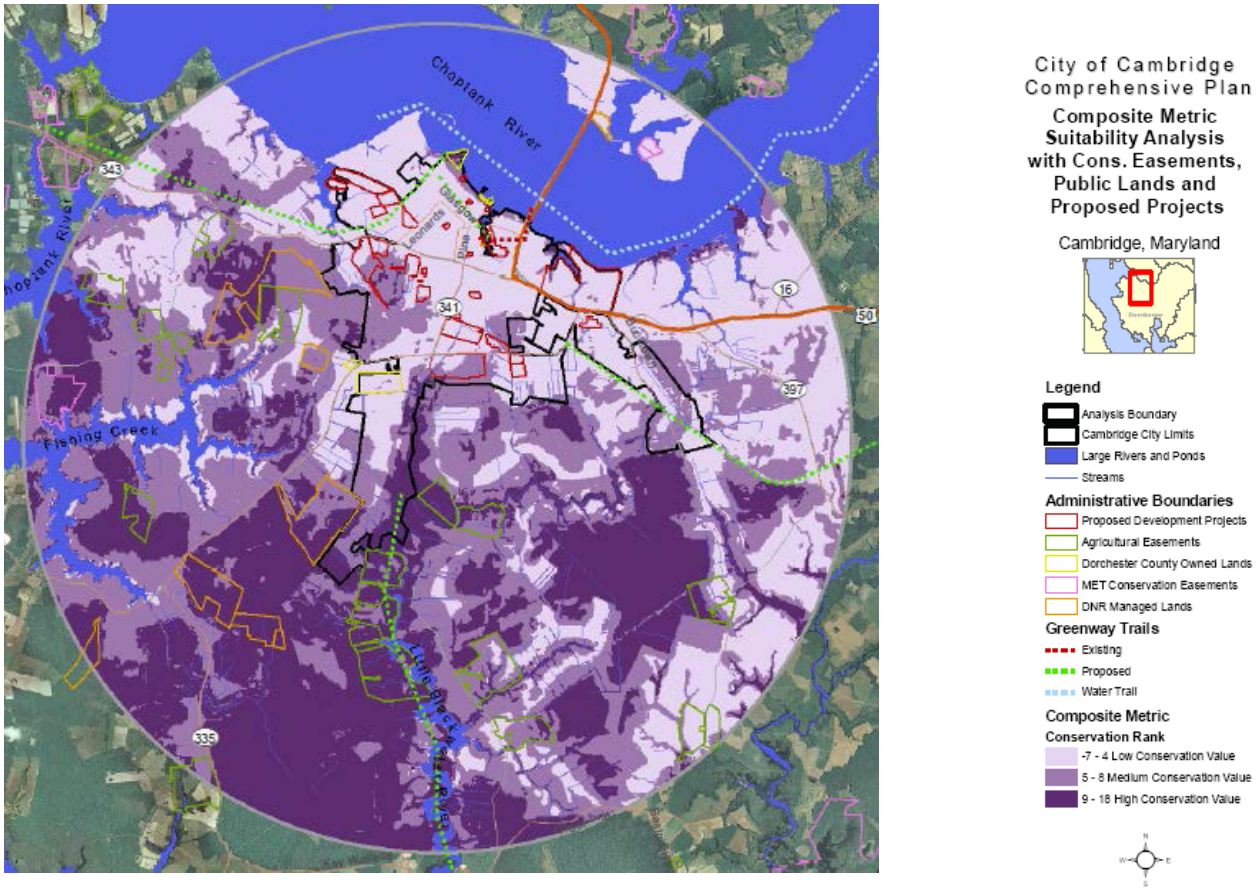
The other notable area with higher natural resource value extends from the west and is associated with Fishing Creek and the Little Choptank Watershed. Valuable resource areas extend along the City's western edge and into the City to the west of and somewhat beyond Bayly Road and Maces Lane. These areas are comprised of large intact forests and wetlands with high habitat value.

Much of the remaining areas within City limits are suitable for development or redevelopment. Should development occur in these areas, appropriate steps in planning, design, and construction should be taken to minimize environmental impacts.

Exhibit 4.13 combines the resource valuation with other important information. Development projects approved within the past few years are shown in red. Several of these projects are now under construction. As shown, the City has approved development projects on lands that have important resource value.

Lands that have been preserved or are owned publicly are delineated in yellow, green, or orange in Exhibit 4.13. As is evident, there has been an effort underway to conserve much of the area best suited for conservation. However, much remains unprotected.

Exhibit 4.13 Suitability Analysis, Conservation Easements, Public Lands, and Proposed Projects



City of Cambridge
Comprehensive Plan

Composite Metric Suitability Analysis with Cons. Easements, Public Lands and Proposed Projects

Cambridge, Maryland

Legend

- Analysis Boundary
- Cambridge City Limits
- Large Rivers and Ponds
- Streams

Administrative Boundaries

- Proposed Development Projects
- Agricultural Easements
- Dorchester County Owned Lands
- MET Conservation Easements
- DNR Managed Lands

Greenway Trails

- Existing
- Proposed
- Water Trail

Composite Metric

Conservation Rank

- -7 - 4 Low Conservation Value
- 5 - 8 Medium Conservation Value
- 9 - 18 High Conservation Value

4.5 Environmental Stewardship

Cambridge embraces a responsibility to ensure that the area's natural resources and sensitive areas, the beauty they contain, and the roles they play in sustaining public well-being are protected and sustained for future generations. The Environmental Stewardship Plan Map illustrates the principal recommendations and policies. The goals are:

- To restore, protect, and preserve natural and environmentally sensitive areas found throughout the Cambridge planning area.
- To protect public health and safety by directing development away from flood prone areas and from locations where certain land uses and land management lead to water pollution.
- To incorporate land conservation into the fabric, use, and enjoyment of the City; connecting people with nature.
- To encourage development strategies within 1,000 feet of the Choptank River that promote water quality improvements.
- To promote environmentally sound development practices in all new developments.
- To promote energy efficiency and energy conservation.

Insert Map

Environmental Stewardship Map

Environmental Stewardship Map
Cambridge, Maryland

- Corporate Boundary
- Greenway Trail
- Critical Area Line
- Stream
- Wetland
- Forested
- 100 Year Floodplain
- Other Resource Conservation

N
W E
S

1 inch equals 2,500 feet

JAKUBIAK & ASSOCIATES INCORPORATED

Map Prepared By: ESRGC

4.6 Environmental Stewardship Policies

Resource Conservation

The Environmental Stewardship Map designates certain areas as Resource Conservation. This designation reflects the findings of the Ecological Assessment, summarized in this chapter. In general, Resource Conservation covers all large forests and woodlands, streams and their buffers, areas of wetlands and floodplains, areas of wildlife habitat, the open space that connects fragmented forests and riparian resources, and farmland. The Resource Conservation designation covers nearly all "sensitive areas" in the Cambridge area.[41] Resource Conservation as envisioned in this Plan will require a dedicated, long-term, and local Cambridge-based civic organization that supports:

1. Strong conservation land use regulation.
2. Adoption of standards for land management, especially for woodland conservation and the restoration of stream environments on farmland.
3. Programming of resource-based recreational and educational uses for the lands that surround the City.
4. Development of funds and the cultivation of fund raising skills.

To the extent possible, permanent protection of resource areas should be achieved through conveyance of conservation easements to the public and/or land trusts and outright land acquisition. Dorchester County could prioritize the farmland surrounding the Cambridge Greenbelt (discussed below) for preservation. The County could give these landowners priority when they apply to sell conservation easements to the State.[42]

Land Use in Resource Conservation Areas: The types of activities permitted in Resource Conservation areas should be limited to nature preserves and related institutions, parks, trails, timber and forest management, and farming. Disturbance of resource conservation areas should be minimized and made only to build the framework of streets and trails that will be needed in the future or to allow the low impact uses of land mentioned above.

The Future Old Growth Forests of Cambridge: The large intact woodlands that surround Cambridge, properly managed, could one day become the old growth forests of Cambridge.[43] The existing stands of woodland could develop over centuries into mature forests essentially free from human disturbance. Guided by the Environmental Stewardship Map, existing woodland should be allowed to expand and fill in the current gaps between fragmented resource lands.

[41] Sensitive areas are the discrete environmental resources referenced by state law for inclusion in municipal comprehensive plans, Article 66B of the Annotated Code of Maryland.

[42] Under the Maryland Agricultural Land Preservation Foundation (MALPF).

[43] A useful resource: Davis, Mary, Eastern Old Growth Forests, Prospects for Rediscovery and Recovery, Island Press, Washington, D.C. 1996.

Forest Management: The use of sound forestry practices and management is also encouraged. A managed forest can also provide essential ecological benefits and contribute to the local economy.

Farmland and Resource Value: Much of the farmland surrounding Cambridge is designated Resource Conservation because farmland and productive soils are a resource. However, farmland is a major contributor of nutrient pollutants to the area's waterways. Therefore, streams and stream buffers should be restored in the farm fields that surround Cambridge. All land use must acknowledge the role that streams buffers play and these areas should be planted in native vegetation to reduce water pollution as discussed under the heading "Environmental Corridor Recommendations" below.

A Permanent Greenbelt: The location of Resource Conservation lands (composed of areas that should not be developed because of their high conservation value) allows for a permanent Greenbelt around Cambridge. It could extend from Washington Street south along the northwest border, encompassing the High School and wrapping around the southern portion of Cambridge beyond MD Route 16 to U.S. Route 50 and the Resort on the Choptank River. The alignment of the Greenbelt is shown on the Environmental Stewardship Map and Land Use Plan Map. Resource Conservation should be the predominant Land Use in the Greenbelt.

It is the policy of Cambridge to work toward the implementation of the Cambridge Greenbelt and to foster citizen commitment to its long-term implementation. The Environmental Stewardship Map shows that one of the key parcels, on the western edge, could be the site of a Natural Resource Park and Environmental Science Center.

The Greenbelt organizes the form of the City. It defines the outer edge of urban and/or suburban growth. The City will grow, develop, and redevelop over time within the enclosure created by the Greenbelt. The most important part of the Greenbelt is composed of those parcels that form the direct edge of urban growth. The City must take steps early on to acquire and/or preserve key parcels to achieve the Greenbelt.

Cambridge recognizes that where future development is planned (even if 20 years into the future), the transition of land use from agriculture to urban provides a unique opportunity to repair and restore essential stream environments, woodlands, and open spaces. When these areas are developed, the City should also require that natural area connections be made to the Greenbelt. These connections could include parks and trails or allow the natural expansion of the forest's edge along the Greenbelt.

Open Space Designated Lands: There are certain tracts of undeveloped or semi-developed lands mostly in farming or recreational use designated "Open Space". These lands should remain in open space use until after 2030: the zoning ordinance and map should be amended to create a resource or open space zoning district for these lands.

Environmental Corridor Recommendations

Buffers along floodplains and streams are considered by this Plan as Environmental Corridors. This is a planning concept only and is not meant to represent any increase in regulations on development or redevelopment activities that may be contained within the corridors.

Stream and floodplain buffers play essential roles in mitigating the effects of farming and development while helping to promote environmental health and public safety. When forested, these buffers can help to stabilize stream banks, manage water temperature, filter out nutrients and toxins, and store water to prevent flooding. Development and farm management plans should acknowledge the role and functions

that buffers play and, to the extent possible, landowners should plant buffers in natural and/or landscaped vegetation to reduce water pollution.

Environmental Corridors comprise a system of water-based resources. These corridors can also connect residents with their natural surroundings, provide a recreational resource, provide migration corridors for wildlife, and preserve the predominant qualities of the landscape. Because of the effect of storm surge and sea level rise, both documented in this report, the area extent of Environmental Corridors should be larger than the standard areas established in current regulations; storm surge may exceed the more narrow regulated buffer boundaries in future decades. Notwithstanding the benefits of more extensive buffer protection, it is the position of the City that Federal, State and/or local steam and wetland buffers are strict enough. Developers shall comply only with all applicable Federal, State and/or local requirements.

In applying the principle of environmental corridor protection during the development review process, the City Planning Commission should determine if land within environmental corridors should be dedicated to the City as open space or parkland as a condition of subdivision approval. When developing farmland, the main emphasis should be the restoration of natural woodlands or meadow conditions in stream buffers. Regarding those undeveloped areas in the Downtown/Waterfront Development District contained within mapped Environmental Corridors; these areas should be permitted to develop without further buffer regulation than exists under current law.

Where Environmental Corridors overlap developed areas, the Environmental Corridor recommendation represents an overlay on the recommended base land use and a guide to the sensitive nature of the land resource.[44] This means that redevelopment activities within these overlay areas could help reestablish the functions of the natural stream buffer or floodplain buffer. For example, impervious surface areas could be reduced. Lots within floodplains and stream buffers could be heavily planted and where possible, reforested. The designation of lands as Environmental Corridor does not mean that uses permitted now under the City Zoning Ordinance, or by right, would not be permitted in the future. It also does not mean that redevelopment activities should be required to meet strict environmental standards in keeping with the sensitive location. To the contrary, redevelopment activities in sensitive environmental areas need only meet applicable Federal, State, and/or local requirements, which requirements are considered by the City to be strict enough.

Chesapeake Bay Critical Area

The Environmental Stewardship Map shows what would be the 1,000-foot official Critical Area line along the tributaries to the Chesapeake Bay. Much of the City of Cambridge is excluded from complying with the requirements of the Chesapeake Bay Critical Area except for areas that have been annexed into the City subsequent to 1984. Since the Plan calls for no annexation in the Critical Area through 2030, the Critical Area restriction is limited to areas shown along the Little Blackwater River and other areas that were annexed since the passing of the law.

Notwithstanding the exemption, the City should voluntary seek to improve the environmental quality of development within what would be the 1,000 foot Critical Area. The City might start by creating a taskforce to study new standards tailored to this area. These may include gradual improvement strategies such as seeking reductions in area wide impervious surface coverage, increasing the tree canopy, and upgrading or retrofitting stormwater management systems with best management practices (BMP) to remove bacteria, nutrients, and other pollutants from urban runoff.

[44] Base land use refers to the recommended land use shown on the Land Use Plan Map in this report.

The City can also look at the Critical Area within the current limits as an opportunity to expand and link parklands as a natural resource amenity. Both the proposed Downtown/Waterfront Development District and U.S. Route 50 concept plans in Chapter 6 designate new parks in sensitive areas. The act of restoring these natural drainage ways would reduce urban runoff into Cambridge Creek. Planning and development of the Cambridge Waterfront should be guided by this same spirit. The City's proposals for protecting streams and steam buffers along their routes from headwaters to river outfall will significantly contribute to water quality improvements without the State zoning created by Maryland Critical Area law.

Greenways

This Plan not only encourages the preservation and restoration of natural resources for the important environmental and public safety benefits they provide. It also encourages resource conservation because of the opportunity it provides for the active, thoughtful, and spiritual immersion into nature. Connection with nature promotes health and human development.

The Environmental Stewardship Map shows a Greenway Trail network through the Cambridge Area. It connects with and supports the County's proposed Greenway Trail. The trail travels the perimeter of Cambridge through the proposed Greenbelt connecting Great Marsh Park to the Hyatt Resort. Plans that are more detailed are now being prepared for the Cambridge Waterfront. Ultimately, a trail will travel along the Choptank River and connect to the Greenway Trail, completing loop around Cambridge.

Energy Conservation

The City should undertake a comprehensive energy consumption estimate and implement energy conservation measures.[45] In the meantime, new development should detail ways in which energy will be reduced and carbon emissions minimized as part of the project approval submittal.

The following may be considered possible means to reduce energy consumption and carbon emissions over typical development projects: building orientation with respect to the sun, solar panels, tree planting to shade buildings and sequester carbon, sidewalks and trails to promote walking, use of windmill technologies, adoption of green building technologies, and new direct street connections to minimize miles traveled. In addition, the City should consider requiring that Leadership in Energy and Environmental Design (LEED) or equivalent high-performance building standards be incorporated in all new development. While the above represents the City's policy, an evaluation of the impacts to housing affordability should be considered when regulations are proposed.

Land Development and Environmental Stewardship

Upon adoption of this Plan, Cambridge should review current regulations and revise them to implement the recommendations of the Environmental Stewardship Plan.

[45] For a case study in Maryland: The City of Annapolis, Maryland passed Ordinance 0-27-07 in 2007 promoting energy efficiency. The City's energy use and carbon footprint were measured and innovations proposed under a City Resolution, R-38-06. In August 2008, the City announced a pilot program in partnership with the Maryland Energy Administration and Chamber of Commerce Foundation and First Commerce Bank to increase homeowner participation in energy efficiency programs.

Low Impact Development (LID) and Environmental Site Design: New development should meet higher standards for environmental quality, and water quality in particular. The City should revise its subdivision regulations and zoning ordinance to promote Low Impact Development (LID).

LID is an approach to land use that works with natural processes and ecologically engineered systems to manage stormwater as close to its generating source as possible. Basic principles include preserving and recreating natural landscape features and functions to provide water quantity control and water quality improvements that benefit nature and society. Treating stormwater as a resource as opposed to a waste product, LID strives to minimize the effective impervious area of a site by creating or retrofitting functional and appealing site drainage features on a small scale close to the source of runoff. These features, such as bio-retention facilities, rain gardens, vegetated rooftops, cisterns and permeable pavements preserve, recreate a "natural service" by capturing and treating runoff before it reaches a creek, river or estuary.

By preserving natural water flows on a development site, LID can reduce the adverse cumulative impacts of uncontrolled stormwater on the physical, chemical and biological quality of the three watersheds in Cambridge. By managing the impact of the built environment on natural water movement on a larger scale, LID can begin to restore a watershed's hydrologic and ecological functions. This is especially significant when aquatic natural resources are economically important or support the life stages of species that are, as with the commercial and recreational fisheries of the Cambridge area.

Conventional development site design utilizes older, more commonly used stormwater management strategies and attempts to mitigate water quality impacts by combining large centralized structural practices for pollutant removal with channel erosion or flood control impoundments. These design approaches have been found to be lacking in that they tend to maximize impervious area and focus on managing large volumes of polluted stormwater, failing to mimic more effective and efficient natural hydrologic processes.

Environmental Site Design (ESD): ESD is based upon the same principles as LID. Maryland's Stormwater Management Act of 2007 defines ESD as "using small-scale stormwater management practices, nonstructural techniques, and better site planning to mimic natural hydrologic runoff characteristics and minimize the impact of land development on water resources."

ESD measures optimize the conservation of natural features, minimize impervious surfaces, slow runoff to maintain discharge timing and increase infiltration and evapotranspiration, and use other nonstructural practices or innovative technologies approved by the Maryland Department of the Environment. In addition, ESD emphasizes early planning of a site, where the natural resources of the land inform the development and design process so that key natural elements of the site are identified, preserved and integrated into the stormwater management approach.

4.7 Generalized Land Use Plan

This section of the Plan continues the discussion of the future arrangement of land use. With the knowledge of resource based values, it focuses on the pattern and distribution of land use activities throughout the City and its surrounding areas.

This section contains the City's Land Use Plan Map. Land use plan maps show the general and preferred type of use on every parcel in a City based on a community's unique situation, goals, and policies. For example, the Cambridge Land Use Plan Map designates valuable forests and wetlands as "Resource Conservation". In doing so, it signifies the City's policy that these natural areas only be put to uses that protect the values that the underlying resources provide. By designating a natural area as "Resource Conservation", Cambridge seeks to protect water quality and achieve other environmental and growth related goals. The same applies to lands designated residential, commercial, and industrial on the Land Use Plan Map. The generalized land use plan is illustrated on the Land Use Plan Map. As a generalized land use plan map, it does not show the smaller scale or individual commercial properties found within some residential neighborhoods.

Sometimes a land use plan map is confused with a zoning map. A zoning map divides a city into distinct zones or districts for the purpose of regulating development and/or restricting the types of uses permitted in each zone.[46] A zoning map is required to be consistent with a land use plan. So, to carry the above example forward, Cambridge might adopt a zoning district for "resource conservation" that limits the amount, type, or density of future development in environmentally sensitive areas. A zoning map is one of the main ways a city implements its land use plan.

With only a few exceptions, the 2030 Land Use Plan for Cambridge does not differ from the current land use pattern. Cambridge is generally a compact city; its patterns are capable of being comprehended in a short time. It is a residential city with nearly half of its developed land base in residential use. It has an industrial sector aligned with the railway. It has a small downtown business and civic district. It has a highway oriented shopping center along U.S. Route 50. It has an extensive open waterfront with great recreation potential along the Choptank River. It has an area of mid-rise condominium buildings along Cambridge Creek near downtown. What this Plan proposes is an optimization of this land use pattern and the resolution of long standing issues, most importantly the trend toward decentralization to outlying areas and disinvestment in older areas near the center. Recent trends, documented in Chapter 3, have seen the piecemeal and uncoordinated development of subdivisions other residential projects on the City's periphery. The City has annexed land and approved many such development projects over the last five to ten years. See Exhibit 3.1 in Chapter 3.

[46] For example, there are certain "residential" zones, which permit residential development while excluding certain commercial and industrial activities that are incompatible with housing.

Insert Map

Land Use Plan

MD RT 343

MD RT 16

US RT 50

WWTP

GREENBELT

GREENBELT

GREENBELT

GREENBELT

BUCKTOWN RD

Stone Boundary Rd

Egypt Rd

Generalized Land Use Plan
Cambridge, Maryland

- Corporate Boundary
- Greenbelt
- Residential-Low Density
- Residential-Medium Density
- Residential-High Density
- Residential-Office
- Institutional
- Commercial
- Industrial
- Maritime Resort
- Open Space
- Resource Conservation
- Downtown Development
- (P) Park
- (S) School

N

W E

S

1 inch equals 2,500 feet

JAKUBIAK & ASSOCIATES INCORPORATED

Map Prepared By:

ESRGC Eastern Shore Regional GIS Cooperative

The City's current zoning map has at least in part contributed to this process of decentralization and disinvestment in the center. The main deficiencies in current zoning that will need adjustment are noted:

- An excessive amount of land is zoned residential. Approved but as yet undeveloped housing exceeds the City's 20-year forecast growth by over 1,000 housing units, yet several major tracts (without approved development projects) are still zoned residential and the potential for infill development on vacant lots is widely available.

- Commercial zoning of open space lands along MD Route 16 on the City's southern edge reduces the likelihood of improved utilization of vacant and underutilized commercial sites along U.S. Route 50. This Plan however, does not recommend a zoning change.

- Zoning in and adjacent to the central business district is uncoordinated and poorly aligned with the goal of revitalizing downtown. Current General Commercial zoning allows permitted uses such as contractors' yards, auto repair, storage and warehousing. These uses should not be "permitted" in downtown because they are not compatible with creating a shopping and residential community. Also, residential zoning in downtown is too limiting in terms of density and the type of dwelling unit allowed. Zoning for a higher residential density should be adopted. Zoning in downtown needs to be altered in order to create a vibrant retail, service, civic, and residential community.

- The Planned Water Community District (PWCD) zoning along Cambridge Creek has been used to allow purely residential development with little regard to public open space, public use and enjoyment of the Creek, and non-residential uses.

The goals of the Land Use Plan are as follows:

- Create a vibrant and beautiful central place in Cambridge.
- Take maximum advantage of the waterfront. (see also Section 6.3)
- Intensify and revitalize the U.S. Route 50 Corridor. (see also Section 6.2)
- Promote the emergence of office and related non-residential uses between Maryland Avenue and the Waterfront.
- Improve Housing Conditions in the Downtown/Waterfront Development District.

The Land Use Plan Map for Cambridge through 2030 designated ten land use categories. Table 4.1 summarizes the primary land use categories shown on the map.

Table 4.1 Recommended Land Uses

Land Use	Purpose	Example Uses
Residential Low Density	Acknowledge the location of existing and approved single-family developments	Single-family homes at density up to 3 units per acre
Residential Medium Density	Designate the location for residential neighborhoods and conserve and protect existing neighborhoods from incompatible land use development	Residences at density of 3-8 units per acre, institutional uses, parks
Residential High Density	Locations of existing high density residential neighborhoods	Multiple family housing projects, trailer park (existing)
Residential Office	To promote a mix of compatible offices with residential, expand professional offices near the hospital	Single family dwellings, institutional uses professional and medial offices
Institutional	Designate and secure the location of the major stand alone institutions in the City	Schools, college, WWTP, hospital campus, YMCA
Downtown / Waterfront Development District	Designate a priority development area, expand downtown	Retail, entertainment, offices, institutions, residential of all types, up to 30 units per acre to be guided by the Downtown Conceptual Program Plan. Waterfront areas are intended to allow a mix of uses that would benefit from a waterfront location and would promote the maritime character of the City (including limited residential).

Table 4.1 Recommended Land Uses (continued)

Land Use	Purpose	Example Uses
Commercial	General commercial uses, highway oriented commercial	Shopping centers, convenience retail, offices
Industrial	Secure location for employment and uses that may not be compatible with residential areas and downtown	Heavy and light industrial, warehousing, auto-related service, contractor's yards, business offices, no residential
Open Space	Limit development until beyond 2030, provide locations for parks, recreation, open space and continuation of farming	Farming and farm-related activities, institutional uses, existing resorts, parks, open space, no commercial or residential development
Maritime Resort	Show locations of existing and planned resort development.	Hotel, conference centers, residential, recreational and open space uses
Resource Conservation	Protection of underlying natural resource areas and values	Nature preserves, parks, low impact institutional uses, timber and forest management, no commercial or residential development

4.8 Land Use Development Policies

Downtown/Waterfront Development District

The central goal of this land use plan is to create a vibrant and beautiful central place in Cambridge. The Plan asserts that a transformation in the role and function of the central core of Cambridge is needed and that combined efforts of the public and private sectors are desirable with the City leading the way.

A~~n~~ major part of Chapter 6 is devoted to this topic. The overall policy discussion is provided here while the vision and more details are discussed in Chapter 6, A Plan to Capitalize on the City's Comparative Advantages. The objectives related to downtown are:

- Create an enlarged development district as a priority place for public and private investment in development, city building, and economic development.
- Promote an economically vibrant downtown.
- Develop a strong and vibrant residential community in and around downtown. Substantially increase permitted residential densities. Substantively improve the housing options for the City's residents.
- Promote the gradual elimination of commercial activities that are inharmonious with a vibrant walkable residential downtown district.
- Regarding the edge of the City, retain in open space those lands in the City's which are not planned to be developed until after 2030.

As shown on the Land Use Plan Map, this plan creates the Cambridge Downtown/Waterfront Development District. It is shaped like a triangle and bordered roughly by High Street, Washington Street, and Cambridge Creek. The downtown/waterfront development district should be a central place: an identifiable district where public and private investment is prioritized.

This main goal and each of the allied goals represents a re-ordering of priorities for Cambridge. The trend documented elsewhere for the past decade has been to promote development on the edge of the City through annexations, the grant of residential zoning, the extension of municipal facilities and services and approval of residential development projects. This is contrary to thoughtful and sustainable development policy. The City's center is supported by sunk investments in infrastructure, therefore for the foreseeable future; it is advisable to meet housing needs in downtown instead of on the outskirts of Cambridge. Therefore as a matter of policy, actions must be undertaken to make the development district a preferred location for growth and redevelopment and to de-emphasize the outward expansion of growth.

Tax Incentives: The City will provide incentives for development in downtown. City incentives to promote development in the Downtown/Waterfront Development District include: reduction or elimination of County development (excise tax) and City impact fees, tax reduction and/or abatement strategies, elimination of water and sewer connection charges, and fast-tracking of development approvals. The City will coordinate with Dorchester County and ask that it too commit to strategies that financially incentivize revitalization in the downtown district. Without this commitment, the County will be out of step with City's efforts and will potentially help forestall achieving its own land preservation and planning goals.

Further incentives are also proposed for study to promote the development district as a location for families including direct housing assistance targeted to first time homebuyers and college tuition grant assistance for any child residing in the development district.

Policies Concerning the Recent Approvals and Growth on the City's Edge: It is the City's policy to grandfather development projects that have received final subdivision approval and not to apply new regulations supported by this Plan to such projects retroactively.

- While it is updating the zoning and subdivision ordinances, the Planning Commission should convene a working group of developers and builders to discuss voluntary changes in approved plans that are in keeping with this Comprehensive Plan.

- The Planning Commission should study the potential for a transfer of development rights program, in cooperation with Dorchester County. The program should be guided by several key principles: the downtown/waterfront development district should be the primary receiving area for development rights. Projects that use transferred development rights should be allowed greater density and floor area and offered substantial financial incentives, and fast-tracking of approvals.
- For areas that may have had a final development plan already approved, revisions to the plan that promote clustering techniques on less sensitive land while preserving the most ecologically sensitive areas is encouraged but not required.

Public Water and Sewer Master Planning: Dorchester County, as authorized by Maryland law, implements the water and sewer master planning for the Maryland Department of the Environment. The County routinely revises and adopts a water and sewer service area plan for all parts of the County that are currently or are planned to receive these public services.

The Cambridge water and sewer maps are provided in the Chapter 3 of this report. The maps classify land areas as one to three categories: existing service area or planned extension within two years, extension planned in two to five years, and extension planned within five to ten years. Water and sewer planning for Cambridge should be properly aligned with this Comprehensive Plan.

It is the policy of Cambridge that the water and sewer maps for the City be redrawn. Lands that have water and sewer service as of 2010 should be shown as existing service areas. No extensions are planned through the year 2030 beyond the existing municipal boundaries. All areas shown as future service areas should be removed from the water and sewer master plan. It is not the policy of Cambridge to extend water or sewer service beyond existing areas and areas planned for growth in this Plan. No water and sewer extension should be made to lands designated for Open Space or Natural Resource Conservation on the Land Use Plan Map.

Take Maximum Advantage of the Waterfront

During the preparation of the Comprehensive Plan, an initiative was undertaken to update Waterfront planning for the City. This citizen based planning effort is nearly completed and the results are presented in Chapter 6. This section of the Comprehensive Plan addresses the Waterfront from a longer term policy based perspective and sets forth the City's principal policies regarding the Waterfront:

- The Cambridge Waterfront is a public resource and it should be managed to benefit the greatest number of people in the best way possible. Extensive and coordinated physical and visual access to the water's edge for the public should be attained.
- The City should establish a comprehensive shoreline access strategy to coordinate physical and visual public access to the waterfront.
- Waterfront development and planning must address access, circulation, and land use in the entire neighborhood, from the water's edge to Maryland Avenue and between downtown and the Waterfront.
- Water dependent uses—uses that could not exist except on the water—such as commercial fishing, some seafood processing, boat yards, ferry terminals, marinas, tug and barge companies, etc.—should be given the highest priority in locating and expanding. Therefore the zoning of

waterfront lands, should allow for water-dependent uses. This recognizes that competition from other land uses has the effect of inflating land values to a point where such essential water dependent uses can become obsolete. These uses should be given full potential to capitalize on waterfront locations and should be protected from incompatible non-water-related uses, such as housing. By allowing non-water dependent uses on waterfront sites, the City loses the potential for uses that require a water access.

- Water related uses—those uses that benefit from a waterfront location, but are not dependent on it such as—resorts, restaurants, certain seafood processing and warehousing, should be permitted, but not necessarily directly on the shoreline.
- Non-water related uses, including housing, should be not allowed along the shoreline of the Choptank River.
- The City should retain the use of the port facility.

Intensify and revitalize the U.S. Route 50 Corridor

Chapter 6, A Plan to Capitalize of Our Comparative Advantages, provides detailed assessment and recommendations for the U.S. Route 50 corridor.

An Expanded Medical Campus

More detailed master planning should be undertaken to guide the redevelopment of the Maryland Avenue corridor and the lands between Maryland Avenue and the Waterfront into a medial campus setting. This would allow the gradual transformation of the neighborhood into a center of professional office space, medical and dental specialists, child and adult day care centers and treatment centers, medical labs, educational facilities, and other institutions and compatible uses and activities.

The Dorchester General Hospital is one the largest employers in the County and provides an essential service to citizens of the area. It is part of the economic base of the community as described in Chapter 2. The hospital's location in such a beautiful setting on the waterfront is a welcome location for a center focused on care giving, good health, and recovery. The hospital's access to U.S. Route 50 is another location advantage. The Planning Commission should continue to work with the hospital to implement a plan for an expanded medical campus.

Housing

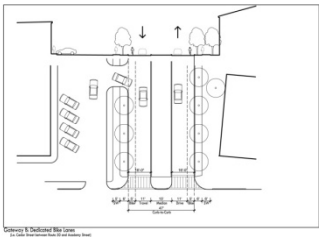
The City should use all available methods of improving housing stock in Cambridge over the next 20 years; this will mean a sustained commitment of public and private funding and investment. The initial focus of efforts should be on the planned Downtown/Waterfront Development District, where much of the housing is deteriorated. The City should acquire, through eminent domain where necessary, blighted housing and properties, consolidate land into buildable parcels and seek proposals for major redevelopment. In short, the City should pursue a major housing renewal program to improve the opportunities for Cambridge residents to live in and own energy efficient, safe, and attractive housing.

This program should be focused on downtown as the first priority. The downtown district concept land use program in Chapter 6 should guide these efforts. Outside of the district, the City should insist on construction practices that reflect traditional building styles and vernacular architecture. In existing neighborhoods outside of downtown, new infill housing should be consistent with the character, mass and scale of existing housing. The City's Housing Compatibility Survey is a resource especially within the Neighborhood Conservation districts.

A full range of housing opportunities that meet the affordability levels of community residents—apartment buildings, accessory apartments, apartments above shops, duplexes, senior housing (providing all levels of care from unassisted senior living through assisted living through nursing homes), townhouses, and single family houses on a variety of lot sizes and configurations should be established and maintained in Cambridge.

Chapter 5

A Plan for Streets and Pathways



5.1 Introduction

A city is not static. It is always in a process of growth and change. Some of the recommendations of this Plan are about catching up to growth and change. Some are about directing growth and change into better arrangements. Some recommendations are about reversing and repairing the negative consequences of growth and change, and in some cases, repairing the impacts of neglect. The City's historic arrangement of streets—the legacy of past circulation needs and constraints—is in place. However, much still needs to be done.

It is time to build on the historic arrangement of streets by designating certain "ordering streets" as the City's Great Streets and investing in their beautification and function. It is time to care for pedestrians and cyclists, to repair and restore the full role and function of the street so that safety and convenience for the City's pedestrians is paramount. It is time to add to the historic arrangement of streets, to build redundancy into the street network, and to make obvious street connections where they can secure long-term mobility benefits.

5.2 The Arrangement of Streets

Few things express a city's image better than its streets. The street is the citizens' right of way. It is the defining element of daily life for the resident and the first experience for the visitor. The street endures while buildings can come and go. Once established, the major street remains a city's handprint on the landscape.

The Traditional Pattern

In the 17th century, Cambridge laid its streets parallel to the Choptank River and then established grids on both the west and east sides of Cambridge Creek. This allowed Cambridge to capitalize on its waterfront and efficiently divide the land into parcels for improvement and building.

Insert Map

Major Street Plan

SANDY HILL RD
GLASGOW ST
JENKINS CREEK RD
BELVEDERE AVE
LOCUST ST
SPRING ST
WEST SIDE BYPASS
LEONARDS LN
HIGH ST
GAY ST
MARKET ST
MARYLAND AVE
E US RT 50
ACADEMY ST
CEDAR ST
E CEDAR ST
ROSLYN AVE
WASHINGTON ST
FRONT ST
MACES LN
BRADLEY AVE
SHEPHERD AVE
PINKS LN
US RT 50
GOODWILL AVE
WOODS RD
RACE ST
PACIFIC AVE
STONE BOUNDARY RD
CAMBRIDGE BELTWAY
BAYLY RD

Major Street Plan
Cambridge, Maryland

Legend

Future Major Streets

Major Street

N
W E
S

1 inch equals 1,250 feet

AKUBIAK & ASSOCIATES
INCORPORATED

Map Prepared By:
ESRGC

The Market Street drawbridge connected these two grids. On the west side of the Creek, the grid extended to downtown before tacking hard to the south so that through downtown, the grid's axis, now Race Street, runs parallel to the Creek. At the Creek's southern end, the unified grid is re-connected and Cedar Street provides a direct line connecting Race Street to U.S. Route 50. High Street radiates from Longs Wharf outward to Washington Street, which forms the southern edge of the City's traditional center.

There is no need to alter this arrangement. It has served Cambridge for hundreds of years. It allowed for the transport of tobacco, lumber and vegetables to the waterfront and before that, the transport of goods and people to points throughout the City from the waterfront. It allowed workers at the packinghouses and processing plants to walk to the waterfront and to other locations for employment. It allowed for the emergence of a central place for business and government and accommodated the political expressions for social justice and economic equality during the 1960's. The City's arrangement of streets, with few exceptions, offers great potential to realize a good and beautiful city form.

While pockets of congestion are inevitable due to the configuration of downtown's short blocks and multiple acute angle intersections and while finding ones way in downtown can be challenge for the newcomer, an honest appraisal of the past 50 years must conclude that the arrangement of the City's historic streets has proven an element of sustainability rather than of detriment.

The City has indeed created a special place in that district where the hard triangles of streets are formed between High, Gay, and Poplar. It has a sense of place. Thankfully, the 1962 Comprehensive Plan's proposal to modernize this arrangement with the straight and direct routing of urban arterials was not realized. The past 50 years of city planning has taught that it was not the arrangement of streets and lots that drove retail away from our downtowns. Looking forward, it will be this authentic legacy of Cambridge's past which will help grow and sustain the vitality of the community.

Loss of the Traditional Pattern

Looking beyond Washington Street to the south and High Street to the west, the City has with few exceptions, lost the integrity of its traditional grid form. All that unifies this area with the traditional center is Race Street, which extends now to the City's edge at MD Route 16. Race Street is in fact the City's axis; its main radial route. (The 1962 Comprehensive Plan proposed a network of major streets to meet the mobility needs of the future. The need for these improvements is still apparent.)

MD Route 16 forms the outer edge of the City. It is a major rural highway and, through Cambridge, it comprises the southern and eastern sections of the long planned Cambridge Bypass. The space between this highway and the traditional city center is expansive.

If the major street improvements proposed in this Plan are not made, this "outer system", which is only comprised of Washington Street, Race Street, and MD Route 16, will fail to meet the access and circulation needs of Cambridge. The City and State will be left with the option of expanding these few

streets with wide pavements, multiple lanes and major intersection traffic controls. This will be the enduring pattern and the piecemeal and self-referential subdivision developments which are now developing in Cambridge will not be unified with the City's historic pattern. Pedestrian and bicycle circulation needs will not be met and the area will be completely auto-dependent. It is an irony of city planning, that sometimes more streets are needed to promote travel by modes other than the car. This Plan recommends a series of connecting major streets, which will create a supporting network and improve circulation for all modes of travel.

5.3 The Ordering Streets of Cambridge

As indicated in the above description, there are in Cambridge a number of "ordering streets". These major streets allow travelers to establish location and context within the whole of the City and can therefore also be thought of as "orienting" streets. Ordering streets help "bring a comprehension and a sense of order to a city or district"[47]. The ordering streets are in place in Cambridge and the potential exists to make these into Great Streets. Here are the principal ordering streets in Cambridge:

- **Race Street**: The City's main axis, Race Street extends from the central business district past Washington Street all the way to MD Route 16 and beyond. Race Street is classified by the Maryland State Highway Administration (SHA) as a collector street. It collects traffic from local streets and conveys that traffic to arterials (larger order highways) such as MD Route 16.
- **Washington Street**: The traditional farm to market route, Washington Street forms the southern boundary of the City's traditional center. It carries high traffic volumes and connects the rural areas west of the City to the U.S. Route 50 corridor. It has many intersecting streets both signalized and un-signalized. It traverses the proposed Washington Street Historic District between High Street and Pine Street. Proposed and ongoing residential development west of the city center is increasing traffic volumes markedly on this street. Traffic demand from this growth is not compatible with the restoration and preservation of the historic area along Washington Street. The SHA classifies Washington Street as a collector street.
- **High Street**: A principal diagonal street, High Street, intersects the east-west grid and the downtown north south grid. It also connects Washington Street to Long Wharf and forms the western boundary of the downtown district. It is a main route into the residential sections of the Cambridge Historic District. Between Long Wharf and Spring Street, the street is brick paved.

[47] Alan Jacobs, Great Streets.

- **Cedar Street**: Like High Street, Cedar Street is not a long street, but it plays a valuable role in ordering the comprehension of Cambridge. It is a gateway route from the U.S. Route 50 corridor into downtown. The views it allows over the Cambridge Creek also help provide a citywide point of reference. During times when the Market Street drawbridge is up, traffic shifts to this important southern connector. Cedar Street could be a major gateway route between downtown and U.S. Route 50. It now lacks public attention and investment in good street design. It lacks curbs, sidewalks, bicycle lanes, streetlights or street trees.

- **Maryland Avenue**: The main gateway into the central business district from the U.S. Route 50 corridor, Maryland Avenue crosses Cambridge Creek at the Market Street drawbridge. Maryland Avenue is a broad avenue as it traverses a residential area with consistent architectural qualities. It runs parallel to the Choptank River. Maryland Avenue provides essential access to the proposed medical campus and Waterfront in addition to downtown.
- **Glasgow and Locust Streets:** This one-way pair is the main radial route leading from the west end of Cambridge and the residential areas west and north of the City to and from downtown. The two streets traverse part of the Cambridge Historic District and have a distinctly residential character.
- **MD Route 16:** This State owned and operated highway is an arterial highway and it defines the edge of the City. As the western bypass route is completed, MD Route 16 will become part of the long planned Cambridge Bypass route.

5.4 Present & Anticipated Problems in Transportation

This section describes four major problems identified by the community; the quality of the walking experience, growth and the impacts to Washington Street, the need for a street network in the outer areas of Cambridge, and the need to transform the U.S. Route 50 corridor.

The Quality of the Walking and Bicycling Experience

With few exceptions, the quality of the "street" for the pedestrian and cyclist is lacking. In large parts of Cambridge over 60 percent of households do not own an automobile and much of the City's street infrastructure is failing this population. No resident of Cambridge should be prevented from walking comfortably because of inadequate sidewalks, unsafe crossings, and poor street design and maintenance to medical care; educational, civic, and religious, activities, recreational centers, and shopping for food and other basic goods and services.

To see a lifelong resident of Cambridge struggle in a wheelchair to access a downtown sidewalk or a mother with a child in a stroller cross a heavily traveled State owned street intersection without the aid of a crosswalk or pedestrian signals is to know the importance of quality streets. Modest investments in street infrastructure can have dramatic improvements in the daily quality of life.

The intersection of Pine Street and Washington Street (MD Route 343) lacks serious attention to the safety of pedestrians. .

There is strong culture of cycling in Cambridge. Cedar Street between downtown and U.S. Route 50 is one of the heaviest bicycle routes. The cyclists in Cambridge are mostly not recreational bicyclists; instead they are residents who use a bike to access jobs and shopping between downtown and U.S. Route 50. Modest improvements in street infrastructure could help promote the safety of cyclists and motorists alike.

Intersection of Market Street and Academy Street.

Cambridge's traditional development pattern is very walkable, but there are many areas both new and old that lack sidewalks. Some new development has eroded pedestrian connections due to block sizing (scale) and internal orientation. In general, the quality of the street is lacking. This is evidenced by aging infrastructure such as street curbs and sidewalks, lack of street lighting, landscaping and public spaces. Intersections with high volumes of traffic have reduced safety and comfort for pedestrians and bicycles along main routes. Many traffic signals lack pedestrian signals and crosswalks.

Growth and the Impacts to Washington Street

Growth of the northwest quadrant of the City will worsen congestion and delay on Washington Street. In recent years alone over 4,600 dwelling units have been approved in development projects. Downtown and its adjoining neighborhoods lay between the northwestern areas and U.S. Route 50. The demand for travel between these areas is great because U.S. Route 50 is the regional arterial highway connecting the Cambridge area to all points beyond and the corridor is the main retail commercial center of Dorchester County. These factors have contributed to Washington Street having high traffic volumes.

Without major improvements to the City street network, Washington Street will be severely congested and the ability to protect and preserve historic resources along Washington Street will be compromised. The current traffic volume on Washington Street increases by a factor of two upon entering the City's boundaries roughly east of Leonard Lane. At Race Street, Washington Street is currently carrying 8,000

vehicles per day (which, for comparison, is about 20 percent greater than MD Route 16 highway now carries). Volumes increase to 10,900 vehicles per day at the approach to U.S. Route 50.

Without the network improvements proposed in this Plan, the State will have to widen the Washington Street though the City at considerable expense and with substantial disruption to community development or the area will become unsuitable to residential purposes because of the heavy flow of traffic and congestion and backups at intersections. Delay at the multiple intersections along Washington Street could force traffic onto local residential streets. Neither option is suitable.

The Need for A Street Network in the Outer Areas of Cambridge

The lack of a coherent street network in the vast area between Washington Street and MD Route 16 means that all travel demand is focused on Race Street and either Washington Street or MD Route 16. There are no cross-town routes running parallel to Washington Street and MD Route 16, yet there is considerable development underway and potential for much more. The need for added cross-town street capacity cannot be overestimated; not only do cross-town routes make for efficient and energy saving automobile and transit travel, they are essential for creating a viable walking and biking community. Cross-town routes relieve congestion on existing routes freeing up space to add bicycle lanes and sidewalks.

The need for cross-town routes was anticipated in the 1962 Comprehensive Plan for Cambridge and is reaffirmed here. Fortunately, not all options for establishing this network have been lost due to development. Rights-of-way may be obtained by the City for much of the needed cross-town streets by requiring street dedication at the time new subdivisions are laid out.

The Need to Transform the U.S. Route 50 Corridor

The development of the already approved housing units in the City along with an increase in through traffic on U.S. Route 50 will make all major street intersections with U.S. Route 50 deficient. According to the 2008 traffic study commissioned by the City Department of Public Works, by 2030, all signalized intersections along U.S. Route 50 will be failing; leading to substantial interruptions and delays to local traffic. This means that local residents and shoppers along the highway corridor will experience severe delays, especially on side streets; far greater than exists today. Seasonal peaks in traffic will be debilitating to local circulation. Exhibits 5.1 and 5.2 compare the pattern of intersection deficiency between 2007 conditions and projected (2030) conditions.

Exhibit 5.1: Intersection Deficiencies: Existing Conditions

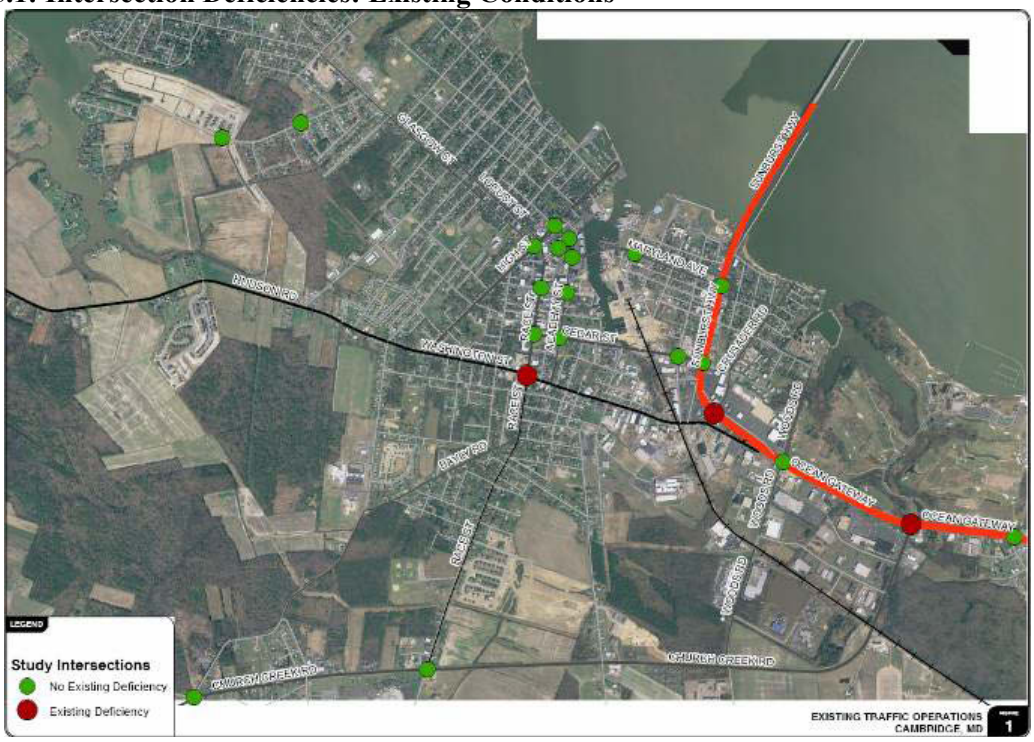


Exhibit 5.2: Intersection Deficiencies: Future Conditions

U.S. Route 50 through Cambridge is a four-lane highway with auxiliary (or continuous acceleration and deceleration lanes) lanes. Table 5.1 shows the increase in traffic on U.S. Route 50 over the past 20 years. Between 1988 and 2008, traffic just east of Washington Street grew by 13,465 vehicles per day, at an average annual rate of 2.4 percent. This growth is largely due to the regional traffic increases and expansion of commercial development along the highway.

U.S. Route 50 in its current configuration is not sustainable. The multiple and uncoordinated driveway connections degrade highway efficiency and increase safety problems. At an annual rate of increase of two percent per year, the highway will carry nearly 52,000 vehicles per day past Washington Street in 2030. Even if the highway were completely access-controlled (like a freeway), this future volume would exceed the highway's design capacity. U.S. Route 50 is not a controlled access facility. It is instead a regional highway through a major shopping center. The recommendations for the highway are discussed under the title Great Streets Strategy.

Table 5.1: Traffic Growth on U.S. Route 50

Location	**Vehicles per Day**			**20-Year Change: 1988 - 2008**		
	1988	1998	2008	#	%	Annual Rate of Growth
Bridge	19,000	21,675	26,660	7,660	40.3	1.7
East of Washington Street	21,525	27,100	34,990	13,465	62.6	2.4
East of MD Route 16	29,200	31,000	37,040	7,840	26.8	1.2

Regarding the character of U.S. Route 50, the cacophony of competing signs of varying conditions and heights has made the corridor ugly and distracts from the good highway design promoted by SHA. For many in the traveling public, this is the only image of Cambridge that they will have. Traffic speeds are also regularly exceeded along the highway. Enforcement of a 35 mph speed limit along a major highway will always be a problem. Enforcement must follow design: as long as fast regional traffic conflicts with slower local traffic, traffic speeds and safety will be a problem.

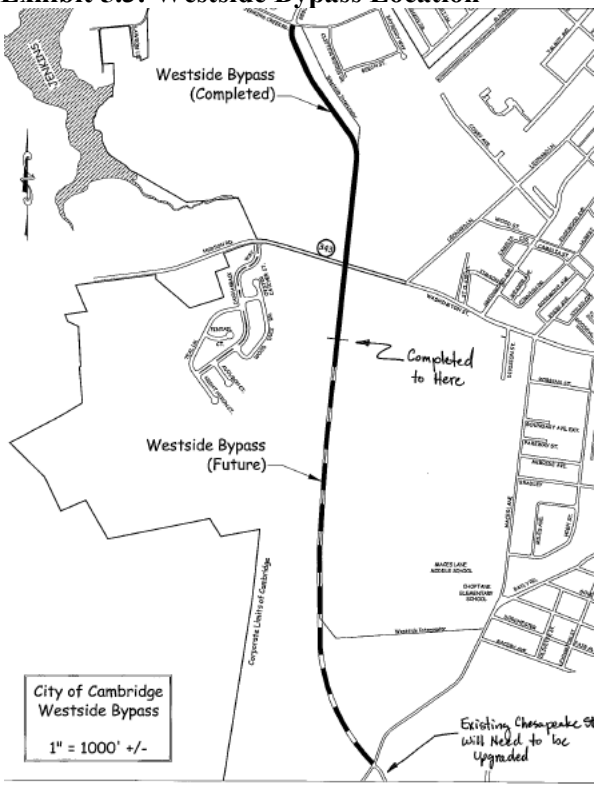
5.5 A Plan for Major Streets

Street Network Improvements

The Plan for Streets is shown on the Major Street Plan Map. It contains major street network improvements, which in some variation have been on the City Plan for 45 years. While each alignment slightly differs from that first proposed owing to the location of land use development in the intervening years and to new goals and needs, it is important to acknowledge the continuum of city planning. The 1962 Comprehensive Plan for Cambridge laid out a series of vial street alignments. This plan affirms most of these. Each major project is numbered and corresponds to the following descriptions:

1. **The western Cambridge Bypass**. This major street will provide a connection between U.S. Route 50 (over existing Route 16) and the northwest quadrant of the City. As shown on the plan map, the first 2,500 feet of the proposed highway is nearly completed. The later phases of the project extend due south to align with Chesapeake Street. The City will upgrade Chesapeake Street to the full road section of the bypass design. The route will then connect with MD Route 16. The design of the bypass will include a bicycle lane in the right-of-way. It will help resolve traffic congestion on Washington Street.

Exhibit 5.3: Westside Bypass Location



2. **An Inner Cross-Town Connector**: The inner cross-town connector would follow a route from U.S. Route 50 at Washington Street (opposite Dorchester Avenue) on the east and connect with the Cambridge Bypass at the location of a new major natural area park site on the City's western edge. This major street would actually connect a number of existing streets including Shepard and Bradley Avenues.

   Its purpose is three-fold. First, it is a parallel relief route to Washington Street and especially helps relieve congestion of the intersection of Washington and Race Streets. Second, it provides a cross-town connection for residents to access employment and shopping on the east side of the City. Third, because the street terminates at the proposed park on the City's western edge, it creates a unifying role in connecting residents and visitors to what could become a major recreational resource in the Greenbelt. This street should be designed as a beautiful and slow moving parkway.

3. **An Outer Cross-Town Connecter**: The outer cross-town connecter would largely be on a new alignment. Like the inner route, this major street connects the U.S. Route 50 corridor to the bypass route on the City's western edge. It would extend from Woods Road on a new alignment, across Race Street and onward to Maces Lane and then to the Cambridge Bypass. Like the inner cross-town connector, this route collects residential traffic from neighborhood streets. It also provides local access to industrial and employment centers in the south east of the City.

4. **Stone Boundary Road Alignment**. Presently there is a missing link between Stone Boundary Road and Goodwill Avenue. Completing this missing link with a modest street connection would provide a continuous route from MD Route 16 to Washington Street. Completing this missing link was rejected by the Planning Commission during the public hearing and comment period. For future study, the City should still consider the extension of Goodwill Avenue from Washington Street to Cedar Street at the terminus of Cambridge Creek. Continuing Goodwill Avenue all the way to Cedar Street (mostly over existing streets) provides accessibility and mobility benefits to the residential development proposed in the new Downtown/Waterfront Development District along the Cedar Street Gateway. In connecting Cambridge Creek to the outer residential areas of Cambridge, the new street could provide a major unifying and place making improvement to the City.

   While the proposal to connect Stone Boundary Road and Goodwill Avenue has been removed from the plan, the lost potential benefits of this connection will need to be addressed in future transportation studies. Because it would provide an alternative radial route to the center of Cambridge, it would free up capacity on Race Street and distribute traffic more evenly throughout the street network especially near Washington Street. This is important for both vehicular and bike accessibility.

The Major Street Plan Map is hereby adopted as the official policy document of Cambridge. The Department of Public Works should review and confirm the final planned alignments of each of these improvements and submit an Official Map to the City Planning Commission for approval. This, in combination with the ongoing development review process, should be used to both preserve the rights-of-way of these needed improvements and to require that development projects conform themselves to the street plan, and build the planned streets as needed.

Minor Street Network Improvements

There are several minor though very important network improvements that should be studied and implemented if found workable. The missing link in Rambler Road on the north side of U.S. Route 50 should be constructed and thereby create a continuous commercial service road parallel to the highway. This needs to be dedicated to the City upon any redevelopment in the area or acquired by the SHA as part of plans to improve U.S. Route 50.

Dorchester Avenue should be extended beyond Washington Street to connect with the planned inner cross-town connector route (Improvement #2 above). This will provide continuous routing of traffic from the Hospital and Waterfront to the industrial areas and onward via the cross-town route to all points west of the City.

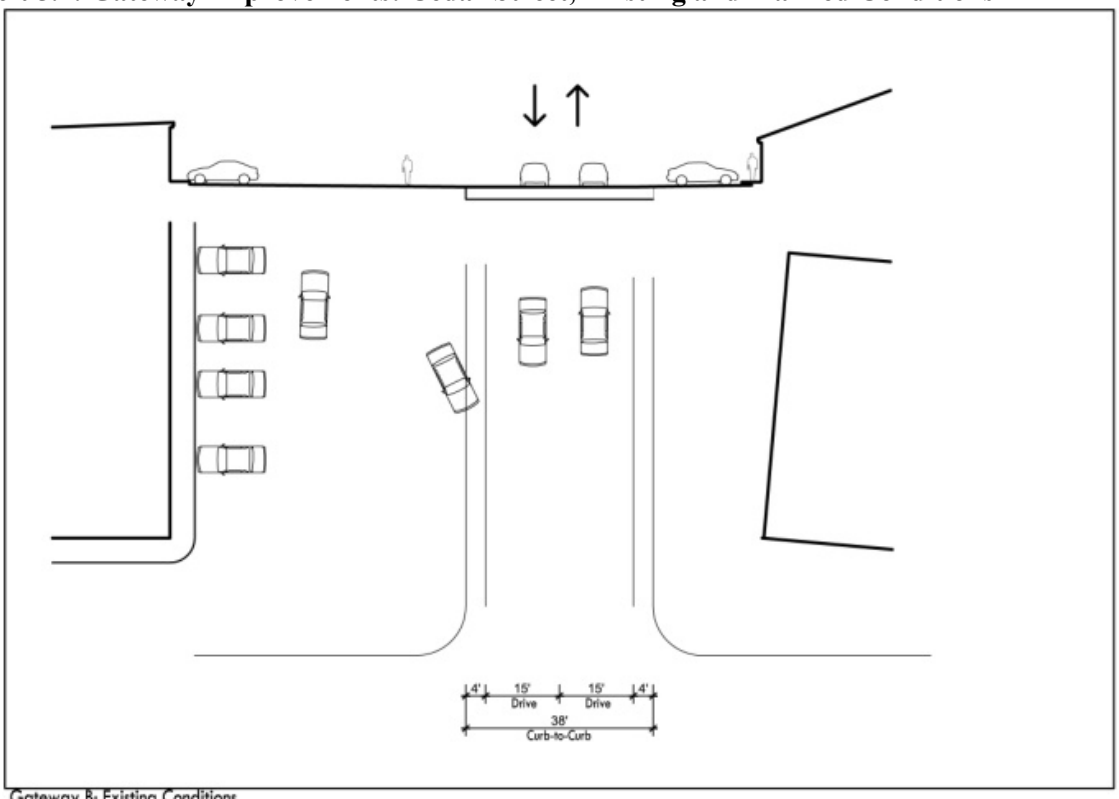
A Great Streets Strategy

With this plan, the City adopts a Cambridge Great Streets program to prioritize the improvement of major travel routes. The Great Streets idea is meant to advance both street repair and modernization for all modes of travel and the coherent urban design of properties lining each street. The candidate Great Streets are Washington Street, Maryland Avenue, Race Street, Cedar Street (Harriet Tubman Boulevard) and U.S. Route 50. The two planned cross-town routes should be built to great street principles as well.

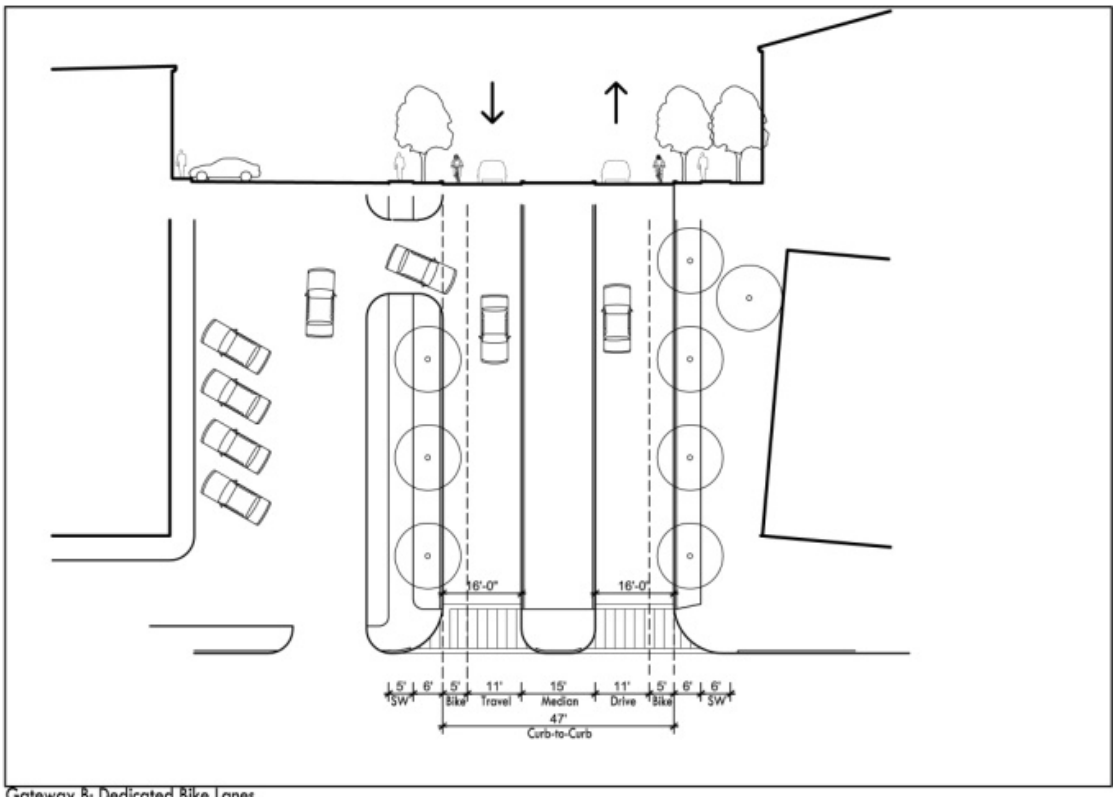
The great street idea combines detailed attention to the quality and civic appearance of the street space and attention to the quality of land use and architecture along the street. The City Planning Commission should convene a working group of local citizens to begin the process of functionally and aesthetically improving the named Great Streets. The SHA should participate with the City to improve those streets owned and maintained by the State—Race and Washington in particular.

Exhibit 5.4 shows the potential for Cedar Street. Note that there is ample right-of-way to accommodate a center landscaped median (possibly with bio-retention for stormwater management), two vehicle travel lanes, two dedicated bicycle lanes, street trees and landscaped plantings strips and sidewalks. These are the types of treatments that this Plan envisions for all of Cambridge's Great Streets. Exhibit 5.5 illustrates a comparable treatment of Maryland Avenue, which is the other gateway from U.S. Route 50 into the planned Downtown/Waterfront Development District.

Exhibit 5.4: Gateway Improvements: Cedar Street, Existing and Planned Conditions

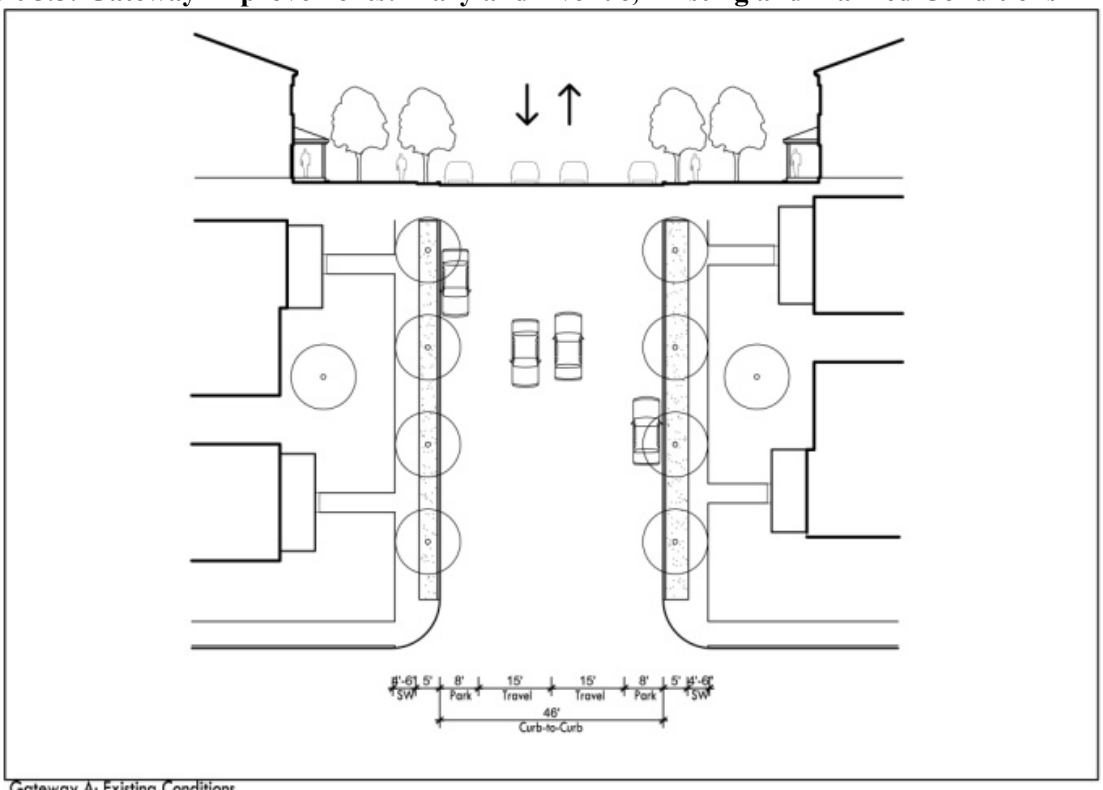


Gateway B: Existing Conditions
(i.e. Cedar Street between Route 50 and Academy Street)

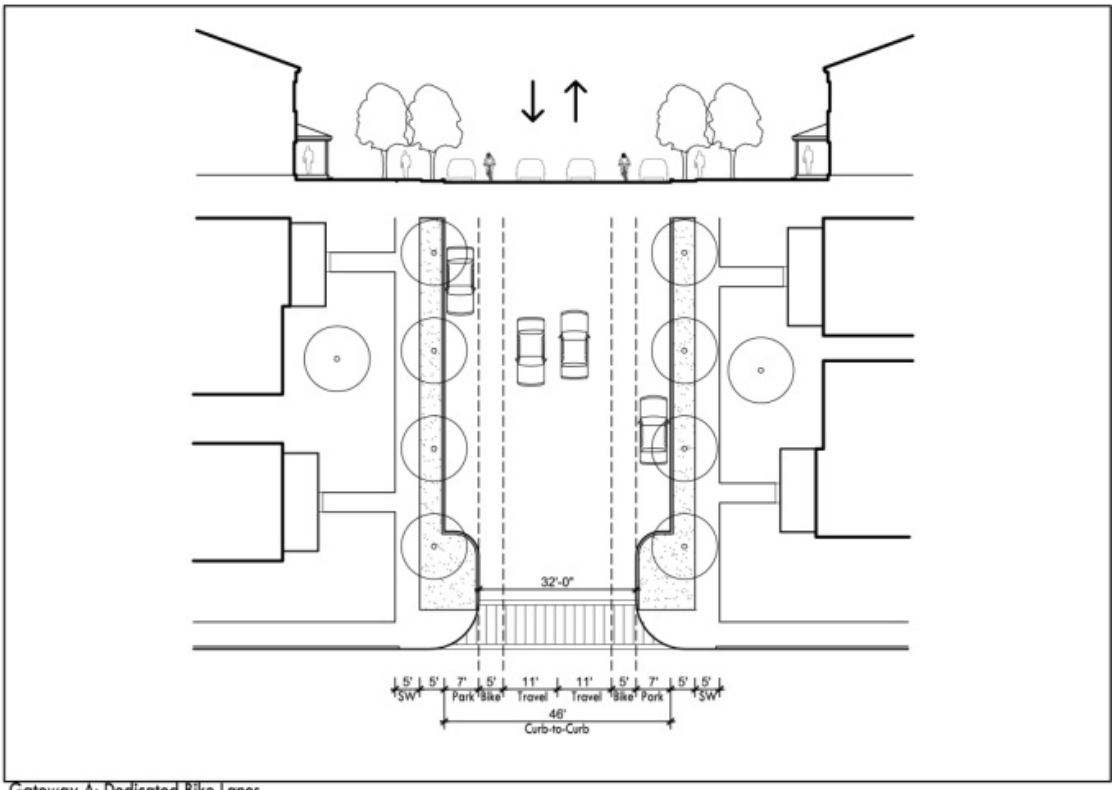


Gateway B: Dedicated Bike Lanes
(i.e. Cedar Street between Route 50 and Academy Street)

Exhibit 5.5: Gateway Improvements: Maryland Avenue, Existing and Planned Conditions



Gateway A: Existing Conditions
(i.e. Maryland Avenue between Route 50 and Market Street)



Gateway A: Dedicated Bike Lanes
(i.e. Maryland Avenue between Route 50 and Market Street)

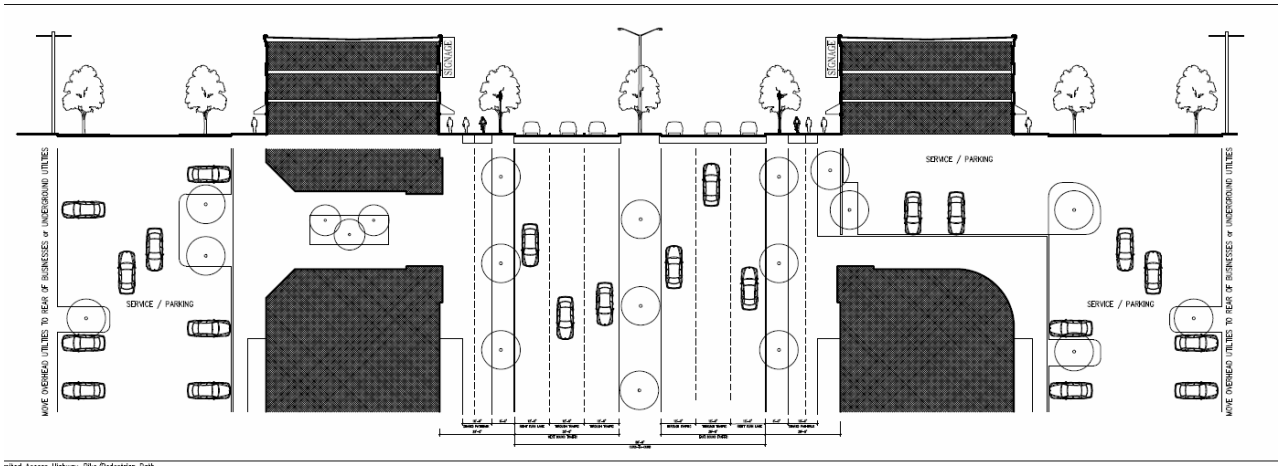
A Beautiful Highway

The City embraces two competing ideas for U.S. Route 50: (1) U.S. Route 50 is a regional arterial highway and (2) U.S. Route 50 is a major commercial shopping center. It is the policy of Cambridge to transform U.S. Route 50 into a controlled access highway while protecting and securing the circulation needs of both City residents and the local industrial base. To achieve this, the Plan proposes a set of land use and transportation changes for the corridor which will require the active involvement of SHA in terms of funding, technical assistance, and development access review and permitting. The concept plan for U.S. Route 50 Circulation is shown in Exhibit 5.7 and summarized below.

- Dorchester Avenue and Rambler Road will be used as parallel commercial avenues which will allow movement along the corridor without the need to travel onto U.S. Route 50. Businesses along the highway will be accessible from these commercial avenues and the intersecting streets rather than by U.S. Route 50. The parallel avenue concept, with appropriate public informational (way finding) signage also promotes access from the highway to important City destination, including the Downtown/Waterfront Development District, Medical Campus, and Waterfront.
- Driveway access points onto U.S. Route 50 will be consolidated and eventually removed. The Plan recommends that SHA no longer allow access permits to the highway and in the short term begin to require closure of driveways where alternative access can be provided. Vehicles turning onto and from U.S. Route 50 introduce conflict into the flow of highway traffic as they slow down or accelerate to maneuver out of or into through lanes.
- An intersection control plan will be adopted which will limit left tuning movements onto U.S. Route 50, to the extent possible, and direct left turns from U.S. Route 50 to only a few select locations such as Maryland Avenue, Cedar Street, and Woods Road. New public minor right in / right out intersections will be introduced at key points to facilitate improved circulation. In the future, motorists desiring to turn left onto U.S. Route 50 will travel through the intersection, use a service road parallel to the highway, and then turn right onto U.S. Route 50 at a designated location. This will reduce the time and delay needed for these maneuvers as well as for the delay experienced by through traffic on U.S. Route 50. By removing conflict points along the highway this arrangement will also improve intersection safety.
- Over the long term, a grade separated intersection/flyer-over may need to be constructed at the Cedar Street / U.S. Route 50 intersection to carry traffic to and from Rt. 50 into the downtown district. Provisions should be made for this in the review and approval of development and access near that intersection.

A conceptual treatment of U.S. Route 50 and parallel commercial avenues is shown in Exhibit 5.6. Note how the commercial buildings lining the highway are accessible by the commercial avenues which run parallel to the highway. This concept allows for generous landscaping and a trail system along the U.S. Route 50 frontage. Businesses along the highway receive the benefit of their locations (visibility) but are accessed from the local street system. This arrangement also benefits the residents of Cambridge who will be able to move through the corridor without traveling onto the highway and mixing with higher speed through traffic.

Exhibit 5.6: U.S. Route 50 and Commercial Avenues

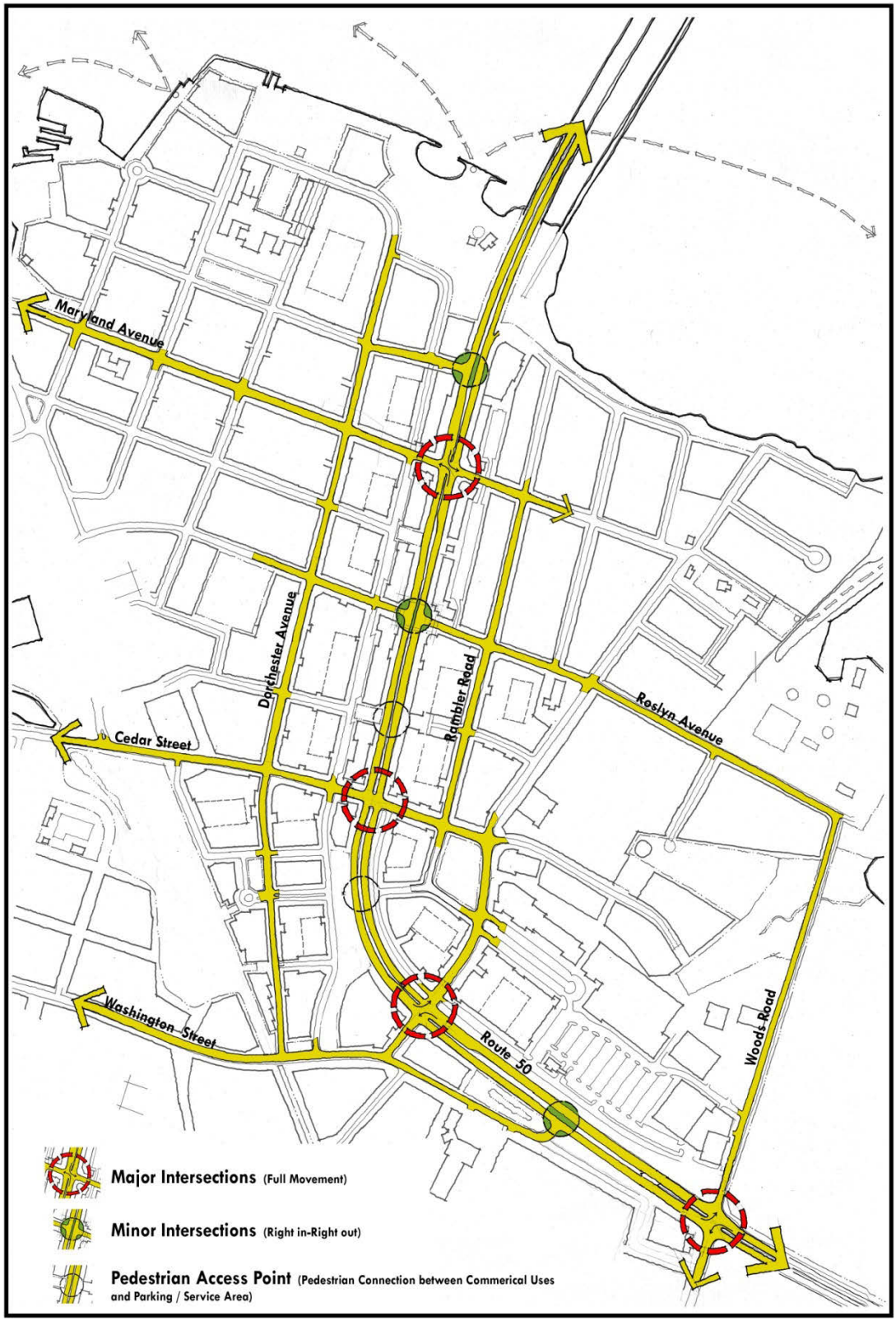


The cluster of signs and billboards that currently dominate the streetscape along U.S. Route 50 is not compatible with this planned arrangement of development and circulation. New standards for signage will need to be adopted. More on this idea is provided under Civic Appearance.

Small Improvements that Enhance the Streetscape

The City will pursue an immediate and deliberate study of the small improvements to the local street system that will enhance bicycle and pedestrian travel and safety. Access from the adjoining neighborhoods to and from the Downtown/Waterfront Development District and within the District will be the first priority. Exhibit 5.8 and 5.9 provide guidance on how modest upgrades to local streets can improve mobility on downtown streets and typical residential streets.

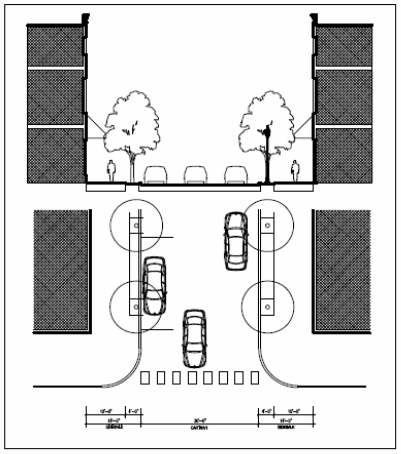
Exhibit 5.7: U.S. Route 50 Conceptual Ciruclation Plan



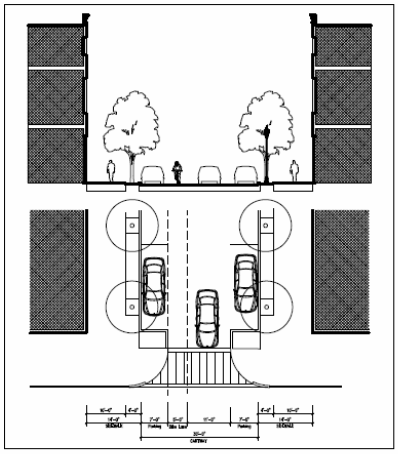
Route 50 Circulation Plan

Exhibit 5.8: Guidance: Improvement of Streets in the Downtown/Waterfront Development District

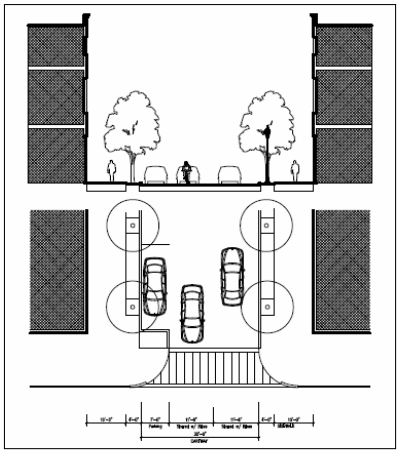
Existing conditions Proposed Conditions



DOWNTOWN STREET TYPE: Existing Conditions

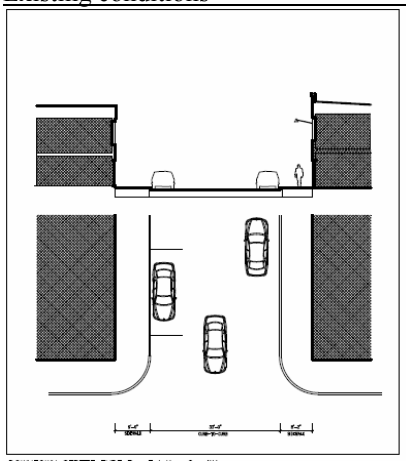


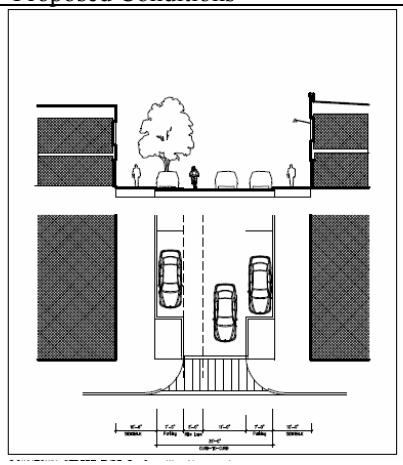
DOWNTOWN STREET TYPE: One-Way Movement



DOWNTOWN STREET TYPE: Two-Way Movement

Existing conditions Proposed Conditions





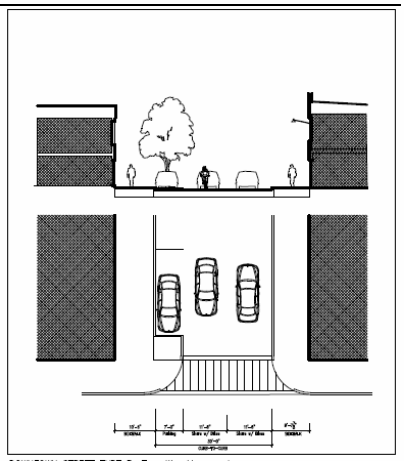
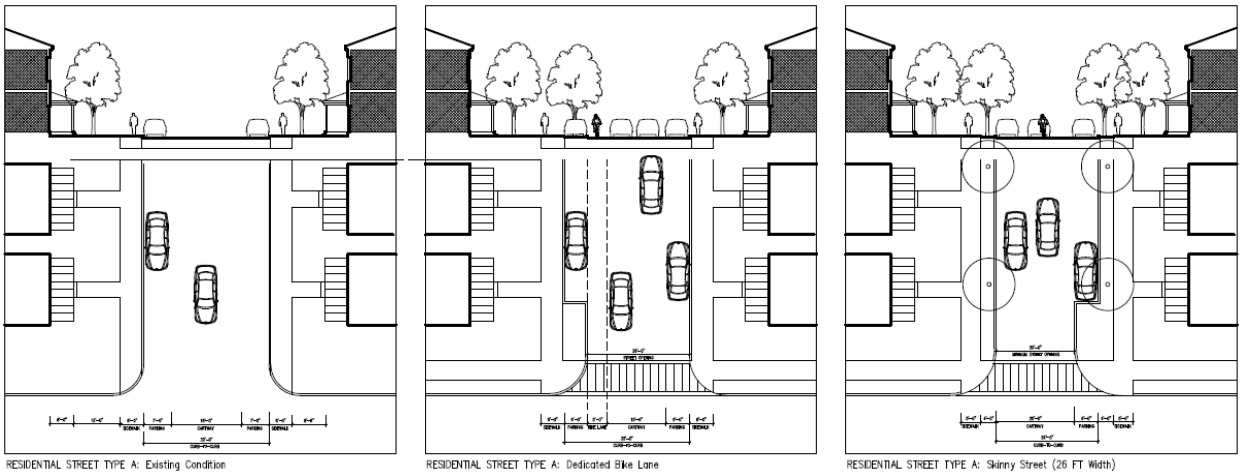
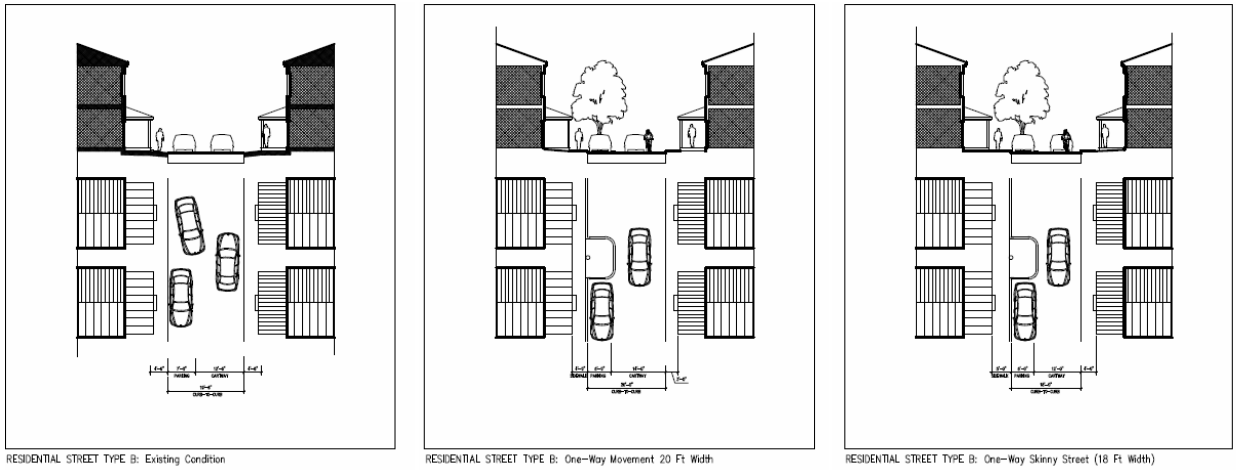


Exhibit 5.9: Guidance: Improvement of Residential Streets

Existing conditions Proposed Conditions



Existing conditions Proposed Conditions



Public Transit

This Plan has provided a framework for streets that will allow the community to be more effectively served by public transit. It is important that the streets accommodate the efficient routing of buses and other transit vehicles and that the bus shelters and pedestrian amenities be provided. The City should promote the expansion of transit service especially in key travel corridors and align the transit service routes with the City's great streets recommendations. The development and review process should encourage the use of transit and grant waivers of parking and other requirements where transit service is feasible. This City should aspire to have and operate its own local transit service. State funding to local transit needs to be increased.

Intersection Control

As a matter of policy, roundabouts should be used at key intersections as the preferred method of intersection control including the following: the bypass and Washington Street, Race Street and Washington Street, Race Street and Cedar Street and Market Street and Academy Street. At all other major controlled intersections where left hand turns are permitted, stand by lanes should be provided to prevent left turning vehicles from blocking through traffic.

Bike and Pedestrian Networks

Bike and pedestrian circulation is fundamental to Cambridge and is discussed throughout this Plan. Improvements to streets should focus on providing safe and accessible pedestrian and bicycle facilities immediately. This should include the provision of bicycle parking at key locations including individual businesses along U.S. Route 50, the Downtown/Waterfront Development District, the Waterfront, and the Medical Campus. Pedestrian and bicycle improvements to area streets should ensure that the network is continuous and connect to the Greenway trail network proposed in Chapter 4. Chapter 6 draws attention to the need to restore the pedestrian environment in and around downtown and recommends a program to this effect: “Small Projects that Make a Big Difference”.

Chapter 6

A Plan to Capitalize on the City's Comparative Advantages



This section describes the comparative advantages of Cambridge: Downtown, the Waterfront, the U.S. Route 50 Corridor, and the historic built environment. It also addresses civic appearance and the need for architectural and sign standards. The section includes concept plans for Downtown, the Waterfront and the Route 50 Corridor. These concepts should become the basis for detailed sector studies and sector planning in the future.

6.1 A Downtown/Waterfront Development District

Introduction

The Plan for Land Use Development and Conservation, Chapter 4, sets forth several goals which are relevant to downtown Cambridge. The Downtown/Waterfront Development District recommendations are intended to refine and detail these goals.

Downtown Cambridge is the historic central business district for a large rural area encompassing Dorchester County and the southeastern parts of Talbot County. It is the center of government and civic affairs. Cambridge is the County seat of Dorchester County. Downtown hosts the courts and the main legislative and administrative functions of government. Other major institutions include the library, bank headquarters, churches, and the Cambridge Branch of the Chesapeake Community College.

Downtown presents the first impression to visitors arriving by water. New restaurants, art galleries and boutiques have improved the ambiance of downtown and these are celebrated as part of a downtown renaissance. The central civic core of downtown is walkable and attractive; it has the ambiance and charm that many communities seek to create. In recent years, waterfront condominium buildings have been constructed along both sides of Cambridge Creek.

Impediments to Overcome

There are several interrelated impediments to growth and vitality in downtown. This Plan seeks to identify and recommend how the City will overcome these impediments and thereby capitalize on the comparative advantage of downtown. First, the Plan recommends that the City expand its notions of what is "downtown". Exhibit 6.1 shows a new Downtown/Waterfront Development District, bounded by High Street, Washington Avenue, and Trenton (Cambridge Creek housing developments).

This Plan creates the Cambridge Downtown/Waterfront Development District and seeks to direct development to the district. It proposes a district where public and private investment will be prioritized over the next 20 years. These investments would seek to overcome the major impediments to downtown: zoning, limited retail, street infrastructure, neighborhoods experiencing economic decline, regulations and taxes, and lack of downtown population.

- Zoning: Zoning in downtown is uncoordinated and fractured. The current zoning is unsupportive of commercial or housing revitalization through 2030. For example, the current "General Commercial" zoning district allows, as permitted uses contractors' yards, auto repair, storage and warehousing. These uses should not be permitted in downtown because they are not compatible with creating a shopping and residential community. Residential zoning on the other hand, is too limiting in terms of density and the type of dwelling that could be constructed. Zoning for a higher residential density should be adopted. Zoning in downtown needs to be altered in order to help promote a vibrant retail, service, civic, and residential community.
- Limited retail: Downtown as a shopping district does not yet meet the retail shopping needs of the full community. While in recent years sit-down restaurants and specialized retail establishments such as boutiques, art galleries, and salons have been developed in downtown, local serving retail establishments have, by and large, not located in or near downtown. Because 60 percent of the households located in and around downtown do not own and car, much of the local market is not being served.
- Street Infrastructure: The quality of the downtown street is lacking in many areas. Sidewalks, crosswalks, curb repairs, streetlights, trees, and other amenities such as bicycle racks, benches, and parks are lacking.
- Economic Distress: The long-term neighborhood and housing disinvestment and economic distress in residential areas of downtown is hard to reconcile with the image of downtown as a tourist destination and quaint shopping district. Around downtown, there are areas of severe to moderate blight, vacant and condemned houses, empty lots, and closed businesses. This is evidence of decades-long economic decline.
- Regulations and taxes: Development and redevelopment in downtown can be exceedingly expensive and relatively risky when compared to development in green fields on the edge of the City. Further, the application of regulations concerning building, fire, and parking can cripple the investments needed to fulfill a development program. This problem is not unique to Cambridge, but coordinated efforts to address regulations (and how they are applied) and to incentivize investment through tax and fee policy can help.
- Lack of population in downtown: A downtown or any mixed-use district needs people and personal income to support its vitality. The residential density within the district is under four housing units per acre. This is inclusive of the waterfront condominium buildings completed in recent years, which is, somewhat removed physically from the current retail core.

A Planning Assessment[48]

The development district comprises roughly 240 acres, or 0.4 square mile. It now contains 925 households, or 18 percent of the City's total occupied dwelling units. It has a residential density of 3.7 units per acre. The district has a resident population of about 1,945.

As part of this Plan, various land use options were considered for the district. The aim of each being to increase the residential density—that is, to increase the number of people who live downtown and who therefore could readily walk to shopping, entertainment, recreation, and other activities including employment.

Table 6.1, shows four density options for the year 2030 that range from doubling the number of households to increasing that number by 250 percent. Ultimately, after reviewing the land available and other goals and objectives for downtown, it was determined that the development goal should be set at 150 percent. That is, the goal is to increase the number of households in the district by 150 percent or by 1,385 households by 2030

This development goal is referenced here as the 56 Percent Plan, because it seeks to direct about 56 percent of household growth projected for Cambridge between 2010 and 2030 to the Downtown/Waterfront Development District. As shown in Table 6.1, under the 56 Percent Plan, the number of households in the downtown district would reach 2,310 by 2030 and downtown's share of total households in the City would rise from 18 percent to just over 30 percent. Consequently, residential density in downtown would increase by a factor of 2.5, from 3.7 households per acre to 9.2 households per acre. As this density is approached, downtown can begin to emerge as a central place, a place of vitality and activity for families and businesses.

Table 6.1: Downtown/Waterfront **Development District: Planning Assessment**

Existing (2010)	**Conditions**					**Density**	**Downtown's Share of City Households (%)**	
	Acres	**HH**	**Pop**			**HH/acre**		
	250	925	1,945	-	-	3.7	18.1	
Plan (2030)				***Growth: 2010-2030***		***Change: New Density***		**Downtown's Share of City Growth 2010-2030 (%)**
		HH	**Pop**	**HH**	**Pop**	**HH/acre**		
100 percent increase (double)	250	1,850	3,885	925	1,940	7.4	24.4	37.3
150 Percent Increase	**250**	**2,310**	**4,850**	**1,385**	**2,905**	**9.2**	**30.5**	**55.8**
200 percent Increase (triple)	250	2,775	5,830	1,850	3,885	11.1	36.6	74.6
250 percent Increase	250	3,240	6,805	2,315	4,860	13.0	42.7	93.3

[48] The borders of the downtown development district were expanded following the Public Hearing to encompass the Sailwinds site, properties along Cambridge Creek on both sides at the approach to the Choptank River, and High Street, west of Spring Street to Long Wharf. These added areas are not accounted for in the detailed land area, housing unit, and density estimates presented in this part of the report.

Cambridge can accomplish the 56 Percent Plan for downtown development. Indeed, resolving many of the aforementioned impediments to a vibrant downtown rests on the substantial increase in residential density in downtown. The Comprehensive Plan embraces a number of important policies that will compliment downtown development.

Increasing Density in Downtown: Incentives

The City will provide incentives for development in downtown. City incentives to promote development in the downtown district include: reduction or elimination of County development (excise tax) and City impact fees, tax reduction and/or abatement strategies, elimination of water and sewer connection charges, and fast-tracking of development approvals. The City will coordinate with Dorchester County and ask that it too commit to strategies that financially incentivize revitalization in the downtown district. Without this commitment, the County will be out of step with City efforts and will potentially help forestall achieving its own land preservation and rural planning goals[49].

Further incentives that should be studied to promote the District as a location for families include: direct housing assistance targeted to first time homebuyers, college tuition grant assistance for any child residing in the district, and the repair and rehabilitation of existing housing stock.

Also, for development projects outside of downtown, the City will increase its fees and connecting charges to offset revenues forgone through downtown incentives. The City will coordinate with the County in these efforts such that the County excise tax applied within the City will be assessed at a higher rate to development further removed from the downtown. Development on the edge of the City increases cost of operating the City, it adds to the infrastructure maintenance burdens especially when considered in light of the forgone opportunities to build where infrastructure already exists.

The Plan acknowledges that nearly 4,700 dwelling units have been approved in many development projects (See Chapter 3, Municipal Growth, Community Facilities, and Water Resources). However, it also acknowledges that the housing units proposed in these projects do not meet the housing needs of many of the residents of Cambridge. The market rate and owner occupied housing in the pipeline will not meet the housing needs for households making less than the County's median household income. Even the multiple-family structures within much of the Blackwater Crossing project, the City's largest active pipeline development project, will not meet the needs of the City's least affluent residents even if price were not the issue. The project is too far removed from essential retail, social and civic services and activities. The District provides a better location for housing in combination with the social, recreational, and economic amenities that support it.

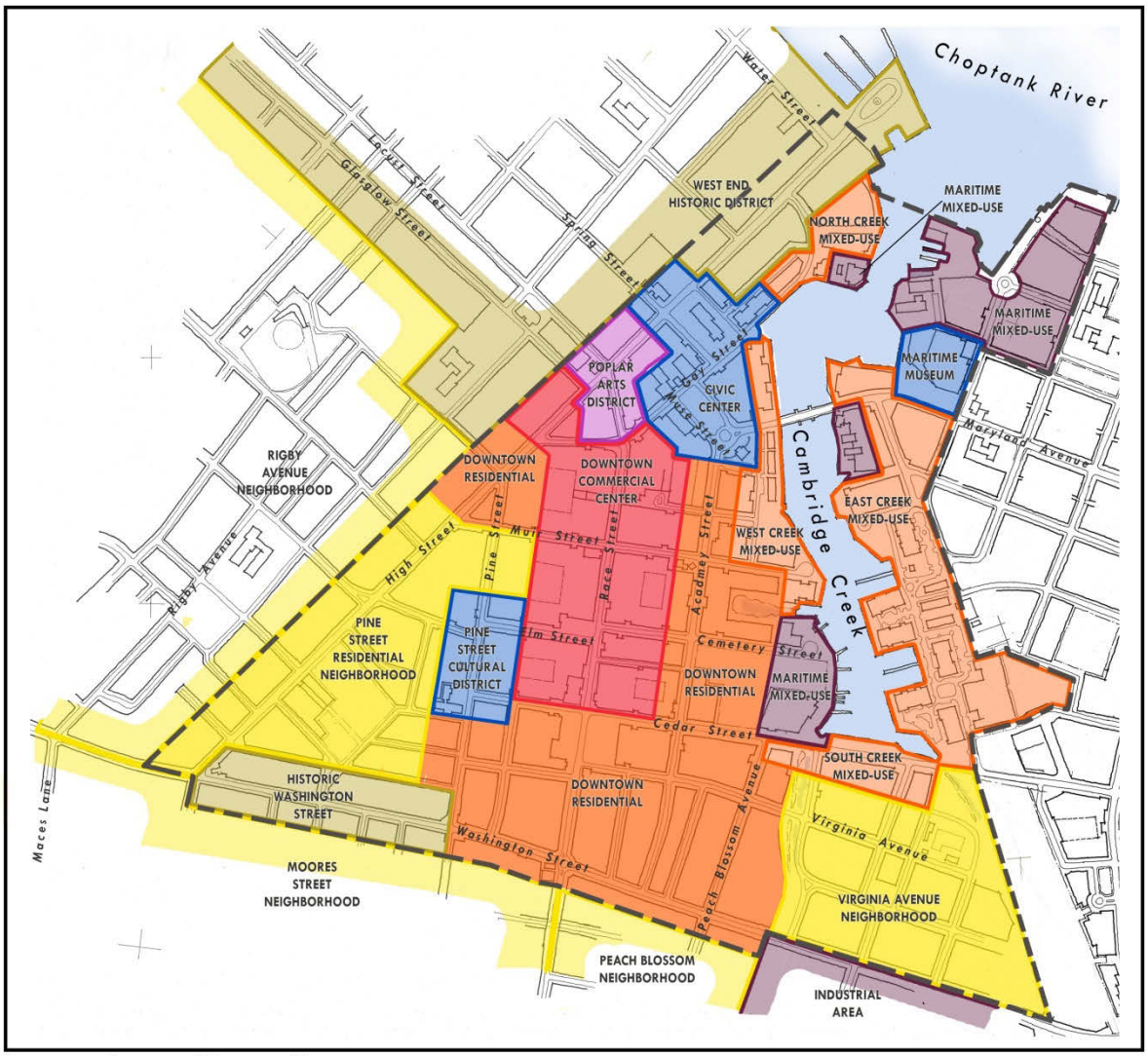
A Central Place: An Organizing Development Program

The Downtown/Waterfront Development District should be a central place: an identifiable district where public and private investment is prioritized. Exhibits 6.1 through 6.4 on the following pages show the plan for the district. The plan can accommodate the 56 percent development goal.

[49] Dorchester County can help revitalize downtown by promoting policies and zoning that have the effect of directing future market demand to the City rather than to new growth areas in the County.

Predictions as to the ultimate land use or business type for every parcel in downtown are neither possible nor wise to make. However, general land use in selected areas is predictable: the retail center along Race Street, for example. In other areas, however, the future is less predictable but what is desirable is evident. For the areas shown as the Pine Street and Virginia Avenue "Residential Neighborhood", it is desirable that the residential base be stabilized and that housing conditions be improved. Exhibit 6.1 provides the guide to development and/or redevelopment. This Exhibit is a conceptual *program plan* for downtown, suggesting not only the types of land uses that are appropriate, but also the general purpose of the various "zones". The exhibit is not a proposed zoning map. Descriptions of the "zones" follow.

Exhibit 6.1: Downtown Conceptual Program Plan



Downtown Conceptual Program Plan

The City Service Center: This is the central location for governmental and civic institutions. Note the center extends to the water's edge and encompasses the current County governmental building site. This is intentional and speaks to this Plan's commitment to keep a public or civic connection to the water in this area of downtown. While Dorchester County may eventually discontinue its presence at this location, it is the City's policy that a substantive governmental, civic, or public presence remains here, accessible to the water.

Poplar Street Arts District: Lying adjacent to the existing civic and instructional center of downtown, this district is currently home to new boutiques, restaurants, salons, and galleries. The continuation of such activities is envisioned.

The Commercial Center: This is the traditional or historic business district, albeit somewhat expanded. This is the primary location for retail and office uses, but also for residences above businesses. More general merchandise retail stores that meet local shopping needs should be encouraged here. Intensive commercial uses, such as automotive, outdoor storage yards, etc. are not compatible with the district.

Downtown Residential: Downtown residential areas are shown along the periphery of the Commercial Center. In these areas, the primarily focus will be on redevelopment for higher density housing. Housing projects of four stories in size and up to 30 units per acre would be permitted within downtown residential areas. It is these areas which hold the greatest potential for residential development in downtown.

The Pine Street and Virginia Avenue Residential Neighborhoods: These are meant to be strong and stable family neighborhoods. In these areas, the primary focus will be on restoration of intact and vibrant single-family neighborhoods through major redevelopment, infill, and/or intensive rehabilitation of existing housing stock. When lots can be consolidated into sizable development parcels, the City should exercise its redevelopment authority to redevelop these areas. The City will target its immediate efforts at condemnation and removal of unsafe and obsolete housing in these areas. The City will seek cooperation with property owners in these areas but will move strongly to implement its authority to promote public health and safety and redevelop these areas to meet the housing needs of the community.

The Pine Street Cultural District: This area is meant to allow a mix of community commercial and institutional establishments that reflect both the historic role of the neighborhood in serving local shopping and entertainment needs and the potential to serve as a destination for tourists. The historic cultural significance of the Pine Street neighborhood should be celebrated and respected in development and redevelopment activities. The areas should be targeted for a high level of pedestrian and street infrastructure amenities.

Historic Washington Street: This is an architecturally unique and historic built environment. Its historic and architectural significance should be documented in collaboration with the National Register of Historic Places. Upon a finding of significance, the City should seek historic district status. Even if this district does not obtain such official federal recognition, the City should still take efforts to preserve and restore this area.

Maritime Mixed: These areas are intended to allow a mix of uses that would be advantaged by a waterfront location including residential. However, residential use shall not be the dominant land use on any parcel and design standards should guide development. Uses that promote a working waterfront may include, but shall not be limited to a maritime museum, boat building/repair yard and/or school with a marine railway.

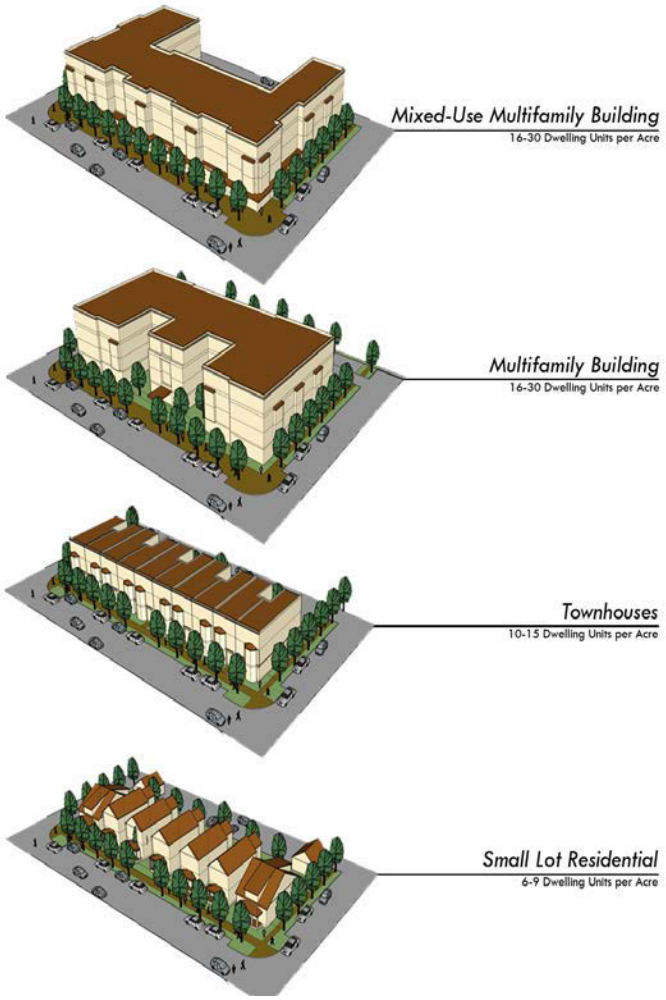
Mixed Use: The plan designates much of the area along Cambridge Creek and the water's edge as mixed use. The intent is to ensure that future development contain both residential and non-residential

components on the same site or in the same buildings. Much of this area has been the site of intense condominium development and this pattern is expected to continue through the foreseeable future. The Sailwinds Mixed Use designation is consistent with the Waterfront 2020 concept plan and does not include residential.

Zoning for Higher Density[50]

The development district should be given special zoning status. To attain the goal of higher residential density, it is not necessary to allow high-density residential projects throughout the district. Higher density residential zoning should not be applied ubiquitously throughout the district. Instead, it should be targeted so that it does not interfere with the gradual infill and redevelopment that is desirable in certain locations. It is sometimes feared that the increased development rights granted through higher density zoning may forestall the rehabilitation of existing housing units as owners hold and/or consolidate obsolete properties waiting for market conditions to materialize to support higher density downtown housing. This may be valid for some areas of downtown but not for all. Indeed, the public benefits of private land consolation and higher density development needs to be acknowledged and the economic transformation of downtown—including the improvement of workforce housing conditions—depends on it over the long term.

Exhibit 6.2: Downtown Cambridge Residential Types



Higher density zoning should not be applied ubiquitously also because it could work against efforts to promote historic resource conservation. There are intact neighborhood elements that are unique to Cambridge and historically or architecturally significant. Preservation of these areas should be supported by zoning and other regulations.

Residential Development in Downtown/Waterfront Development District: Exhibit 6.2 shows acceptable types of development. The mixed use building (with residential above ground floor commercial) is appropriate for the Downtown Commercial District. The multiple family building with a density up to 30 units per acre and the town house types with a density up to 15 units per acre are encouraged and accepted within the Downtown Residential sub area. The Small Lot Residential type is appropriate and encouraged for the Pine Street and Virginia Avenue Neighborhoods. This pattern would provide housing densities at between six and nine units per acre and

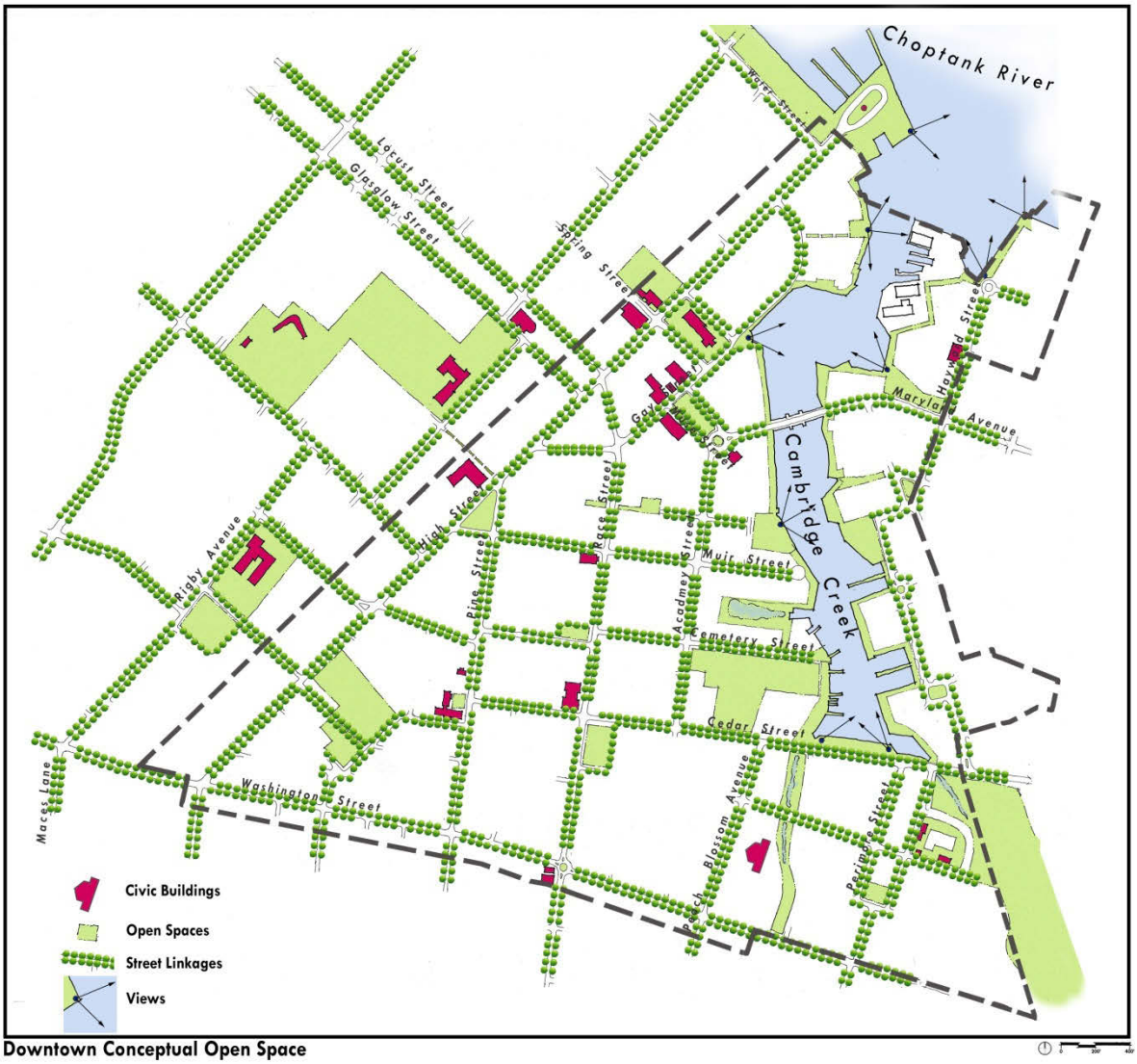
[50] One approach to the recommended zoning changes that could be applied to areas within the Downtown/Waterfront Development District is form-based zoning. Form-based zoning is a zoning code that primarily regulates the physical form of buildings rather than just the use permitted in certain areas.

feature minimum lots sizes of about 5,000 square feet.

Open Space in Downtown/Waterfront Development District

It is an imperative that the quality of the residential environment be improved as housing densities in downtown increase. Exhibit 6.3 shows the arrangement of existing and planned open spaces and parks in and near the district. This plan is meant to guide the location and amount of open space. Individual development projects should also provide project specific open spaces, such as small parks and play areas.

Exhibit 6.3: Downtown Conceptual Open Space



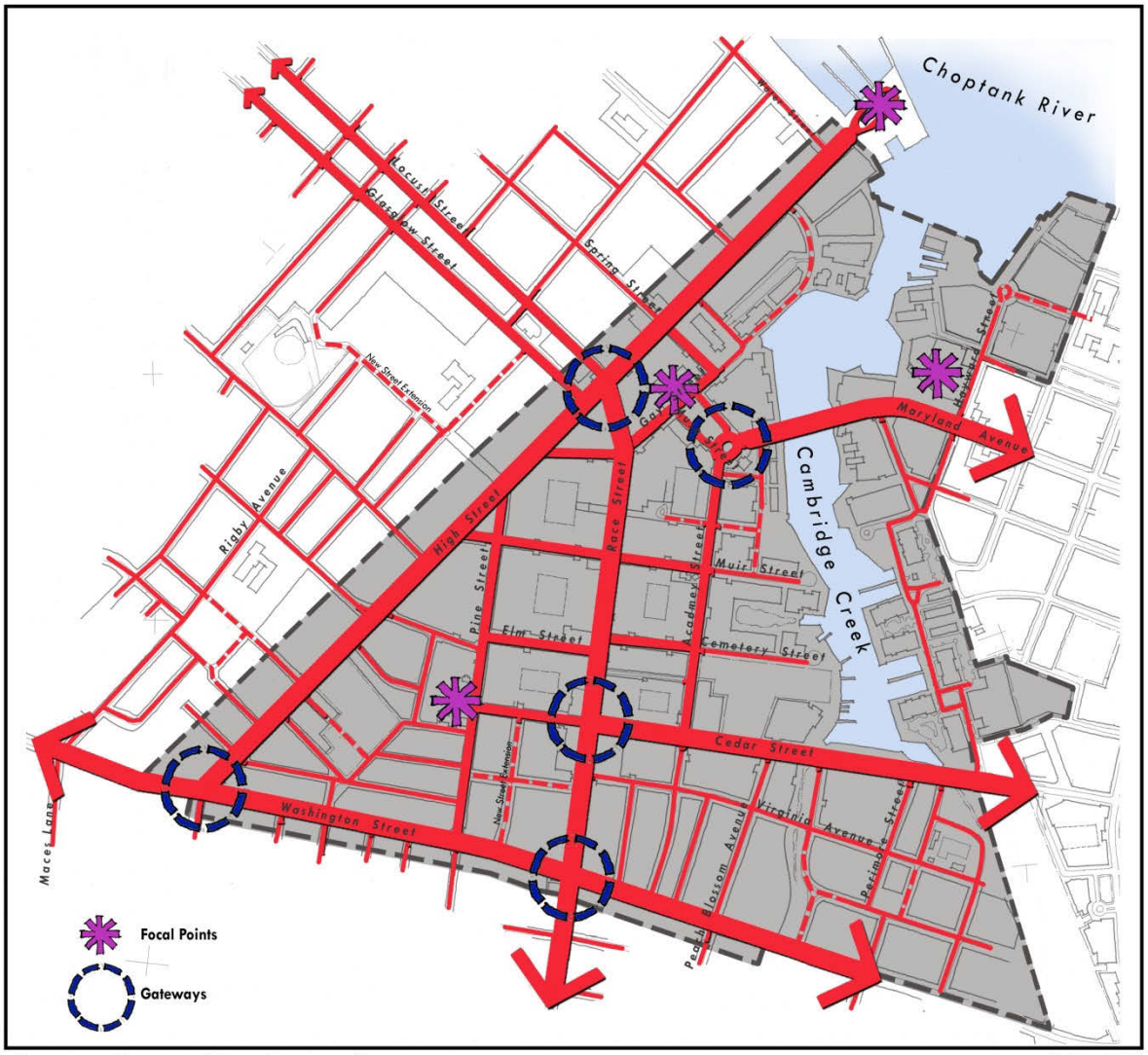
Downtown Conceptual Open Space

Circulation in the Downtown/Waterfront Development District

The main focus should be on creating a highly walkable community throughout the district. Exhibit 6.4 shows the conceptual circulation plan. It indicates locations and alignments for minor street improvements which will improve pedestrian and vehicle traffic flows. The Planning Commission should review and apply this plan when projects for downtown are proposed.

The Exhibit highlights four major gateways. A gateway marks the transition from one district to another. It can also mark the point of arrival into a special place. Three of the gateways mark the point of entry into the district: Market and Academy Streets, Race and Washington Streets, and Glasgow and High Streets. The gateway at Race and Cedar Streets marks the entry into the heart of a new downtown residential community and serves to anchor Cedar Avenue. The gateway at Pine and Cedar Streets marks the entry point into the Pine Street Cultural District. The gateways could feature any or a combination of the following: a traffic roundabout (rather than signalized intersections), signage, landscaping, monuments, or monumental building design and architecture.

Exhibit 6.4: Downtown Conceptual Street Framework



Downtown Conceptual Street Framework

Downtown Infrastructure

The City should begin immediately to identify key repair and rehabilitation projects in downtown. It should upgrade and modernize its street infrastructure with special emphasis on pedestrian and cycling routes and improvements. For the downtown in particular, the City will create a program of "Small Projects That Make a Big Difference" to install and/or repair sidewalks, curbs and gutters, crosswalks, bicycle lanes, and street trees. Sixty percent of households in the downtown area do not own a car; pedestrian and bicycle access in the downtown district must be the priority.

6.2 U.S. Route 50 Development District

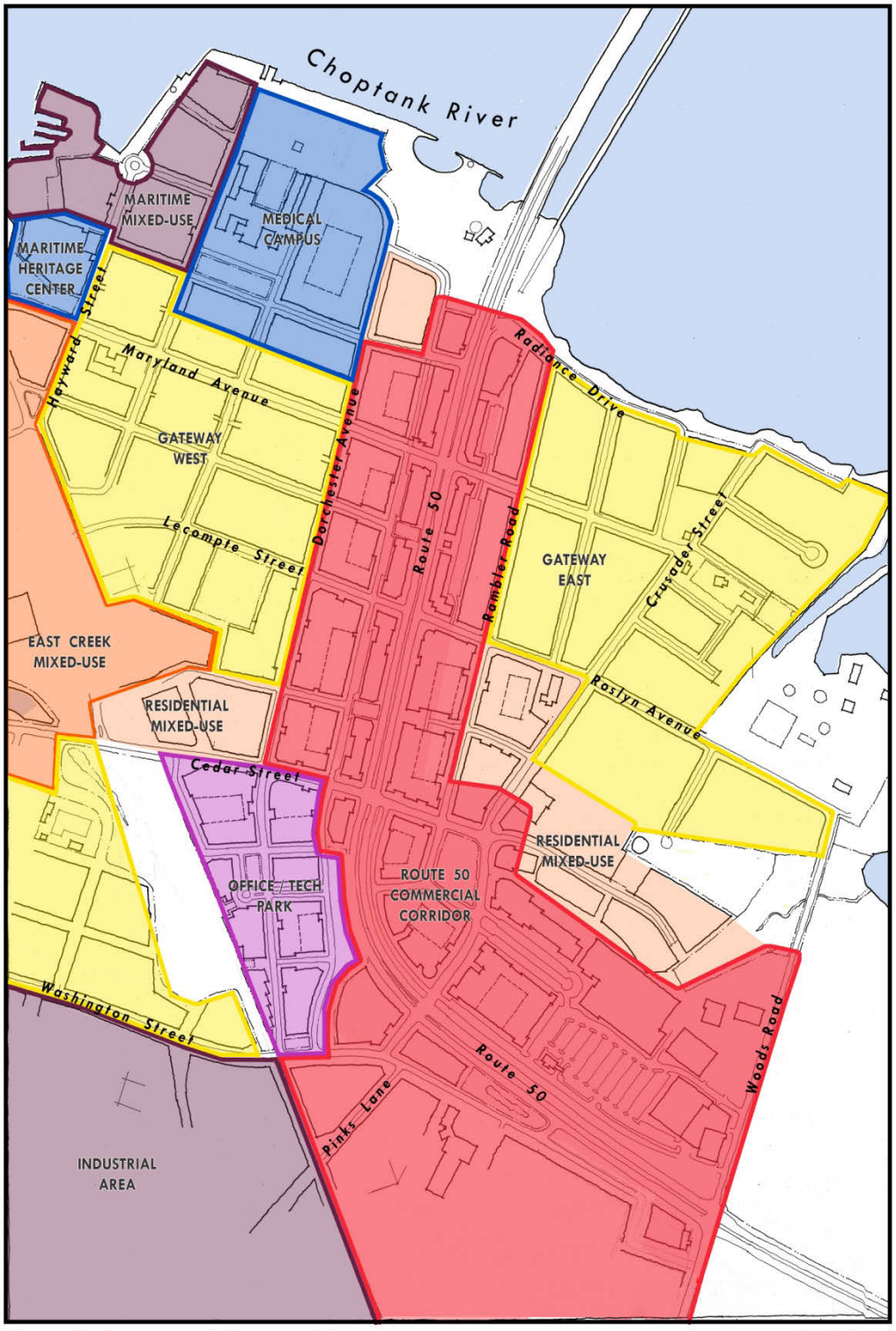
The U.S. Route 50 corridor offers superior accessibility to regional markets and customer base and will remain a central place for retail and retail services, not withstanding improvements in downtown. Indeed the success of downtown is tied to the success of the highway corridor; congestion and delay along U.S. Route 50 can reduce visitor trips and travel to downtown and the clutter of signs and lack of unified design and building appearances can discourage visitation. While development along the highway started out in a strip commercial pattern with each site un-referenced and uncoordinated with any other site, this Plan now envisions that the corridor will become a unified regional shopping and employment center over the next 20 years. This Plan recommends that the City encourage redevelopment of commercial properties along Route 50 through tax and other incentives.

The Plan for Streets and Pathways, Chapter 5, provided background and an access managed strategy for the U.S. Route 50 Corridor. It is essential that this strategy for consolidating access points and eliminating private driveways be completed over the next two decades. By 2030, all signalized intersections along U.S. Route 50 are projected to fail, leading to severe congestion. The problem faced is how to transform the corridor into a coherent commercial center while allowing continued growth in regional traffic, especially seasonal traffic. In this section, an overall land use concept plan for the corridor is provided. Also provided is the park and open space concept plan for the corridor.

The plan features two residential areas named Gateway East and Gateway West. These are the existing neighborhoods. The plan calls for conserving and protecting these residential areas as single family neighborhoods. The residential Mixed Use areas would allow high density residential development and commercial uses. It provides a zone of transition between the commercial highway and the Gateway neighborhoods. The Office Technology Park and Medical Campus are discussed in the section on Economic Development.

This Exhibit, entitled 'Route 50 Conceptual Plan' is intended to illustrate the general land uses and gateways depicted thereon, and the specific layouts for any particular land use depicted in the exhibit are not binding by this Plan.

Exhibit 6.5: U.S. Route 50 Corridor Plan

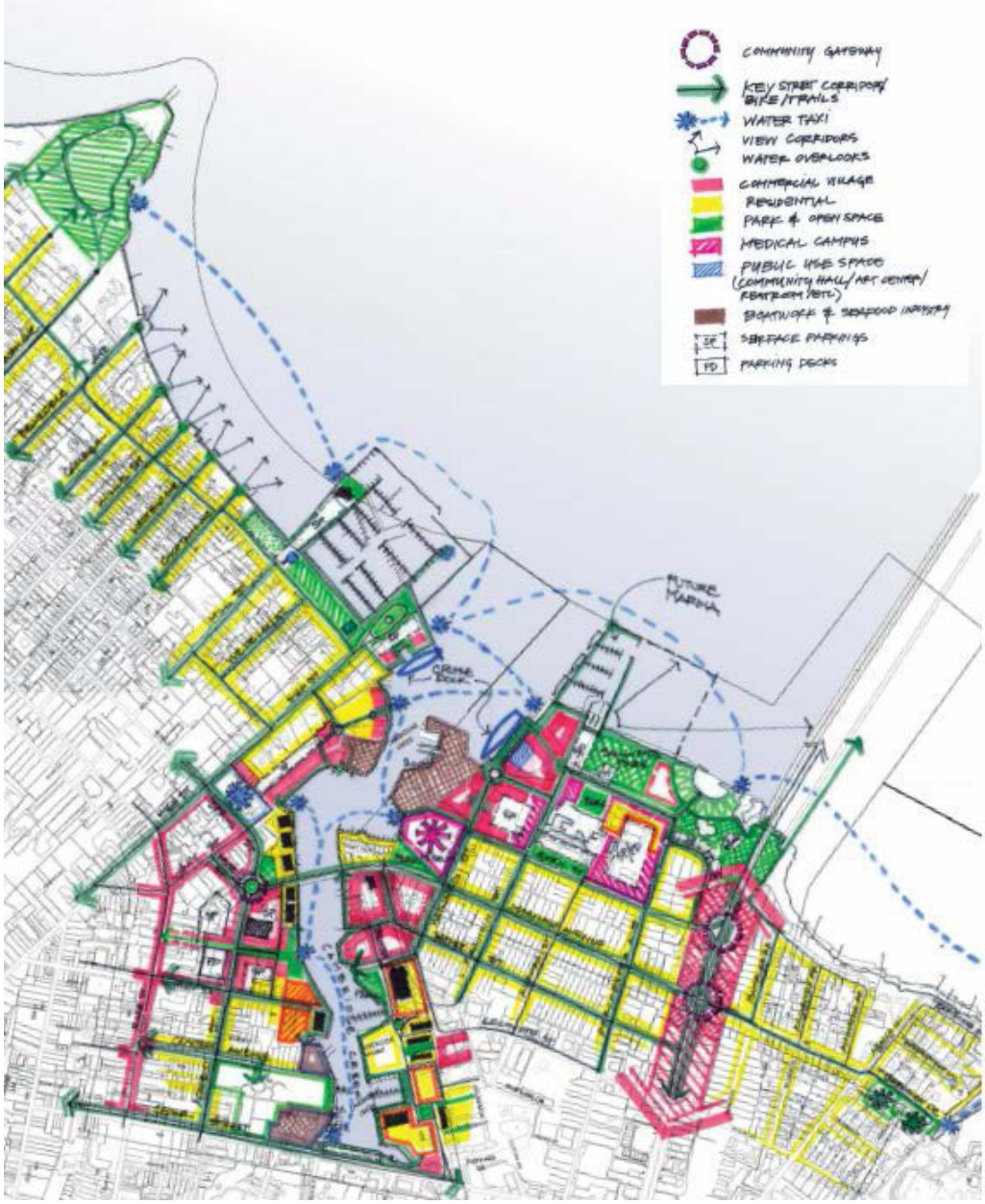


Route 50 Conceptual Program Plan

6.3 Cambridge Waterfront

During the preparation of this Comprehensive Plan, a citizen effort to re-focus attention on the Cambridge Waterfront was established—Waterfront 2020. A series of well attended citizen planning and design meetings were held and the outcome of these efforts is presented in the emerging ideas concept plan for the Cambridge Waterfront in Exhibit 6.6. The Waterfront 20/20 Concept Plan (Exhibit 6.6) is hereby adopted and made a part of this Comprehensive Plan by reference to the extent not inconsistent to the Land Use Maps as set forth in section 4.6 of this Plan and the extent no inconsistent with any other provision of the Plan. This plan represents, in **concept** form, the "visions" as articulated through the Waterfront 2020 Charette that occurred on November of 2008.

Exhibit 6.6: Waterfront Emerging Ideas Concept Plan



The purpose of the Waterfront 2020 project was to review the waterfront plans that had been prepared over the last 30 years and to formulate a comprehensive overview going forward that addresses new concerns of environmental sustainability and economic development. The goal of the project was to develop a community vision concept that would be incorporated into the Comprehensive Plan and help shape future development, public access, economic development, and linkages along the shoreline. This Comprehensive Plan embraces the concept plan and most importantly the City's ongoing commitment to guide the development of this important resource in the public's interest.

The Governors Hall property at Sailwinds Park owned by the Maryland Department of Transportation (MDOT) is a key element of the citizen concept plan. The intent of this Comprehensive Plan is that the site becomes a community gathering place with a mix of commercial, maritime, limited residential and institutional uses integrated with public spaces. Residential use shall not be the dominant part of any plan for this parcel.


Governors Hall property at Sailwinds Park

The City wishes to develop a clearer and more definitive redevelopment plan and strategy. The City is committed to the continuance of working with its citizens and stakeholders through this process. The City's goal is that this key parcel be made available for re-development and that such redevelopment is guided by plans adopted by Cambridge. To this end, the current MDOT lease to the City was extended for a term of five years. This would provide time for redevelopment plans to crystallize and form the basis of a solid redevelopment effort, and anchor other potential development along the Choptank waterfront. It is also critical to discuss the plans for the Port Property in the broader context of the entire Cambridge Waterfront.

Chapter 4 set forth the principle land use policies which should guide the use and development of the Waterfront through 2030. The Waterfront 2020 Concept Plan (Exhibit 6.6) is hereby adopted and made part of this Comprehensive Plan by reference. It is available upon request of the City Planning Department. Essential elements of the Waterfront 2020 Plan include linking the recreational resources along the Waterfront, connecting the waterfront to downtown, integrating Waterfront development with the Maryland Avenue neighborhoods that adjoin it; water taxi service connecting key destinations along the Choptank shoreline and Cambridge Creek with downtown and the current resort.

The Plan encourages the development of a Heritage Trail System along the waterfront of the Choptank River and Cambridge Creek, to include the development of a waterfront riverwalk connecting the Visitor's Center to the Cambridge Creek Bridge.

6.4 Conservation of the Historic Built Environment

Cambridge, Maryland is a City rich in history. Founded in 1684, Cambridge contains resources that span a wide range of styles, functions, and dates. The City not only serves as the county seat of Dorchester County and boasts resources from its maritime and agricultural past, but also claims a vibrant African-American community, with one of the oldest continuously-occupied African-American neighborhoods in the Nation. Intact historically or architecturally significant elements of the built environment are often the essential precursors to a revitalized urban district.

Predating English arrival and settlement of the Cambridge area, there were extensive village settlements including in present day Cambridge. While no buildings within the City remain from that period, an informed evaluation of the landscape could reveal the heritage of the peoples that have long lived here. This Plan recommends that this evaluation take place and that heritage including sacred sites and trails of the Nause-Waiwash and other peoples be mapped on the landscape of Cambridge and its environs and that this heritage be made part of the City's planning.

Historic District and Structures

Cambridge's Historic District, Wards I and III, listed in the National Register of Historic Places on September 5, 1990, reflects the City's development as a port city, tied to its shipping and food processing industry and maritime heritage. Located in the northwest section of the City, the district contains buildings of the late eighteenth century through the mid twentieth century that reflect a rich variety of architectural styles and functions. The district, with its outstanding examples of residential, commercial, governmental, and church architecture, is roughly bounded by the Choptank River on the north, Gay and Race streets on the east, Glasgow Street on the south, and Glenburn Avenue on the west. The City has adopted design standards and guidelines for changes to the exterior of buildings in the district.

In recent years, plans to expand the boundaries of Cambridge's Historic District culminated in a preliminary evaluation study that looked at expanding the district to the southwest. A Maryland Historic Trust Determination of Eligibility Form was submitted in 2002 for evaluation of the "Cambridge Historic District–SW Expansion Area." This expansion district, located at the southwestern edge of the Historic District, roughly includes Pine and Cross Streets and School House Lane. The form states that the area consists primarily of single-family residences constructed in the early twentieth century that are compatible in massing, scale, set back, and integrity to the properties located within the listed Historic District. To date, the current boundaries of Cambridge's Historic District have not changed.

Descriptions of the structures listed on the National Register of Historic Places and in the Maryland Inventory of Historic Properties were prepared as part of this Plan and available upon request of Department of Planning.

Pine Street Cultural District

The Pine Street Cultural District is identified in the downtown district development program. This is the cultural center of a larger community with special status as one of the oldest continuously occupied African-American neighborhoods in the United States. Rough boundaries of the potential area include a triangular-shaped area bounded by High Street to the north and west, Washington Street to the south, and Pine Street to the east. This area is reflected in the Downtown/Waterfront Development District program

plan. This and its cultural and historic resources should be studied in detail and an inventory undertaken of individual resources. Redevelopment activities in the area should reflect the historic landscape of this district.

Washington Street Historic Area

One portion of this area that is particularly noteworthy from an architectural standard is what this Plan has referred to as the Washington Street Historic Area. This is a unique grouping of houses along both sides of Washington Street roughly bounded by Pine and High Streets. This area should be designated a historic landmark by the City; application should also be made to the National Register of Historic Places. Irrespective of these steps, tax and other incentives should be directed toward promoting the restoration and/or perseveration of this area. It should be designated for protection through the zoning ordinance.

Heart of Chesapeake Country Heritage Area (HCCHA) Management Plan

This is a State program that seeks to promote resource conservation and economic development through heritage tourism. The HCCHA recognizes the unique resources of Dorchester County and it seeks to protect and promote the historic towns, roads, and cultural landscapes within its boundaries, including in Cambridge. Cambridge is eligible to receive capital and non-capital grants for preservation, tourism, and community development projects that support the Heritage Area's goals. The City continues to support implementation of the HCCHA Plan. The HCCHA Plan is adopted as part of this Comprehensive Plan.

One of the principal objectives of this Comprehensive Plan is to advance the understanding and celebration of the Harriet Tubman Underground Railroad. This Plan specifically recommends that Cedar Street be designated as Harriet Tubman Boulevard from U.S. Route 50 to Pine Street. It is the primary connection from the highway to the Pine Street Cultural District.

6.5 Civic Appearance

The appearance of a community provides a lasting impression which contributes much to making a city a pleasant place to be in, worth coming back to visit, and worth living and investing in. One of the purposes of comprehensive planning is to make Cambridge a more desirable place to live and work. Civic appearance can be a major element in attracting new business to the community. The appearance of a city is affected not only by landscaping and architectural embellishments but also the efficiency, design, and arrangement of the various elements. The arrangement of relatively small public buildings in the civic core of the Cambridge downtown, connected by sidewalks and shaded by old trees, is a good example of an arrangement that creates beauty for the City. An attractive community creates civic pride and leaves strong favorable impressions upon visitors.

The appearance of the City is the responsibility of the public sector and private citizens and property owners. Most of the City is in developed use, thus private property owners are responsible for most of the City's appearance. The areas used publicly are, of course, the responsibly of public agencies. It is imperative that public agencies develop and use property in an attractive way so that private citizens are encouraged to develop their property in a similar manner. The City is also responsible for adopting and enforcing regulations which can assist in improving the City's appearance.

Street Rights-of-Way: About 20 percent of the developed land in Cambridge is occupied by public streets. These are used daily by citizens and visitors. Whether positive or negative, the aesthetic quality of a street exerts a strong and lasting impression. Chapter 5 described the Plan for Great Streets in Cambridge. It is imperative that this set of recommendations be implemented. The treatment of major streets in Cambridge signifies the expectation that the City has for the treatment of private property along those streets. The creation of the recommended Cedar Street gateway boulevard into downtown will change the character and the quality of the appearance of the properties that front on Cedar Street.

The transportation section also proposed the repair and restoration of important pedestrian amenities in the street right-of-way, and the installation of street lights and street trees. These are the minimally required elements of a Great Streets strategy. Street trees should be added to all streets especially in residential areas. All new streets should be planted with street trees. The City should adopt unified standards for street lights and trees for each of its main districts. For example, there should be a Downtown/Waterfront Development District street lamp and pole and landscaping theme.

Parking Lots in Downtown: All parking lots in the downtown district especially should be thoughtfully landscaped. At minimum a shrub border should be planted along all parking lots facing a public right of way. Shade trees should be planted in all parking lots.

Private Advertising Signs and Billboards: Few uses of private property in Cambridge have done more to distract from community appearance and lend a disordered sense to the urban environment than signage and billboards. This is especially the case along U.S. Route 50 where the clutter of competing signs is a public eyesore and a nuisance.

This plan sets the stage for the adoption of new sign standards and the amortization of existing signs and billboards which should be non-conforming immediately following the adoption of new standards. The reason is simple, the clutter and disorder created by signs and billboards distracts from the achievement of significant public goals, including:

- Protecting the views of the Choptank River and open spaces that lie beyond the highway and exemplify the rural character of the region.
- Protecting residential neighborhoods that lie near the highway.
- Protecting the City's ability to direct the public through appropriate signage to key destinations such as the Waterfront, the Hospital (and proposed medical campus), downtown, the proposed Pine Street Cultural District, and essential public buildings such as the Police Department, Library, and City Hall.
- Attracting and retaining visitors in support of City economic development and tourism initiatives.
- Implementing the Heart of Chesapeake Country Heritage Area Plan.
- Implementing a coordinated access management strategy along the highway which depends on uncluttered view lines and undistracted motorists.
- Promoting unified land use and architectural development concepts along the highway that can be served readily with municipal and emergency medical services and accessed conveniently and safely by motorists and pedestrians.
- Promoting traffic safety and efficiency along the highway.

- Reducing distraction and confusion on the part of motorists, pedestrians, and cyclists.

Signage in downtown should also be comprehensively evaluated to determine where improvements could help protect and preserve the historic appearance of downtown, help unify the district or its sub areas, and protect residential character and public investments in streetscape improvements.

Building Design Standards: The City should develop building design standards for the Downtown/Waterfront Development District. Building design standards can help to create a unified sense of place. Design standards ensure that buildings add to the quality and attractiveness of the community.

6.6 Local Economic Development

A comprehensive plan cannot also be a strategic economic development plan. However, it is worth noting how this Comprehensive Plan accommodates and promotes economic growth. Stated simply the goal of economic development is to improve the economic circumstances of Cambridge residents and business as measured in personal income and business profit and growth. Because of the relatively high poverty rate in Cambridge, a specific objective of economic development must be to reduce the percentage of local families earning incomes that place them below the poverty level. The City should strongly aim to reduce City poverty levels to the statewide average for Maryland.

Ultimately, it is the community that must commit to economic development and improving the well being of its members. The community can commit to economic development through strategies that engage local bankers and business experts personally in micro-financing, training, and mentoring local entrepreneurs who commit to opening or continuing businesses in Cambridge. Teachers that engage students and promote participation in the civic and business concerns of Cambridge contribute to local economic development. Shoppers who choose to shop at locally owned businesses and support local farms support local economic development.

Chapter 2 of this Comprehensive Plan, entitled the People and Economy of Cambridge, discussed general economic structure and performance. It noted the sectors where local specialization are found and documented the historic movement away from higher paying manufacturing jobs toward retail and service sectors. These findings illustrate why this Plan does not call for the expansion of industrial or commercial land or public investments in new industrial parks removed from the central city. Optimization of available land reduces the City's long term development and maintenance costs and offers economic advantages to businesses. Growing business sectors such as the Service sector do not require expansive land or infrastucure; instead they require supportive policies that lower the cost of entry into their markets.

Quality jobs, entrepreneurial activity, expanding markets for goods and service produced locally (including tourism), are all necessary. The City should adopt economic development strategies aimed at these factors. From a land use and zoning perspective, the plan establishes a framework and strategies that optimize the current land use pattern and existing infrastructure including:

A Medical Campus District: Zoning should be changed and incentives provided to create a major medial campus district along Maryland Avenue near the current Dorchester General Hospital. The health care sector is growing in Dorchester County. Multiple uses of land allied with the medical fields should be

permitted to locate close to the Hospital and close to one another. Further, the City's physicians and medical professionals can contribute much to the reputation of Cambridge. The Hospital itself and the Shore Health System Center, in general, can be an engine of local economic development. The Hospital hosts the Center for Cardiopulmonary Fitness and Wellness among other specialties.

Downtown/Waterfront Development District: Public and private investment should be directed to creating a district. The district can be the incubator of local entrepreneurs. Encouraging housing density in downtown concentrates market power close the source of goods and services. Downtown living can also present individuals and families with lower overall housing costs, freeing up capital for local spending and investment. Public investments in beautification, parks, and infrastructure repairs in downtown can support the downtown real estate and business climate. The ultimate business success stories and cultural achievements in the downtown district will be made by individuals over time and they are hard to name now: but imagine the potential for a Pine Street Music Institute—a small start up day care center focused on music education for the children of Cambridge

U.S. Route 50 Office/Technology Park: On lands between Cedar and Washington Streets between a new park at the end of Cambridge Creek on the west and U.S. Route 50 on the east, the Plan calls for an Office and Technology Park. The area is largely developed now. The area is presently zoned highway commercial and general commercial. While the area is shown as "commercial" on the generalized Land Use Plan Map, the City Zoning Map could be changed to reflect the planned special status of this area as "office park".

Dorchester Avenue Business District: The area extends along Dorchester Avenue (which runs parallel to U.S. Route 50 on the west side) from Maryland Avenue to Cedar Street. This is a centrally important emerging local business district in Cambridge. This is where some small offices and retail establishments have found good locations, close to U.S. Route 50 but also easily accessible to the residents of Cambridge. A traveler or potential shopper should know when he/she is entering this local business district. The City could work with local business and property owners to unify signage and manage off-street parking. The area is now substantially underutilized with large expanses of unused surface parking and will eventually be incorporated into the U.S. Route 50 access management plan presented in Chapter 5, A Plan for Streets and Highways.

Natural Resource Park and Environmental Science Center: Building on the reputation of the University of Maryland Center for Environmental Science at Horn Point, the City should consider developing an allied site at the location of the planned Natural Resource Park shown on the Land Use Plan. These and related strategies are needed to develop the professional and scientific employment base, which will in turn provide the future jobs for today's children.

Waterfront: The Waterfront provides opportunity for the development of tourism related and waterfront related economic development. Specific recommendations for how the area should develop are provided in the Waterfront 2020 Plan contained in this report.

Chapter 7

Implementation of the Plan—The Essential Work of the Planning Commission

It is difficult to preserve a Plan's integrity and consistently carry out its proposals. Yet this is what Cambridge must do. The 18-month planning process that has resulted in this Comprehensive Plan has helped prioritize community needs and the location for needed investments. It has helped uncover and legitimize interests and goals that have the potential to improve the well-being of all citizens. It represents a public announcement and a renewed commitment to people, places, and to ideas. This Comprehensive Plan can help drive a civic agenda and give direction to all who would accept responsibility for the well-being of Cambridge. Five measures are required to ensure successful implementation over the long term.

1. There must be an independent planning agency.

The task of securing the planned development of a city is too great to be entrusted to an agency or department whose responsibilities are chiefly in another field. The City's planning agency should be independent of the Department of Public Works and other any agency of City government. A well funded and staffed City Planning Department is needed. The Maryland Department of Plan should commit a continuous funding stream to the City's Department of Planning in support of implementation.

2. There must be an official adopted comprehensive plan that is followed.

The comprehensive plan should be officially adopted by the Planning Commission, recommended to the Mayor and Commissioners of the City Council and approved by resolution of the Mayor and City Council. To be implemented over time, the Plan should continue to have the enthusiastic support of the community and the agencies and units of government called on to implement it. It should be reviewed in six years, updated if needed, and re-affirmed by resolution of the Planning Commission.

3. Private development must be coordinated with the Plan.

This does not mean that private development proposal should be "theoretically" coordinated with the plan or "conceptually" coordinated with the plan. No, private development proposals must be consistent and compatible with the Plan; they must work toward the advancement and implementation of the Plan. If a private development project is judged to be in the public's interest, yet incompatible with this Plan, then the City should amend this Plan through the legal processes established for that purpose in Article 66B of the Annotated Code of Maryland.

The main tools available to the City to bring private development into compatibility with the plan include: Zoning, Subdivision Regulations, Urban Renewal, Annexation Agreements and Official Mapping. These are recommended at the relevant places in the text of this report.

4. Public improvements must be coordinated with the Plan.

To ensure that public improvements are coordinated with the Plan, the Planning Commission is charged with the responsibility of reviewing the plans for all major public improvements prior to authorization and construction. The Planning Commission should ask itself whether any given public project is consistent and compatible with the Comprehensive Plan. The Planning Commission should insist on the preparation of a five and ten year capital improvement program and budget and then review and make recommendations on that program to the Mayor and City Commission. This essential task is expressly authorized by Article 66B of the Annotated Code of Maryland and is no less important that reviewing private development plans. The City Planning staff should coordinate this review providing technical recommendations concerning the compatibility of all projects with the Plan, just as it reviews private development plans and subdivision plats.

5. Citizens must be engaged and active in supporting the implementation of the Plan.

The fundamental difference in outcomes between communities that successfully implement a Comprehensive Plan and those that do not is citizen engagement. If the citizens of Cambridge commit to three things this Comprehensive Plan will, over the next decades, be viewed a success:

- Citizens must hold elected and appointed officials accountable to the Comprehensive Plan.

  Many of the general policies and strategies of this Plan will need to be implemented through detailed efforts and studies. For example, an updated zoning ordinance and new zoning map are needed within six months. Other policies provide direction to the Planning Commission and City Council such as the recommendation for no further residential annexations and reducing fees and creating other incentives for downtown redevelopment. Lastly, some policies require long term attention and perhaps regular reminders such as securing the rights-of-way of future major streets or the dedication of Greenbelt open spaces when new development is contemplated.

- Citizens must form organizations to advocate and support elements of the Plan. Many elements of this Plan that are especially well suited to citizen organizations.

  Citizen groups could advocate for the Greenbelt, beautification and improvement of the downtown, improvement of housing conditions, the training of local entrepreneurs, creation of bicycle and pedestrian networks, creation of the Pine Street Cultural District and the Cedar Street Gateway, restoration of historic resources, and the building of new parks. Organizations exist throughout Cambridge that could include within their focus the implementation of special parts of the Comprehensive Plan. This Plan, at its root, envisions an engaged and active citizenry. It is designed for it.

- Citizens must remain informed and educated about the City's development process, insisting on accurate and thoughtful information and media coverage of development and planning issues.

  The Planning Commission has a responsibility under Article 66B of the Annotated Code of Maryland law to assist citizens in these efforts. As an example, the Planning Commission could create a continuous citizen outreach program, publish regular issue papers and progress reports to inform and educate, host speakers with special expertise and experience in planning and development, require greater notification of all key meetings, especially when reviewing major public and private development proposals.

The truth is that implementing the Plan will require much forward-looking work which will reveal the faith the community has in this place called Cambridge. There is a human dimension to city planning not the least because it requires hope, in the face of obstacles, that by aligning my resources and skills with yours, our work will pay dividends and improve the lives of all.

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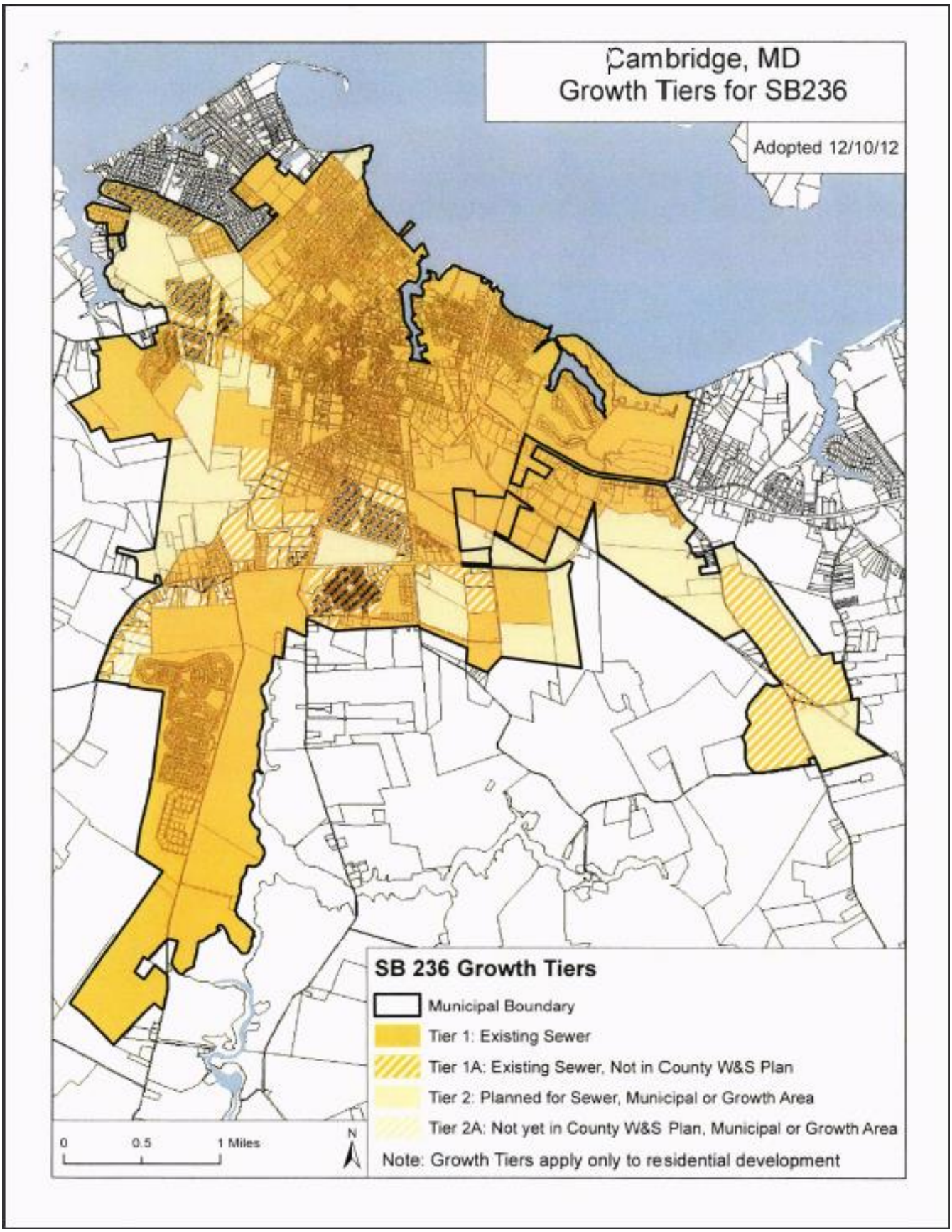
APPENDIX A – GROWTH TIER MAP

In May of 2012, the Maryland General Assembly passed Senate Bill 236, entitled "The Sustainable Growth and Agricultural Act of 2012" (the "Act"). The Act's goal is to limit the disproportionate impact of large subdivisions on farm and forest land, streams, rivers, the Chesapeake Bay, and other coastal bays, and it provides an approach for planned development on on-site sewage disposal systems. The Act establishes four levels, or tiers, to identify the type and intensity of residential subdivision that may occur (minor or major), and the type of sewage disposal system to serve them. Pursuant to Md. Code Ann., Land Use § 1-506(b), as a municipal corporation that exercises planning and zoning authority, the City is required to adopt Tier I and may adopt Tier II.

Tier I areas are those areas served by public sewerage systems and mapped locally designated growth areas or municipal corporations that are priority funding areas and served by public sewerage systems. The intent in mapping Tier I areas is to identify areas for which public sewerage service is currently available.

Tier II areas are those areas: (1) planned to be served by public sewerage systems and in the municipal growth element or mapped locally designated growth areas; and (2) needed to satisfy demand for development at densities consistent with the long-term development policy after consideration of land areas available for development, including in-fill and redevelopment, within the municipality. The intent in mapping Tier II areas is to identify growth areas that are planned for public sewerage service.

In accordance with the Act, on December 10, 2012, the Commissioners adopted a Growth Tier Map for the City of Cambridge, which was also adopted by the City of Cambridge Planning Commission on December 18, 2012. The Growth Tier Map appears on the following page and was incorporated into the Comprehensive Plan pursuant to Ordinance No. 1113, passed by the Commissioners on February 12, 2018 and effective February 22, 2018.


Cambridge, MD
Growth Tiers for SB236
Adopted 12/10/12
SB 236 Growth Tiers
Municipal Boundary
Tier 1: Existing Sewer
Tier 1A: Existing Sewer, Not in County W&S Plan
Tier 2: Planned for Sewer, Municipal or Growth Area
Tier 2A: Not yet in County W&S Plan, Municipal or Growth Area
Note: Growth Tiers apply only to residential development
0
0.5
1 Miles
N