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Resolution No. 2004- 2

A RESOLUTION OF THE MAYOR AND CITY COUNCIL OF HAVRE DE GRACE, MARYLAND TO APPROVE AND ADOPT THE "COMPREHENSIVE PLAN FOR THE CITY OF HAVRE DE GRACE, MARYLAND," PREPARED, APPROVED, AND SUBMITTED BY THE HAVRE DE GRACE PLANNING COMMISSION

WHEREAS, the Havre de Grace Planning Commission has by its Resolution 2004-1 approved the "Comprehensive Plan, City of Havre de Grace, Maryland", attached hereto and incorporated herein as Exhibit A (including twelve elements, texts, maps, additions, and other matter intended by the Havre de Grace Planning Commission to form the Plan) (collectively referred to herein as the "Plan"); and

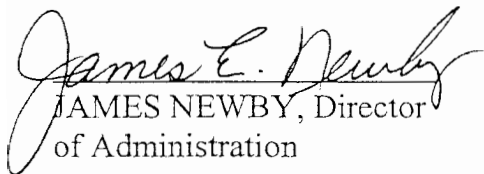
WHEREAS, pursuant to the authority set forth in Article 66B of the Annotated Code of Maryland, the Chairperson of the City of Havre de Grace Planning Commission has reported its Resolution 2004-1, the Plan, and the input received from jurisdictions authorized to comment on the Plan, to the Mayor and City Council of the City of Havre de Grace.

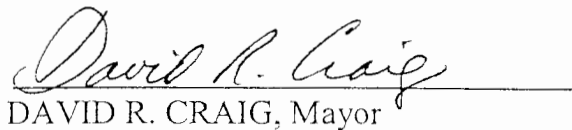
NOW, THEREFORE, BE IT RESOLVED by the Mayor and City Council of Havre de Grace, Maryland, that:

1. The Comprehensive Plan for the City of Havre de Grace, attached hereto and incorporated herein as Exhibit A, be adopted in accordance with Article 66B of the Annotated Code of Maryland.
2. The Comprehensive Plan shall be effective immediately upon enactment of this Resolution.

ATTEST:

THE MAYOR AND CITY COUNCIL
OF HAVRE DE GRACE, MARYLAND


JAMES NEWBY, Director
of Administration


DAVID R. CRAIG, Mayor

DATE: March 1, 2004

HAVRE DE GRACE PLANNING COMMISSION

RESOLUTION NO. 2004-1

**RESOLUTION OF APPROVAL OF THE "COMPREHENSIVE PLAN,
CITY OF HAVRE DE GRACE, MARYLAND," BY THE HAVRE DE GRACE
PLANNING COMMISSION**

BE IT HEREBY RESOLVED by the Havre de Grace Planning Commission that the "Comprehensive Plan, City of Havre de Grace, Maryland," attached hereto and incorporated herein as Exhibit A (including twelve elements, texts, maps, additions, and other matter intended by the Havre de Grace Planning Commission to form the Plan) (collectively referred to herein as the "Plan"), is hereby approved.

BE IT FURTHER RESOLVED pursuant to the authority set forth in Article 66B of the annotated Code of Maryland, the Chairperson of the City of Havre de Grace Planning Commission reports this Resolution, the Plan, and the input received from jurisdictions authorized to comment on the Plan to the Mayor and City Council of the City of Havre de Grace.

Passed and Approved:


Allen Philippe, Chairperson
Havre de Grace Planning Commission

Date: 2/9/04

Ayes: 5
Nays: 0
Absent: 2

CITY OF HAVRE DE GRACE, MARYLAND

MAYOR

David R. Craig

CITY COUNCIL

Wayne H. Dougherty, Council President

John P. Correr, Jr.

Fred H. Cullum

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Gary Wasielewski

PLANNING COMMISSION

Allen R. Philippe, P.E., Planning Commission Chairman

Councilman Fred H. Cullum, Council Liaison

James A. Cameron

Thomas Fitzpatrick

Rene A. Lambert

Jim Miller

Wardell V. Stansbury

Vicki M. Stephens (Alternate)

COMPREHENSIVE PLAN DOCUMENT

Dianne H. Klair, Manager of Community Development and Planning

Allen R. Philippe, P.E., Planning Commission Chairman

Joseph W. Kochenderfer, Editing

GRAPHIC CONSULTANT

Kirsten A. Coffen, Landscape Architect

Garden Architecture, LLC

DEPARTMENT OF ECONOMIC DEVELOPMENT AND PLANNING

Albert J. Henry, Director

Donald J. Bautz, Jr.

Dianne H. Klair

Bridgette L. Robinson

Winifred J. Roche

Patrick D. Sypolt

Pat M. Walston

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Havre de Grace Department of Public Works
Havre de Grace Department of Administration
Havre de Grace Police Department
Havre de Grace Economic Development Commission
Havre de Grace Historic Preservation Commission
Havre de Grace Tourism Advisory Board
Havre de Grace Ambulance Corps
Greater Havre de Grace Chamber of Commerce
Susquehanna Hose Company
Harford Community College
Harford County Board of Education
Havre de Grace Elementary School
Havre de Grace Middle School
Havre de Grace High School
Meadowvale Elementary School
Harford County Department of Parks and Recreation
Havre de Grace Recreation Committee, Inc.
Harford County Department of Planning and Zoning
Harford County Public Library
Harford County Transportation Services
Harford County Health Department
Maryland Department of Planning
Maryland Department of Transportation
Maryland Transit Administration
Maryland State Highway Administration
Friends of the Concord Point Lighthouse
Havre de Grace Decoy Museum
Havre de Grace Maritime Museum
Susquehanna Museum of Havre de Grace, Inc.
Chesapeake Heritage Conservancy, Inc.
Baltimore Gas & Electric Company
Upper Chesapeake Health System

The Planning Commission thanks all of the citizens of Havre de Grace, the Planning Area, and Harford County who either attended and actively participated in the forums and public hearings or read and commented on the Comprehensive Plan draft.

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I. OVERVIEW

This Comprehensive Plan is designed to be a guide for the physical development of the City. It was prepared with the intent of educating the public about planning decisions, and serves as a document to assist the Mayor and City Council as they consider important funding and budgetary priorities. In addition, the Plan serves as recognition of the City's support of Maryland's *Smart Growth Initiative* as a cornerstone of intelligent planning and local land use policy.

The purpose of the Comprehensive Plan is to encourage development of a safe, healthy, and distinctive living environment—one that serves the existing community, entices visitors, and stimulates economic development. Also crucial is the desire to retain the "small town" aspects of Havre de Grace, which so many people cite as being very important. Downtown preservation and enhancement remain as a primary planning objective, however the entire community must be considered in respect to planning and development decisions and programs. Residential neighborhoods and industrial areas must be approached with the same care and thought when policies are planned and implemented.

The City of Havre de Grace, with the guidance of the Havre de Grace Planning Commission, engaged in a review of its 1996 Comprehensive Plan beginning in 2000. The Planning Commission and staff from the Department of Economic Development and Planning revalidated the Visions and Goals established in the 1996 Comprehensive Plan and began a review of the entire twelve-chapter document. This resultant document recognizes the accomplishments that have been made during the past eight years and builds on the foundation of the earlier plan. In addition, some new planning concepts have been developed during this review and incorporated in this planning document. The findings and recommendations included in this document serve as the basis for developing subdivision and zoning regulations and, ultimately, a capital improvements program which guides expenditures for necessary public improvements. This Comprehensive Plan is intended to be a reference for community leaders and citizens who are striving to make Havre de Grace a better place in which to live, work, and enjoy an excellent quality of life.

II. USE OF A COMPREHENSIVE PLAN

The purpose of a comprehensive plan is to give direction to both public and private decision-makers so that the most beneficial arrangement of land uses can be accomplished as well as the provision of public services for present and future residents. A comprehensive plan provides a basis for informed discussions by the public and its elected representatives on the future development of their community. It also coordinates decision-making within

and between public and private activity in the endeavor to achieve a healthy and balanced environment. To be effective, the plan must be accepted, understood, and supported by the elected officials who are charged with the responsibility of decision making and by citizens who recognize the benefits that can result from good planning. It must also be tailored toward the social, economic, and environmental conditions that prevail today while at the same time promote a balance between environmental and historical protection and the provision of adequate services and facilities required by the populace in the future.

The following statements address more specifically the various uses of the comprehensive plan:

- *An economically healthy balance of land uses is represented in the comprehensive plan which provides a framework for consideration of annexation and rezoning applications.*
- *Use permits, subdivision plats, site plans, and general development proposals can be reviewed within a more comprehensive frame of reference and not approached on a piecemeal basis.*
- *Improvements to the City's transportation network can be coordinated to provide a more integrated and serviceable system.*
- *Programs for the improvement and/or expansion of public utility systems can be undertaken in a more judicious manner.*
- *Public services and facilities can be provided in a more economical and efficient manner.*
- *The comprehensive plan will promote an awareness of social values which should result in a wide variety of housing types, densities, and price ranges.*
- *Once officially recognized, natural resources, scenic vistas, features of historical and architectural significance, and areas of natural beauty can be more effectively preserved, protected, and integrated into an orderly pattern of development.*

III. STUDY AREA

The Havre de Grace planning area consists of three segments: (a) the older portions of the City located to the east of US 40, which are identified as revitalization areas, (b) newer neighborhoods and developing areas which are within corporate limits, and (c) areas outside of corporate limits which are recognized as logical planning areas by the Planning Commission. The area reviewed is generally bounded by Interstate 95 to the north; Earlton and Robinhood Roads to the west; the Oakington Peninsula to the south; and the Susquehanna River and Chesapeake Bay to the east. The incorporated areas of Havre de Grace reflect the City boundaries as they were on 1 July 2003.

Within each of the three comprehensive planning areas are sub-areas that represent a section of the City or a common characteristic for planning analysis. For instance within the *Revitalization Areas*, there are sub-areas for the City's Waterfront, Downtown Business District, and Old Town, among others. *Newer Neighborhoods and Developing Areas* address existing neighborhoods, like the Meadowvale community, Grace Harbour, Bayview Estates, and tracts of land yet to be developed within the City limits. *Growth Areas*, on the other hand, are those areas outside of the City that must be reviewed in terms of future annexation and desired land uses.

IV. LOCATION

Havre de Grace is located in northeast Maryland at the mouth of the Susquehanna River on the Chesapeake Bay. The City is centrally located between Wilmington, Delaware, which is forty miles to the northeast, and Baltimore, Maryland, which is thirty-five miles to the southwest. These cities are connected by US 40, which extends through the City, and the John F. Kennedy Memorial Highway (Interstate 95), located just northwest of the City.

Havre de Grace is in the eastern corner of Harford County and constitutes one of the three municipalities in the County. Other municipalities include the City of Aberdeen, located three miles to the southwest, and the Town of Bel Air, the County seat, which is located thirteen miles west of the City. Northeast of Havre de Grace, across the Susquehanna River, is Perryville, which is a small community located in Cecil County. Havre de Grace is connected to Perryville and Cecil County by the Thomas J. Hatem Memorial Bridge and the Millard E. Tydings Memorial Bridge. The Pennsylvania border is twenty miles north of Havre de Grace, and the City is within an hour's drive of Lancaster, Chester, and York, the nearest major cities in Pennsylvania. Havre de Grace is forty minutes from Baltimore and Wilmington, seventy-five minutes from Philadelphia and ninety minutes from Washington D.C. Within a three hour radius of Havre de Grace are the great metropolitan areas of the Northeast Atlantic seaboard, including New York, which constitutes the largest regional concentration of people, urbanization, and economic activity in the United States.

V. CITY HISTORY

In the interest of establishing the background for this study, it is of value to understand the historical beginnings of the City. The first recorded history of Havre de Grace can be traced back to the mid-1500s when various explorers traveled into the Chesapeake Bay area. A map of the Bay was produced in 1585 by an Englishman named Wyth, but it was not until John Smith's exploration of the Upper Bay and Susquehanna River area in 1608 that a detailed description of the area was recorded. In 1658, the land on which Havre de Grace is now located was granted to Godfrey Harmer, and he called the site Harmer's Town. During the following year, Harmer transferred his land to Thomas Stockett, and the site became known as Stockett's Plantation.

Many of the determining factors surrounding the growth of the City are closely linked to its location at the mouth of the Susquehanna River. In 1695, the General Assembly granted permission to establish a ferry with inns on either side of the river. A toll ferry, put into

operation in the same year, became the first legally established crossing of the Susquehanna as well as an important crossing on the lower Susquehanna. After the establishment of Bell's Ferry at Lapidum in 1727, Bell's was referred to as "Upper Ferry", and the settlement on the site of present day Havre de Grace became known as Susquehanna Lower Ferry. During colonial times, Havre de Grace, known as the Susquehanna Lower Ferry, had become an important link in the great coach road between Philadelphia and the South. The Lower Susquehanna River Crossing was used more frequently than other river crossings since it was located on the most direct route between Baltimore and Philadelphia. Washington, Jefferson, Richard Henry Lee, Madison, Monroe, John Adams, John Quincy Adams, and other colonial leaders used the Lower Susquehanna River Crossing during their travels.

The City became known as Havre de Grace in about 1782. According to legend, Lafayette referred to the City as Havre de Grace in a letter to George Washington. It is said that the site reminded him of the French seaport, Le Havre. Havre de Grace was incorporated as a Town in 1785 and in 1799 developed its first City Plan. Many of the streets that were laid out on this early plan still exist today, with Congress and Union Avenues as principal streets.

While the City had not been directly involved in the Revolutionary War, much of it was destroyed during the War of 1812, the second war with the British. In 1813, a group of local militia from Havre de Grace fired upon a party of British naval vessels, leading to the subsequent burning and ransacking of the Town by the British. Consequently, few eighteenth century structures remain in Havre de Grace, and the City has subsequently rebuilt itself.

In the nineteenth century, many of the major historical events in Havre de Grace were related to commerce and transportation. The Concord Point Lighthouse was built in 1827 to aid in navigation. In 1836, the Baltimore, Wilmington, and Philadelphia Railroad laid tracks from Baltimore to Philadelphia via Havre de Grace. The Susquehanna and Tidewater Canal from Havre de Grace to Wrightsville, Pennsylvania opened in 1840. A passenger steamboat service from Havre de Grace to Baltimore was also initiated in that year. During the Civil War, many new business efforts began and prospered in Havre de Grace, including sand export, fishing, ice harvesting, canning, and milling operations. The first bridge across the mouth of the Susquehanna was constructed by the Baltimore, Wilmington, and Philadelphia Railroad in 1866. The Susquehanna and Tidewater Canal ceased operation in 1900.

The first half of the twentieth century saw numerous important local events including the opening of the Bayou Hotel in 1921, the completion of the Conowingo Dam in 1928, and the construction of the US 40 bridge in 1939. The double-decked bridge, which remained open until the completion of the US 40 bridge, was dismantled and sold for scrap iron during World War II. The Graw, a Havre de Grace racetrack built in 1912, provided a popular form of entertainment for residents and visiting race enthusiasts until it ceased operation in 1950. Harford Memorial Hospital, during the same period of time, became the primary County hospital and remains a vital medical service provider today. Duck hunting, or gunning, on the Susquehanna Flats was at its peak. Being a neighbor to the Aberdeen

Proving Ground (APG) and the former Bainbridge Naval Training Center, Havre de Grace provided entertainment and off-base housing to military troops stationed at these facilities.

Recent events of significance in Havre de Grace include the arrival some major industries centered along MD 7/Old Post Road and Chesapeake Industrial Park. Expansion of marinas, cultural museums, public waterfront areas, and downtown commercial revitalization are transforming the older portions of the City. In addition, significant residential developments, which include the newer communities such as Bayview Estates, Grace Harbour, Bayland Condominiums, and numerous waterfront condominiums as well as future Bulle Rock communities, are changing the landscape of the City. On-going public improvements and increased private investment are working to advance the City into a vibrant waterfront community.

VI. SOCIO-ECONOMIC PROFILE

The main areas covered in this socio-economic profile for the City include population trends, age distribution, race distribution, median household and per capita income, poverty status, and labor force characteristics. The information contained in this chapter is based upon U.S. Census Bureau, Census 2000 data and past census data reflected in the 1996 Comprehensive Plan. The data provided are a consolidated form identified by the geographic areas of the City of Havre de Grace and Harford County, Maryland. Data for Harford County are included to give an insight into how Havre de Grace compares with the expanded population of Harford County as a whole. Statistical profiles of general demographic information and selected social, economic, and housing characteristics were utilized.

A. Population

The City's population increased marginally (2.2%) from 8,763 in 1980 to 8,952 in 1990. However, the City experienced a significant population increase of 26.6% from 1990-2000. The overall increase is primarily attributed to in-migration and an increase in housing stock due to the new residential development west of US 40. It is fully expected that population growth will continue at an even greater pace over the next ten years because of new residential growth of the proposed Bulle Rock communities, proposed annexations, and in-fill residential development in the older communities. Information on the estimated number of housing units is available in Chapter 11, Housing, and will provide an indication of anticipated population growth.

TABLE 1.1
TOTAL POPULATION
FROM CENSUS 2000, PROFILE OF GENERAL DEMOGRAPHIC CHARACTERISTICS

Population	1980	1990	1980-1990 % change	2000	1990-2000 % change
Havre de Grace	8,763	8,952	2.2	11,331	26.6
Harford County	145,930	182,132	24.8	218,590	20.0
% of Total Population	6.0%	4.9%		5.2%	

There are striking differences in the population by age trends between 1990-2000 as compared to 1980-1990 with regard to the 0-20 year and the 21-64 age cohorts for the City of Havre de Grace as shown in the following table. This reflects the new residential growth west of US 40 and the influx of new families with school age children.

TABLE 1.2
POPULATION BY AGE - CITY OF HAVRE DE GRACE
FROM CENSUS 2000, PROFILE OF GENERAL DEMOGRAPHIC CHARACTERISTICS

Age Group	1980	1990	1980-1990 % change	2000	1990-2000 % change
0-20 years	2,897	2,564	-11.5	3,231	26.0
21-64 years	4,640	5,024	8.3	6,622	31.8
65+ years	1,226	1,364	11.3	1,478	8.4
Total	8,763	8,952	2.2	11,331	26.6

B. RACE

The following table shows the Census 2000 statistics on racial composition of Havre de Grace and Harford County based on the *Profile of General Demographic Characteristics: 2000, RACE* for those respective geographic areas. In addition to what is shown on Table 1.3, statistics on Hispanic or Latino populations are provided by Census 2000 data separately (as provided by *Profile of General Demographic Characteristics: 2000, HISPANIC OR LATINO AND RACE*). Census data of the Hispanic or Latino population for Havre de Grace show 241 persons, or 2.1%; Harford County's Hispanic or Latino population is 4,169, or 1.9% of the County's total population.

TABLE 1.3
HAVRE DE GRACE - PROPORTION BY RACE
FROM CENSUS 2000, PROFILE OF GENERAL DEMOGRAPHIC CHARACTERISTICS

Race	Havre de Grace 2000	% of Population	Harford County 2000	% of Population
One Race				
White	8,979	79.2	189,678	86.8
Black or African American	1,830	16.2	20,260	9.3
American Indian and Alaska Native	25	0.2	498	0.2
Asian	146	1.3	3,313	1.5
Native Hawaiian and Other Pacific Islander	13	0.1	129	0.1
Some Other Race	91	0.8	1,500	0.7
Two or More Races	247	2.2	3,212	1.5
Total Population	11,331		218,590	

C. Income

The median household income for a community provides important information regarding the spending power and lifestyle of that community, as well as overall wealth. Median household income for residents in Havre de Grace has been and continues to be considerably lower than that of Harford County as a whole. However, one positive trend that is evidenced from the 2000 census is that the percent of change for Havre de Grace between 1990 and 2000 is growing at a slightly higher rate than Harford County. Though not statistically significant, it may reflect a slow progression of the City's population in shortening the gap for median income between Havre de Grace and the general Harford County population.

TABLE 1.4
MEDIAN HOUSEHOLD INCOME
UPDATED FROM CENSUS 2000, PROFILE OF SELECTED ECONOMIC CHARACTERISTICS

Income	1980	1990	% change	2000	% change
Havre de Grace	\$14,441	\$26,678	84.7	\$ 41,218	54.5
Harford County	\$20,875	\$41,680	99.7	\$ 63,868	53.2

To be expected based on median income, Havre de Grace per capita income is also lower than that of Harford County. However in a positive trend, percent of change between 1990 and 2000 is increasing at a substantial rate of 62.0%, also indicating a measure that the gap is diminishing between Havre de Grace population and the County as a whole in terms of income.

TABLE 1.5
PER CAPITA INCOME
UPDATED FROM CENSUS 2000, PROFILE OF SELECTED ECONOMIC CHARACTERISTICS

Income	1980	1990	% change	2000	% change
Havre de Grace	\$6,342	\$13,112	106.7	\$21,176	61.5
Harford County	\$7,626	\$16,612	117.8	\$24,232	45.9

D. Poverty Status

Most recent information of poverty status is from 1999 Poverty Status from the U.S. Census Bureau *Profile for Selected Economic Characteristics: 2000* for the geographic area of Havre de Grace. The income threshold for poverty status for a family of four at the time of this survey (1999) was \$17,029. For a single individual, the income threshold for poverty status was \$8,501. Poverty status is determined for all persons except institutionalized persons, persons in military group quarters and college dormitories, and unrelated individuals under fifteen years old.

Though it is decreasing, Havre de Grace has a disproportionately high rate of poverty as compared to Harford County. Due to the 12.9% poverty rate, the need for services for low-income populations is also high. Necessary services include free and reduced cost meals, intervention programs, and instructional assistance for school children through Title 1 funding (Federal and State) in Harford County Public Schools, increased transit, social services, and housing support.

TABLE 1.6
POVERTY STATUS
UPDATED FROM CENSUS 2000, PROFILE OF SELECTED ECONOMIC CHARACTERISTICS
POVERTY STATUS IN 1999

	Residents below poverty (1980)	% of Total	Residents below poverty (1990)	% of Total	Residents below poverty (1999)	% of Total
Havre de Grace	1,482	16.9	1,304	14.6	1,461	12.9
Harford County	10,638	7.3	9,122	5.0	10,695	4.9

E. Labor Force

Unemployment is an important indicator of the socio-economic conditions present in a community. Within the City of Havre de Grace, the labor force increased while the number of unemployed remained steady during the past ten years. Overall, there was a slight decrease in the unemployment rate for the City to 5.1%. In comparison, the unemployment rate for Harford County for 2000 is extremely low at 3.1 %, while the labor force has increased significantly.

TABLE 1.7
EMPLOYMENT STATUS
UPDATED FROM CENSUS 2000, PROFILE OF SELECTED ECONOMIC CHARACTERISTICS

	Total Civilian Labor Force	Number Unemployed	% Unemployed
Havre de Grace			
1980	3,741	256	6.8
1990	4,456	296	6.6
2000	5,757	296	5.1
Harford County			
1980	66,613	3,884	5.8
1990	96,765	3,265	3.4
2000	115,314	3,522	3.1

As shown in Table 1.8, the leading occupation for the civilian employed population in Havre de Grace is management, professional, and related occupations at 33.6%, with sales and office occupations as second highest (26.3%). Though not shown in the table, the total population 16 years or older is 8,716, with 5,792 in the labor force and 2,924 persons (or 33.5%) not in the labor force. Those not in the labor force may be retired individuals or are individuals that do not identify themselves as part of the labor force at

the time of data collection for Census 2000. In addition to the civilian work force identified in the table below, thirty-five (35) persons are employed in the Armed Forces.

TABLE 1.8
HAVRE DE GRACE – OCCUPATION STATUS, 2000
FROM CENSUS 2000, PROFILE OF SELECTED ECONOMIC CHARACTERISTICS

Occupation	No. of Persons	% of Total
Management, professional, and related occupations	1,834	33.6
Service occupations	752	13.8
Sales and office occupations	1,434	26.3
Farming, fishing, and forestry occupations	3	0.1
Construction, extraction, and maintenance occupations	592	10.8
Production, transportation, and material moving occupations	846	15.5
Total Employed Civilian Population 16 years and over	5,461	

F. Summary of Socio-Economic Profile

During the past ten years, the City of Havre de Grace has experienced a substantial increase in population. Due to known and anticipated future residential development, the City's population growth will continue. In addition to population, income levels are continuing to rise at a steady rate. Population diversity in terms of racial composition continues to be excellent, reflecting a healthy and vital community. As evidenced by census data, these are positive trends that reflect the City's changes since the 1996 Comprehensive Plan. However, the City of Havre de Grace also has a substantial population of low-income and poverty level status. These populations need the continuing publicly funded support services that are required by individuals and families in need.

I. INTRODUCTION

This chapter re-establishes the City's broad visions and goals stated in the 1996 Havre de Grace Comprehensive Plan. The visions and goals established in the 1996 Comprehensive Plan were a product of substantial community effort and are recognized as valid today. In addition, this chapter also includes the State of Maryland's eight visions as provided by the *Neighborhood Conservation and Smart Growth Initiative*. This State initiative guides local planning policy by establishing eight visions to be included at the local planning level. The chapter also describes the community process used for the development of this Comprehensive Plan.

II. PLAN PREPARATION

The approach used in the preparation of this Plan placed great importance upon gathering input from the many stakeholders in the community who will be affected by the Plan's recommendations. Elected and appointed officials, residents, and business owners were invited to participate in the Plan's development. Initially, members of the Planning Commission recognized the value of the 1996 Havre de Grace Comprehensive Plan and determined that it would serve as the foundation for the development of this subsequent plan in terms of format and content. They began an in-depth review and revision in 2000, noting accomplishments and formulating changes and recommendations for all twelve chapters of the document. In October 2001, the Planning Commission held a public weekend workshop with the Mayor, City Council, and City staff members to identify broad concepts to be incorporated in the planning document.

In December 2001, the Planning Commission held two evening public open houses to gather community perspective on the development of the Comprehensive Plan. Both open houses included an informational presentation at the beginning of the session and an atmosphere of informal discussion around stations relating to chapter topics. Participants could ask questions or provide opinion on items of their interest, and a facilitator at each station documented all information. Over one hundred people participated in these two open houses. In addition, the City newsletter provided an email contact for additional community comment for the period that the Plan was developed.

During 2002 and 2003, staff of the Department of Economic Development and Planning substantially revised the twelve chapter document under the advisement of the Planning Commission. Chapters of the document were provided to various City Commissions, such as the Economic Development and Historic Preservation Commissions, for their review and content opinion as well. Public hearings by both the Planning Commission and City

Council prior to the adoption of this Comprehensive Plan provided final public comment for its formal legislative establishment. In addition and as required, the Maryland Department of Planning and Harford County Government also were provided the opportunity to comment on this Plan.

Modified only slightly from 1996, the following visions will continue to serve as the guiding principles for the City's land use for future development. In very broad terms, they are the essence of what the City is striving to be. It is essential that the Mayor and City Council reference the Plan and these guidelines during their deliberations at the budget, project, and program levels.

III. VISIONS AND GOALS

The visions established by the City have been grouped into five general categories:

- (1) *Community Services and Development*
- (2) *Urban Design and Development*
- (3) *Environment and Open Space*
- (4) *Historic and Cultural Resources*
- (5) *Economic Development*

Additionally, the State mandates that the Planning Commission implement the following visions through the Comprehensive Plan (Codified at § 3.06(b), Article 66B, Annotated Code of Maryland). These eight visions are a comprehensive set of guiding principles established by the State of Maryland, which describe how and where growth and development should occur. They also call for land and water stewardship to guide land use policy, individual efforts, and group actions. Due to the dense nature of historical development patterns of Havre de Grace, its relationship to major transportation networks, and availability of public utilities, the City's planning efforts directly support the State of Maryland's *Smart Growth* Initiative.

- (1) *Development is concentrated in suitable areas;*
- (2) *Sensitive areas are protected;*
- (3) *In rural areas, growth is directed to existing population centers, and resource areas are protected;*
- (4) *Stewardship of the Chesapeake Bay and the land is a universal ethic;*
- (5) *Conservation of resources, including a reduction in resource consumption, is practiced;*
- (6) *Economic growth is encouraged and regulatory mechanisms are streamlined;*
- (7) *Adequate public facilities and infrastructure under the control of the county or municipal corporation are available or planned in areas where growth is to occur; and*
- (8) *Funding mechanisms are addressed to achieve these visions.*

The following visions and goals have been developed for the purpose of coordinating the quality, scale, location, and timing of future development within the City of Havre de Grace. Developed through the community's numerous stakeholders, these adopted visions and goals set the physical, social, economic, and cultural framework around which the Havre de Grace Comprehensive Plan is designed. The following definitions of the word *vision* and the word *goal* describe the relationship of visions to goals for the purpose of this Comprehensive Plan.

Definitions

VISION: *A statement of a desired future condition.*

GOAL: *A specific step or action necessary or desirable to make a vision reality.*

Each of the aforementioned five general categories contains a vision statement along with a set of goals to be achieved.

1. Community Development

VISION: **A Good Family Life**

Goal A: Preserve and improve the stability, physical structure, and property values of existing neighborhoods.

Goal B: Provide adequate public services and facilities to existing and future residents of the City.

Goal C: Promote and encourage a City-wide sense of community among the residents, in both old and new neighborhoods.

Goal D: Promote volunteerism and philanthropy within the community.

Goal E: Improve the quality, availability, diversity, and affordability of housing throughout the City.

2. Urban Design

VISION: **A Small Town Ambiance**

Goal A: Preserve the small town image, amenities, and appearance of the City.

Goal B: Plan, design, and develop land uses which complement the downtown, the waterfront, and historic areas.

Goal C: Protect waterfront vistas along the Susquehanna River and the Chesapeake Bay and maintain public access to these features.

3. Environment and Open Space

VISION: An Environmentally Sensitive Community

Goal A: Protect and maintain the environmental resources in Havre de Grace.

Goal B: Minimize the adverse effects of development on environmental resources.

Goal C: Participate with Harford County and other governmental agencies (Maryland Department of the Environment, Department of Natural Resources, and the Corps of Engineers) in efforts to protect environmental resources.

Goal D: Conserve and protect the City's sensitive areas and natural ecology and encourage development in a manner which minimizes impacts on these areas.

Goal E: Create opportunities for City recreation, parks, open space, and urban street landscaping.

Goal F: Conserve significant green space and open land.

Goal G: Take advantage of opportunities to enhance or retain scenic views and byways.

4. Historic and Cultural Resources

VISION: A Historic And Cultural Center

Goal A: Protect and enhance the historical elements and building architecture which contribute to the distinctive image of the City.

Goal B: Protect and enhance the visual and historic character of the various periods and styles of Havre de Grace's evolution.

Goal C: Protect and preserve the historically significant manor houses in the Havre de Grace planning area.

Goal D: Support the City's numerous museums in their efforts to interpret the important cultural history of the region.

5. Economic Development

VISION: A Good Place To Do Business.

Goal A: Support the retention of existing businesses while exploring opportunities for new business development.

Goal B: Expand and enhance conveniently accessible and attractive commercial and industrial development.

Goal C: Strengthen and expand the existing tourism industry in the City.

Goal D: Encourage retail and service development in the Downtown Business District.

Goal E: Utilize policies, financial incentives, and business skill enhancement opportunities to strengthen and stimulate private development.

Goal F: Coordinate the efforts of economic development, local business, and tourism organizations to assure a unified and strong approach to improving the economic base.

Goal G: Explore opportunities available to the City to receive and leverage economic development funds.

These visions and goals, supported by the Mayor and City Council, will continue to be used as a basis in the preparation of land use recommendations, development strategies, plans, and programs.

I. DEVELOPMENT OF THIS PLAN

The City developed this plan by:

- Reaffirming the visions and goals established in the 1996 Comprehensive Plan
- Outlining the requirements of public water and sewer infrastructure to serve future areas that are annexed
- Acknowledging the land use changes that have taken place since the 1996 Plan, and
- Minimizing impacts to the City's environmental and historical resources.

Since the adoption of the Comprehensive Plan in 1996, the municipal boundaries have changed considerably. Annexation of large land tracts to the west of the City along Chapel Road, such as Mt. Pleasant Farm and the Bulle Rock North Course, and Barker parcel located at the I-95 interchange has brought a great deal of 1996 Comprehensive Plan to fruition. In addition to the City's new growth areas, revitalization efforts within the older portions of the City of Havre de Grace continue to enhance the City's attractiveness for its residents and as a destination for travelers. This Comprehensive Plan builds on past accomplishments and the foundation that the 1996 Comprehensive Plan provided.

The approach that was taken to determine the future of Havre de Grace in this Comprehensive Plan is one that takes into account the whole City as an integrated community. The City is a strong and established community. It is a City of new vibrant neighborhoods, historic homes on tree-lined streets, extensive waterfront public parks, beautiful downtown, growing service/retail corridor, and strong employment centers of both industry and health care. Located on the Susquehanna River at the top of the Chesapeake Bay and along the I-95 corridor that connects the Philadelphia and Wilmington areas with Baltimore and Washington D.C., the City is in an excellent position to determine its future within a dynamic local and regional context.

II. THE PLANNING CONTEXT: STATE OF MARYLAND AND HARFORD COUNTY

The City gets its legal planning authority from the Article 66B of the Annotated Code of Maryland, which is part of the Laws of Maryland. For jurisdictions that fall under Article 66B, the law outlines the role, powers, terms, and composition of Planning Commissions, defines the required components of a comprehensive planning document, determines enforcement powers and subdivision review authority, and sets Board of Appeals

requirements. Through Article 66B, the City has the autonomous function of planning for the land within its municipal borders.

In addition to the legal authority that the State of Maryland determines, the State has developed strong planning policies through the 1997 Smart Growth Areas Act. These Smart Growth policies set the stage for jurisdictions within the State to fund projects that are located in areas that have infrastructure already in place so that growth is focused in appropriate areas. These areas are called Priority Funding Areas, and municipalities such as the City are designated as such. The intent of Priority Funding Areas is to provide the most efficient and effective use of taxpayer dollars, to avoid higher taxes which would be necessary to fund infrastructure for sprawl development, and to encourage development in areas where infrastructure already exists, thus reducing the pressure for sprawl development.

Within the context of State Law, the City must also consider the planning policies of Harford County in regard to new growth areas that result in annexation. Annexation law is determined by Article 23A, Section 19 of the Annotated Code of Maryland, which outlines the authority of a municipal legislative body to enlarge corporate boundaries to areas that are contiguous to and adjoining the existing corporate area. This is done through petition of property owners to the municipality or through municipal action. However in the annexation process, the land use designation for the property cannot be substantially different from the land use designation specified in the current adopted master plan of Harford County without the express approval of the Harford County Council (Article 23A, Section 9 of the Annotated Code of Maryland). If there is a substantial difference in the land use designation, a five-year waiting period for the change of use is required unless a waiver is granted by the County Council. Because of this relationship between the City and Harford County as determined by State Law, coordination between land use policies of both jurisdictions is paramount for productive implementation of land use planning efforts.

III. THE PLAN FOR THE CITY

The planning area for the City consists of the land that is currently within the City's municipal boundary and potential growth areas that are within a reasonable proximity of the City's boundary. Identified growth areas are those areas outside of current municipal limits, which in the Havre de Grace Planning Commission's judgment, bear relation to the planning responsibilities of the Commission. Annexation is a natural and consistent measure for growth within this County and this region. For the purpose of this planning document, the City's planning area includes land bounded by the Susquehanna River and Chesapeake Bay to the east and south; Interstate 95 to the north; and Earlton Road and Robinhood Road to the west. Potential growth areas are identified on the Comprehensive Plan Areas map located at the end of this chapter. These growth areas were established with consideration for the Smart Growth policies set forth by the State of Maryland, planning policies that guide growth and development within Harford County, the City of Aberdeen's most recent annexations, and the ability to serve the properties with public utilities.

The Comprehensive Plan for the City incorporates *Revitalization Areas*, *Newer Neighborhoods/Developing Areas*, and *Growth Areas* within its planning framework. These areas are described as follows:

Revitalization Areas are those areas that are located east of CSX Rail Line and are generally among the older portions of Havre de Grace. The Revitalization Areas section includes older neighborhoods, the downtown and the waterfront, properties along US 40 within the City limits, major street corridors within the City, and industrial areas. Revitalization of the older portions of the City is the key priority for the overall health of Havre de Grace. Continued enhancement of pedestrian connections and public facilities as well as private reinvestment in historic structures and new in-fill development are necessary for the renaissance of the City.

Newer Neighborhood/Developing Areas are those areas located west of the CSX Rail Line and include existing subdivisions such as Havre de Grace Heights, Chesapeake Heights, Meadowvale, Grace Harbour, and Bayview Estates. In addition, areas which are within City limits and are under construction or recently annexed are included in this section. Neighborhoods such as Grace Manor and the annexed areas of Bulle Rock are discussed as well as the Mixed Office Employment district located at the I-95 Interchange.

Growth Areas is the final section of this chapter. Growth areas, or areas which may be considered for annexation, include land that is within one mile of municipal boundaries and has a likelihood of being annexed into the City. All of these sections – whether they be revitalization areas, newer neighborhoods, developing areas, or future growth areas – need to be viewed collectively to ensure, to the extent possible, a cohesive city in terms of connectivity, public resource allocation, and community identity.

The Comprehensive Plan Areas map (Figure 3.10) located at the end of this chapter illustrates the geographic relationship of these areas to each other. *Revitalization Areas* are delineated in blue in this map; *Newer Neighborhoods/Developing Areas* are delineated in red; and *Growth Areas* are delineated in green. The seven *Revitalization Areas* are also mapped individually in the next section of this chapter. In addition, a Land Use Plan map (Figure 3.11) is located at the end of this chapter, which illustrates appropriate land use designations for the City and its growth areas. The land uses delineated on the Land Use Plan map are fully described in Chapter 4, Implementation.

A. REVITALIZATION AREAS

Older portions of the City are described in the following seven Revitalization Area sub-areas: 1. *Downtown Business District*, 2. *Waterfront*, 3. *Old Town*, 4. *Route 40 Corridor*, 5. *Gateway Corridors*, 6. *Revolution Street Neighborhoods*, and 7. *Industrial Area*. Boundaries for these Revitalization Areas are intended to be generalized, and may in some cases overlap each other. The following narratives summarize recommendations for each revitalization area, general location, existing land use, zoning, natural features and cultural aspects, and suggested design and special site development guidelines.

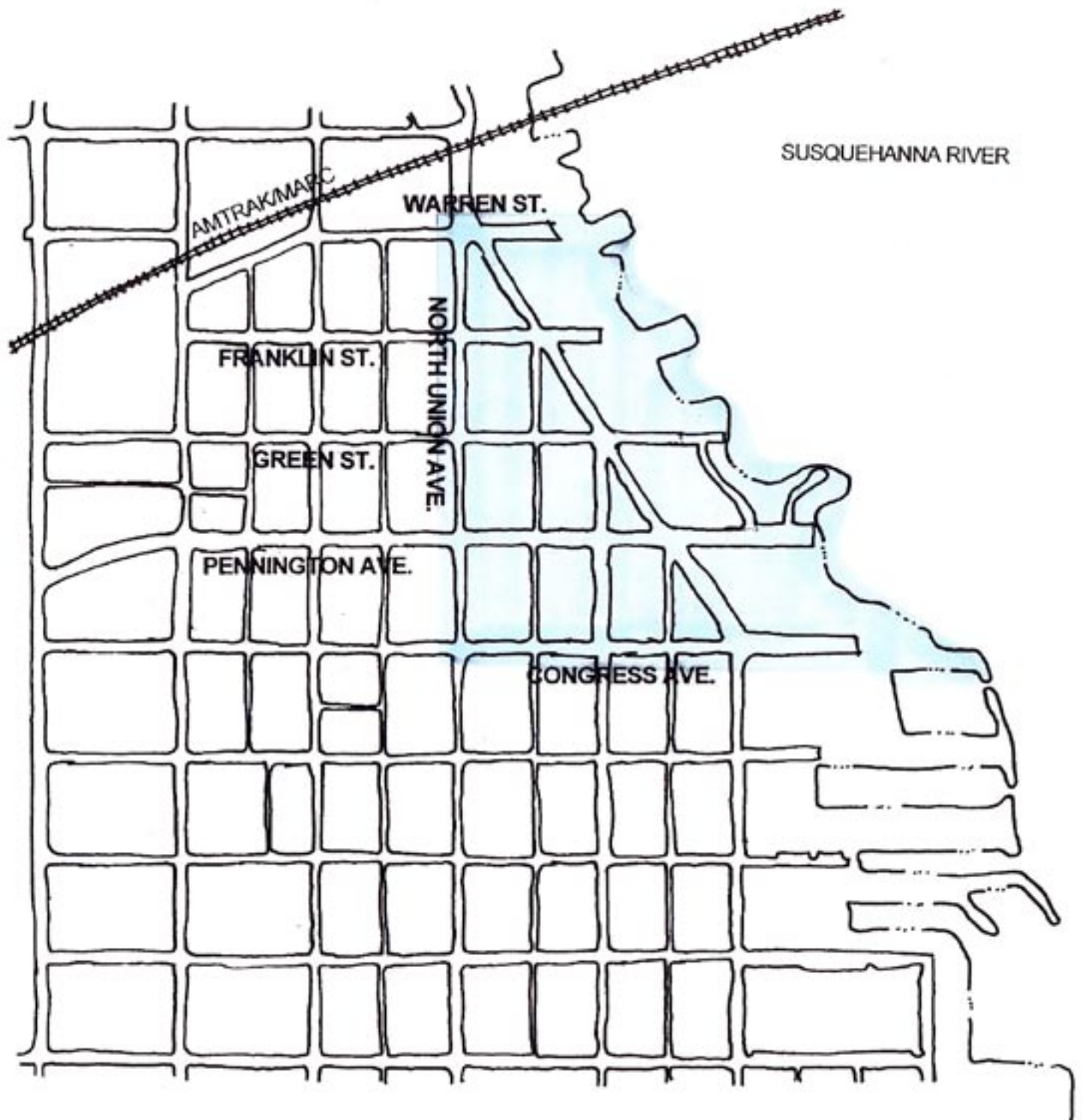
1. Revitalization Area 1 - Downtown Business District**Recommendations**

- Provide business development and resource education for businesses in the Downtown Business District, and work to attract new businesses into this important commercial area.
- Work with the Greater Havre de Grace Chamber of Commerce to develop a successful marketing campaign for the Downtown Business District.
- Develop design guidelines for new building construction so that new structures may be in character with existing historic downtown commercial buildings.
- Continue sidewalk and streetscape improvements within the Downtown Business District to enhance its attractiveness.
- Consider the designation of an Arts and Entertainment District in the Downtown Business District which provides property and income tax incentives through the State's Department of Business and Economic Development.
- Explore opportunities for placing utilities underground.
- Provide more cohesive signage to lead visitors to the Downtown Business District.
- Coordinate a comprehensive parking strategy that evaluates current parking provided within the Downtown Business District and determine future needs and possible shared use arrangements.
- Encourage use of Maryland Historic Rehabilitation Tax Credits for renovation of existing commercial structures.
- Educate property and business owners about the Maryland Building Rehabilitation Code (or Smart Codes) for renovation of existing structures.

The City's Downtown is situated along the Susquehanna River on the eastern side of Havre de Grace. It is generally located between the AMTRAK Line and Congress Avenue, and from Union Avenue eastward to the Susquehanna River. The existing zoning is predominantly RB (Residential Business), except for some limited areas along Union Avenue that are zoned RO (Residential Office). The entire Downtown Business District is within the City's recognized National Register Historic District.

The Downtown Business District is the heart of the City. Its proximity to the waterfront, well-crafted and architecturally detailed historic structures, interesting mix of businesses, and pedestrian-friendly streets are what make the downtown such a unique destination. The Downtown Business District is largely comprised of specialty retail shops, restaurants, offices, and financial institutions. As a historic, traditional downtown, it is also a strong center of mixed-use residential/commercial activity (i.e. apartments over shops).

Figure 3.1



REVITALIZATION AREA #1 (DOWNTOWN BUSINESS DISTRICT)

Changes to existing buildings or any new development in this district must be done in such a way as to preserve its character and historic commercial structures.

Business retention and new business development are key strategies for revitalizing this significant downtown commercial area. Supporting existing businesses through business development and resource education is a very important component of downtown revitalization, as is developing a marketing campaign. In addition, attracting new businesses that complement the existing uses is equally important in order to fill the vacant storefronts in this area and lead to increased viability of the entire downtown.

The City has accomplished streetscape enhancements for three commercial blocks on Washington and St. John Streets, and it will continue other improvements in the Downtown Business District as funding allows. These enhancements include decorative street lighting, brick edging for the sidewalks, street trees and furniture, and electric outlets for street decorations. Improvements such as these will be continued for the purpose of preserving the appearance and character of the City's downtown. It is the goal of the City to eliminate overhead utilities in the Downtown Business District over time. In addition, properties located within the Downtown Business District are also eligible for historic rehabilitation tax credits for commercial property.

Several implementation measures must be accomplished within the next several years. The development of design guidelines is desired for the Downtown Business District, which will set forth standards for site design for new, in-fill buildings and the architectural requirements of new structures. Currently, this district is characterized by its storefront appearance and zero lot line attached buildings; new development should be done in accordance with the existing character of the downtown. In addition, a parking plan must be developed that is reasonable for property and business owners, and takes into consideration the physical constraints of the downtown and keeps the small-town streetscape intact. Lastly, there is great need for a sign plan for travelers unfamiliar with Havre de Grace to locate the Downtown Business District and other destinations within the City. A sign study should be performed from the interchange at Interstate 95, along major routes of MD 155 and US 40, and throughout the road system within the City. It is also recommended that future bus stops and shelters be located and constructed to serve the Downtown.

Property owners within the Downtown Business District are encouraged to preserve or return store fronts to their original architectural character. The City also encourages the upgrading of existing apartment units and the creation of additional office space in upper-story adaptive use projects. This would be consistent with the City's vision of maintaining a small town and

historic flavor by protecting and emphasizing the visual and historic character of the various periods and styles of architecture.

2. Revitalization Area 2 - Waterfront

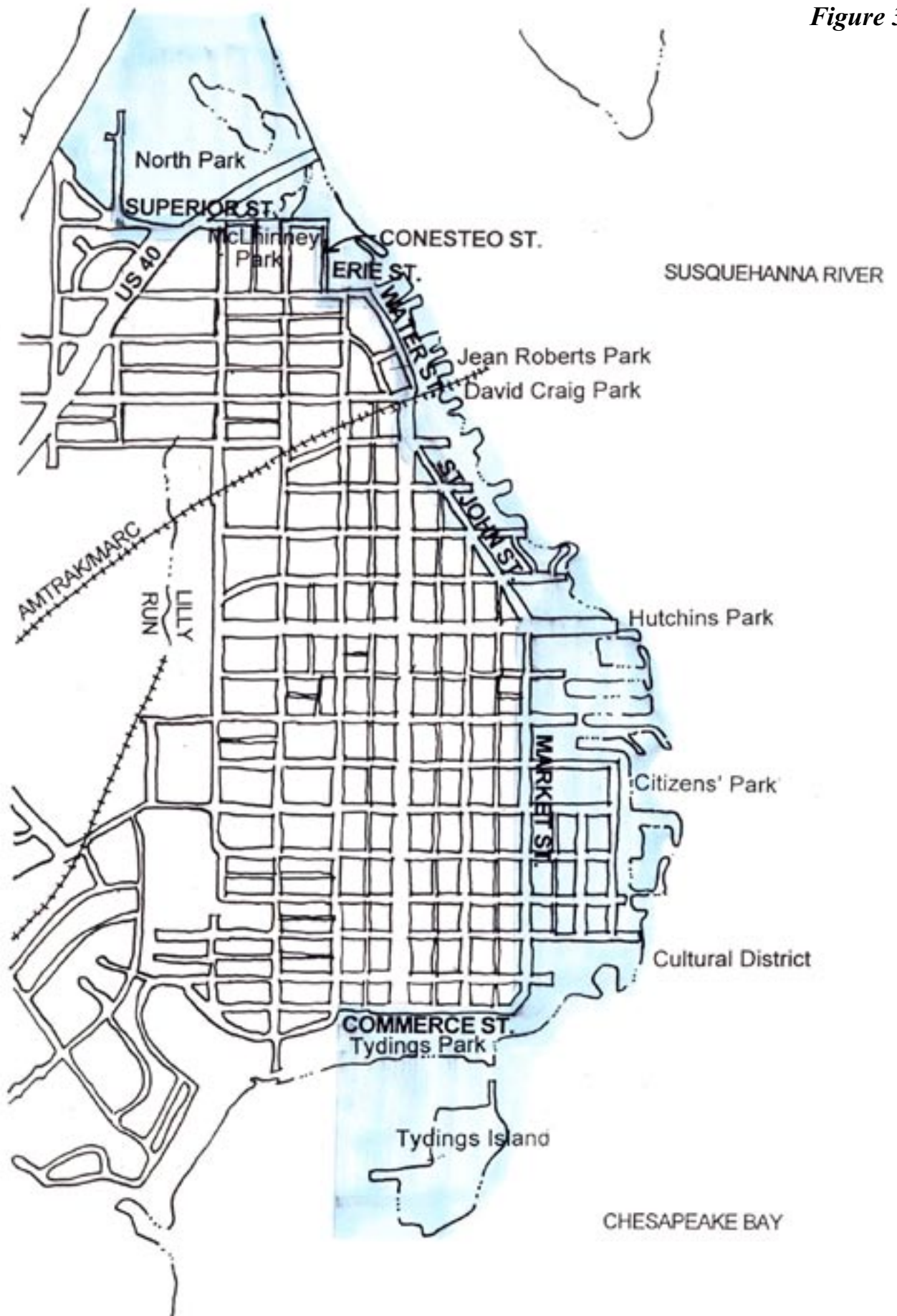
Recommendations

- Perform a waterfront study for the City shoreline areas that identifies appropriate land use and environmental constraints as related to adjoining waterways.
- Continue to explore and develop the concept of a waterfront jetty as a protection measure for the City's shoreline and as an enhancement for further economic development.
- Continue to develop pedestrian and bikeway connections within the City, to the Lower Susquehanna Heritage Greenway, and to other areas, such as Swan Harbor Farm on the Oakington Peninsula.
- Continue physical improvements on public land within the City, such as the signature sidewalk connections from North Park to the Promenade and redevelopment of park areas.
- Encourage appropriate re-use of underutilized parcels along the waterfront.
- Review and revise Chesapeake Bay Critical Area requirements for compliance with current State regulations and policies.
- Review and revise existing local regulations regarding zoning, parking, signs, and site development.
- Continue to work with property owners in regard to environmental regulations when performing property improvements in shoreline areas.
- Work with museums in the Heritage Park area to develop a shared parking area.
- Develop and implement a marketing campaign of Havre de Grace waterfront and City-wide attractions.

The City has approximately three and a half miles of shoreline beginning at North Park and ending at the end of Old Bay Lane at the City's municipal border. Generally, the waterfront as a revitalization area is located to the east of Water Street, St. John Street, Market Street and south of Commerce Street to include Tydings Park. Uses along the waterfront are diverse, varying from natural areas at the City's North Park, to dense marinas, buildings of historic significance, public parks and cultural attractions, downtown businesses, and waterfront condominiums. The current zoning in the waterfront area is predominantly R-B (Residential Business).

The waterfront is a tremendous asset of the City, for residents and visitors alike. Located at the point where the Susquehanna River meets the Chesapeake Bay, the City is unique ecologically because of its extreme river

Figure 3.2



REVITALIZATION AREA #2 (WATERFRONT)

currents from the high water volume of the Susquehanna and estuarine tidal action of the Chesapeake. Views from Havre de Grace are supremely beautiful, especially from the southeastern point of land known as Concord Point and Tydings Memorial Park which overlook the Susquehanna Flats at the head of the Chesapeake Bay. Balancing private development along the City's waterfront with the preservation of public access and open space is the challenge in maintaining the character that is uniquely Havre de Grace.

The development of a jetty along the City's shoreline to create a protective harbor is a concept that will be explored more fully in the next several years. This will include hydrologic feasibility studies, environmental impact analyses, and potential funding mechanisms. Expansion of waterfront uses and public access along the waterfront in the Downtown Business District is greatly desired. As shown on the Downtown Public Waterfront Promenade Concept Plan (Figure 3.3), the development of a waterfront promenade, public piers and landings, and attractive pedestrian connections to shops, restaurants, and public parks in the Downtown Business District will maximize the waterfront in this area of the City.

Because the City is located within the Chesapeake Bay Critical Area, special development regulations are applied to tidal waterfront areas within 1000 feet of the shoreline. The majority of the waterfront was designated as an Intensely Developed Area (or IDA) by the Chesapeake Bay Critical Area Commission in 1985, and was categorized as buffer exempt. As a result of this exemption, waterfront uses may continue to occur. However due to recent State policy changes (April 2000), properties located within the buffer exempt areas must follow guidelines for both re-development and new development. The City must review and revise its current Critical Area program to incorporate new State policy at the local level. Emphasis will be placed on maximizing public access, preserving water views, and maintaining an appropriate building scale for areas being redeveloped.

For the purpose of describing the Havre de Grace waterfront more fully, this section has been divided up into four sub-areas: Connections to the Lower Susquehanna Heritage Greenway (LSHG), North Waterfront, Mid-town Waterfront, and South Waterfront. This will aid in describing waterfront areas – their commonality and uniqueness – more effectively. In addition, a concept plan is included in this chapter to illustrate the relationship of the various public park areas along the waterfront, proposed connections, cultural attractions, and the Downtown Business District (see Figure 3.4, Heritage Corridor Plan).

A. ***Connections to the Lower Susquehanna Heritage Greenway***

Beginning with the northern end of the waterfront, it is planned that North Park will be tied into the LSHG trail system by a hiking path around Arundel Quarry. This trail system extends from the

Figure 3.3



DOWNTOWN WATERFRONT PROMENADE

Conowingo Dam to Havre de Grace on the west side of the Susquehanna River and from Conowingo to Port Deposit and Perryville on the Cecil County shoreline. Plans for the LSHG are focused on increasing heritage and eco-tourism for Havre de Grace, Port Deposit, Perryville, and Harford and Cecil Counties by creating waterfront trail systems which connect the municipalities with the beautiful natural areas along Susquehanna River.

The LSHG effort has been ongoing since 1993 and has accomplished the designation of the region as a Certified Heritage Area for the purpose of funding under the Maryland Heritage Areas Authority. Linkages through the City have been identified and include signature sidewalks, expanded waterfront promenades, and bike routes. Concepts for water linkages include potential pedestrian bridge locations and/or water taxi shuttles. Beyond the City to the south, Swan Harbor Farm should be viewed for future connections that link all the assets within this Chesapeake shoreline area.

A signature sidewalk, composed of concrete and brick pavers, is being constructed to connect the waterfront from Tydings Park to North Park. Starting at the corner of Lafayette and Concord Streets, the signature sidewalk will run north on Concord to Revolution Street, west on Revolution to Market Street, north on Market, St. John and Water Streets to Erie, west on Erie to Conestee Street, and north on Conestee to North Park. Period streetlights are also recommended along the entire length.

Within Havre de Grace, the signature sidewalk will connect public attractions along the waterfront. These attractions include, but are not limited to: McLhinney Park, North Park and the North Park Loop Trail, the Susquehanna Museum at the Lock House, Jean Roberts Park, David R. Craig Park, the Downtown Business District, Frank J. Hutchins Park, Concord Point Lighthouse and the Lighthouse Keeper's House, the Maritime Museum, the Decoy Museum, the Promenade, and Tydings Park. Numerous businesses and residential communities are linked within the pedestrian planning framework. In addition, water-taxi stop locations, downtown waterfront promenade, a kayak launch site, an expanded seaplane base, a pedestrian bridge from Havre de Grace to Perryville, and a safe harbor/jetty in the downtown area are being considered at this time to augment the existing waterfront amenities.

B. *North Waterfront*

The north waterfront area encompasses City-owned and leased lands of North Park and the Susquehanna Museum at the Lock House, private marina and boat sale uses, a limited amount of vacant land,

and Jean S. Roberts Park. In terms of private development efforts, an area of great opportunity lies in the vacant parcels in this area. Being one of the last areas along Havre de Grace's waterfront available for redevelopment, this area should be developed while avoiding the errors of the past. These errors include not providing public waterfront access or a view of the water. The area should provide mixed-use opportunities with quality, upscale commercial development, and should incorporate the signature sidewalk linkages along Water Street. Development efforts could also include additional marina capacity, however boat sheds in the form of high and dry facilities are not desired due to their height, which obstruct waterfront views and are unsightly from the water as well.

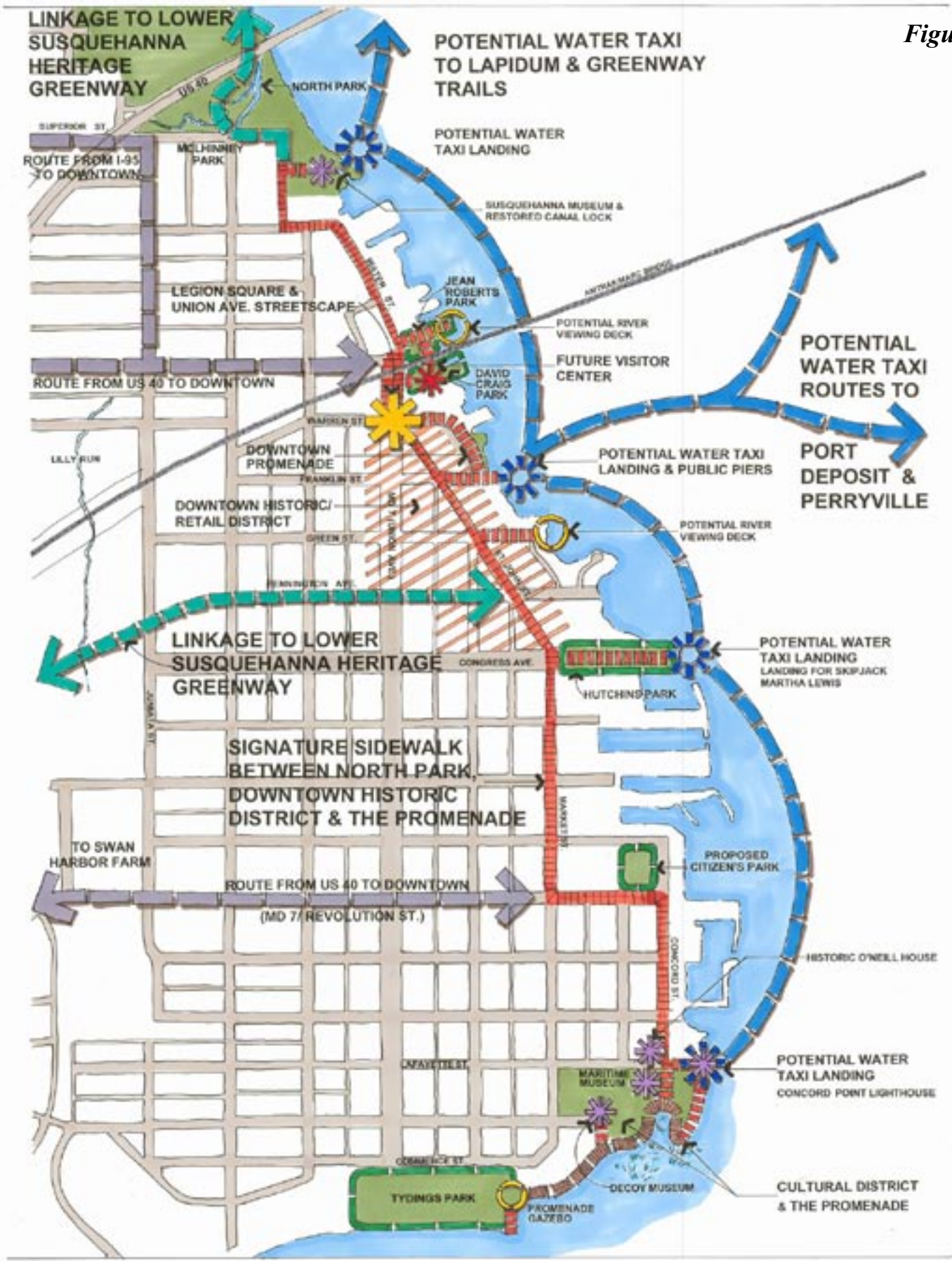
C. ***Mid-town Waterfront***

The mid-town waterfront includes land areas that are south of the AMTRAK Railroad Bridge and north of Girard Street. Beginning at the northernmost edge, it incorporates David R. Craig Park, American Legion Post #47, the water's edge of the Downtown Business District, Hutchins Park at Congress Avenue, and business, marina, and residential uses that extend to Girard Street. David Craig Park and Frank J. Hutchins Park are areas that are in transition for redevelopment into improved public facilities. Signature sidewalk improvements along St. John and Market Street are planned through this area as pedestrian linkages along the waterfront. In addition, a downtown promenade facility is being planned along the water's edge of the Downtown Business District.

Downtown waterfront revitalization strategies are numerous, with business retention and new business development as primary for revitalization. Planning efforts include: concepts for redevelopment of the municipal parking lot between Warren and Franklin Streets along the Susquehanna River behind the City's water treatment plant; re-use of existing storefronts in the downtown area for retail, service, and restaurant opportunities; streetscape enhancements; and support for destination-type uses, such as a kayak launch site and sea plane base improvements. Because of a lack of transient slips for visiting boaters, a jetty extending from Otsego Street to Congress Avenue has been proposed to provide another element of economic revitalization for the City's downtown commercial area. A study is underway to determine the economic and environmental feasibility of such a major undertaking.

Frank J. Hutchins Park is a public park located between the Downtown Business District and other businesses and marina uses south of Congress Avenue along Market Street. A Frank J. Hutchins Park redevelopment project is currently underway and will contribute

Figure 3.4



HERITAGE CORRIDOR PLAN

to the visual attractiveness of the City's mid-town waterfront. This park serves as a destination for visitors into Havre de Grace attending events on the Lantern Queen dinner cruise ship and Skipjack Martha Lewis. In addition to being a major point in the City for visitor access, this park provides a location for several large events. The redevelopment of Hutchins Park will improve the use of the park for public functions while creating a more attractive setting. Signature sidewalk connections will be built within the park and southward along Market Street.

D. *South Waterfront*

The south waterfront area encompasses newer residential condominium communities along the waterfront, a senior housing complex, Citizens Care Center, a private marina, and a large waterfront park area with museums. The museums and park areas at the southern end of the City are integrated into Heritage Park. This area includes Concord Point Lighthouse, the Light Keepers House, Maritime and Decoy Museums, the Promenade, Tydings Park, the Municipal Yacht Basin, and Tydings Island. Many improvements to this area have been accomplished or are underway, such as the redesign and construction of streets and utilities, the building of the Maritime Museum, and the renovation of the O'Neill Lighthouse Keepers House. Planned improvement strategies in this area are the continuation of the signature sidewalk and the development of a park behind the Citizens Care Center.

Redevelopment of Penns Beach Marina into an expanded and improved private marina and residential condominium project is underway with public access provided along the southern edge. The proposed public walkway would be of the same materials as the existing Promenade and would provide increased public access to the City's beautiful waterfront. In addition, another opportunity for redevelopment exists on a former scrap-yard site and adjoining vacant land. Proposals for this site must be of high quality design and be compatible with the surrounding uses. The site provides an excellent location for views to the Susquehanna Flats and Chesapeake Bay and could integrate housing, hotel or conference uses, cultural amenities, and parking.

The southern portion of the waterfront should continue to be developed into a rich cultural and recreational base. The museums located in this area provide experiential educational opportunities in local history and culture in a setting that is incomparable. The Promenade, Tydings Park, and other City-owned land of this area offer a tremendous public waterfront for the City's residents, visitors, and for Harford County and the region. Continued support to the

museums for their projects is paramount to the cumulative success of the cultural area, and incorporation of a shared parking concept needs to be carried to completion as a coordinated venture between the museums and the City.

Tydings Park, the Municipal Yacht Basin, and Tydings Island are located at the southern end of the waterfront area and are owned and operated by the City. Located on a bluff overlooking the Chesapeake Bay, Tydings Park is a grassy park with well-established trees, excellent views, a large play area, gazebo, and picnic tables. It is the site for numerous festival events, such as the Seafood, Arts, and Children's Art Festivals, and the location for the annual Fourth of July carnival.

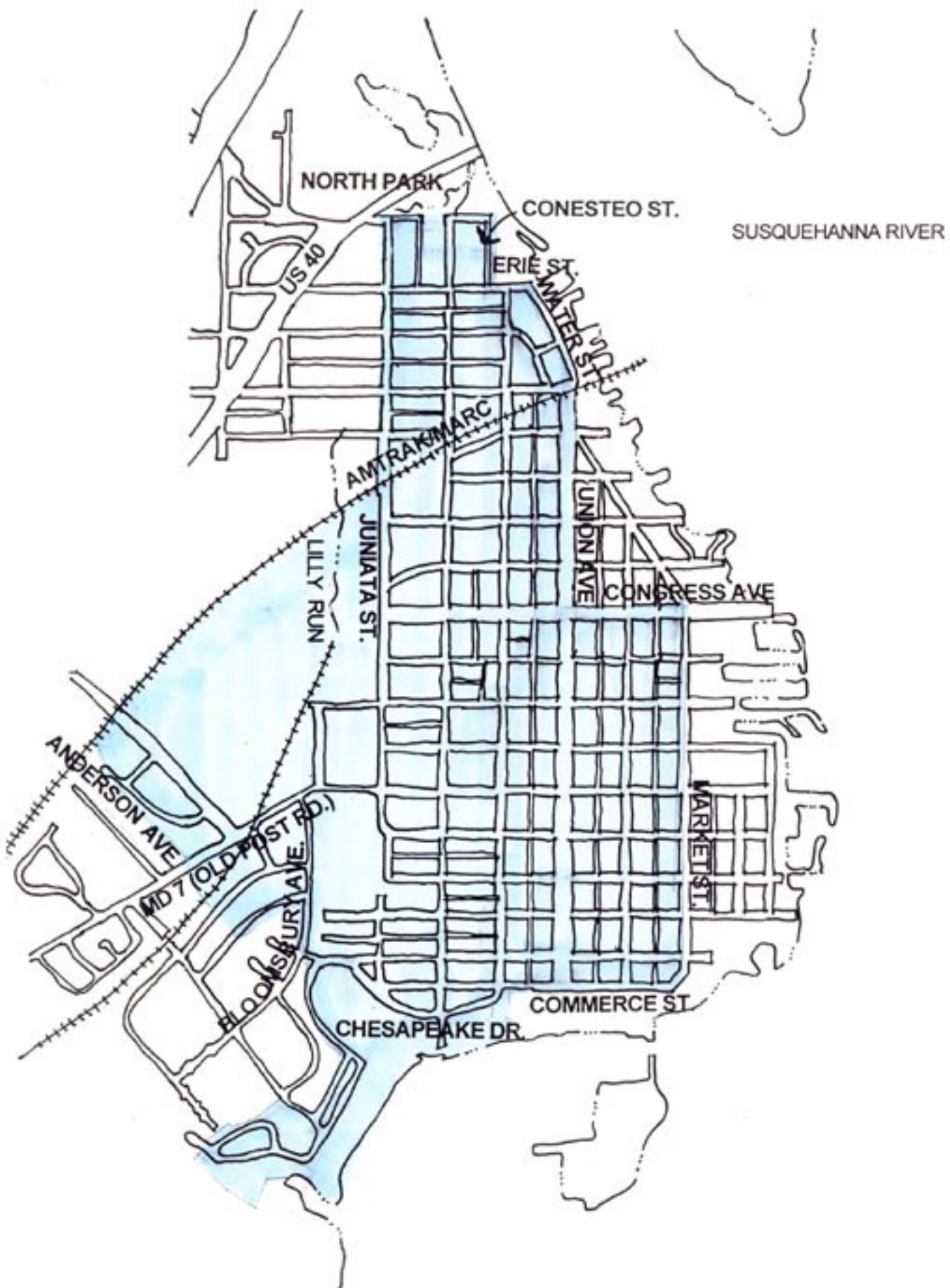
Below Tydings Park is the Municipal Yacht Basin, which has been undergoing renovation to include pier reconstruction, bulk-head replacement, and fuel dock, shower and attendant booth improvements. Tydings Island is an approximate fourteen-acre man-made island, which is a permanent Dredge Material Placement (DMP) site for reusable spoil materials when the Yacht Basin requires dredging. The island is also identified as a Resource Conservation Area (RCA) under Chesapeake Bay Critical Area regulations and is nesting grounds for area waterfowl. Providing excellent views of the headwaters of the Bay and beautiful parklands for outdoor enjoyment, Tydings Park, the Municipal Yacht Basin, and Tydings Island are of great value to the residents of the City and of the region.

3. Revitalization Area 3 - Old Town

Recommendations

- Encourage use of Maryland Historic Rehabilitation Tax Credits for renovation of existing historic structures throughout the Old Town area.
- Educate property and business owners about the Maryland Building Rehabilitation Code (or Smart Codes) for renovation of existing structures.
- Continue to support the mix of uses within the Old Town area of Havre de Grace, to include offices, residential, and limited commercial.
- Strengthen the medical corridor as a presence within the City.
- Encourage the renovation of converted apartment houses back into single family occupancy homes.
- Develop design guidelines for new construction within the National Register Historic District so that new buildings are in keeping with

Figure 3.5



REVITALIZATION AREA #3 (OLD TOWN)

the historic character of the Old Town area. This may be addressed through the review and revision of existing local regulations regarding zoning, parking, signs, and site development.

- Work with the State of Maryland and local non-profit entities to develop opportunities/incentives for homeownership.
- Continue to work with property owners regarding new development in the older areas of the City so that improvements are compatible with existing structures and the surrounding context.
- Continue to enforce Building and Property Maintenance Codes.
- Work with Harford County Transportation Services and Maryland Transit Administration to improve service and locate bus stops with shelters within the Old Town areas of the City.

Old Town is the historic residential area of Havre de Grace, and is generally bounded by North Park to the north; Chesapeake Drive and Commerce Street to the south; Market Street, Downtown Business District, and Water Street to the east; and Juniata Street to the west. The current zoning in the area is a mix of residential business (RB), residential office (RO), and residential (R-1 and R-2). The majority of this revitalization area is within the City's National Register Historic District. Descriptions of neighborhood sub-areas within Old Town that are of particular significance are addressed in Chapter 9, Historic Preservation.

The zoning within the Old Town Revitalization Area reflects the mix of uses within the area that is predicated on the City's historic development. The Old Town area of Havre de Grace has a wealth of historic buildings set within a traditional grid-pattern street system. Many of the streets are lined with large deciduous trees and have sidewalks. Alleys or lanes provide the opportunity for rear lot, garage and ancillary building access, trash removal, and utility supply infrastructure. As a traditional City, the older portions of Havre de Grace are a blend of small-lot residential development interspersed with commercial uses, places of worship, civic uses, apartments, and multi-story senior housing complexes. In the truest sense, it is a mixed-use, traditional city.

Various corridors within the Old Town, such as Otsego Street, Revolution Street, Juniata Street, Pennington Avenue and, to a certain extent, Union Avenue allowed for limited commercial uses within the fabric of the City during its development and contribute to the characteristic flavor of Havre de Grace. Several Bed and Breakfast establishments flourish in this area, as well as financial and real estate offices and personal service and specialty retail uses. Continuation of limited commercial uses along the Revolution, Otsego, and Juniata Street corridors can still be encouraged at a scale that is appropriate to the surrounding neighborhoods.

In addition to the commercial corridors in the Old Town area, Union Avenue has a significant concentration of offices for the medical community, which

is well established in Havre de Grace. Harford Memorial Hospital, located at the corner of Revolution Street and Union Avenue, is central to the Union Avenue medical corridor. The hospital serves the greater Harford/Cecil County region and is a significant medical center for the Upper Chesapeake Health System. Continued office uses that support the medical establishment of the City within this corridor are desired and encouraged.

Because of the dense residential areas in the Old Town and destinations located within the City in general, improved bus service is desired. This includes local Harford County Transportation Services within the City and to points within Harford County as well as commuter service to downtown Baltimore. Comprehensive review of existing services and a plan for future improvements for all Harford County is currently underway through the Maryland Transit Administration. The City is also exploring opportunities for bus shelters to be placed throughout Old Town and other points of origin/destination within Havre de Grace.

Many of the neighborhoods within the Old Town are very stable, tight-knit communities. However, there are others that are in decline or transition. Deteriorating structures within this area should be restored to proper condition if they are to contribute to its character. This can be accomplished by enforcing building and property maintenance codes, educating property owners about historic rehabilitation tax credits, and targeting available public sector financial assistance when appropriate. Home-ownership programs should also be made available to transition some homes from rental to owner-occupied. In addition, many large historic homes have been converted to multi-unit apartments. Incentives for the re-conversion of these homes into single-family owner-occupied dwellings is desired.

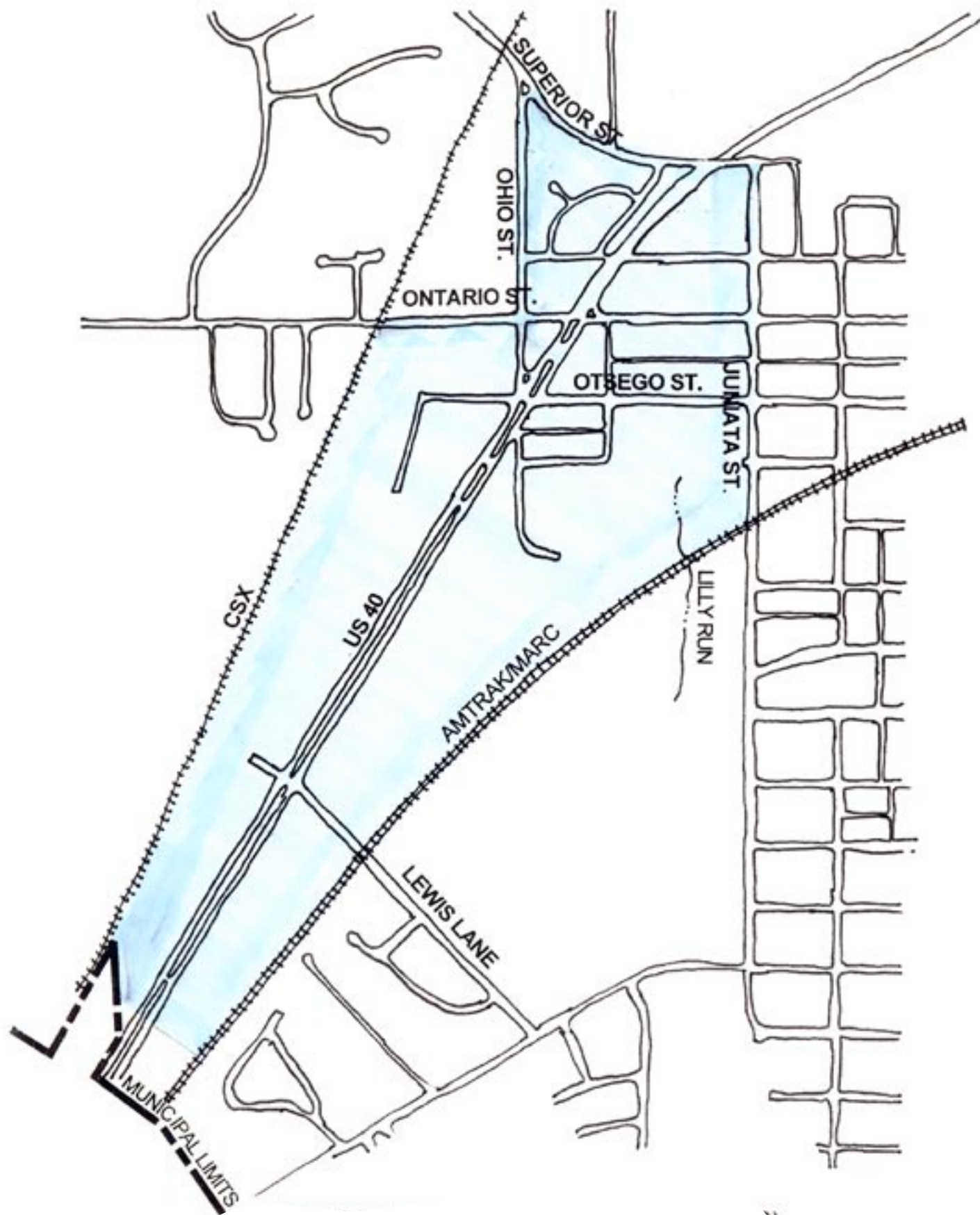
Site design and building design for new structures within the older portions of Havre de Grace should be in character with the surrounding buildings to maintain the historic character of the City. To that end, establishing design guidelines for in-fill development is paramount. Architectural compatibility, site configuration, and parking are all issues that need to be addressed within design guidelines or must be addressed within the revision of existing local regulations.

4. Revitalization Area 4 - Route 40 Corridor

Recommendations

- Support existing businesses and work to attract new businesses into the US 40 commercial corridor.
- Continue to work with property owners at the concept stage of development to ensure appropriate uses and development design.

Figure 3.6



REVITALIZATION AREA #4 (US ROUTE 40)

- Work with property owners to upgrade existing uses and provide screening where necessary.
- Review and revise existing local regulations regarding zoning, parking, signs, and site development.
- Require pedestrian and bikeway connections from newer, developing neighborhoods to US 40.

The Route 40 Corridor consists of the US 40 four-lane divided highway right-of-way and adjacent lands along the thoroughfare. It is generally bounded by the CSX and AMTRAK Rail Lines, and extends in a southwesterly direction from the Susquehanna River to the edge of the current City limits. The majority of this area is designated C (Commercial), with some portions zoned R-B (Residential Business) where US 40 approaches the Thomas J. Hatem Memorial Bridge and Susquehanna River. The corridor is dominated by commercial uses, such as restaurants, auto and truck service, community shopping centers and retail, used auto sales, and lodging. There are also some salvage yards and under-utilized parcels within the Havre de Grace portion of this corridor.

The Route 40 Corridor is a commercial area that serves some of the basic retail needs of communities in Havre de Grace and within the region, such as Perryville and Aberdeen. At this time, groceries, pharmacy, auto fueling and service, and convenience restaurants are the predominate uses in the corridor within the City limits. In Havre de Grace, the Route 40 Corridor is the dividing line between older areas and the newer communities but serves them equally for daily retail needs. Because of this commonality, the Route 40 Corridor could serve as a bridge between these communities; the physical connection of Lewis Lane to Chapel Road will aid in the flow between these two distinct areas. Future uses of under-utilized parcels along US 40, forested areas, and parcels near Bulle Rock Golf Course need to be considered as westward expansion of the City through annexation occurs. A separate corridor planning effort may be necessary to address implementation tools or regulations, infrastructure, and phasing.

As a gateway corridor, US 40 is undergoing improvements by the State Highway Administration. These improvements include median and edge landscaping, sidewalks at prime pedestrian locations, crosswalks, new traffic signals, gateway signs for Havre de Grace, and pavement resurfacing with brick detailing. In addition to the visual improvements of the public right-of-way, it is desired that the existing businesses along the corridor be visually appealing and lend to an overall improvement of the highway through the City and the adjacent jurisdictions. To this end, property maintenance code enforcement and, in cases of redevelopment, integrated site design is important.

Issues to be addressed with regard to visual cohesiveness within the corridor include business signs and unsightly uses, such as warehouses, junkyards, construction equipment yards, and unscreened exterior storage. With regard to signs along US 40, the existing business signs should be reduced in height, size, and number, while design guidelines for both existing and future signs should be prepared and enforced. Additional junkyards, construction equipment yards, and warehouse uses should not be permitted within this predominantly retail corridor. Existing uses of this nature should be required to provide landscape buffers and screening. Heavy industrial uses are viewed as incompatible uses to those already existing or planned for the corridor. High quality, visually appealing highway commercial development with appropriate design, landscaping, and parking patterns should be encouraged to physically integrate the Route 40 Corridor to the extent that it is possible.

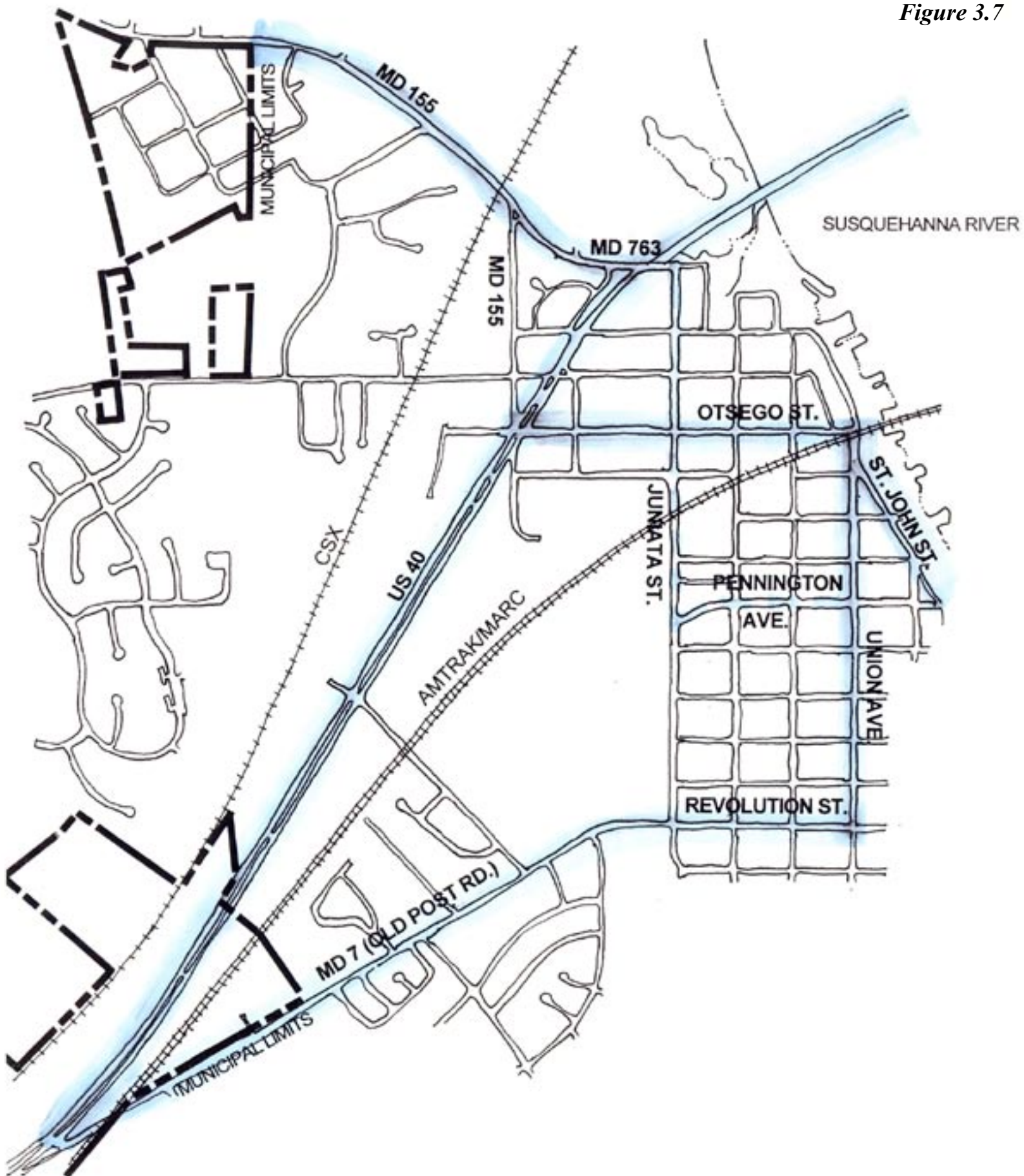
5. Revitalization Area 5 – Gateway Corridors

Recommendations

- Work with State Highway Administration to develop an improvement plan for Revolution Street.
- Continue to work with State Highway Administration to improve the safety of MD 155 from I-95 Interchange to US 40.
- Continue to work with State Highway Administration to complete improvements to Otsego Street (MD 7) as a budget priority.
- Provide more cohesive signage to lead visitors to the numerous destinations from the various gateways into the City.
- Continue streetscape improvements along Pennington Avenue to connect the Downtown Business District with the civic uses along Pennington, such as the Visitor Center, Harford County Public Library, City Hall and the Police Station, and the Board of Education Recreation Complex.
- Review and revise existing local regulations regarding zoning, parking, signs, and site development.

The City has several gateways, or defined entrances, which lead to the older portions of Havre de Grace and the Downtown Business District. Gateways include: MD 155 to MD 763 to Juniata Street; MD 155/Ohio Street to Otsego Street (MD 7); US 40; and Revolution Street (also MD 7). Within Havre de Grace, Pennington Avenue and Juniata Street also serve as gateways to the commercial downtown, waterfront, and museum destinations. It is desired that all gateways provide a positive visual experience for travelers and the community alike, and that they are attractive thoroughfares within the City. Gateway planning efforts include visual enhancements, functional improvements, and improved signage to destinations within the City.

Figure 3.7



REVITALIZATION AREA #5 (GATEWAY ROAD CORRIDORS)

All of the major gateways, such as MD 155, MD 763, US 40, Otsego and Revolution Streets, provide different directional approaches into the City, and all are heavily utilized. Approaching from the northwest, MD 155 provides a route from rural Harford County into the City that offers a series of interesting vistas of the Chesapeake Bay and Susquehanna River. After a dramatic descent into the older portions of the City, MD 155 diverges into MD 763/Superior Street or continues as MD 155/Ohio Street to US 40. Both are significant entrances into the Old Town. The 5-point intersection of MD 155, Otsego Street, and US 40 is a location that requires careful consideration for improved signage. Providing access to the City's northern end from US 40, Otsego Street is often considered the primary gateway because of its intersection with Juniata leading to Union Avenue and the Downtown Business District. However, to alleviate congestion problems on MD 155/Ohio Street, the MD 763/Superior Street route needs to be considered as a more expedient route into the downtown core for travelers from I-95.

Revolution Street allows for a southern approach to Havre de Grace from Aberdeen and southwestern points along US 40. It serves as a primary route into the City and is the major access to the Chesapeake Industrial Park for truck traffic. Working with the State Highway Administration, major businesses, and communities along Revolution Street to develop a corridor enhancement strategy would be of great benefit for this approach into Havre de Grace.

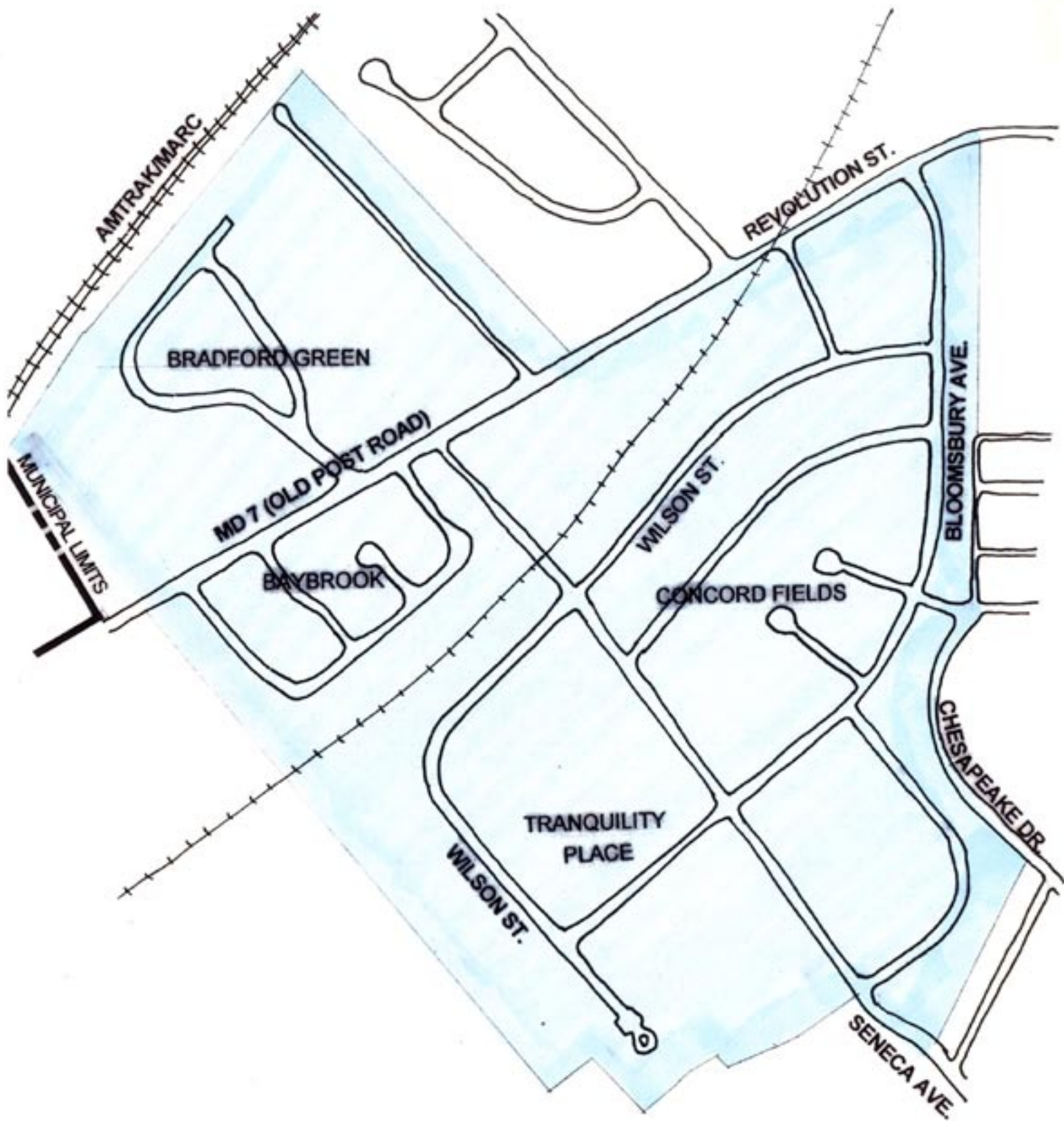
Within the City, Pennington Avenue and Juniata Street also serve as gateway connections to the Downtown Business District. Enhancements along Pennington Avenue are greatly encouraged because this roadway connects a vast body of civic uses with the Downtown Business District. Pennington is a broad avenue that affords easy bus access to the City's downtown and its recently established Visitor Center. Juniata Street connects MD 763/Superior Street to Otsego and Pennington. Some improvements could be done along Juniata to make it a more attractive entrance into the City. Individual strategies for the gateway routes into the Havre de Grace need to be created, and may include landscaping, site planning criteria, and distinctive public streetscape improvements that will contribute to overall appearance for these corridors.

6. Revitalization Area 6 – Revolution Street Residential Communities

Recommendations

- Strengthen the neighborhood retail center as a commercial area that serves the residential communities along Revolution Street.
- Coordinate with State Highway Administration to develop an improvement plan for Revolution Street.
- Work with the State of Maryland and local non-profit entities to develop opportunities/incentives for homeownership.

Figure 3.8



REVITALIZATION AREA #6 (REVOLUTION STREET COMMUNITIES)

- Coordinate with Harford County Transportation Services and Maryland Transit Administration to improve service and locate bus stops with shelters along the Revolution Street corridor.

Several large residential communities are located along Revolution Street, such as Bay Brook, Concord Fields, Tranquility Place, and Bradford Green. Offering affordable housing opportunities for Havre de Grace residents, these communities are comprised of older townhomes and one story single-family and duplex homes. Other residences are located along Webb Lane and Revolution Street. In addition to the residential uses, Revolution Street provides a core of commercial uses that serve adjoining neighborhoods and the City in general. Strengthening the neighborhood retail/service uses and residential neighborhoods along Revolution Street are goals of planning efforts within the City.

Located on the south side of Revolution Street, Concord Fields and Tranquility Place Townhomes were originally part of one housing complex. Built by the Federal government in 1941, Concord Fields War Housing Project was developed as housing for military personnel during the increased activity at Aberdeen Proving Ground. In 1956, the 246-unit townhouse complex that is now known as Tranquility Place was divided from the single-family and duplex homes of Concord Fields. This complex is under single-ownership, and all homes are leased. The Concord Fields community, on the other hand, is a mix of owner and tenant-occupied homes. The Bay Brook neighborhood, also located to the south of Revolution Street, is comprised of single-family homes and was built in the 1950's.

Located on the north side of Revolution Street, Bradford Green is a townhouse community of 117-homes and was built in the mid-1970's. The homes are modest townhouse units of which two-thirds are tenant-occupied. Also on the north side of Revolution is a small street called Webb Lane. Predominant uses here are residential, however one industrial use and church are also accessed via Webb Lane. Drainage problems have been noted in this area due to wet soils and limited storm drain infrastructure.

The Revolution Street communities have neighborhood-scale retail opportunities that serve the convenience needs of area residents. Strategies for enhancing the retail area into a stronger commercial center include the expansion of low interest loan incentives to the businesses along the corridor, incentives for façade improvements, and redevelopment of existing parcels. The communities along Revolution Street are in close proximity to Havre de Grace Elementary and Middle Schools which provide public open space and recreational activities within walking distance. In addition, Concord Fields and Tranquility Place Townhomes share the Todd Field recreational area as a neighborhood park. This park is owned and maintained by the City and includes a recently built skate park.

Community reinvestment efforts are important components to the physical improvements in the Revolution Street corridor. These include a comprehensive strategy for the Revolution Street corridor as a State Highway roadway, improved local and commuter bus services, opportunities for homeownership, and facility improvements in the community recreation areas. Due to the age of many of the buildings in Concord Fields and Tranquility Place Townhomes, rehabilitation of some residential structures in this area is to be encouraged and, in extreme cases, redevelopment should be pursued. Targeted maintenance code enforcement efforts are necessary.

7. Revitalization Area 7 - Industrial Area

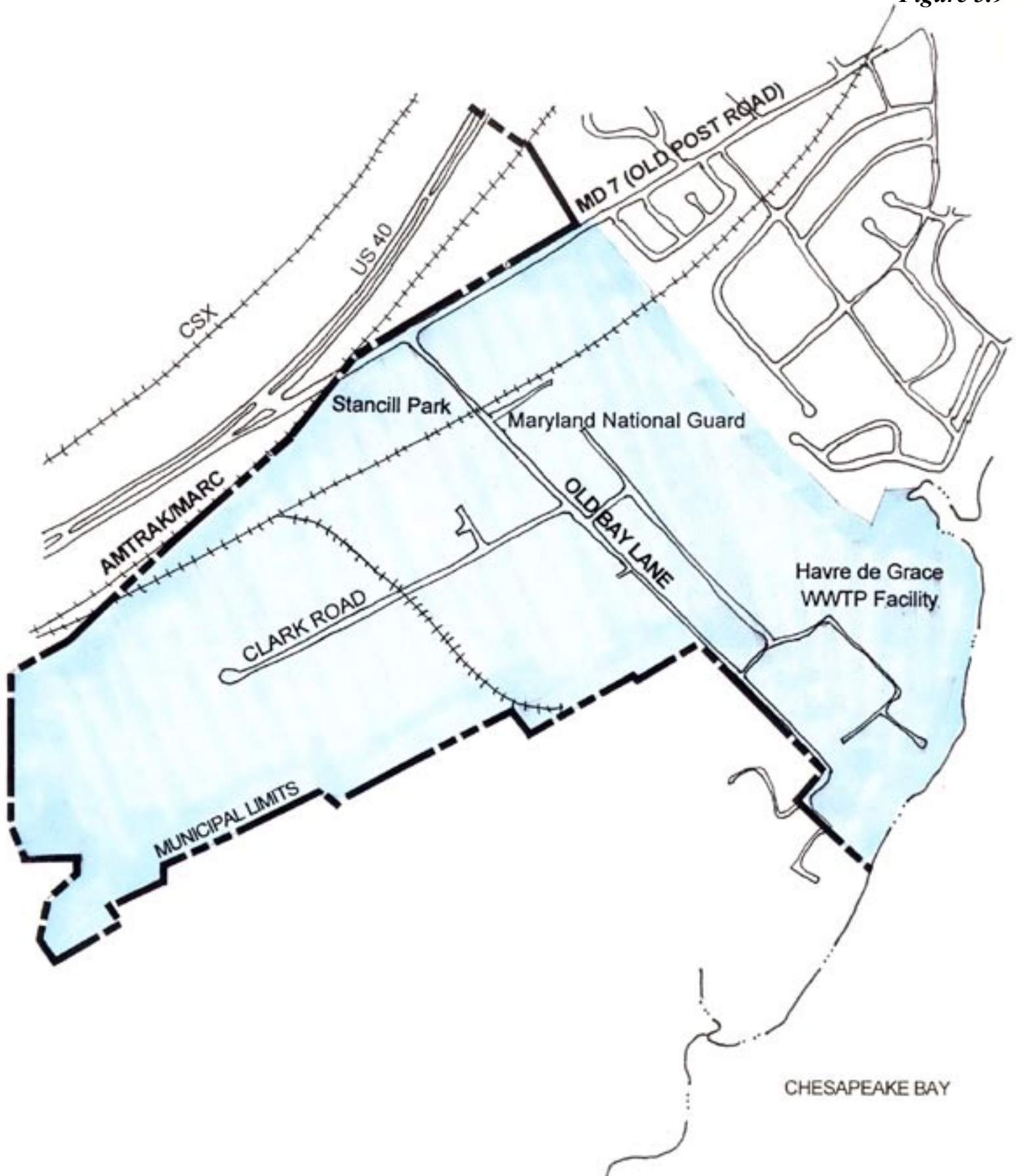
Recommendations

- Coordinate with State Highway Administration to improve the entrance to the Chesapeake Industrial Park and the Revolution Street corridor.
- Improve the road conditions and visual appeal of Old Bay Lane and Clark Road within the Chesapeake Industrial Park.
- Support existing businesses/employers and work to attract new industries into Havre de Grace.
- Work with Harford County Transportation Services and Maryland Transit Administration to improve service and locate bus stops with shelters within the Industrial Area.

The primary industrial area for the City includes the Chesapeake Industrial Park on Old Bay Lane and Clark Road and the industries along western length of Revolution Street. The 130 acre Industrial Park was established in the 1970s, and includes the industries of: Solo Cup, Smuckers Quality Beverages, Aiken and Colliers, Inc., National Ammonia Company, Constar, Inc., and On-Guard Industries. Constar, Inc. has two facilities in the Chesapeake Industrial Park, one on Old Bay Lane and the other on Clark Road. Adjacent to the industrial park is a large Maryland National Guard complex that comprises 64 acres along Old Bay Lane.

Other industries adjoining the Chesapeake Industrial Park on the south side of Revolution Street are Cytec Fiberite, Inc. the Pepsi Cola Bottling Company, and a division of Sherwin-Williams. The land area on the north side of Revolution Street is mixed auto sales and service uses, metal fabrication, fiberglass repair, and an existing auto salvage yard (this use was grandfathered because it pre-dates zoning in the City). With the exception of the salvage yard, these parcels are not within City limits and some do not have public utilities. Annexation of these parcels may be beneficial for the property owners so that public water and sewer may be attained. Due to its quick access to US 40 and surrounding industries, the City recommends that

Figure 3.9



REVITALIZATION AREA #7 (INDUSTRIAL AREA)

future uses be compatible with the surrounding industrial uses to create an expanded center of industrial/employment opportunities.

The visual appearance of the industrial area is important for retaining and attracting business into Havre de Grace and, in many ways, it indicates the City's economic health. As the oldest industrial park in Harford County, the Chesapeake Industrial Park is showing its age in its roadways and right-of-way appearance. Roadway widening, substrate improvements, and resurfacing of both Old Bay Lane and Clark Road are being pursued at this time in order to provide smoother and more durable access for the more than 80,000 trucks per year into the industrial park area. Construction of sidewalks and selective landscaping would also improve the function and appearance of the Chesapeake Industrial Park. In addition to improvements in the industrial park, a corridor enhancement strategy for Revolution Street would be of benefit for businesses along this thoroughfare and for the City in general.

B. NEWER NEIGHBORHOODS/ DEVELOPING AREAS

Newer Neighborhoods/Developing Areas are those areas that are within City limits and located to the west and north of the CSX railroad tracks. These include well-established residential neighborhoods such as the communities of Havre de Grace Heights, Chesapeake Heights, and Meadowvale. It also includes newer neighborhoods that have been built within the past fifteen years, such as Bayland Condominiums, Grace Harbour, Bayview Estates, and the Village of Gracecroft. Other recently annexed parcels such as Grace Manor, Bulle Rock Estates, and The Meadows at Bulle Rock are developing residential areas that are also to be addressed within this portion of the Plan chapter and will be described individually because they are new, emerging communities within the City.

Recently annexed, non-residential areas include lands of the proposed Bulle Rock project and areas located in the southern quadrant of the I-95 interchange (known as the Barker/Abel annexation). These areas are intended to complement existing and developing residential areas in terms of site design, land use, and roadway improvements. They will also be described individually in terms of their relationship to existing neighborhoods and residential uses. Planning considerations for the newer neighborhoods and developing areas include, but are not limited to:

- Appropriate land uses
- Improved roadway connections between older and newer communities in terms of design, safety, and physical enhancements
- Recreational open space needs in proximity to emerging residential communities
- Adequate public facilities
- Relationship of these newer areas to the older historic core of the City

The following recommendations reflect the above considerations as they relate to planning efforts for the Newer Neighborhoods/Developing Areas.

Recommendations

- Evaluate the City's current zoning regulations and revise them to include new residential zoning categories that require open space as a percentage of the total project acreage and landscaping requirements for commercial uses.
- Continue to work with property owners at the concept plan stage of development to ensure appropriate uses and development design.
- Work with Harford County to develop a roadway improvement plan for Chapel Road so that it may be a more cohesive thoroughfare within the City and into County jurisdictional areas.
- Work with State Highway Administration on MD 155 to improve the safety of MD 155 and to provide entrance signs into Havre de Grace on MD 155 near the I-95 interchange.
- Develop a marketing strategy to attract residents of newer and developing Havre de Grace neighborhoods, Harford County, and the local region into Havre de Grace.

The following are descriptions of land areas that are currently within City limits that are being developed, in the design stage of development, or annexed with a prescribed zoning classification. These are areas *in process*. Existing communities are not described individually as they are already well established. However, the relationship of developing areas with existing communities—whether it be Old Town or newer neighborhoods – is extremely important to strengthen Havre de Grace as a whole and integrated City. Roadway connections, increased community planning, and marketing efforts are keys to bridging the divide between newer neighborhoods, developing areas, and the Old Town core of Havre de Grace. The Land Use Plan map (Figure 3.11) located at the end of this chapter illustrates a unified plan for Havre de Grace which relates land uses, road network, and pedestrian access between the older portions of the City and the newer, emerging communities.

1. I-95 Interchange, Southern Quadrant

Several parcels located in the southern quadrant of the I-95/MD 155 Interchange (often referred to as the Barker/Abel Annexation) were annexed into the City in March 2001 and are zoned Mixed-Office Employment (MOE, 102 acres) and Residential (R-1, 53 acres). The purpose of this annexation was to provide major economic development generators to balance a tax base that is predominantly residential in nature and to provide local job opportunities for the City's population. It is intended that the southern quadrant of the I-95 interchange at MD 155 will serve as a major gateway to the City and contribute to its economic vitality. The complex is to include such uses as hotel/conference centers, restaurants, corporate office

buildings, technology-based offices and assembly centers, and research facilities. It is proposed to be a corporate campus style. Because of its proximity to I-95 and major fiber-optics infrastructure, technology employment is the primary focus for the City's desired future use.

It is intended that any limited commercial uses will be non-obtrusive and compatible with the existing residential neighborhood of Susquehanna River Hills. Site design guidelines for the area have been incorporated in the zoning classification and include standards for building materials and signs, buffering, and the siting and massing of buildings to enhance the views of the site from I-95 and adjacent residential neighborhoods. This southern quadrant of the I-95/MD 155 Interchange will be serviced with City water and sewer. A portion of this area located adjacent to Chapel Road is designated as residential and will be developed as part of the Bulle Rock planned adult community. Bulle Rock Parkway, a major thoroughfare to serve these new uses, is being built by the private developer to connect MD 155 with Chapel Road.

2. Bulle Rock Project, The Meadows Area

This tract of land, formerly part of the larger Blenheim parcel, is approximately 166 acres in size and was annexed in March 2002 with a zoning designation of R-2. The site is part of a planned adult community that will consist of mixed housing types, to include single-family detached residences, villas, and condominium flats. The Bulle Rock Project is age-targeted for active adults and will provide a variety of amenities (to include a community center, golf course, and restaurants) in a private, gated community. Currently, 56 single-family attached dwellings, or villas, are under construction.

3. Bulle Rock Project, The Parkway Area

This tract of land, which consists of several parcels including Mount Pleasant Farm, is approximately 385 acres in size and was annexed in May 1999 with R (Residential) zoning classification. Located to the south of Chapel Road, this site will be part of the Bulle Rock planned adult community and will be directly accessed from Bulle Rock Parkway, currently under construction. A roundabout entrance to this community will be framed by views of the Chesapeake Bay and it is anticipated that a 32,000 square foot community center will serve as a focal point. The main house, a historic Colonial Revival mansion, will be renovated for integrated use within the site.

Situated between the Meadows Area to the west, Bulle Rock Golf Course to the south, and Bayview Estates on the east, this site is the main residential area of the Bulle Rock planned adult community. This project will consist of

a mix of housing types, to include as single-family detached residences, villas, and condominium flats in a private, gated community. Currently, twenty-five (25) single family homes under the name Bulle Rock Estates have been platted and are being constructed on the easternmost edge of this site. Age-targeted for active adults, it is anticipated that this project will build out in ten to fifteen years.

4. Grace Manor

Grace Manor is a new neighborhood of 78 single-family homes which is currently under construction. This site was annexed in May 2001 with a zoning designation of R-2. Located on the south side of Chapel Road, this neighborhood is between Bayview Estates and Chapel Terrace. It will be connected to the new neighborhood of Havre de Hills, which will allow access from Chapel Road to US 40 through Lewis Lane. Aside from the new homes, the neighborhood also offers walking trails through the forest conservation easement areas as a passive use recreational outlet for its residents.

5. Havre de Hills/Lewis Lane

The Havre de Hills neighborhood is a 96-unit townhouse development and will be located north of the CSX Rail Line and south of Grace Manor. Roadway connections through this neighborhood allow for direct access to US 40 via Lewis Lane for these town homes and Grace Manor residences. An improved at-grade crossing will be built to provide safe access over the railroad right-of-way. An interesting aspect of this neighborhood design is the use of small lanes behind some of the homes for homeowner parking.

C. GROWTH AREAS

Growth areas are defined as those areas outside of the City, which in the Planning Commission's judgment, bear relation to the planning responsibilities of the Commission. Annexation is a natural and consistent measure for growth within the County and region. This planning area is bounded by the Susquehanna River and Chesapeake Bay to the east and southeast and Swan Creek, Robin Hood Road, Earlton Road, and I-95 to the west and north. However, not all land areas within this planning framework are considered realistic areas for annexation based on current uses, infrastructure limitations, or topographic restrictions. Areas that are not considered growth areas but are within the City's planning scope include the Oakington Peninsula, properties that are too far from public infrastructure, properties annexed by the City of Aberdeen, parcels with conservation easements, and Arundel Quarry with associated buffers. Priority Funding Certification under the State of Maryland Economic Growth and Resource Protection Policy requires that new growth areas must be zoned at a minimum of 3.5 units per acre to qualify for State funding for future public facilities.

Again, strengthening the relationship between older areas within the City, new developing areas, and future growth areas is key to creating a more fully integrated City in its physical development and functional interdependence. Future locations for infrastructure and treatment capacity for both water and sewage drives the growth and development of Havre de Grace and any city. However in the planning process, roadway connections, inter-relationships of geographic areas, and site development are all instrumental in making a city a well-crafted place. Working with property owners at the concept stage of development and revising existing implementation tools, such as zoning, parking, signs, and site development requirements, will work to create a city which is attractive and well-planned.

Recommendations

- Define a municipal growth boundary for which full development build-out is factored into the City's water and sewer treatment capacity and is designed with most ideal location for efficiency of infrastructure.
- Coordinate with Harford County Department of Planning and Zoning in the development of their six-year Master Plan/Land Use Element Plan to address appropriate expansion of municipal boundaries through annexation.
- Continue to work with the Harford County Department of Planning and Zoning and Department of Public Works in regard to annexation petitions.
- Coordinate with Harford County Department of Public Works on long-term policies for water distribution.
- Work with the Harford County Department of Parks and Recreation for identifying locations for public open space and active recreational areas north of US 40.
- Evaluate the City's current zoning regulations and revise them to include new residential zoning categories that require open space as a percentage of the total project acreage and landscaping requirements for commercial uses.
- Continue to coordinate with property owners during the annexation process to establish appropriate zoning designations, development concepts, and conditions of annexation.
- Develop design guidelines within the zoning regulations for commercial uses and strengthen existing ordinances for improved site design elements. This may be accomplished by the review and revision of existing local regulations regarding zoning, parking, signs, and site development.

The City's framework of future land uses is illustrated on the Comprehensive Plan Areas map located at the end of this chapter. The following are considered to be potential growth areas for which the City would consider providing public infrastructure. These growth areas are divided into two categories: 1). In-fill Growth Areas, and 2). Phased Annexation Areas. In addition, a third sub-section under the heading of *Other Areas within the Planning Jurisdiction* is included. These are areas that most likely will not be petitioned for annexation. However in the event that they do become annexed through property owner initiation, we have addressed their proposed use in this Comprehensive Plan. The following areas that are

described relate directly to the identified growth areas of the Comprehensive Plan Areas map.

A. In-fill Growth Areas

In-fill areas are communities immediately adjacent to and/or nearly surrounded by municipal limits. Most often, these areas would be annexed through property owner initiation based on the need for public water and sewer services due to failing private wells or septic systems. Others, such as commercial/industrial uses along Revolution Street and US 40, would be considered annexation priorities based on the desire for continued economic revitalization in areas where these uses are most appropriate.

1. Shawnee Brooke

Shawnee Brooke is an established residential community with the Harford County zoning designation of R-2 Urban Residential. This neighborhood is bordered by Chapel Road on the south, Cherry Hill Farm on the west and the City (by the Grace Harbour neighborhood) on the north and east and is currently serviced by well and septic. Several properties in recent years have been experiencing well problems and several property owners desire public water service. Efforts are underway to annex the Shawnee Brooke community based on the need for public water. If annexed, Shawnee Brooke will remain low-density residential use.

2. Havre de Grace Heights

Havre de Grace Heights is an established Harford County residential community almost totally surrounded by the City. The neighborhood is located in the northwest quadrant of the City and has a Harford County zoning designation of R-2 Urban Residential.

Havre de Grace Heights is partially served by City water and has individual septic systems, except for some properties along MD 155 that are supplied by individual wells. This community should be annexed into the City because of the public infrastructure that has been provided to the community and to provide closure to the City's northern border. Efforts should be made to annex this area through tax phase-in efforts and special financing opportunities for water connections to the City system. If annexed, this community will continue as low-density residential.

3. The Revolution Street Commercial Corridor

A small pocket of commercial uses north of Revolution Street is located outside the City limits of Havre de Grace and should be considered an annexation priority. This portion of the corridor is located south of the

AMTRAK line on the north side of Old Post Road from US 40 to the municipal boundary. The Harford County zoning designation is Commercial Industrial (CI). The City's proposed land use designation for this area is commercial/industrial, with the focus on expanded employment opportunities and increasing the City's industrial base.

Much of this area has been managed poorly in terms of land use and is characterized by incompatible uses or under-utilization of the individual parcels. Annexation would allow for the expansion of more compatible commercial/industrial uses in an area where these uses are appropriate. A primary goal of the City is to strengthen and expand the industrial/employment opportunities within the City. It would also provide the City with more regulatory control in terms of maintenance enforcement and site design in instances of redevelopment.

4. US 40 Commercial

The US 40 Commercial Growth Area extends from the City's current municipal limits westward to Gasheys Creek between the CSX and AMTRAK Rail Lines. Harford County zoning along this segment of the Route 40 Corridor to Aberdeen City limits is Commercial Industrial (CI). Since on-site public water and sewer are currently unavailable, many of these parcels are undeveloped or under-utilized. Continued commercial expansion with a land use designation of commercial is appropriate for future land use in this area.

In consideration of the annexation of parcels along US 40, the City must update its zoning regulations to ensure compatibility and good site design in any new development. As a commercial corridor, the expansion of commercial uses is appropriate. However, consideration of existing uses along Route 40, such as Bulle Rock Golf Course, the preservation of some forested areas or open space, and future landscaping must be taken into account when developing new requirements.

Visual cohesiveness and attractive commercial development is a desired goal as this is a main gateway into the City. To accomplish this, increased flexibility of design is important while at the same time ensuring that environmental resources are protected. Possible design considerations may be landscaping requirements, incentives for integrated commercial centers with upper-story offices as opposed to pad site development, and the location of parking areas relative to structures. In addition, parking requirements may be reviewed to reduce impervious surfaces for stormwater run-off.

5. Lampson Property

This parcel is located north of the CSX rail line between the Bulle Rock project and Bay View Estates, and is approximately 23 acres in size. Currently, it is designated G-I under Harford County zoning. Due to its proximity to other residential communities and limited access via the rail line, an appropriate land use designation is medium intensity residential.

B. Phased Growth Areas

Phased Growth Areas are those areas that are in close proximity to the City municipal limits and could easily be serviced by public water and sewer connections in the future at owner's initiation and expense. Although the properties may lie in close proximity to the City, a reasonable timeframe for annexation may be one to three years. Requests for annexation will be considered in light of the merits of the development proposal, its intensity and land uses, and the City's ability to service their public water and sewer needs. The primary purpose of annexation is to increase the City's tax base by promoting responsible development through the efficient use of land while protecting environmental resources and providing public services.

6. Cherry Hill Farm (Guzzo Property)

Cherry Hill Farm is a twenty-seven acre property on the north side of Chapel Road and south of Sion Hill and Mount Felix. The site is located on a rise across from the proposed Bulle Rock Resort and Conference Center, and provides an excellent vantage point for views of the Chesapeake Bay. The farm's house, the Harry Mitchell House, is a historic resource.

For the City's planning purposes, designation of this parcel is medium-density residential. Consideration for its annexation and subsequent development should be the topography and shape of the parcel. The number and location of street entrances must be limited so that a hazardous traffic condition is not created along Chapel Road. It is also desired that the development complement existing and proposed uses of adjacent sites, such as Bulle Rock Resort and Conference Center and existing residential communities. Preservation of the historic residence is desired as it could prove a valuable component of a development proposal.

7. Greenway Farm

Greenway Farm is a 151 acre parcel north of the CSX Rail Line located between Bulle Rock Golf Course and Bulle Rock Estates. Harford County zoning designation is General Industrial (G-I), however due to its proximity to adjacent residential communities and a premier golf course, medium intensity residential land use is desired for this site. In addition, environmental considerations, such as a large pond and Gasheys Creek, and

limited access to the site make this undesirable for future industrial land uses. The preservation and structure of the historical Hokeland main house is desired.

8. Green Properties

Immediately east of the I-95 Interchange parcels (Barker/Abel Annexation, which is currently in City limits) are three parcels owned by the Green family which will abut Bulle Rock Parkway. It is recommended that these parcels be considered for employment uses, if future annexation by the property owner is requested. It is desired that any future development at this location be of a scale and layout that is sensitive to the adjoining Sion Hill National Register Historic Landmark and the Maryland Environmental Trust (MET) conservation parcel. This site should be of a transitional nature between the proposed Employment/Industrial uses directly adjacent to the I-95 Interchange and Sion Hill. A new zoning classification may be necessary to ensure that an appropriate scale of development is achieved. Industrial and retail uses are not recommended at this location. Alignment of Bulle Rock Parkway with Lapidum Road is also desired.

9. Earlton Road

The Earlton Road phased growth area consists of two large undeveloped parcels of land totaling approximately eighty acres located east of Earlton Road and south of I-95. Currently, these areas are designated AG (Agricultural) under Harford County zoning. Due to the proximity to the Mixed-Office Employment area and single-family residences on Earlton Road, low-intensity residential land uses are recommended for this area. Low-intensity residential uses will serve as a transition from the proposed commercial/employment uses at the I-95 Interchange and the existing low-intensity uses and rural areas west of Earlton Road. In addition, Gasheys Creek, which is an environmentally sensitive waterway, bisects both parcels. Site planning and access for this area should take into consideration the environmental constraints.

10. Robinhood Road

Properties east of Robinhood Road within the City's planning area are recommended for low-intensity residential uses if they are considered for annexation. Currently, these parcels are designated AG (Agricultural) under Harford County zoning. Low-intensity residential uses would provide for an appropriate transition from existing residential and rural land uses along Robinhood Road.

11. US 40 Commercial Extended

US 40 Commercial Extended Growth Area includes the parcels within the Route 40 Corridor from Gasheys Creek westward to Oakington and Robinhood Roads. Harford County zoning designation for these numerous parcels along this corridor is CI (Commercial Industrial). Appropriate land use designation for this corridor is Commercial. Annexation in this area is desired to expand the City commercial tax base and to have site design control as this area develops.

As described previously in the US 40 Commercial Phased Growth Area, Havre de Grace must update its zoning regulations to ensure compatibility and good site design in new commercial development along US 40. Visual cohesiveness and attractive development are the desired goals of creating an integrated corridor that is visually appealing and serves to bridge the need for increased commercial venues.

12. Bulle Rock Golf Course

Bulle Rock Golf Course is a nationally recognized, premier public golf course which currently offers club house and restaurant facilities. Opened in 1998, this course was designed by Peter Dye and maximizes the beauty of the original Blenheim Farm. It is anticipated that property owners will request annexation into Havre de Grace as part of the Bulle Rock planned adult community. Future additions to this site include a hotel and conference facility and some limited residential uses. The original Victorian mansion house is being renovated as an amenity for the existing golf course and larger Bulle Rock Project.

C. Other Areas within the Planning Jurisdiction

Other areas within the planning jurisdiction are those in which annexation is not anticipated. However, in the event that public utilities are necessary in the future, land use designation must be considered in the development of this Comprehensive Plan. Areas under this heading include the existing residential communities such as Susquehanna River Hills, Crest View, and Orchard View Estates, Arundel Quarry, and properties with conservation easements.

13. Garrett Island

Garrett Island is a 180-acre island at the lower end of the Susquehanna River between Cecil and Harford County. It is the largest uninhabited island remaining on the eastern seaboard and is significant as a prehistoric and early colonial archeology site. Currently, it is part of Cecil County. If property owners desire annexation into the City, its land use designation will be open space and would be limited to passive uses, such as hiking

trails and interpretive educational facilities. Connections to the Lower Susquehanna Heritage Greenway via small crafts, such as canoes, kayaks, or small motor boats, would be acceptable.

14. Chapel Road Communities

On the north side of Chapel Road, between Earlington Road and Gasheys Creek, lie the subdivisions of Crest View and Orchard View Estates. Both of these subdivisions are firmly established areas and currently served by well and septic. Harford County zoning for these communities is Agricultural (AG). If annexation is sought due to failing wells, it is recommended the area be continued as low-density residential. This would support and preserve the current uses and neighborhood character.

15. Susquehanna River Hills

Susquehanna River Hills is an established residential community located northwest of Havre de Grace in the east quadrant of the I-95 and MD 155 interchange in Harford County. County zoning for this community is R1 Urban Residential. Bordered by I-95, MD 155, and Lapidum Road, Susquehanna River Hills is currently serviced by well and septic. There is no apparent need for the community to seek annexation, however public water and sewer would be needed if drain fields or wells begin to fail. If annexed, Susquehanna River Hills is recommended for continued low-density residential uses.

16. Arundel Quarry

Located directly north of the City, the Arundel Quarry is a 650-acre crushed stone mining operation. The quarry site contains enough accessible stone deposit to operate for seventy more years. It is not anticipated that Arundel will be annexed into the City. The City's interests in the site are for future reuse of the property upon completion of the mining operation and for hiking trail connections to the Lower Susquehanna Heritage Greenway.

17,18. Conservation Easements: Sion Hill and Old Bay Farm

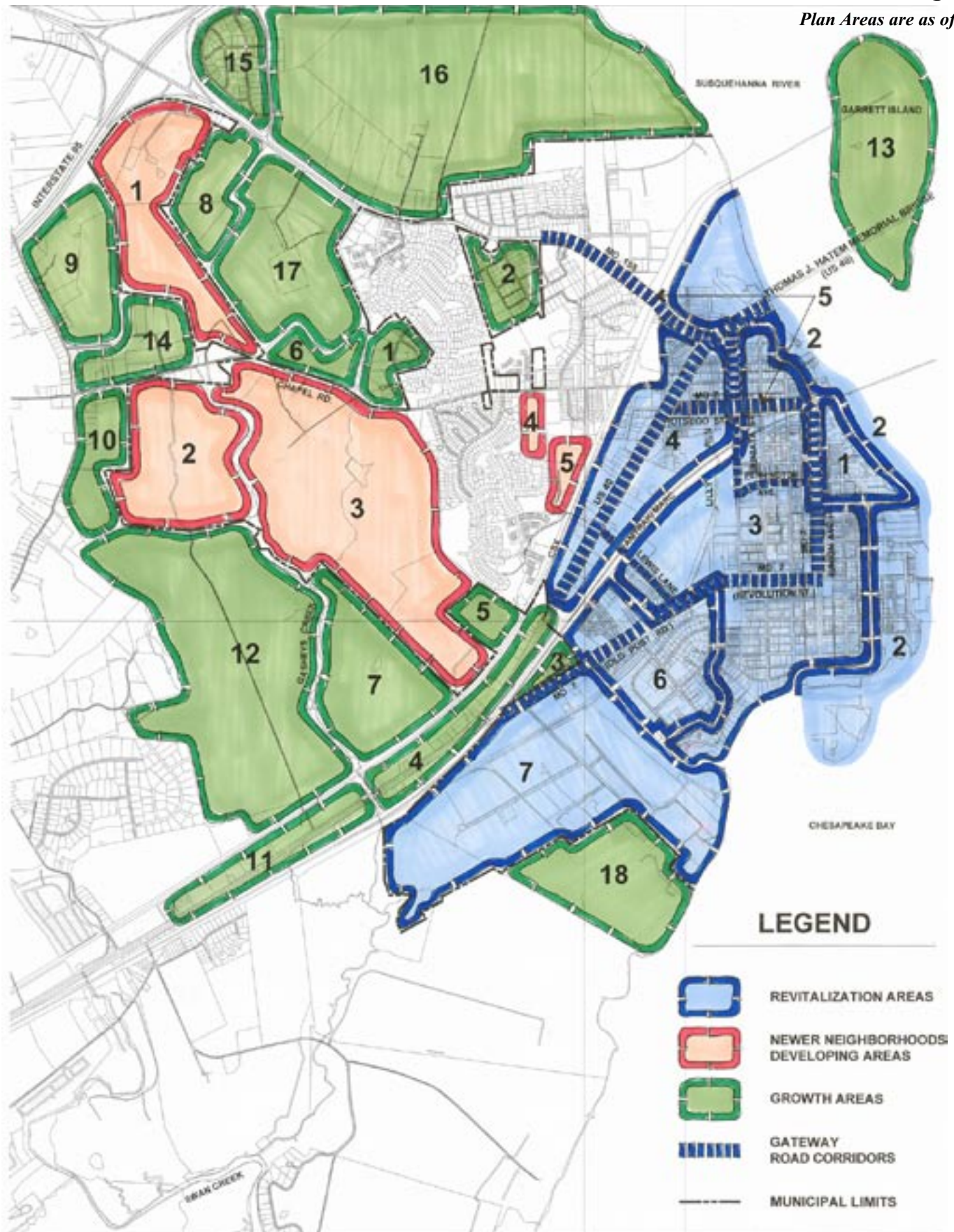
Contiguous to the City are Old Bay Farm along the City's southern shore and Sion Hill and associated farm fields, which are west of and adjacent to the Grace Harbour community. It is not anticipated that properties with conservation easements from Maryland Environmental Trust would be annexed into Havre de Grace. However, if annexation were sought for either of these two landholdings, the recommended land use would be as open space.

- (17) Sion Hill is a National Register Historic Landmark, which is the highest recognition that can be applied to any historic structure in the United States.

The significance of this structure does not hinge only on the time period in which it was built and its architectural elements, but the significance of the family who inhabited it and their relationship to Revolutionary History, the War of 1812, and later military history. Maintaining the grounds around Sion Hill and Mount Felix (which is the structure that is located on the rise in the middle of the farm fields, and is also historically significant) is important in terms of preserving the context of these structures and the visual beauty of this entrance into the City. Future use as passive or active open space of the grounds is desired, with a careful preservation of historic structures.

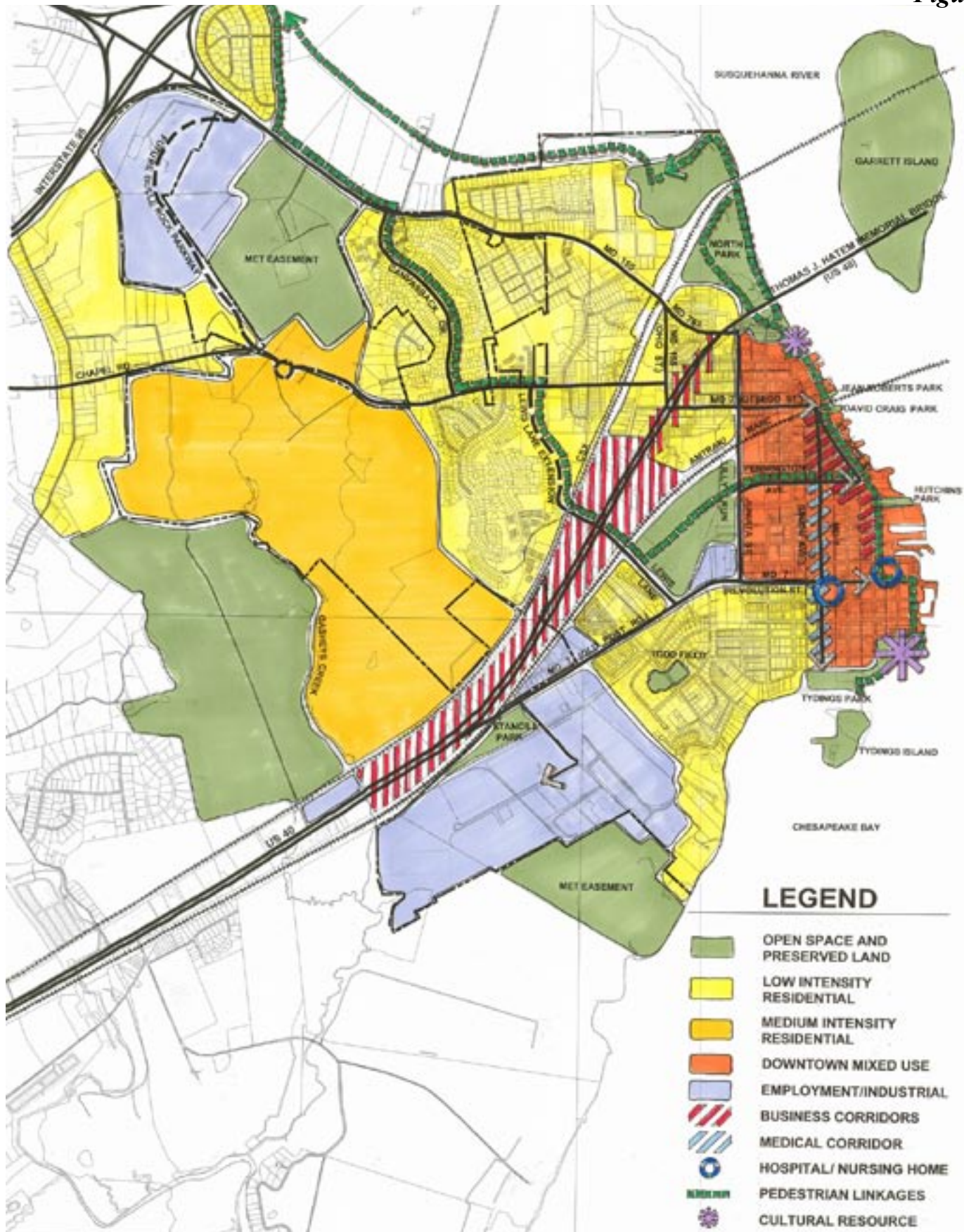
- (18) Old Bay Farm is a beautiful tract of land that rests on the shoreline of the Chesapeake Bay. Consisting of 123 acres, this farm was the home of the late State Senator William S. James. Immediately adjoining this property to the south is Swan Harbor Farm, which is a 467 acre tract owned and operated as a park by Harford County Department of Parks and Recreation. Connection of Swan Harbor Farm with the Lower Susquehanna Heritage Greenway through Old Bay Farm would be a wonderful crowning achievement for communities within this region, for Harford County, and for the State of Maryland. A primary goal of the Greenway initiative is to provide public access to shoreline areas of the Susquehanna River and headwaters of the Chesapeake Bay.

Figure 3.10
Plan Areas are as of July 2003



COMPREHENSIVE PLAN AREAS

Figure 3.11



LAND USE PLAN

I. PURPOSE OF THE MUNICIPAL GROWTH ELEMENT

The Municipal Growth Element (MGE) is a required element for municipalities in their comprehensive plans through House Bill 1141, passed in 2006. The purpose of this requirement is to ensure that communities are realistically planning for growth, are able to serve that growth with public facilities and resources, and are able to identify the inherent costs to the public. It's a matter of "going in with eyes wide open" to make sure communities can handle functionally and fiscally new – primarily residential but also commercial and industrial – development. Havre de Grace is fortunate to be of a small enough scale that our land use decisions are community-based. The decisions affect citizens in a very direct way, whether it is putting in sidewalks on a local road or determining the appropriate layout for a new neighborhood along the edge of town and its relationship to the existing city. Through the requirement of an MGE, the State is ensuring that all communities are responsibly assessing land annexation for accommodating growth, are able to serve that growth, and are successfully coordinating with the counties in which they are located.

This element, or chapter, is designed to provide a detailed and quantitative analysis of a city's anticipated expansion over the next twenty years based on a capacity analysis of the areas identified for growth. According to Maryland Department of Planning, this is to assist counties and municipalities to fully consider the capacity of land use, public services, infrastructure, costs, and financing associated with growth before committing resources, and it is intended to help direct future growth in a rational, predictable manner.¹ In other words, this element is the basis for realistic decisions regarding future expansion through residential growth and how those decisions relate to future costs borne by local governments and their citizens. As required by HB 1141, this chapter includes consideration of the following topics:

- Anticipated future municipal growth areas outside the existing corporate limits of the municipal corporation
- Past growth patterns
- The capacity of land areas available for development within the municipal corporation, including in-fill and redevelopment
- The land area needed to satisfy demand for development at densities consistent with the long-term development policy
- Public services and infrastructure needed to accommodate growth, including public schools, libraries, public safety, water and sewerage facilities, stormwater management systems, and recreation

¹ Planning Commission, Planning Board and Board of Appeals Education Course, p.41.

- Financing mechanisms
- Rural buffers and transition areas
- Burden on services and infrastructure
- Protection of sensitive areas
- Relationship of long-term development policy to a vision of a city's future character.

The planning basis for this *Municipal Growth Element* is from *The Plan, Chapter 3*, and its associated maps. As a Comprehensive Plan amendment, this chapter works in tandem with *Chapter 3* (thus the designation of 3A) to fulfill added requirements of the State. Many of the required topics are combined in the sections that follow and describe the City's plan for growth from the 2004 Comprehensive Plan. These topics are extremely important when talking about a city's future – what City stakeholders want this City to look like and function like in the future. This chapter goes further to address the fiscal reality (cost of development) and the impacts to public services and infrastructure.

In answer to the development capacity component of this MGE, Havre de Grace was fortunate to have the technical assistance of Maryland Department of Planning perform the development capacity analysis with City planning staff in 2004/2005. This capacity analysis is intended to direct land availability for the next twenty years to ensure an adequate supply of development potential for population growth. The City was part of the first round of the statewide focus of development capacity and was included as an example in the State's publication *Final Report of the Development Capacity Task Force* (July 2004). Findings of that analysis and an updated analysis which includes development from the past five years form the basis for this chapter.

Since the 2000 Census which estimated the City's population at 11,331, Havre de Grace has grown by approximately 3,184 people to an estimated population of 14,515² (as of January 1, 2010). This is due to major building activity as a result of the City incorporating large land areas through annexation then subsequently developing them. The location of these annexations were to the west of the town older center (please see Comprehensive Plan Areas map in *The Plan, Chapter 3*), as Havre de Grace is bounded by the Susquehanna River to the east, Chesapeake Bay to the south, and large hard rock quarry to the north. These tracts were large rural parcels immediately adjacent to then city limits which could easily be served by public utilities and provided a natural progression for the City's growth.

For the purpose of this plan, population estimates to 2025 are necessary for determining future growth potential and the ability to serve new development with public facilities. Based on the growth rate from the past ten years, the City estimates the number of new households by 2025 to be 1,995, with an estimate of 4,868 additional new residents and total population of 19,383. This estimate, however, may need to be adjusted if the future growth rate is greater than the City's past ten-year growth rate or if the household size substantially changes over time. This is in consideration of the influence of the Army's Base Realignment and Closure Act (BRAC) initiative which may increase housing demand in

² The population estimate was based on an average Havre de Grace household size of 2.44 people multiplied by new residential permits (less 7% unoccupied). Base number of occupied housing units from 2000 Census was 4,557. FY00 – FY09 new residential permits were 1332, plus additional 71 permits were issued between 7/1/09 and 12/31/09.

Havre de Grace due to its proximity to Aberdeen Proving Ground (APG).

II. ANTICIPATED FUTURE MUNICIPAL GROWTH AREAS OUTSIDE OF EXISTING CORPORATE LIMITS

Much of the City's growth was provided for during the past eleven years, with the major annexation of large land tracts. Since 1999, the City has annexed approximately 1,300 acres to include the large tracts that are being developed as Greenway Farms, The Residences at Bulle Rock (Planned Adult Community), Bulle Rock Golf Course, Scenic Manor, Havre de Hills, Grace Manor, and Mount Pleasant subdivisions. There were also several parcels on US 40 for commercial development and the land area near the I-95 interchange zoned for mixed-office employment. Because of these recent annexations, Havre de Grace is considering very little land area outside its boundaries for expanding the City for new residential development at this time. The 2004 growth areas outlined in this plan, such as those planning areas along Earlton and Robinhood Roads, are only for annexation consideration at such time that the City feels it would be desirable to undertake new residential development. The City will consider on a case-by-case basis the need to annex areas surrounded by City limits which are in need of public water and/or sewer service, such as Shawnee Brooke, based on hardship. All of these 2004 established growth areas were included in the City's wastewater treatment plant expansion.

Primary considerations for growth are additional commercial parcels along US 40. New commercial expansion and redevelopment of existing underutilized parcels is desired to make a cohesive corridor for service, retail, medical, and office uses. As described in the *Economic Development* chapter, these are the City's daily-driver type commercial uses to serve the needs of residents of Havre de Grace and the region. Examples of excellent new commercial development in the area between Havre de Grace and Aberdeen along US 40 are the Harbor Shops, the Havre de Grace Medical Center on Lewis Lane, Swan Creek Village Center, Bulle Rock commercial, and the Cork and Barrel/Chip Shot Café complex. Some of these commercial projects are inside the corporate limits of Havre de Grace and some are part of Harford County's jurisdiction. However they are served by public utilities, the continued expansion of high-quality commercial projects along this corridor is greatly desired. The focus of development in this area is to meet the intent of Harford County's US 40 Commercial Revitalization Corridor. Future policy for development at the mixed-office employment area (located at the I-95 interchange) must take into account potential negative economic impacts to US 40 commercial development and the continued renewal of the City's Downtown Business District.

III. PAST GROWTH PATTERNS

From a historical planning perspective, the City of Havre de Grace has a very interesting development pattern. It began as a colonial era water-centered settlement with a ferry linking the eastern and western shores of Maryland in the late 1600's. Havre de Grace was incorporated in 1785 and its first City Plan with a grid-pattern street system was established in 1799 (please see *Introduction, Chapter 1*, p.1-3; City History). The building of the Susquehanna and Tidewater Canal, which allowed transportation of Pennsylvania's natural resources – coal and timber – to expansive southern markets, caused steady progress and growth within the original City Plan. Through the nineteenth century, Havre de Grace

became the mercantile center for Harford County with railroad traffic from both the B&O and Pennsylvania Railroads, industry, banking, commercial fishing, ship building, canning houses, and shopping.

Building initially followed the grid-plan lot division, with speculation and subdivision by major landholders, such as the Seneca family at the turn of the nineteenth century (north end of town) and Millard Tydings, a US senator from Havre de Grace, in the 1920's (south end of town, which included covenants and restrictions). Allowable building rights on lots-of-record based on lots from the original City Plan are still a legal challenge in old sections of the City. Later development occurred in concentric rings around the old town core, moving north and westward away from the waterfront. The purchase of land for Aberdeen Proving Ground by the Federal Government in 1917 would eventually change the face of development in the coastal region of Harford County in general, with civilian housing projects cropping up in the area. Specifically in Havre de Grace, a large farm tract called Lower Bloomsbury along Revolution Street/Old Post Road was sold for civilian housing to support mobilization for World War II. Developed in an elongated grid-pattern indicative of the times, the Lower Bloomsbury tract would later be known as Concord Fields and Tranquility Townhomes when it was sold and privatized in the 1950's.

Early coastal routes such as The Old Post Road/MD 7 through the center of town defined the City's relationship to the rest of rural Harford County and the region until the construction of US 40 completed in 1940, which connected Baltimore with Atlantic City, New Jersey. Highway commercial, replete with lodging and restaurants for travelers, was the typical development along this thoroughfare. US 40 was built on the edge of town and effectively bypassed it; it also came to define later residential development and its relationship with the older sections of Havre de Grace in the sense that the highway provided a division between the older portions of the City and newer post-war neighborhoods. Later in the mid-1960's, the construction of I-95 again bypassed Havre de Grace a mile from the edge of the City limits.

Havre de Grace had well-paced growth in the decades following World War II, with some in-fill south of US 40 where land allowed, such as Anderson Avenue, and the development of Havre de Grace Heights, Meadowvale, and other residential areas along MD 155. These neighborhoods were built along a modified-grid street pattern consisting entirely of single-family homes on fairly large lots (.33 acres and greater). Later, just as the rest of Harford County had major subdivisions planned and built in a development surge in the 1980's, Havre de Grace had large scale neighborhoods emerge "up on the hill", such as Grace Harbour and Bay View Estates. These developments were designed in the typical suburban subdivision fashion of single family and townhouse residences with curvilinear road networks and cul-de-sacs, stormwater management facilities, and the occasional tot-lot. They brought an influx of new families into the community and a place to expand the existing population in a generalized time of population expansion.

Since the year 2000, Havre de Grace has experienced another surge of residential growth with several large subdivisions currently taking place. Bulle Rock, a large planned golf course community, has been designed and partially built around a five-star golf course. Giving a nod to neo-traditional planning principles, Bulle Rock was designed as a mixed

residential community with a combination of single family homes, villas, and condominiums. As the City's largest subdivision at over 2100 units, Bulle Rock is intended as a community of individual neighborhoods consistent with Smart Growth ideals for high-density housing options but also having excellent green space and trails systems. The project has utilized existing historic structures and capitalized on views down the Bay. Other large projects include Greenway Farm with its bridge entrance off US 40 and Scenic Manor on Chapel Road across from Bulle Rock. With the start of these projects, new development (not including in-fill) was anticipated at approximately 3,500 residential units. This surge required a major expansion at the wastewater treatment plant and the execution of water buyback from Harford County for water supply and efficiency improvements to the water treatment plant to meet new capacity requirements.

IV. CAPACITY OF LAND AREA AVAILABLE FOR DEVELOPMENT

An initial development capacity analysis was performed by MDP in 2004 with assistance from City staff. Havre de Grace was one of five municipal examples involved in a yearlong effort by the State to develop a methodology for determining residential development capacity to be applied to all jurisdictions, regardless of size. Base numbers from that study showed that Havre de Grace had a household capacity for 2,749 units, which included the Bulle Rock planned adult community (estimated to have 1,958 units at the time), vacant residentially-zoned parcels, and underutilized parcels within city limits.³ At that time, Greenway Farms and Scenic Manor had not been annexed.

The MDP study went further and estimated residential development capacity within City limits and all growth areas as identified in the 2004 Comprehensive Plan which included Greenway Farms, Scenic Manor, and potential growth areas to the west of the City boundary along Robinhood and Earleton Roads (Growth Areas #9 and 10). This new household capacity was estimated at 3,496 units (refer to map in addendum for automated process utilizing MDP very generalized data/assumptions and statewide GIS data). During this time, the City was in the middle of major annexations and residential expansion. Due to the pace of growth statewide at that time, the homebuilding community was insistent on having jurisdictions identify their development capacity and to maintain a projected capacity to meet the need for residential growth for twenty years.

With the development of this MGE, a parcel-specific inventory of residential development potential has been performed. Updated development capacity for Havre de Grace for the twenty-year outlook is good. As of January 1, 2010, the City has an estimated residential capacity for 2,749 dwelling units within its municipal limits. This estimate includes individual small lots for in-fill development, larger parcels of land within current City limits, and major developments that are in process. In addition, the City has an estimated 326 dwelling units if the City annexed all lands identified in its 2004 Comprehensive Plan (please see Residential Development Capacity in addendum B. for specific breakdown).

The twenty-year build out rate for the City's potential residential inventory of 3,075 total units (including growth areas) has an average of 154 units per year. The City's past ten year growth rate (FY00 – FY 09) is 133 units per year. Simplistically stated, Havre de Grace at

³ Final Report of the Development Capacity Task Force, July 2004

this time has the ability to supply the next twenty years of housing growth. Considerations for future growth rate include: the influence of BRAC, resulting in the expansion of facilities and personnel at nearby APG, on housing demand in Havre de Grace; economic recovery; general product demand for the types of housing offered; and the affordability of new homes (which includes ownership costs such as HOA fees, maintenance fees, water and sewer rates, and combined City and County real property taxes).

Because of the large annexations over the past ten years, Havre de Grace has incorporated the land area needed to satisfy demand for residential development at densities consistent with long-term policy. Areas that were annexed are consistent with State Smart Growth policies and meet the requirements of Priority Funding Area (PFA) designation, to include: the extension of water and sewer service to those areas; densities that achieve 3.5 units per acre; that the growth plan is consistent with projections; and that the PFA size is large enough to meet twenty years for projected growth⁴. (Please see map for Priority Funding Areas located at the end of this chapter.) Since the 2004 MDP study, 1,044 new building permits have been issued⁵ due to the large new developments, such as Bulle Rock, and substantial infill projects, such as Heron Harbor.

State Smart growth policy is based on concentrating development in those areas where infrastructure – such as roads and public water and sewer services – already exists. In addition, the City development policies are in keeping with Harford County development policies where higher density growth is directed to the Development Envelope. Major opportunities exist in this region for serving the residential growth needs due to BRAC because of the City's proximity to APG. Our combined regional efforts with the support of Harford County Government need to be based in Smart Growth ideals which concentrate development in these areas with public water and sewer and where the existing road network can handle increased traffic.

V. PUBLIC SERVICES AND INFRASTRUCTURE NEEDED

From a facility stand-point, Havre de Grace is in a good position for accommodating new residential and commercial growth. Completion of existing development projects is desired for greater utilization of the wastewater treatment plant and increased capital cost revenue. With the exception of the branch of the Harford County Public Library, facility needs are currently met and, in most cases, exceeded. These include the two elementary schools, its middle and high schools (all of which are under capacity), public water and sewer treatment facilities, emergency services and public safety, stormwater management, and recreational facilities. The main issues at hand are financing the debt service for major upgrades to the City's wastewater treatment plant, maintaining current facilities that serve the City, and continuing to make necessary improvements to the water treatment plant and aging water and sewer infrastructure, typical of older communities.

Schools

Facility development, operations, and funding for all public schools come under the control

⁴ Where Do We Grow From Here? A Report of the Task Force on the Future for Growth and Development in Maryland, 2008

⁵ FY05-FY09 building permits (973), plus additional 71 permits for first six months of FY10

of Harford County Public Schools and the Harford County Board of Education. All of the public schools in Havre de Grace are currently under-capacity and will continue to be according to projections through 2015⁶. Meadowvale Elementary has the greatest utilization by its State-rated capacity of 568 students; its 2009-2010 actual utilization is at 92%. Projections for that school indicate a slight dip in utilization in the next two years then a gradual upward trend to 90% for the 2014-2015 school year. Havre de Grace Elementary, on the other hand, is well under-utilized with current utilization at 69% (State-rated capacity is 574 students). The newer communities, such as The Residences at Bulle Rock and Greenway Farm, are in the Havre de Grace Elementary School district, so continued growth is not problematic but actually desired.

Both the middle and the high schools are under-capacity with 75% and 91% actual utilization, respectively. Havre de Grace Middle School has a State-rated capacity of 775 students and is very small compared to most of the other middle schools in the County. Its utilization trends/projections show it maintaining modest utilization through the next five years, staying between 70-79%. With a capacity of 850 students, Havre de Grace High School is the smallest high school in the County with a utilization rate of 91%. Projections for utilization remain stable for the next two years with enrollment then expected to decline to 83% by 2015. The following chart shows the actual and projected utilization for primary and secondary schools serving Havre de Grace.

School Name	State-rated capacity	Actual		Projected									
		2008-2009		2009-2010		2010-2011		2011-2012		2012-2013		2013-2014	
		Enroll	% Util.	Enroll	% Util.	Enroll	% Util.	Enroll	% Util.	Enroll	% Util.	Enroll	% Util.
Havre de Grace Elementary	574	396	69%	404	70%	407	71%	386	67%	378	66%	388	68%
Meadowvale Elementary	568	520	92%	502	88%	493	87%	501	88%	506	89%	513	90%
Havre de Grace Middle	775	584	75%	546	70%	551	71%	570	74%	610	79%	598	77%
Havre de Grace High	850	775	91%	780	92%	774	91%	750	88%	704	83%	705	83%

Source: Harford County Government 2008 Annual Growth Report, as amended January, 2009.

Comfortably under-capacity, it is evident that public schools in Havre de Grace are sufficient to accommodate student population consistent with State-rated capacity standards. From a County-wide policy standpoint, residential growth in this region should be supported and marketed as facilities here are very community-based and well under-utilized. With smallness as a strength in a time of huge student bodies, all of the schools in Havre de Grace are at an excellent scale to meet individual student needs. However, it is critical to ensure facility improvements as the facilities age so that they are comparable to new facilities that are built within Harford County.

Libraries

The Havre de Grace Branch of the Harford County Public Library is well-utilized by its citizens. At only 9,000 square feet, the Havre de Grace Branch is a small facility, but it has a very high circulation rate. The library system has a county-wide system for funding and resource distribution, with most libraries located in either individual communities within the County's development envelope or in its designated rural villages. Though the funding for capital projects by Harford County Public Library has been devastated by the economic

⁶ 2008 Annual Growth Report, Harford County Government as amended January, 2009

recession in recent years, the Havre de Grace Branch is a high priority for being rebuilt with a second-story as soon as funds are available. It is designated for expansion due to its heavy use and anticipated future use due to new residential growth related to BRAC.

Currently, there are eleven branches of the Harford County Public Library with the Havre de Grace Branch representing over seven percent of the County's total circulation. The Havre de Grace Branch usage is also growing substantially, with an increase of 25% from FY09 to FY10⁷. This is by far the greatest increase in circulation of any library branch within Harford County, with most of the branches showing a decreasing level of circulation from a year to date comparison. Located in the center of old town Havre de Grace on Union and Pennington Avenues, there is a tremendous amount of walk-in traffic at this branch, and it is busy throughout the entire day. Due to its close proximity to local schools, academic and recreational computer usage is very high, often with daily waiting lists. Havre de Grace has a collection size of about 60,000 volumes which is relatively small (5.92% of total library collection), however with its future expansion the collection would be able to be increased. Harford County Public Library customers can access all branch collections by reserving volumes in advance.

Public Safety: Medical, Fire and Rescue, and Police Protection

Havre de Grace is well provisioned in regard to public safety with emergency medical services of the Havre de Grace Ambulance Corps; fire and rescue consisting of five divisions of the Susquehanna Hose Company; the Havre de Grace Police Department; and Harford Memorial Hospital, a full-service hospital. Volunteer personnel and Police Department staff are supported by the Harford County Government Emergency Operations Center (EOC) located in Hickory for communications and response. The EOC is central to the County for dispatch, emergency preparedness, and hazardous material response.

The Havre de Grace Ambulance Corps is an all volunteer organization responsible for 911 emergency medical and trauma response⁸. A separate organization from fire and rescue, the Havre de Grace Ambulance Corps has a modern facility located on MD 155 (1601 Level Road) with five equipment bays, administrative offices, bunk rooms, crew area, classrooms, and storage. Over eighty members provide emergency medical response to the local citizenry as well as providing mutual aid to jurisdictions within Harford County and Cecil County. Volunteer members with support from paid staff from Harford County consist of a mix of advanced life support (ALS) patient care providers, IV technicians, and basic life support (BLS) patient care providers. The ambulance and support fleet includes eight vehicles, including two ALS equipped ambulances and other support vehicles for both advanced life support and basic life support.

Havre de Grace is fortunate to have Harford Memorial Hospital located within the municipality for full-service medical support. Located in the center of the older portion of Havre de Grace on Union Avenue, Harford Memorial Hospital has been in operation since 1910. As part of Upper Chesapeake Health, it is an acute care, non-profit hospital with a

⁷ From February 2010 monthly report of Harford County Public Library, year to date percentage difference for Havre de Grace Branch.

⁸ All Havre de Grace Ambulance Corps information comes from their website at www.hdgac.org as of April 2010.

full complement of medical, diagnostic, and emergency care services with state-of-the-art ICU/PCU (intensive care/progressive care units), and an emergency department which handles over fifty thousand patients a year⁹. For trauma victims requiring more specialized medical care, Havre de Grace is equipped with a Medivac heliport located on the National Guard property on Old Bay Lane, which allows for transport to the University of Maryland Trauma Center within a very short time in extreme emergencies.

Susquehanna Hose Company proudly celebrates its 108th year in 2010 as fire and rescue response for Havre de Grace and the surrounding region. As with the Ambulance Corps, Havre de Grace is fortunate to have the dedicated, all-volunteer organization that provides for the City's public safety for emergency rescue and fire. Due to the fact that the Susquehanna Hose Company has five divisions and houses within municipal limits, they have an extremely fast response time. According to their website, the Susquehanna Hose Company responded to 696 calls in 2009 with an average time to the call location of 3 minutes/24 seconds¹⁰. The Susquehanna Hose Company was recently re-rated by the Insurance Services Office (ISO) as a Class 2 fire department, which will go into effect on November 1, 2010. As only the second Class 2 fire department in the State, this new rating is based on the operations and efficiency of the Hose Company, the water system within the City, and 911 emergency dispatch for Harford County. This rating will reduce insurance premiums for residents and businesses within Havre de Grace.

In addition to the equipped building facilities located throughout town, the Hose Company operates five engines, one tower (a specialized ladder truck for multi-story structures), one quint (ladder truck), one rescue unit, a mini-pumper, three boats, a dive unit, a swift water unit, and four utility vehicles. Specialized units within the Company include a dive team and swift water rescue unit, which is part of Harford County's Tactical Rescue Team. The Harford County Tactical Rescue Team maintains units for various rescue needs, with the emphasis on Havre de Grace for water search and rescue as well as rescue during flood events.

The Havre de Grace Police Department includes 37 full-time sworn officers and ten additional administrative and support staff for dispatch, communication, and central records. Centrally located in Havre de Grace on Pennington Avenue next to City Hall, the Department is housed in a modern facility built in 2001. Like the Susquehanna Hose Company, quick emergency response time – generally less than three minutes – is a tremendous asset for City residents requiring police services. The City's facilities within the Police Department building include a communications and dispatch area, a duty officer's room and officers' work area, records management, processing areas, evidence room, administration offices, and a community meeting space that can operate as an emergency operations center in case of a large-scale public emergency or natural disaster. Generators are located on-site that serve as backup for operating both the Police Department and City Hall in case of a power failure. In addition, the City has its own firing range in a remote area of the City that provides space for firearms training to local police departments as well as Federal and State agencies. Police vehicles are equipped with mobile data terminals,

⁹ Upper Chesapeake Health website with facility information for Harford Memorial Hospital, www.uchs.org.

¹⁰ Susquehanna Hose Company website at www.susquehanna5.com, as of April 2010.

providing information through a national crime database.

The Havre de Grace Police Department consists of Patrol and Criminal Investigation divisions, Communications, and Administration. Specialized personnel include two School Resource Officers, a Community Resource Officer, and two K-9 units. Personnel growth within City government has been focused on public safety and particularly the Police Department, adding six sworn officers since 2007. This was required due to the expansion of the City (i.e. larger geographic area/response time/coverage) and subsequent population growth, allowing for additional staff coverage per shift. In addition, the Police Department is expanding its ability to process serious crime scene evidence through a forensics evidence unit. The Havre de Grace Police Department is supported by other agencies in the region, such as the Harford County Sheriff's Department, the Aberdeen Police Department, the Maryland State Police, Maryland Transportation Authority Police, and numerous Federal agencies through mutual aid agreements. Both Computer Aided Dispatch (CAD) and Records Management Systems (RMS) are County-wide and common to all law enforcement agencies.

Several circumstances in Havre de Grace are unique from a public safety standpoint. The City is adjacent to major interstate roads, rail lines, and bridge structures that require extra measures of preparedness for major emergencies. As a waterfront community, Havre de Grace is subject to tidal surge flooding, as was seen in Hurricane Isabel in 2003, as well as from major rain events flooding interior waterways, such as with Hurricane Floyd in 1999. This adds a natural hazard element to the local public safety agencies' missions not typical of most communities as well as requiring specialized services for drownings and water-related emergencies. In addition, daily assistance for Harford Memorial Hospital is necessary for personal emergencies, crime or accident victims, and psychiatric unit support.

All public safety-related facilities have kept pace with the City's growth and demand, and continual facility and equipment updates are important for the community's public safety. Much of the funding for volunteer organizations is provided through Harford County Government's capital budget process. Contributions also come from the City of Havre de Grace and local fundraising efforts by the organizations themselves. County agencies, such as the Emergency Operations Center, are funded through the Harford County Government, where cyclical upgrades based on technology improvements are paramount for integrated, interoperable communications. The Havre de Grace Police Department, on the other hand, is funded primarily through the City's budget for operations and capital requirements. These funds come from a variety of sources, to include real property taxes and other taxes, grant funds and local aid, and other intergovernmental sources.

Volunteer recruitment and training is critical to sustaining emergency response, and Havre de Grace is very proud of its volunteer organizations which serve the immediate community and the region in such an essential public safety capacity. The City is dependent on generous volunteers for vital services in medical emergencies, fire, rescue, and natural disaster. The City is equally proud of its hardworking, professional, and highly-trained police staff, who keep the community safe around the clock and who perform fundamental public services on a daily basis.

Water and Sewer Facilities

The City is well served in terms of capacity by public systems for water and sewer with new treatment plant upgrades at both facilities. Havre de Grace embarked on a major wastewater treatment plant construction project in 2006 to meet new State requirements for enhanced nutrient reduction and increased capacity. The City has a design capacity of 3.3 million gallons per day (mgd) and a 24-month rolling average utilization of 1.366 mgd as of December 31, 2009. In addition, the City is in the middle of a three-phase plan for improving the water treatment plant. The City's water treatment plant withdrawal permit is for 4 mgd with a maximum day water usage of 2.037 mgd during the 2009 calendar year. (Please see the *Water Resources* chapter for more specific information on water and sewer facilities.) The main improvements in the future for water and sewer facilities will be the continuation of infrastructure improvements to an aging distribution system, such as replacement of water lines, valves, and sewer collection infrastructure.

Stormwater Management Systems

Havre de Grace has remained current in its requirement for stormwater management as State law has changed through the decades. Most recently, the City Council adopted a new stormwater management ordinance (Ordinance No. 912) on May 3, 2010. This new Ordinance adopts the more restrictive compliance criteria mandated by the State of Maryland's 2007 Stormwater Management Act. The City adopted its first stormwater management ordinance in 1984 with the purpose of reducing stream channel erosion, pollution, siltation and sedimentation, and local flooding¹¹. Implemented by the Department of Public Works through plan approval authority, stormwater management facilities were required to be designed for quantitative and qualitative control of stormwater runoff. Early development projects that required stormwater management plans were Chapel Heights (a small neighborhood located on Chapel Road), Grace Harbour, and Bayview Estates. The land was graded to accommodate stormwater management ponds which were built to retain stormwater runoff within a neighborhood during a rain or snow event.

Driven by State law, stormwater management requirements have evolved since they were first adopted in the 1980's. The City adopted an updated ordinance in 2002 based on the State model (Ordinance No. 826) which repealed all past stormwater management ordinances including minor refinements to ensure that the City was current with State law administered through Maryland Department of the Environment (MDE). Most recently, the State passed the Stormwater Management Act of 2007 where new regulations were again formulated by MDE. These new regulations refine stormwater collection and soil infiltration during storm events so that developed land imitates a more natural condition, like those areas that remain forested. This progressive approach to stormwater management is called environmental site design and is driven by the need to make substantial improvements to the water quality of the Chesapeake Bay. (Please see the *Water Resources* chapter for more in-depth information regarding stormwater management.)

Recreation

Havre de Grace has many varied types of recreational facilities available to its citizens – vast regional parks, recreation complexes with playing fields, and an excellent array of smaller

¹¹ Ordinance No. 675, Stormwater Management, enacted 6/4/84 and effective 7/1/84.

municipal parks unique to the region. Within the region, there are the very large regional facilities of Susquehanna State Park, Swan Harbor Farm, and Eleanor and Millard Tydings Park tract that are publicly-owned and provide over sixteen hundred acres of waterfront open space to the north and south of Havre de Grace. The City itself has many waterfront parks which provide public access to the Susquehanna River and the Chesapeake Bay to include: McLhinney, North, The Susquehanna Museum at the Lockhouse, Jean Roberts, David Craig, Frank Hutchins, and the entire cultural district with Concord Point Lighthouse, Havre de Grace Maritime Museum, Decoy Museum, and Tydings Park. These are all connected through sidewalks and marked trails along the City's waterfront.

City residents have the benefit of several generous recreational areas with active playing fields, to include the centrally-located middle and high school complex within the City, a multi-field recreational area being constructed on Chapel Road, and the playing fields at Gravel Hill. Havre de Grace itself also has some excellent regional trail features, such as the Promenade and waterfront pedestrian walkways through old town, the North Park Loop Trail, the Lafayette Historic Trail, bikeways through the City, and connections to the Lower Susquehanna Heritage Greenway and East Coast Greenway. In addition, privately-owned facilities which serve the community include Bulle Rock Golf Course, the Havre de Grace Little League at Stancill Field, and several marinas.

With a State standard of thirty acres of recreational/open space land per one thousand people (estimated population within the City is just over 14,500), Havre de Grace is in excellent shape. The region has a generous amount of open space for both passive and active recreation – passive for quiet enjoyment of nature (with trail systems included) and active recreation such as playing fields and recreation complexes. Havre de Grace exceeds acreage requirements with those large public parks adjacent to the City. Multi-use playing fields for active group-sport participation are also adequate however there is always a need for increased acreage in these types of facilities due to high usage. Major complexes include the middle school/high school recreational area with multi-use fields and baseball/softball diamonds and the new Chapel Road site where fields are being developed. Meadowvale and Havre de Grace Elementary Schools, as well as nearby Roye-Williams Elementary and Gravel Hill site, also provide field space for the City's team sport recreational needs. In addition, the Havre de Grace Activity Center – a multi-agency facility which includes Harford County Department of Parks and Recreation, a senior center, and the Havre de Grace Boys & Girls Club – provides indoor recreational space for citizens of all ages.

Playgrounds are interspersed throughout Havre de Grace in both the older and the newer communities. Some small playgrounds are owned and maintained by homeowners associations, others are provided on school property, and several are owned and maintained by the City itself, such as the Tydings Park playground overlooking the Chesapeake Bay. Responsible agencies work hard to maintain the existing facilities and to allocate funds to keep them up-to-date, which is a constant effort. These are important features in the community landscape, providing beneficial activity in an urban setting. As mentioned above, trails feature heavily in Havre de Grace and are part of a long-term effort to incorporate hiking and biking options in this beautiful region. Pedestrian accessibility and recreational opportunities lend to healthy, sustainable communities and add tremendously to the region's quality of life. (For an in-depth discussion of trail systems and recreational

facilities, please refer to the following chapters: *The Plan* (Chapter 3), *Community Facilities* (Chapter 5), and *Transportation* (Chapter 7).)

Funding of public recreational facilities comes from a number of different sources, to include the State of Maryland, Harford County Government, and the City of Havre de Grace. Providing recreational facilities and open space is a multi-tiered cooperative effort that benefits local citizens and the broader region. Harford County Department of Parks and Recreation continues to be very supportive of this region by acquiring large properties for active and passive open space by providing facilities and partnering in the development of facilities. The City has had the support of both the County and the State in leveraging grant funds for major land purchases through the decades. Havre de Grace is extremely fortunate to have the wealth of facilities that it enjoys.

VI. FINANCING MECHANISMS

Havre de Grace as a City is growing. Over the past ten years, it has annexed major land areas and now it is steadily filling those areas with planned residential development, as demand requires. As noted in Section IV, there is capacity for 2,749 new residential units within the City currently, seventy-five percent of which are in annexed areas from the past ten years. The City has improved facilities – both water and sewer as well as building facilities – to meet that growth demand, but the City also has acquired substantial debt to pay for them. The City must also maintain adequate staffing to operate all necessary facilities and to serve the growing population (i.e. police, public safety). This section explores how the City pays for what it already has as a municipal corporation as well as how it continues to finance its growth as new developments get completed over time.

A primary source of funding for government operations is real property taxes that are collected by both Harford County and the City of Havre de Grace. This source grows as the City expands through new subdivision and property improvements. When determining the amount of taxes owed on an individual property, two distinct variables come into play: the property's assessed value (determined every three years by the State Department of Assessments and Taxation) and the tax rate established by local jurisdictions. In the case of the municipalities within Harford County, they pay a prorated portion of the County's real property tax combined with a separate local real property tax. As of July 1, 2010, the real property tax rate for Harford County within the City of Havre de Grace was \$.908 and the City's tax rate was \$.60 per \$100 of assessed value. As new development occurs – both residential and commercial – the real property tax base increases thereby helping to pay the cost for new required services. Businesses also pay personal property taxes, with a rate of \$2.27 assessed by Harford County and \$1.705 for the City of Havre de Grace per \$100 of assessed value. The City also receives a portion of State income tax proceeds on a yearly basis.

In addition to adding to the tax base, new development also contributes directly to pay for system upgrades within the City by paying substantial water and sewer capital cost recovery fees. As of July 1, 2010, these fees (referred to simply as hook-up fees) for a residence in Havre de Grace were \$8,000 for water and \$13,200 for sewer. The City also collects fees for various required permits to cover the cost of personnel and professional services. These

include permit fees for all development plans, such as site plans and subdivision plans, stormwater management plans and outsourced engineering review, legal fees, and others. These fees are subject to legislative review to ensure that they remain current to adequately adjust for costs incurred.

All new residential construction is subject to Harford County impact fees which are designated as supplemental funding for school construction. These fees range from \$6,000 for a single-family detached dwelling, \$4,200 for a townhouse, villa or single-family attached dwelling, and \$1,200 for all other residential units such as apartments or condominiums. The impact fees noted here were as of December 2009 and are collected at the time of new building permit application. Other funding mechanisms are built into government financing at the County and State level, such as the transfer tax for recreational open space and agricultural preservation, which benefit the public at a broad level. City taxpayers, through the collection of Harford County real property tax, pay for County services such as the public school and the library systems. Residents and businesses are citizens of both jurisdictions and contribute directly to both local government operations.

The cost of permits, development, and construction is borne by the developers of a building project, whether it's residential or commercial in nature. As a subdivision is built, a developer must construct all necessary infrastructure at their expense – such as its water lines, sewer lines, roadways, sidewalks, public lighting, electric lines, etc. – to serve the community. Only in the case of commercial and industrial reinvestment are there financial incentives for new development and redevelopment. These incentives come in the form of an Enterprise Zone Tax Credit Program which was awarded to this region in 1996 and renewed in 2006 to provide real property tax credits based on new employment and the cost of property improvements.

The most significant costs for running the City come from public safety and operations of public works for providing roadway maintenance and water and sewer service – all necessary aspects of life in a small city. The budgets for all administrative functions, finance, public safety, public works, planning, and the Mayor and City Council are all part of Fund 1, the General Fund. Within its budget, Havre de Grace has a separate enterprise fund for directing the capital and operating costs of water and sewer. A self-sustaining operation, the Water and Sewer Fund (Fund 9) requires a substantial budget for necessary capital plant and infrastructure improvements, operations, and maintenance. The City also has a small enterprise fund for marina operations at the municipal yacht basin (Fund 8). Each year, as required by charter, the City develops its budgets through a public notification and hearing process. The budgets must be adopted by the second meeting in June and include real and personal property tax rates, the continuation of the Critical Area Tax for waterfront property, marina slip fees, and water and sewer rates. (Please see the current City of Havre de Grace Annual Budget for specifics on sources of revenue and expenses.)

The Department of Finance and its Director operate under the authority of the Annotated Code of Maryland Article 23A, which governs activity of municipal corporations in the State, and The City of Havre de Grace Charter, Section 82, which determines the role and responsibilities of the Director of Finance. In addition, Charter Section 37 governs the development of the City's budget process. Operating under generally accepted accounting

practices, the Department is governed by guidelines determined by the Financial Accounting Standards Board (FASB) and the Government Accounting Standards Board (GASB). These Boards set the rules under which the City's books must be kept. Other Federal and State mandated oversight also applies to the operation of the City's fiscal management.

Several sources of funding through the Federal, State, and County provide revenue for operations related to growth. One of the largest sources of growth related funding comes in the form of State and County Police Aid, which provides substantial revenue support for public safety and is adjusted yearly based on the size of the local police budget within the County. Community Development Block Grant (CDBG) funds are provided by the Maryland Department of Housing and Community Development on an annual basis and are often used for facility, infrastructure, and road repair. In addition, the City is consistently pursuing grants to augment its financing stream. Aggressive grant seeking has assisted the City in the construction of ongoing streetscape improvements, the redevelopment of several playgrounds and community parks, and necessary environmental improvements to the wastewater treatment plant. The City will continue to judiciously manage taxpayer investment through pursuit of external revenue sources while focusing on cost control in the operation of this mutually-shared municipal corporation.

VII. RELATIONSHIP OF LONG-TERM DEVELOPMENT POLICY AND CITY'S FUTURE CHARACTER

Havre de Grace has the opportunity to be an extremely productive model for livable communities and Smart Growth. The City's waterfront history, relationship to the mid-Atlantic transportation corridor, and its growing population and housing options place it in a unique position for exemplifying the State's Smart, Green, and Growing policies. These policies focus on community revitalization in existing population centers, creating pedestrian-friendly communities for less reliance on automobiles, compact development, and a traditional mix of uses. The City has so many assets that make it a beautiful and viable example for these urban planning principles and it is important that the City retains its autonomy for land use control and public utilities, as its character is determined by its direct role in zoning, land use, and development. At a time when some jurisdictions are turning in their charters due to insolvency, it is paramount that Havre de Grace stays strong, financially sound, and viable as a municipal corporation to drive its future growth and retain its unique character and historic identity.

Community Character, BRAC, and Transit Oriented Development

Several ideas need to be introduced here to explain a vision of Havre de Grace within the region. These ideas include its relationship to the City of Aberdeen, the recreational assets and beauty of this unique region, and to Harford County in general. At this time prior to developing all vacant land, there is a great opportunity to offer a well-thought out integrated landscape where the Cities of Havre de Grace and Aberdeen complement each other. Within a five-minute drive from Havre de Grace, Aberdeen is literally at the gate of APG for BRAC development and redevelopment and will feature heavily for meeting the office space needs for BRAC-related industry. Aberdeen is an extremely active City with over 1,750,000 square feet of planned office space within its municipal limits (not including office space within APG itself). Aberdeen is also the hub of intermodal transportation for Harford County, with Amtrak (eastern seaboard) and MARC (regional commuter) rail

service and local and regional bus service. In addition, it is already a busy employment center with APG and also has significant community assets such as Ripken Stadium, the Higher Education and Conference Center @HEAT, an interesting traditional downtown/old town area, and major hotel and retail activity at the focal I-95 interchange.

Havre de Grace, on the other hand, is a picturesque town with a beautiful waterfront and a quieter feel. Situated at the top of the Chesapeake Bay, it is a center for regional (Pennsylvania, Delaware, as well as Maryland) boating activity and water-based recreation. The historic section of Havre de Grace consists of traditional tree-lined streets laid out in a grid pattern, with pedestrian access to its quaint old town retail area and public buildings such as its schools, library, and City Hall. As a center for museums and cultural heritage, the City is focusing on its high quality-of-life with a well-developed arts community (Arts and Entertainment District), avant-garde appeal, interesting restaurants, and a Downtown Business District with Main Street designation which continues to undergo revitalization. The newer communities in Havre de Grace offer a wide array of price options and amenities, and the City is working to ensure their connection to the original town center despite being bisected by US 40, a major highway.

Due to the City's proximity to Aberdeen, Havre de Grace is an excellent location for new residents relocating because of BRAC. Havre de Grace may also be considered for transit-oriented development in support of Aberdeen's center of transportation, in some sort of modified form. In general, transit-oriented development (TOD) is a practice of land use planning where high density residential housing is built around transit hubs, supporting mass transit options over full reliance on automobiles. In the case of Havre de Grace, there is no longer a passenger train station in the City. However, the City has local bus service to Aberdeen, regional bus service to Baltimore, and is four miles from two MARC stations (Perryville and Aberdeen). The long-term potential is for full regional rail interconnections, with MARC to the south to Baltimore and Washington, D.C. and the SEPTA System to the north into Wilmington and Philadelphia. Increased mass transit – with housing densities to support it – is a practical alternative to increased vehicular traffic in the mid-Atlantic region. Citizens in the region benefit tremendously from the beautiful park resources in the area, to include adjacent Swan Harbor Farm, expansive Tydings Park on the Oakington Peninsula to the southwest of Havre de Grace, and Susquehanna State Park to the north. In addition, bikeway connections such as the Lower Susquehanna Heritage Greenway and larger East Coast Greenway continue to offer unique recreational opportunities that directly connect the City to the broader region. Now, prior to development, there is an excellent opportunity to successfully transition between and capitalize on the unique characteristics of both Aberdeen and Havre de Grace by creating a natural buffer along the Oakington and Robinhood Road corridors. These areas are beautiful, irreplaceable natural corridors which have remained largely undeveloped. Identifying what is important to preserve in its context is critical prior to annexation and total development by both municipalities.

The long-term development policy of Havre de Grace must support its collective vision of the City's future character, where its vision is to support its historic, small-town feel. As the City continues to build out its new neighborhoods, the City's character is dependent on interconnections between the older and newer areas, its trail systems and pedestrian connections within the City, and its retention of its historic context and scale. Havre de

Grace has a great advantage over larger jurisdictions like Harford County to be able to plan at a community level where smaller-scale planning equals human-scale planning. Planning at any scale always affects people who are all ultimately subject to the policies that determine the built environment. However, here decisions can be made to benefit the citizens in a very direct and personal way to make this City a vibrant, desirable, and successful place to be.

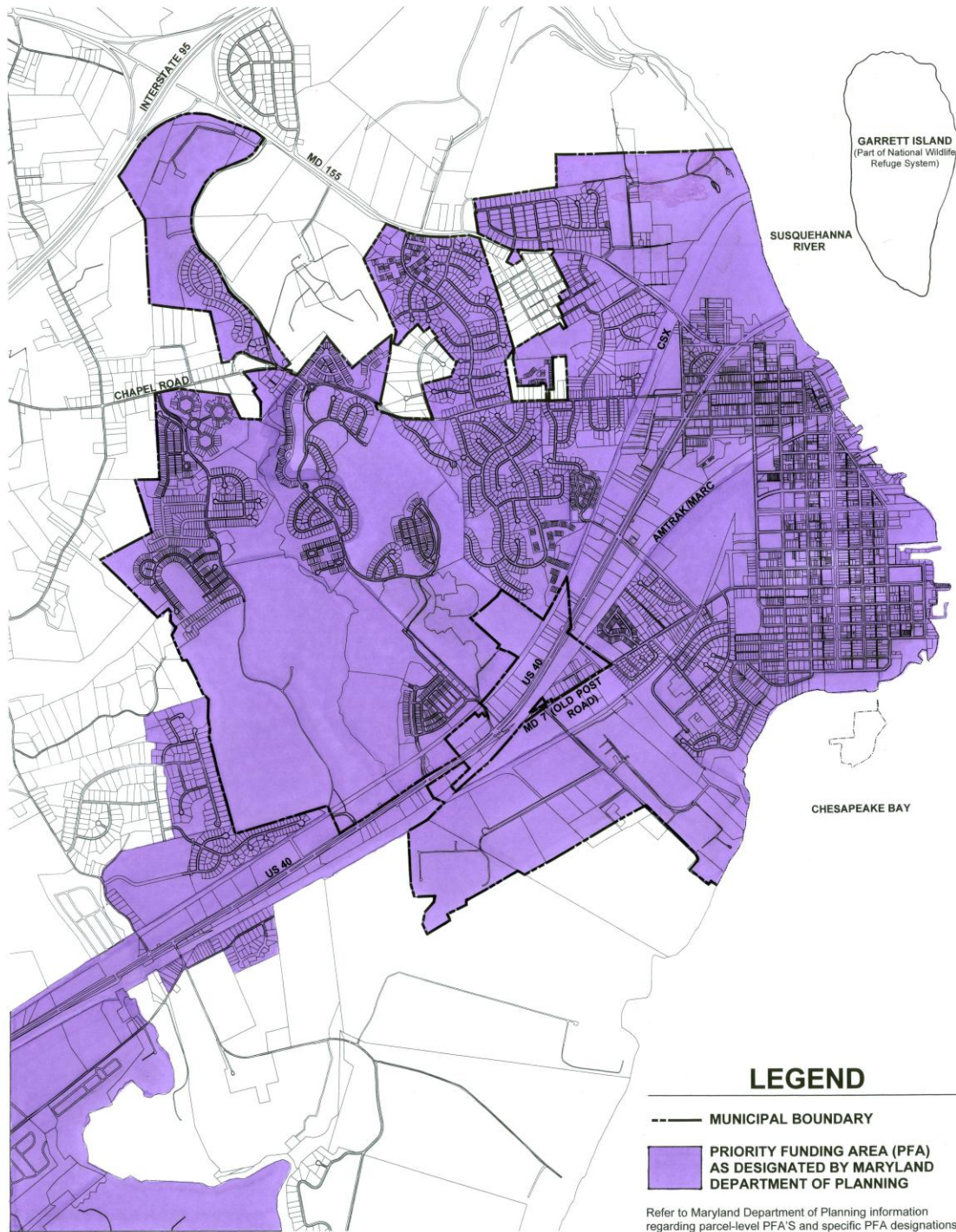
Rural Buffers, Transition Areas, and Sensitive Areas

Due to its location at the top of the Chesapeake Bay, citizens and officials in the City of Havre de Grace must keep in mind the impacts of growth on the region's sensitive areas, such as its extensive shoreline, stream corridors, and steep slopes that are a predominant feature at the fall line. The City is subject to Chesapeake Bay Critical Area Law as well as other State and Federal environmental laws, such as those governing stormwater management, soil conservation, forest conservation, and pollutant discharge. (A more comprehensive description of these laws is included in *Sensitive Areas, Chapter 10.*)

In addition to concentrated development within the City of Havre de Grace, Harford County land use policy supports agricultural land uses north of I-95. This interstate thoroughfare provides a physical demarcation of the County's development envelope, providing a transition from the rural portions of the County to the more dense municipalities. In the case of Havre de Grace, this transition is a soft, but distinct edge to land use intensities as one travels east on MD 155. Maintaining the agricultural designation in the Harford County Land Use Plan north of I-95 is desired to retain that rural buffer. As mentioned before, maintaining a visual sense of separation between Havre de Grace and Aberdeen is also desired by way of an established buffer along the Robinhood Road/Oakington Road corridor. The forested spans and vegetated medians along US 40 between Havre de Grace and Aberdeen give a visual sense of transition between the two Cities. Retaining that sense of transition in land use practices, zoning, and subsequent development is desired. The jurisdictions of Aberdeen, Havre de Grace, and Harford County must coordinate efforts in land use planning for this region so that the beauty of the natural areas and stream corridors are retained.

The City of Havre de Grace benefits from Harford County land use policy that focuses on revitalization of existing communities within the development envelope to maximize resources and support its municipalities. These efforts reduce costs for infrastructure and roadways, reduce low density sprawl-type development with the need for long commutes to employment centers, and support centers for culture and older, historic communities. Supporting existing communities and focusing new development in areas with roads and infrastructure is extremely important from a smart growth and green perspective.¹² It is generally known and understood that more compact, sustainable communities reduce resource consumption (such as gasoline by reduced vehicle miles traveled) and pollution (emissions, septic system nutrient reduction). This is an extremely important effort with regard to resource conservation.

¹² The Abell Report, March 2009, Volume 22, Number 1.



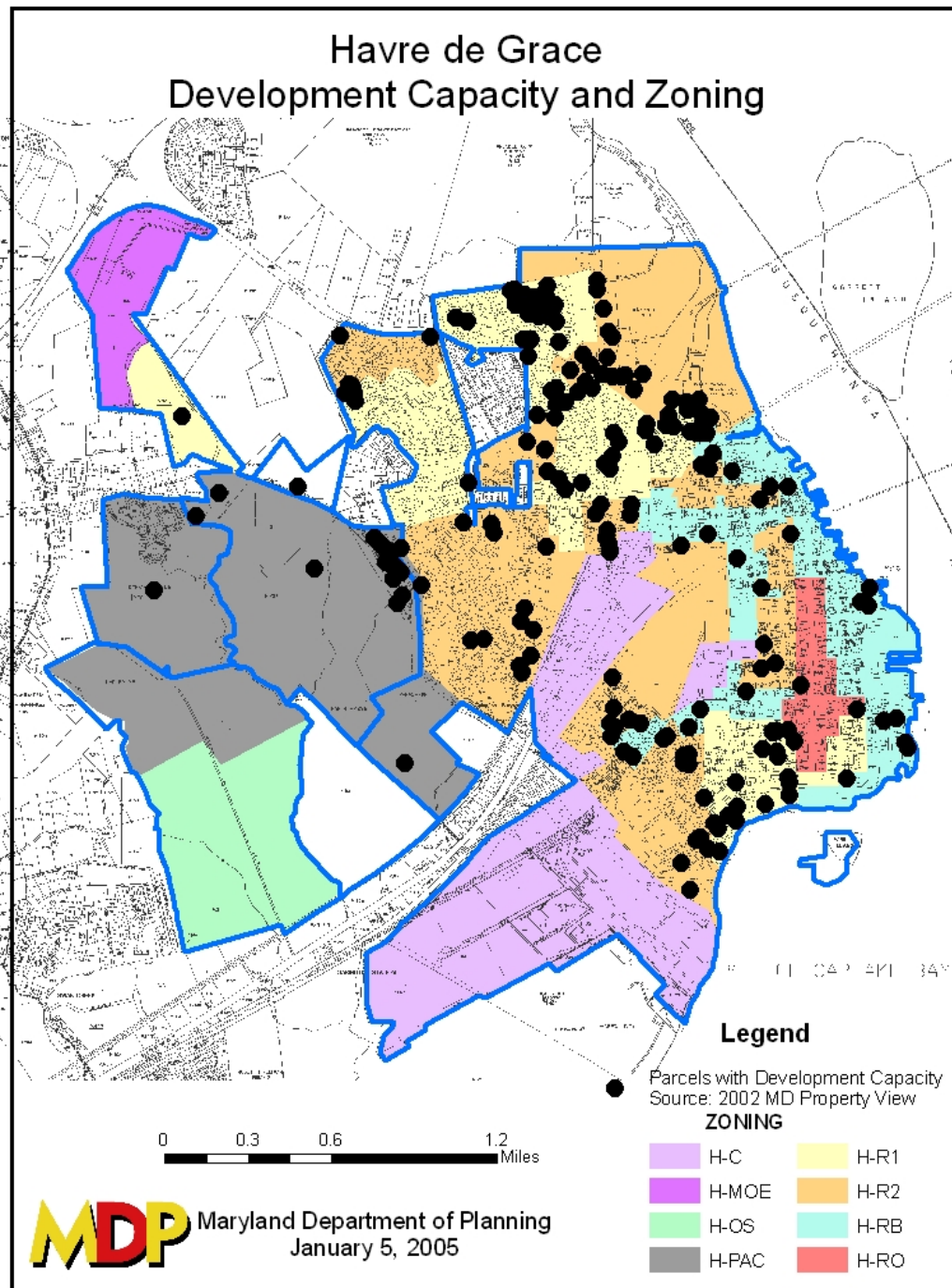
PRIORITY FUNDING AREAS

City of Havre de Grace Comprehensive Plan



VIII. ADDENDUM

- A. Maryland Department of Planning map of Havre de Grace from January 2005. Development capacity analysis did not include Greenway Farm development or commercial areas along US 40. Much more reference material pertinent to Havre de Grace is in full version of *Final Report of the Development Capacity Task Force*.



B. Residential Development Capacity – January 1, 2010

This analysis includes information on building permits through December 31, 2009 for all residential projects in process. This is a manual assessment of vacant land and is intended as an updated refinement of Maryland Department of Planning GIS-based residential development capacity inventory performed in 2004/2005 for the *Final Report of the Development Capacity Task Force*.

Number of individual vacant lots for single-family detached (SFD) dwellings: 75
(assumed capacity for one new household per vacant lot; minor in-fill, ~ 75 units)

Larger vacant parcels with residential development potential: 280
(acreage/ in-fill factor based on MDP assumptions from 2004 analysis)

Large known residential subdivision projects and status:

*Remaining # of
dwelling units in each project*

Bulle Rock Project (#3): (Planned Adult Community; 2067 with possible maximum of 2126 units; does not include Bulle Rock Estates or Yacht Club) 1360

Scenic Manor (#6): 84 units (subdivision plan approved for SFD) 84

Ivy Hills: 43 units (development of single-family attached homes/
32 townhouses currently being built; 11 completed)

Bloomsbury Park: TBD (250 SFA units, redevelopment project of former Tranquility Townhomes) 250

Greenway Farm (#7): 682 units (development of SFA/townhomes currently being built; 109 completed) 573

Mount Pleasant: 11 units (development of SFD; 2 built) 9

St. Johns Commons: 40 units (affordable apartments for elderly; plan review) 40

Bulle Rock Yacht Club: 34 units (SFA on waterfront; plan expired) 34

Water Street Condominiums: 12 units (condos. on waterfront; plan expired) 12

Total Development Capacity within current City limits: 2749

Residential Growth Areas:

(planning areas outside of current City limits but part of 2004 Comprehensive Plan)

Growth Area #5, Lampson Property: 70 units, Medium Intensity designation

Growth Area # 9, Earlton Road: 160 units, Low Intensity designation

Growth Area #10, Robinhood Road: 96 units, Low Intensity designation

Growth Areas #1 (Shawnee Brooke), #2 (Havre de Grace Heights), #14 (Chapel Road Communities), #15 ((Susquehanna River Hills): These existing residential communities are considered for extension of public services based on hardship/need (i.e. failing wells, septic systems, etc.)

Growth Areas #4 (Grace Manor) and #5 (Havre de Hills) are built out.

Growth Areas #8 (Green Properties), #11 (US 40 Commercial Extended), #13 (Garrett Island), #16 (Arundel Quarry), #17 and #18 (Conservation Easements: Sion Hill and Old Bay Farm) are not intended for increased residential growth.

Area #19 (Swan Harbor Farm) is identified in 2010 Water Resources Element Amendment (see maps in Water Resources chapter) as a potential planning area for nutrient offloading, not residential development. This was part of a coordinated effort between Harford County and the municipalities in 2007 to determine logical water and sewer service areas for the land area between Aberdeen and Havre de Grace.

Total Growth Area units: 326

Possible sites for residential redevelopment:

(potential for residential units unknown, but must be considered with regard to future water and sewer capacity)

Harford Memorial Hospital: Hospital may relocate at some future date, number of units or reuse of property unknown at this time (zoned RO, Residential Office in Revitalization Area #3 – Old Town)

Growth Areas #12, Bulle Rock Golf Course: Open Space, Preserved Land designation

Total units: unknown

Total Residential Development Capacity for 2004 Comprehensive Plan scope: 3075

C. New Residential Dwelling Units/Permit Activity for the Past Ten Years

This list of new residential permit activity by fiscal year (FY) is provided for the purpose of determining the City's ten-year growth rate and population estimates as of January 1, 2010. In addition to the units by fiscal year listed below, the City also issued 71 new residential building permits first half of FY10 (July 1 to December 31, 2009) to bring total building permits to 1403 for the start of the decennial.

FY00	60 units
FY01	12 units
FY02	30 units
FY03	77 units
FY04	180 units
FY05	340 units
FY06	254 units
FY07	245 units
FY08	88 units
FY09	<u>46 units</u>
Total:	1332 units

[PLEASE SEE ALL MAPS IN THE PLAN, CHAPTER 3 FOR ADDITIONAL SUPPORTING POLICY INFORMATION RELATING TO THIS MUNICIPAL GROWTH ELEMENT]

I. INTRODUCTION

The adoption of this Comprehensive Plan is only one element of a continuous growth management process for the City of Havre de Grace. The Plan itself serves as a framework around which relevant future land use decisions are based. The word *implementation* is an action word, and implementing the Comprehensive Plan is a continuing, active process. It is accomplished through various growth management tools – such as the zoning, subdivision, and site plan ordinances—that govern public and private actions at the individually owned property (or site planning) stage and may include incentives as well as regulations. This chapter serves to outline current regulations, policies, and incentives that relate to land use and the built environment. It also provides recommendations for strengthening existing or developing new implementation tools at the local level.

Land use policy is extremely complex. It is an inter-relationship between public agencies at the local, State, and (to a limited degree) Federal levels. Some regulations, such as the zoning or site plan ordinance, are developed and enforced at the local level. Other regulations, such as the Chesapeake Bay Critical Area Ordinance and Forest Conservation Ordinance, are incorporated into local law but mandated by the State. Floodplain regulations, on the other hand, are established by the Federal Government. All of these regulations are in place to govern how land is utilized with full regard for the environment and the health, safety, and welfare of the public.

In addition to regulations, there are also incentive policies that influence land use decisions, both public and private. These may include Enterprise or Empowerment Zones for renewed commercial reinvestment, Historic Tax credits for reuse of existing structures, or other incentives that ultimately affect land use. Within the past decade, great strides have been made at the State level under the nationally recognized Smart Growth initiative to encourage growth to occur in appropriate areas. These State initiatives affect land use policies at the local level and include the establishment of Priority Funding Areas and the development of incentives for cleanup of old industrial areas, or Brownfields. These incentives serve to encourage beneficial land uses, whether it's community revitalization, historic preservation, or other desired outcomes.

This chapter lays out existing implementation measures that affect land use in a very broad, generalized way. Further investigation is necessary for more specific information relating to policies, regulations, or available incentives. The following recommendations are considered to be the most important actions that should be pursued within the six-year time frame of this Comprehensive Plan. Supporting sections within this chapter consist of the following: (1) implementation authority and process of local government to oversee policy, regulation, and enforcement regarding land use control, (2) comprehensive land use categories as related to zoning designations, (3) the capital improvements program, (4)

annexation, and (5) other implementation tools. This chapter strives to clarify the relationship of the Comprehensive Plan as a policy document to the real process of implementation that occurs at the individual property level.

II. RECOMMENDATIONS

- Continue to support the all-volunteer Planning Commission in its role in the development of the City's Comprehensive Planning document; its review of subdivisions, site plans, and plats; and making informed recommendations regarding land use regulations, annexation, conditional uses, special exceptions, and variance requests.
- Continue to support the all-volunteer Board of Appeals in its role in hearing appealed decisions of the Planning Commission and its review of conditional uses, special exceptions, and variances.
- Formalize the Joint Development Review Committee as part of the site planning process. This committee is comprised of staff from the Departments of Economic Development and Planning (DEDP) and Public Works (DPW) and representatives from the Planning Commission and City Council Planning Committee.
- Through the Smart Growth Memorandum of Understanding, continue to strengthen relationships between the local jurisdictions of Harford County, Aberdeen, and Bel Air for mutual cooperation in regard to growth, development, and public utility issues.
- Review and revise existing zoning, site plan, and subdivision ordinances to further the objectives of the Comprehensive Plan through local implementation measures. To this end, develop a Unified Development Ordinance (or UDO) that incorporates these ordinances and parking requirements, signs, and design standards. Particular attention must be focused on the Residential Business (RB), Commercial (C), and Mixed Office/Employment (MOE) Districts and the development of an Open Space zoning category. Strong consideration should be given to the use of overlay districts, floating zones, and design standards as additional tools in support of Comprehensive Plan objectives.
- Consider the need for Adequate Public Facilities legislation, with particular attention to school facilities.
- Require a minimum of 3.5 units per acre density for new annexations in the City of Havre de Grace. This is to meet the requirements of Priority Funding Areas Certification for new growth areas under the State of Maryland Economic Growth, Resource Protection, and Planning Policy.

- Develop a Waterfront Overlay to maintain an appropriate building scale for the City's waterfront, retain the visibility of the waterfront from the public rights-of-way, and to allow public access where possible.
- Evaluate existing regulations and adopt new guidelines that support transit-oriented development throughout the City.
- Create land use regulations that support compact, mixed-use development in Newer Neighborhoods/Developing Areas and Growth Areas.
- Develop design guidelines for the National Register Historic District within a Unified Development Ordinance to support the existing character of the older portions of the City. Work with Maryland Historical Trust to develop specific requirements for in-fill development that would address street layout and design, pedestrian facilities, lot configuration, mix of uses, mix of housing types, scale, and density.
- Consider ways to preserve historic resources in New Neighborhoods/Developing Areas and Growth Areas, such as clustering and context sensitive design.
- Consider Harford County's Commercial Revitalization District as a model for revising the City's zoning regulations along US 40.
- Consider the designation of an Arts and Entertainment District in the Downtown Business District which provides property and income tax incentives through the State Department of Business and Economic Development.
- Consider the need for requirements for affordable housing in future revisions to zoning regulations.
- Evaluate the City's current environmental standards for consistency with State and County requirements.
- Develop a consolidated Havre de Grace Water and Sewer Master Plan that outlines extension of water and sewer infrastructure in growth areas. This plan would coordinate with the Harford County Water and Sewer Master Plan for the extension of water and sewer service in this region and could form the basis for capital improvement planning with regard to infrastructure costs and timing.
- Evaluate the potential for impact fees and other mechanisms for the City to achieve compensation for higher density housing development.
- Continue to revise environmental regulations, building codes, property maintenance codes, or other requirements as established by State law.

- Improve community notification of public hearings regarding general subdivision plans and site plans projects that are being reviewed by the Planning Commission. Currently, notification is required for conditional uses and variances only.
- Develop an integrated 5-Year Capital Improvements Program that supports the objectives of the Comprehensive Plan through DPW.
- Refine development review and tracking procedures between various City and State agencies so that practices are standardized and review time is determined.
- Develop landscaping requirements for commercial, industrial, multifamily, and employment zoning classifications.
- Support the recognized annexation policy established by City Council in Resolution No. 97-7 of August 1997.

III. IMPLEMENTATION AUTHORITY AND PROCESS

Planning is a recognized governmental process, operating under the general objectives established by the Maryland Zoning and Planning Enabling Act. The City's planning authority is provided by Article 66B, in which the City's elected representatives grant planning and development review authority to a separate body, the Planning Commission. The City's Planning Commission, an empowered seven-member commission of the Mayor and the City Council, is charged with the duties of developing and maintaining the Comprehensive Plan; developing and recommending, for adoption by the Mayor and City Council, the necessary legislative tools for effectively implementing the Plan; and carrying on other activities dealing with City land use, development, and property improvement. In addition to the Planning Commission, a five-member Board of Appeals is an empowered body that is charged with acting on conditional uses, variances, and special exceptions and appealed decisions of the Planning Commission relating to land use.

The Comprehensive Plan is a guide for generalized land use policies and is a legislatively adopted document. However, the implementation of the plan truly occurs through the City's ordinances (and possibly incentives), the strength of which determines how the City gets "built out" or developed over time. In order to give public sanction to the Comprehensive Plan, the Planning Commission can avail itself of several local regulatory tools or ordinances, including zoning, site plan, and subdivision regulations. In addition, there are other laws mandated by the State of Maryland that are incorporated into local law which also apply to individual properties during the development process. The administration of those ordinances are accomplished by staff within DEDP during the development review process. The following is a list of regulations that govern actions during the site and subdivision review stages of the development process:

- Chesapeake Bay Critical Area Ordinance
- Floodplain Ordinance

- Forest Conservation Ordinance
- Sediment and Erosion Control
- Off-Street Parking Ordinance
- Site Plan Ordinance
- Stormwater Management Ordinance
- Subdivision Ordinance
- Zoning Ordinance

All subdivisions of property, site plans, and development plats come before the Planning Commission for formal review and approval through a public hearing. As a voting body, the Commission follows a structured process during its review hearings, with a majority vote for project approval or denial. Approval of conditional uses, special exceptions, variances, or appeals of Commission decisions are heard by the Board of Appeals. Again, a simple majority wins or denies approval. Any appeal of the Board's decision must be heard by Harford County Circuit Court.

Prior to public hearings for development review and formal action by the Commission, City staff members review a project internally to ensure that it conforms to State and local laws and that the project can be served by public utilities and services. As part of the staff review, a Joint Development and Review Committee has been formed to address issues related to development projects. This committee includes members of the DEDP, DPW, local emergency response, City Council Planning Committee, and the Planning Commission. Property owners and/or project developers are requested to participate to answer questions relating to their respective project. Consideration for the following items are paramount during these discussions and throughout all development review by City personnel and the Commission to assure the best possible project.

Project Land Use and Density

- Functional organization of site
- Land use relationships
- Developable area
- Compatibility with Comprehensive Plan

Transportation and Circulation

- Identify transportation hierarchies
- Vehicular access and circulation
- Pedestrian access and circulation
- Traffic impact analysis

Design Considerations

- Compatibility of scale
- Compatibility of design
- Architectural style
- Landscaping

Site and Off-Site Features

- Size and shape of site
- Topography
- Soil and sub-soil conditions
- Drainage and storm water
- Public utilities and infrastructure
- Existing improvements

Historical and Architectural Considerations

- Significance
- Location

Environmental Considerations

- Inventory of assets
- Quality of ecological setting
- Preservation of natural systems
- Quality of environmental design
- Open space and conservation

IV. LAND USE VERSUS ZONING DESIGNATIONS**A. Comprehensive Plan Land Use Categories**

This section describes the various types of land uses identified in the land use plan map from Chapter 3, The Plan. It is important to identify and organize future land use categories in a manner that can be (1) creatively and flexibly applied to future land uses and (2) adaptable for classification into the City's Zoning Ordinance. The following land use designations are based upon (a) the appropriateness of the recommended land use categories for application within the City, (b) the completeness of the recommended land use categories in addressing the range of potential land uses which should be accommodated in the future, (c) the reasonableness of the recommended densities within each land use category, and (d) the political and social impacts of applying the uses and densities to the areas subject to annexation. Thus, the following land use categories are intended to provide the range of land uses around which site-specific recommendations for the future land use plan will be based.

This Comprehensive Plan provides for six major land use categories. These categories provide the context for the designation of the revitalization areas, newer neighborhoods/developing areas, and growth areas that are detailed in Chapter 3, The Plan. The six major land use categories – *Low Intensity Residential*, *Medium Intensity Residential*, *Mixed Use Residential*, *Commercial*, *Employment/Industrial*, and *Open Space* – accommodate a general range of land uses.

Residential

Three separate residential land use designations have been selected for the future land use plan – *Low Density Residential*, *Medium Density Residential*, and *Mixed Use* – with each dominant housing type selected and defined based on its appropriateness for the future housing needs and desires of the City. Density, generally expressed in terms of "dwelling units per acre", is representative of that found in contemporary housing developments within communities similar in size and character to Havre de Grace.

The residential densities recommended are presented in a range to provide maximum flexibility in determining the most appropriate density for any given development proposal. The higher end of the density in the zoning districts is to be applied where individual land use proposals are of a superior quality relative to site design (within the context of recreational and environmental amenities as well as off-site improvements and critical public facilities) and address specific issues and needs raised in the Comprehensive Plan. The following table summarizes the three residential land use designations:

	<u>Residential</u>	<u>Density</u>
1.	Low Density Residential (Single-family detached)	2-4 Dwelling Units per Acre (Gross)
2.	Medium Density Residential (Single-family detached and attached)	5-7 Dwelling Units per Acre (Gross)
3.	Mixed Use Residential (Single-family detached, attached, and multi-family units)	8-16 Dwelling Units per Acre (Gross)

Low Density Residential is intended to provide opportunities for single-family detached residential development in the Havre de Grace study area at a maximum density of four units per acre. This will permit more flexibility in yard requirements, lot widths, and bulk regulations.

Medium Density Residential provides for the opportunities of single-family detached and single-family attached on smaller residential lots within the City. To a limited degree, multi-family residential uses may be acceptable if considered very carefully within the context of surrounding land uses. The maximum recommended residential density for *Medium Density Residential* is seven units per acre, with a base density established at five units per acre.

Mixed Use Residential land use is intended to address and support existing land uses in the older portions of the City. These are areas where the continuation of traditional historical residential development patterns mixed with commercial retail, multi-family residential, and offices uses are desirable. Residential densities of up to sixteen units per acre may be permitted in these areas.

Business Corridors

The *Business Corridors* land use category denotes areas of general business, office, retail, and services uses within the City of Havre de Grace. These are areas that are to be supported with economic development, business retention, and enhancement strategies, and include the Downtown Business District and the US 40 service/retail corridor.

Employment/Industrial

The *Employment/Industrial* land use category denotes areas that are or are desired to be major employment generators for the City and surrounding region. These areas include the Chesapeake Industrial Park, existing industries along MD 7/Old Post Road, and the land immediately adjacent to the I-95/MD 155 interchange.

Medical Corridor

The *Medical Corridor* denotes an area where there is a high concentration of medical service providers in close proximity to Harford Memorial Hospital. It is desired that a future land use strategy be developed to maintain and strengthen the presence of medical offices in this area, such as through an overlay zone.

Open Space

This general land use category is to be applied to areas of conservation, preservation, and institutional uses, such as public parks and school sites. Any and all land uses occurring within the Open Space category would be implemented by the adoption of zoning regulations and/or special use permit standards not currently available.

B. Zoning Designations

Zoning is the principal means available for giving the Comprehensive Plan its legal effect. The functions of zoning are to control the use of land and buildings and to regulate the density of development in order to guide future land use patterns towards the visions and goals outlined in the Comprehensive Plan. Zoning has proved to be an extremely important public law, capable of shaping the environment of the communities that use it. Its application may be apparent only in small ways, even after years of use. If used properly, it will produce a better and more livable environment.

In order to proceed effectively, growth and development must be guided by both the Comprehensive Plan and the Zoning Ordinance. Under the provisions of zoning regulations, a community is divided into *zoning districts*. These districts specify permitted, conditional, and special development uses allowed on individual properties. Zoning regulations also determine lot size, coverage, building placement, and density. Enacted legislatively, the City's present zoning consists of the following seven districts and a conservation zone.

Residential (R, R-1, R-2)
Residential Business (RB)
Residential Office (RO)
Mixed Office/Employment Center (MOE)
Commercial (C)
Critical Area Resource Conservation Zone (RC)

The three Residential Districts differ in that R is lower density, R-1 is medium density, and R-2 permits the highest density, including multi-family residential units. The RB District permits, among other uses, retail stores and shops while the RO District is oriented to office types of land uses. The MOE District is intended to facilitate and regulate retail and business uses in an office park setting. The City has no industrial classification; manufacturing is a permitted use in the Commercial District. The Resource Conservation (RC) Zone permits very limited development within areas designated for protection within the Chesapeake Bay Critical Area.

The City adopted its initial zoning ordinance in 1982. Though some zoning categories have been added since 1982, the body of the ordinance has been unchanged. Several zoning categories, such as the Residential Business (RB) and Commercial (C) districts are extremely liberal in what they allow in terms of uses and the building requirements. These must be fully reviewed to strengthen the effectiveness of the zoning ordinance as an implementation tool. Other zoning categories or overlay districts may also be added to broaden the ordinance applicability. For instance, the development of an Open Space zoning category may be necessary for some properties or more restrictive overlays may be desirable for areas of special concern, such as the waterfront, stream valleys, or the historic areas of the City.

V. CAPITAL IMPROVEMENT PROGRAM

The scheduling of public physical improvements, such as streets, sewers, buildings, and parks for a community, is the essential task of capital improvements programming. The scheduling is based on a series of priorities according to need, desire, or importance, and to the community's ability to pay. Capital improvement programming provides the vital link between the Comprehensive Plan and the actual construction of public improvements. Whereas the plan may state what and where improvements should be built, the capital

improvement program states when they will be built and what they will cost. Because the provision, nature, and location of public facilities greatly influence the patterns of urban growth, programming is one of the most important implementation tools at the City's disposal.

Many important advantages and benefits are to be gained from the programming of capital improvements. Programming:

- Ensures that the public facilities and traffic circulation portions of the comprehensive plan will be carried out;
- Calls attention to deficiencies in the community and promotes action to correct them;
- Produces cooperation and coordination between various municipal departments as well as different governmental units;
- Ensures that projects are not built before they are needed or so late that costs become prohibitive;
- Ensures that funds can be provided in a logical manner;
- Guarantees review of new facilities to determine whether policy decisions were properly made on how the new project should be financed; and
- Protects the community from pressure groups demanding "pet" projects.

The term "capital improvements" refers to new or expanded physical facilities for the community that are of large size and relatively permanent, such as streets, playgrounds, harbor facilities, police stations, schools, libraries, water distribution, and sewer systems. Large-scale replacement and rehabilitation of existing facilities also fall within this category. To derive the maximum benefits from public funds, it is vitally important that municipal improvements be scheduled and coordinated so they are constructed in the proper sequence to meet growth demands. Once programmed, it is critical that the funding be earmarked and the planning, design, engineering and construction schedule is adhered to. This will give the capital improvements program, or CIP, validity.

Public improvement programs generally cover the scheduling of capital expenditures under a priority system for a revolving five-year period. It is essential that these programs be coordinated with the Comprehensive Plan for consistency. An enhanced dialogue between DPW and DEDP would facilitate this coordination. The Joint Development Review Committee is a logical forum for accomplishing this. Projects scheduled for early execution are detailed so that proper budgeting and financing can be arranged. The program is reviewed annually and at the same time projected ahead another year. In this way, there is a continuing program five years in advance. This assures that public projects will be completed where and when needed, and within the budget of the community.

VI. ANNEXATION**A. The Case for Annexation**

There are relatively few acres of land within the City which remain vacant and are developable. Much of the remaining vacant land, scattered throughout the City, is restricted due to the presence of wetlands, bedrock, steep slopes, floodplains, and hydric soils. Given the limited vacant land, planned development, which responds to the demand for more housing, must be accommodated through the expansion of the City's corporate boundaries. In order to adequately plan for this growth, DEDP studied numerous areas and properties adjacent to the current corporate boundaries. The results of this analysis are reflected in the recommendations in *Chapter 3, The Plan*. The City also analyzed its capability to provide services in those growth areas. That analysis is found in Chapter 6, Public Utilities.

B. Evaluating Annexation Requests

Annexation is the process of expanding the corporate boundaries of the City. A basic requirement is that land to be annexed must be adjoining existing City boundaries. Annexation is desirable when expansion is consistent with plans for orderly growth and development.

Guidance is provided by the:

- Comprehensive Plan
- Water and Sewer Master Plan
- Other plans and studies as may be pertinent

The Havre de Grace annexation policy is expressed in Resolution No. 97-7, which states in part:

1. Annexation requests must meet the legal criteria under Article 23A, Section 19 of the Annotated Code of Maryland, all guidelines established by the Mayor and City Council, and be consistent with the Comprehensive Plan.
2. Encourage annexation of all areas contiguous to the City, which would eliminate the appearance or creation of enclaves.
3. Give priority to annexation requests that will increase the commercial or industrial base and generate employment opportunities for City residents.
4. May grant an abatement of City real property taxes (with certain conditions, on a case by case basis) for areas to be annexed until water and/or sewer service is available or until a construction permit is issued or a final subdivision plat is approved by the Planning Commission.

5. Connect all areas to be annexed to City water and sewer service upon its availability at the property as an annexation condition.
6. Require all applicants seeking annexation to complete a Request for Annexation application.

Annexation of land should result in increasing the City tax base and expanding employment opportunities. Analysis of the cost and benefits of annexing certain land should be considered as well as any special conditions that should be met by the applicant petitioning for annexation. Annexation of land into the corporate boundaries should be of benefit to the City when all things are considered. To assist the City in making this determination, the applicant must develop and provide an *Annexation Justification Statement*. This statement should briefly address the following elements:

- The rationale for the annexation from the applicant's perspective.
- A description of the proposed land use.
- A comparison of the proposed land use to the Comprehensive Plan and the Zoning Ordinance.
- A description of the expected economic, environmental, and social impacts, both positive and negative.
- A description of services required as a result of the annexation, including water and sewer, fire and police protection, schools, libraries, and recreation.
- A statement of required services which will be provided by the applicant, the method of financing those services, and the schedule for completion.
- The reasons why the City should support the annexation proposal.
- A description of the process used and results of community notification and input regarding the proposed annexation.

Annexation may be initiated by a property owner (or owners) by filing a request, or petition, for annexation. The petition must be signed by not less than twenty five percent (25%) of the persons residing on the property to be annexed and who are registered as voters in Harford County elections in the precinct(s) in which the land to be annexed is located; and by the owners of not less than twenty five percent (25%) of the assessed valuation of the real property in the area to be annexed. In cases where an annexed area is not served by public water and sewer, temporary tax abatement may be provided. If the proposed zoning of the land to be annexed differs from that of the Harford County Master Plan/Land Use Element Plan, then the County Council must waive its control, or the zoning of the area must remain as designated by the County for a period of five years.

The legislative action required for annexation is the enactment of an *Annexation Resolution*. Annexation Resolutions are:

- Prepared by Department of Economic Development and Planning.
- Considered by the Planning Commission, which makes a recommendation.
- Acted upon by the Mayor and City Council after a public notification and hearing process has been completed.

VII. OTHER IMPLEMENTATION TOOLS

There are other tools that can assist in the implementation of the Comprehensive Plan. Special overlay districts, floating zones and the creation of design standards for project review should all be considered when making a determination of how to best protect the City's resources. *Overlay Districts* are special zones typically depicted on a map, which serves the purpose of outlining a significant asset or concern about protection of that asset (economic, environmental or historic). Guidelines are prepared which serve to supplement already existing regulations such as zoning, site plan or subdivision. Existing districts in the City include those for the Critical Area and Historic Area. Additional overlay districts could be considered for other important resources in Havre de Grace.

Floating Zones are different than overlay districts in that they are not a mapped zone or district. While standards and guidelines are written and adopted by ordinance, they only become effective when an application for development is approved subject to the requirements of the floating zone. The floating zone supplants the existing zoning and provides more flexibility in tailoring development that is consistent with what is desirable for a specific geographic area. The 1996 Comprehensive Plan included medical, museum, commercial/recreation, and water-related (waterfront) districts as examples of recommended floating districts. These districts are still valid and should be closely examined as another means of meeting the intent of the Plan.

As part of the revision process for the existing site plan and subdivision ordinances it is important to capture another opportunity for assuring higher quality development and redevelopment. Serious consideration should be given to incorporating *Design Standards* into existing regulations. These standards would provide more direction and guidance to developers in respect to the City's desires in regards to architectural treatment, landscaping, and "green space" requirements. This guidance makes the developer's job easier by clarifying early in the process what is required. It makes the City's job easier by having something clear as a reference. Most importantly, design standards can be used to foster greater compatibility between what the City identifies as important community attributes and what the developer would like to create. The development of design standards as part of revised planning and zoning regulations should be a high priority.

Various incentives are also available which work to shape the way land or buildings are improved over time. For Havre de Grace, these include Maryland Historic Tax Credits for appropriate improvements to historic residences in the City's large National Register Historic District and Federal Historic Tax Credits for commercial properties. In addition, Enterprise Zone Tax Credits are available to businesses and industries in both Havre de

Grace and Aberdeen as the result of efforts for Enterprise Zone designation in 1996. As part of the *Smart Growth Initiative*, assistance funding for the environmental clean-up of old industrial sites, or Brownfields, is available. Numerous other business and tax credits also exist at the State level, such as Water Quality Improvement, Neighborhood Partnership Program, and Commuter tax credits, to name a few. More information on these programs can be found through the State of Maryland.

VIII. COORDINATION AND COMMUNITY INVOLVEMENT

Community Involvement in the Planning Process

The City of Havre de Grace has very successful community and public review built-in to its planning and development process. All activity of the Planning Commission is open to the public, with opportunities for public comment. This includes site plan, subdivision, and final plat review, work sessions on all comprehensive planning or ordinance initiatives, or hearings related to Planning Commission recommendations for annexation, ordinance legislation, conditional uses, variances, and special developments. All Board of Appeals hearings are also public, with public notification required. In addition, meetings of Mayor and City Council on all matters – including land use issues relating to annexation, ordinance legislation, or the adoption of the Comprehensive Plan – are public and televised with opportunities for public comment. In this way, the City Government is a very open process with numerous avenues for public comment.

The only limitation of the public process is the lack of requirement for advance public notification of these activities. Agendas for Planning Commission hearings and Board of Appeals cases are posted at the entrance of City Hall prior to the meetings. However, individuals interested in further information regarding development projects or the planning initiatives must actively seek the information themselves through City staff members. Realistic funding and staff resources must be considered in regard to advanced public advertising.

Coordination with Harford County Government

Increased coordination between the City of Havre de Grace and Harford County Governments on land use issues is extremely important. Planning initiatives between jurisdictions are not independent in their affects on each other, and it's important to recognize the close relationship between Harford County and all municipalities within the County. Changes in land use through annexation, large development projects, the transportation network, school system needs, and the inter-related public utilities are just some of the major items that demand heightened coordination. Through the Smart Growth Memorandum of Understanding (MOU) signed in 2002 between Harford County Government, the Town of Bel Air, and Cities of Havre de Grace and Aberdeen, a formalized approach to coordination was achieved. It is of utmost importance that all jurisdictions honor the MOU for shared information, increased coordination, and mutual cooperation for the benefit of citizens and stakeholders in Harford County.

Coordination with State Government

Coordination with State government agencies is also key for the City of Havre de Grace. Major highway projects, park enhancements, and public facility improvements are provided through the State of Maryland's numerous capital funding agencies. In addition, technical support is also readily available.

Numerous large-scale projects have been accomplished directly in Havre de Grace through the State Highway Administration (SHA), such as the recently completed US 40 and MD 7 streetscape projects. SHA comes under the Maryland Department of Transportation (MDOT), which also encompasses bus and rail service (through the Maryland Transit Administration, MTA) as well as Interstate 95 (Maryland Transportation Authority, MdTA). The City coordinates with these agencies for all available modes of transportation.

The City works closely with Maryland Department of Planning for annexation and various planning initiatives as well as utilizes their technical and training support. The Department of Natural Resources (DNR) provides technical assistance, environmental review (Chesapeake Bay Critical Area Commission, Forestry, etc.), and grant funding, such as that provided through Program Open Space. The Department of Business and Economic Development provides jurisdictions with support for business activity, facility improvements, and tax incentives (such as the Enterprise zone). Community revitalization, historic preservation, and housing initiatives are provided through the Department of Housing and Community Development. Finally, Maryland Department of the Environment MDE provides funding for water and sewer facilities, technical assistance, and enforcement action.

Relationship to Other Plans

Harford County Water and Sewer Master Plan is the guiding plan for all of Harford County with regard to the extension of water and sewer facilities. This plan is updated every six months, in the fall and spring. Construction permits through the Maryland Department of the Environment require consistency and coordination between the various jurisdictions through this legislatively adopted document.

Harford County Department of Community Services Consolidated Plan is a 5-year plan that is required through the Federal Department of Housing and Urban Development. This plan describes how Harford County utilizes Federal, State, and local funds to address housing and community development needs of low to moderate income individuals and families in all of Harford County (including municipalities). Annual action plans address the yearly progress of the Consolidated Plan.

Harford County Emergency Operations Plan is the plan for Harford County for large-scale emergencies. This plan determines the best escape routes and modes of transportation in the event of severe flooding, bombing, or chemical discharge from Aberdeen Proving Ground. Sections of this plan address the following: Reception and Mass Care; Police, Fire

Rescue, and Emergency Medical Services; Public Works; Health, Medical, and Mortuary; Emergency Resources; and the Chemical Stockpile Emergency Preparedness Program.

IX. IMPLEMENTATION PRIORITIES

For DEDP, the most significant implementation priority is the creation of a Unified Development Ordinance (UDO) which will incorporate land use regulations, such as the zoning, site plan, subdivision, parking, and sign ordinances into one document. The UDO may include consideration for transit-oriented development, Harford County's commercial revitalization standards, local historic district guidelines, potential overlay districts, open space requirements, and compact, mixed-use design. This revision effort will be comprehensive in its scope and will most likely take eighteen months to two years to complete. The services of a consultant may be necessary.

The development of a 5-Year Capital Improvements Program must come through DPW with support from Mayor and City Council, DEDP, the Department of Administration, the Department of Finance, and the Police Department. Capital improvements for growth-related projects (such as potential Wastewater Treatment Plant expansion, new water and sewer mains) as well as Revitalization Areas (road reconstruction, replacement of water and sewer lines, park and facilities renovation, etc.) must be planned and financed in an organized, efficient manner. In addition, lifecycle planning related to infrastructure costs longer than five years must be considered, as well as capital depreciation and asset-tracking/asset management. Lastly, formalizing the development review process through the various City departments and County and State agencies is necessary for review consistency, efficiency, and timeliness. This may include increased public notification for projects being considered by the DEDP, Planning Commission, and/or Board of Appeals. The development review process should outline required timelines for project submission, staff review time, other agency review (to include Harford County Planning and Zoning as agreed in the MOU), public notification requirements, and Planning Commission and/or Board of Appeals review time.

I. OVERVIEW

The City of Havre de Grace has a wealth of community facilities. These facilities can be grouped into five general categories: (1) Parks, Recreation, and Open Space, (2) Museums and Cultural Facilities, (3) Schools, (4) Public Buildings, and (5) Health Services. For the purpose of this comprehensive planning process, community facilities include all properties and buildings owned by and/or providing a service to the City. Community facilities are integral parts of the physical structure of a community. They influence the community's appearance and livability, and their availability and adequacy are a measure of the quality and desirability of a community.

This chapter is divided into sections based on the above-mentioned five categories. Each section includes a brief introduction of the topic, recommendations, and then a description of existing facilities for each category within the City. Related community facilities that are located outside of the City are addressed at the end of the chapter. These are community facilities that benefit Havre de Grace citizens by virtue of their proximity to the City, such as Susquehanna State Park, Swan Harbor Farm and other County-owned parks, adjoining emergency response teams, and Upper Chesapeake Medical Campus.

II. PARKS, RECREATION, AND OPEN SPACE

Parks, recreation, and open space are very important components for a community in terms of people's physical health and mental well-being. Planning for parks, recreation, and open space are three distinct but related considerations in the Comprehensive Planning process. All involve the setting aside of land for use—whether it be for the protection of environmental or landscape resources, the active recreational use of ball fields and play areas, the more passive enjoyment of natural areas through hiking, or some combination of all of these. The issue of parks, recreation, and open space presents a challenge to community leadership because of the costs associated with land acquisition, the long-term planning and provision for changing recreational needs, and the intrinsic necessity but elusive value of preserving public open space.

Four different kinds of parks are described in this plan and are determined by their scale and use. These include the following: 1). Small Parks, which provide outdoor enjoyment and are often ornamental to residents in a densely populated community; 2). Neighborhood parks, which are larger and provide playing fields and active play space; 3). Playfields, which are often school/recreational complexes that provide a greater number of playing fields for more competitive sports events; and 4). Community Parks, which are large parks that serve an

entire city or a larger region and often have interesting topography and physical attributes such as lakes or rivers.

Extensive recreational programs for the City and all of Harford County are offered through the Harford County Department of Parks and Recreation. Programs range from youth sports programs such as soccer, tennis, basketball, lacrosse, youth football, dance, gymnastics, to adult aerobics and volleyball to senior activities as organized under the Havre de Grace Golden Age Club. The greater Havre de Grace region is organized under the Eastern District of the Department of Parks and Recreation, which also incorporates the Dublin/Darlington area within its district. In addition, Havre de Grace Little League, which is a federally chartered non-profit organization under Little League International, provides tee-ball, baseball, and softball to area youth. The Havre de Grace Boys & Girls Club and YMCA also offer limited recreational activities to youth in after-school programs.

Delineation of open space for the protection of environmental or landscape resources is often dealt with at the land subdivision stage of residential and commercial development. This is accomplished through environmental regulatory functions at both the local and State level, such as Forest Conservation, Natural Resources District (stream buffers), and Chesapeake Bay Critical Area requirements. In addition to lands immediately adjacent to streams, steep slopes or land areas that are subject to erosion are also protected under natural resources conservation. Open space and/or forest conservation areas are most likely deeded to the respective Home Owner's Association (HOA) of a subdivision and are the responsibility of the HOA for maintenance, liability, and resource management. Some designated open space in individual neighborhoods is dedicated as active open space, such as the small playground in Grace Harbour on Canvasback Drive. However, open space associated with subdivision activity is often environmentally constrained and limited to low-impact passive use, if any.

A. Recommendations

The following policies are recommended upon review of the existing recreation facilities in Havre de Grace:

- Support the Board of Education in the construction of the new high school football stadium in terms of funding for necessary components for the facility such as bleachers, lighting, and future outbuildings.
- Support the Harford County Department of Parks and Recreation in the establishment of the Havre de Grace Youth/Senior Community Center at Lewis Lane behind the Havre de Grace Middle School. The facility will be a shared-use facility for youth and community recreation programs, expansion of the Boys & Girls Clubs of Harford County, and senior activities through the Harford County Office on Aging.
- The City's Subdivision Regulations should be revised to provide more opportunities for both active and passive use. Possible options for achieving

this are to institute Open Space/Recreation fees or Open Space requirements in the development process.

- Continue to implement the concept designs that were endorsed in the Lower Susquehanna Heritage Greenway Management Plan and Heritage Corridor Management Plan. The Havre de Grace Heritage Corridor Management Council should continue working with the City to assure completion of the Promenade/signature sidewalk system to connect the City's waterfront from north to south. Consider the need to update the Havre de Grace Heritage Corridor Management Plan in relation to the Lower Susquehanna Heritage Greenway planning and implementation efforts.
- Develop an identifiable trailhead for the North Park Loop Trail and the Lower Susquehanna Heritage Greenway at the Havre de Grace Community Center located on Lagaret Lane.
- Through the LSHG effort, continue to work with Arundel Corporation on the development of hiking trails around the perimeter of the mining operation. These are to be located in their required buffer. In addition, work with Arundel Corporation over the long-term to establish a hiking trail along the shoreline after mining activities at the site cease.
- Expansion of the North Park Trail System should be continued as a component of the Lower Susquehanna Heritage Greenway within the City. In addition, the implementation of the Susquehanna Museum at the Lock House concept plan should be encouraged and supported.
- Continue to explore ways to develop pedestrian trail connections from Havre de Grace to Swan Harbor Farm.
- The continued development of the Heritage Park area is encouraged to establish a cultural, educational, and recreational destination site at the southern point of the City overlooking the Chesapeake Bay. The City should continue to develop linkages from Heritage Park to the Downtown Business District, the National Register Historic District, and Lower Susquehanna Heritage Greenway. It is recommended that a shared use parking area be established at the corner of Market and Lafayette Streets for the Heritage Park cultural attractions.
- Encourage the re-development of David R. Craig Park into an appropriate use for the location, such as a visitor information center, a waterfront observation area, or a native plant garden. Limitations of the site need to be taken into consideration, such as Chesapeake Bay Critical Area regulations, roadway/access difficulties, and current shoreline containment features. Future improvements to the park should preserve and incorporate the historic bridge abutments that are on the site.

- Develop the concept of a Downtown waterfront promenade to connect public park area at the north end of the City with the Downtown Business District and expand the public accessibility to the Susquehanna River.
- Support the development of a water taxi shuttle service or an acceptable river-crossing alternative to Cecil County to ensure improved linkages with the Lower Susquehanna Heritage Greenway.
- Designate bikeways through the historic areas of Havre de Grace to allow for the safe flow of bicyclists from the Lower Susquehanna Heritage Greenway bike paths through the City to Heritage Park and Swan Harbor Farm. The bikeways should be marked with signs or pavement stencils so that they are clearly identified for bicyclists and motorized vehicles for increased safety.
- A small, ornamental park should be established behind Citizens Care Center. The park would serve the residents of Canvasback Cove, Citizens Care Center, The Graw, and Log Pond communities and would provide a rest stop for those travelling the signature sidewalk through the City.
- Investigate the opportunity to develop a park/recreation facility at the Havre de Grace Community Center property on Lagaret Lane.
- Continue to implement improvements to the City's numerous parks, such as Tydings Park and Municipal Yacht Basin, Hutchins Park, Jean S. Roberts Park, Todd Field, and Bradford Green Park.
- In terms of marina facilities located in revitalization areas, it is recommended that some of the facilities be upgraded. The development of a waterfront jetty to create a safe harbor with additional private boat slips and transient slips should be considered.
- Determine the necessity of increased lighting of park facilities for evening use, public safety, and reduced vandalism. In addition, an effective crime and vandalism prevention program should be developed and enforced in parks throughout the City.
- All new parks and facilities must satisfy the requirements of the Americans with Disabilities Act.
- Review the number of baseball/softball fields, basketball courts, football fields, soccer fields, and tennis courts to determine if there is an adequate amount of these facilities based on the National Recreation and Park Standards with respect to recent population growth.
- An in-depth Parks and Recreation Needs/Demands Study should be conducted to determine space requirements and program demands. Relevant

information from the survey would include the number of times in which an activity is participated, preferred recreational activities, future location and preferred methods of financing new facilities, and maintenance of existing facilities.

- Proper and periodic maintenance of all facilities must be ensured. This can be accomplished by establishing regular maintenance schedules for City-owned properties and by working with the Board of Education and the Department of Parks and Recreation to identify maintenance needs of County-owned facilities.

B. Existing Facilities

The following is a list of park and recreational facilities within the limits of the City. Each facility is under its respective heading of ownership—either by the City, privately, or by the Harford County Board of Education—and is described by location and recreational function.

1. City Facilities

The Promenade is located along the Chesapeake Bay from Tydings Park to the Concord Point Lighthouse. The Promenade consists of a handicap-accessible waterfront walkway (2,400 feet), constructed of wood decking and concrete with brick inlay sidewalk, with entrances at Tydings Park, Havre de Grace Decoy Museum, Lafayette Street and the Concord Point Lighthouse. Other facilities include observation decks along the promenade, a gazebo at the entrance of Tydings Park, two information kiosks, benches, trash receptacles, a lighting system and an emergency phone system. The Promenade is a component of an integrated community park— along with Tydings Park and Heritage Park — for City residents and the greater Harford County region.

Heritage Park is approximately 8.5 acres in area and is located from Concord Point to Market Street, primarily along the south side of Lafayette Street. Facilities in this park include the Concord Point Lighthouse, the Havre de Grace Decoy Museum, the Havre de Grace Maritime Museum, a portion of the Promenade, an observation deck, a transient dock at the Lighthouse, an open play area at Lafayette and Market Streets, and the O'Neill House.

Tydings Park is located south of Commerce Street along the Chesapeake Bay Waterfront and consists of 17 acres of park area and includes the Municipal Yacht Basin and Tydings Island. The park includes facilities such as a refreshment stand, two tennis courts, fishing area, picnic facilities (including grills), a 275-slip public marina with fuel and pump out facilities, a public boat ramp, parking facilities, and playground with multiple pieces of

equipment. The Municipal Yacht Basin is currently undergoing major renovation, with bulkhead replacement, pier reconstruction, and fuel dock, shower, and attendant booth improvements.

North Park is a large public park area located in the northern portion of the City along the Susquehanna River. It is comprised of a total of 46.9 acres, including the Lock House and McLhinney Park, and may serve as a Community Park for the City and greater Harford County region in the future as part of the Lower Susquehanna Heritage Greenway. Of this, 7.6 acres are owned by the City and the remaining 39.3 acres are leased by the City from the Exelon Corporation. North Park's facilities include the Lock House Museum, the Canal Lock and Swing Bridge, a transient dock, and a fishing area. North of the playground is the North Park Loop Trail which is a hiker/biker trail that traverses a large natural area that ends just south of the CSX Susquehanna River Bridge crossing.

David R. Craig Park is a small waterfront park (approximately 1.5 acres) at the northern end of Union Avenue. Located immediately adjacent to Legion Square at the primary entrance of the City's Downtown Business District, it is anticipated that a permanent Visitor Center will be constructed in this park in the future. The facility currently provides parking and excellent water-views of the Susquehanna River.

Frank J. Hutchins Memorial Park is a small waterfront park (approximately 2 acres), located at the foot of Congress Avenue at the Susquehanna River. It consists of a fishing pier that also serves as a transient dock for boats and ships, and is currently undergoing redevelopment to make it a more attractive waterfront park for residents and visitors. Hutchins Park is the home of the Skipjack Martha Lewis and Lantern Queen stern-wheeler, both of which are vessels that handle large numbers of the visiting public.

Jean S. Roberts Park is a small waterfront park (less than one acre) and is located at the foot of Otsego Street at the Susquehanna River. The facility includes a public boat launching ramp, transient slips, picnic facilities (including grills and a pavilion), a fishing area, and a parking area.

Bradford Green Park is a small park that is approximately two acres in area and includes the open spaces owned by the City across Village Drive. The park is located at the intersection of Battery and Village Drives in the Bradford Green neighborhood and includes a basketball court, a multi-purpose play system and an open play area.

Todd Field is a larger neighborhood park that is approximately twelve acres in size and located on both sides of Seneca Avenue between Bloomsbury Avenue and Deaver Street in the Concord Fields community. Its facilities include a baseball field, a basketball court, a skate park, and a playground.

Havre de Grace Community Center, located on Lagaret Lane, is an 11,000 square foot building situated on approximately fifty-three acres of City-owned land in the northeast corner of the City. Originally built by the Havre de Grace Law Enforcement Association, Inc. to serve as a police training center and community facility, this building was turned over to the City in 1995. The building consists of a banquet/conference room that can accommodate up to 600 persons, a small meeting room, restrooms, and kitchen facilities. The property, on which the community center is located, has some spectacular views of the Susquehanna River from its bluffs and could be developed into a park, recreational facility, or exhibition hall in the future.

2. Private Facilities

Stancill Park is a privately-owned baseball/softball facility of approximately fifteen acres which is located at the intersection of Old Bay Lane and Old Post Road adjacent to the Chesapeake Industrial Park. The facilities are owned by the Havre de Grace Little League Inc. and include four baseball fields, a softball field, a tee-ball field, a refreshment stand with restrooms, and League offices and storage.

Somerset Manor Playground is a small park (approximately one acre) located off Ohio Street in the Somerset Manor Neighborhood. The playground facilities include a basketball court, picnic facilities, a play field, and a playground.

Bayland Condominiums has a small private recreation facility (less than one acre) that is located on Bayland Drive in the Grace Harbour neighborhood. This facility includes a clubhouse, a gazebo, and a swimming pool.

Chesapeake Swim Club is a private swimming facility that is less than an acre in size and is located on Bayview Drive.

Canvasback Cove Condominiums has a private swimming facility consisting of a swimming pool, dressing area, picnic tables, and 73 private boat slips for the residents of this development. The Canvasback Cove recreation area is 2/3 acre in size and is located between Fountain and Revolution Streets along the Susquehanna River.

Seneca Pointe Condominiums has a private swimming facility with a bathhouse located on Seneca Way.

Grace Harbour recreational facilities are located on various sites in the Grace Harbour community. Small play facilities include a tot lot at Remington Court and Canvasback Drive, a tot lot at the end of Hunter Court,

an open play area at the end of Heron Court, and a multi-purpose play area on Canvasback Drive near Brant Court.

Bayview Estates has a tot-lot area with playground equipment on Roosevelt Court which can be accessed from Tidewater Drive, Katherine Way, and Mallard Court within the community.

Private Marinas operate within the Havre de Grace City limits. The Havre de Grace Marina and Yacht Sales is located on Water Street. It consists of 1.3 acres and contains 58 slips. The Tidewater Marina is approximately twelve acres, contains 175 slips, and is located at the foot of Bourbon Street at the Susquehanna River. The Havre de Grace Marina at Canvasback Cove is located on Girard Street and contains 68 slips. Currently being redeveloped, Penns Beach Marina is located on Concord Street. The facility is over six acres in area and is expected to contain approximately 100 slips upon completion. This facility will be built with a public pedestrian access and fishing pier which will be constructed similar to the Promenade. The public access structure will be deeded to the City after the property owner builds it.

3. Board of Education Facilities

The City's schools, as with most of Harford County school facilities, have been developed in recognition of the "park school" concept. Presently, schools afford most of Havre de Grace's recreational outlets in terms of gymnasium space and playing fields. A wide variety of recreational programs are offered in the City for children, adults, and senior citizens through the Harford County Department of Parks and Recreation. All recreational activities are supervised by Department of Parks and Recreation staff or its extensive base of volunteers.

Meadowvale Elementary School is located on Graceview Drive on the east side of the Meadowvale Neighborhood. The total area including school buildings and parking areas is 13 acres. Facilities include a softball field, two basketball courts, and a playground. Ballet, tap, and jazz dancing classes are offered between September and April.

Havre de Grace Elementary School is located on South Juniata Street and encompasses a total area of 10 acres including school buildings and parking areas. Facilities include a softball field, two basketball courts, and a playground. Youth basketball and aerobic classes are offered September through June. The Department of Parks and Recreation also sponsors the summer recreation center at this site.

Havre de Grace Middle School/High School Complex is located between Havre de Grace Middle School and High School, from Lewis Lane to

Juniata Street adjacent to the AMTRAK Rail Line. Its total acreage is 61.8 acres, including all Middle and High School buildings and parking areas. Major portions of this site are being reconfigured to accommodate a new football stadium/track facility that will be located immediately adjacent to Juniata Street. Tennis courts, baseball/softball fields, basketball courts, soccer and field hockey fields are also being reconfigured at this time due to the substantial grading and soil replacement that is currently being performed. Outdoor activities through the Department of Parks and Recreation are proceeding by stretching available space. Indoor activities will proceed and include bluegrass concerts, gymnastics, adult basketball, coeducational volleyball, cheerleading, karate, indoor soccer, square dancing, summer basketball, and fitness programs.

4. Facilities That Serve the Region

Lower Susquehanna Heritage Greenway (LSHG) is a project currently under development but will consist of a series of trails and pathways beginning at Conowingo Dam and which traverse both shores of the Susquehanna River to the Chesapeake Bay. The Greenway connects a number of key cultural, historical, and natural features along the Susquehanna, such as Susquehanna State Park, the City of Havre de Grace, and the Towns of Perryville and Port Deposit in Cecil County. All three municipalities have waterfront pathways, such as the Promenade in Havre de Grace, to lend to the connectivity of valuable waterfront areas. It is desired that the Lower Susquehanna Heritage Greenway eventually provide a river crossing to link eastern and western shores and extend to Swan Harbor Farm in Harford County.

Susquehanna State Park is a large Community Park located just north of the City and is part of the State Park System. This extensive park area incorporates vast natural areas along the western shore of the Susquehanna River and serves the Lower Susquehanna/Upper Chesapeake Bay region. The park consists of 2525 acres in Harford County and has a boat launch ramp, fishing pier, camping and picnicking facilities, the historic Rock Run Mill, and Steppingstone Museum, which is an interpretive farm and agriculture/cultural museum. Most of the parkland is forested and ranges from gently rolling hills to steep slopes and deep narrow stream valleys. The Deer Creek State Scenic River meets the Susquehanna River in Susquehanna State Park. Shoreline and small craft fishing are extremely popular here.

Swan Harbor Farm is another large Community Park facility located just southwest of Havre de Grace on the Oakington Peninsula. Located on the Chesapeake Bay, Swan Harbor Farm is owned and operated by the Harford County Department of Parks and Recreation and it is the only park owned by the County with direct Bay access. The park contains a beautiful mansion house which is available for receptions, main offices for the Maryland Agricultural Education Foundation, large meadow areas, farm fields,

vineyards, a field for radio controlled aircraft, and exhibit area for agricultural education.

C. Proposed Facilities

Havre de Grace Activity Center is a shared use activity center which will be located on the Board of Education Middle School/High School Complex directly behind Havre de Grace Middle School. This project will be developed through a partnership between Harford County Government, the City of Havre de Grace, and the Boys & Girls Clubs of Harford County. The facility will be used for recreational programs (for all ages) and offices of Harford County Department of Parks and Recreation, youth activities through the Havre de Grace Branch of Boys & Girls Clubs of Harford County, and senior programs through the Office on Aging. The first phase of construction is to relocate and stabilize the existing recreational fields during the year 2004. It is anticipated that actual building construction for the Havre de Grace Activity Center will occur throughout the year 2005.

III. MUSEUMS AND CULTURAL FACILITIES

Within the City, a number of museums and cultural attractions have developed to the good fortune of the City. These include facilities owned by the City, developed by non-profit organizations, and those of the Harford County Board of Education.

A. Recommendations

- Support the implementation of the various museums' development plans, as the museums are very important attributes within the City in terms of cultural recollection, education, and archival knowledge.
- Support the professional staff members and large base of volunteers for each museum as they carry out the missions of their respective museums.
- Support the Havre de Grace Museum Alliance in its ability to work collectively for integrated cultural programs for tourists visiting the Havre de Grace region, school children, and residents of the City and Harford County. The Havre de Grace Museum Alliance consists of representatives from the Concord Point Lighthouse and Keeper's House, Decoy Museum, the Maritime Museum, The Susquehanna Museum at the Lock House, The Chesapeake Heritage Conservancy, Inc., and Steppingstone Museum, which is located in nearby Susquehanna State Park.
- Support the advertisement of the cultural museums and their programs through the newly established Havre de Grace Visitor Center located on Pennington Avenue.

- Encourage the development of the Heritage Park and Ecology Center partnership as a cultural and ecology interpretive center and aid in the development of a shared parking facility for the museums established in the Heritage Park setting.
- Conduct a demand and site analysis to determine the most suitable location for the construction of a permanent band shell/concert facility for the City's Arts Commission Summer Concert Series and other outdoor musical events.

B. Existing Facilities

Concord Point Lighthouse and Keeper's House are among the most interesting and unique historic structures in Havre de Grace. Built at a cost of \$3,500 in 1827 by John Donohoo, this thirty-seven foot stone masonry structure is the oldest, continuously operated lighthouse in the State of Maryland. The Friends of Concord Point Lighthouse, Inc., a non-profit organization, have been maintaining the lighthouse and its grounds, located east of the intersection of Concord and Lafayette Streets, on behalf of the lighthouse's current owner, the City, since 1979. The Friends have undertaken another major project, the restoration of the lighthouse keeper's house. Built in 1829 and named for the keepers of the lighthouse from its inception to its automation in the 1920s, the Keeper's House, or O'Neill House, is located at the northwest corner of Concord and Lafayette Streets. Plans have been developed to restore the structure to its appearance in 1892, which was just after its last renovation as the keeper's house. The plans also include replicating the outbuildings and gardens of the property. Upon completion, the complex will serve as a period museum.

The Havre de Grace Decoy Museum is a 15,000 square foot facility established to document and interpret waterfowl through this genuine American folk art form as it applies to the heritage of Havre de Grace and the Chesapeake Bay. After months of renovating the former Bayou Hotel's power plant facility, the Decoy Museum, which overlooks the Susquehanna River and the Chesapeake Bay, was opened to the public on November 4, 1986. The Museum grew rapidly and completed a second floor and elevator addition to achieve its present size. The Decoy Museum contains extensive display areas of local decoy carvers, watercraft, the R. Madison Mitchell workshop, an archival resource library, a gift shop and a small conference space. Long-term plans for expansion of the Decoy Museum include: a 125 seat auditorium for school groups and special programs; an addition to house the Mitchell Workshop so it can be properly preserved and interpreted; an addition to create a living exhibit entitled "Susquehanna Flats - A Changing Environment"; and a new visitor entry area facing Lafayette Street with additional restrooms and an enlarged gift shop.

The Havre de Grace Maritime Museum was incorporated in 1988 to preserve the maritime heritage and lifestyle of the Upper Chesapeake Bay Region. In 2001, the Maritime Museum completed the construction of a two-story building on pilings on the south side of the 100 block of Lafayette Street in Heritage Park. In the future,

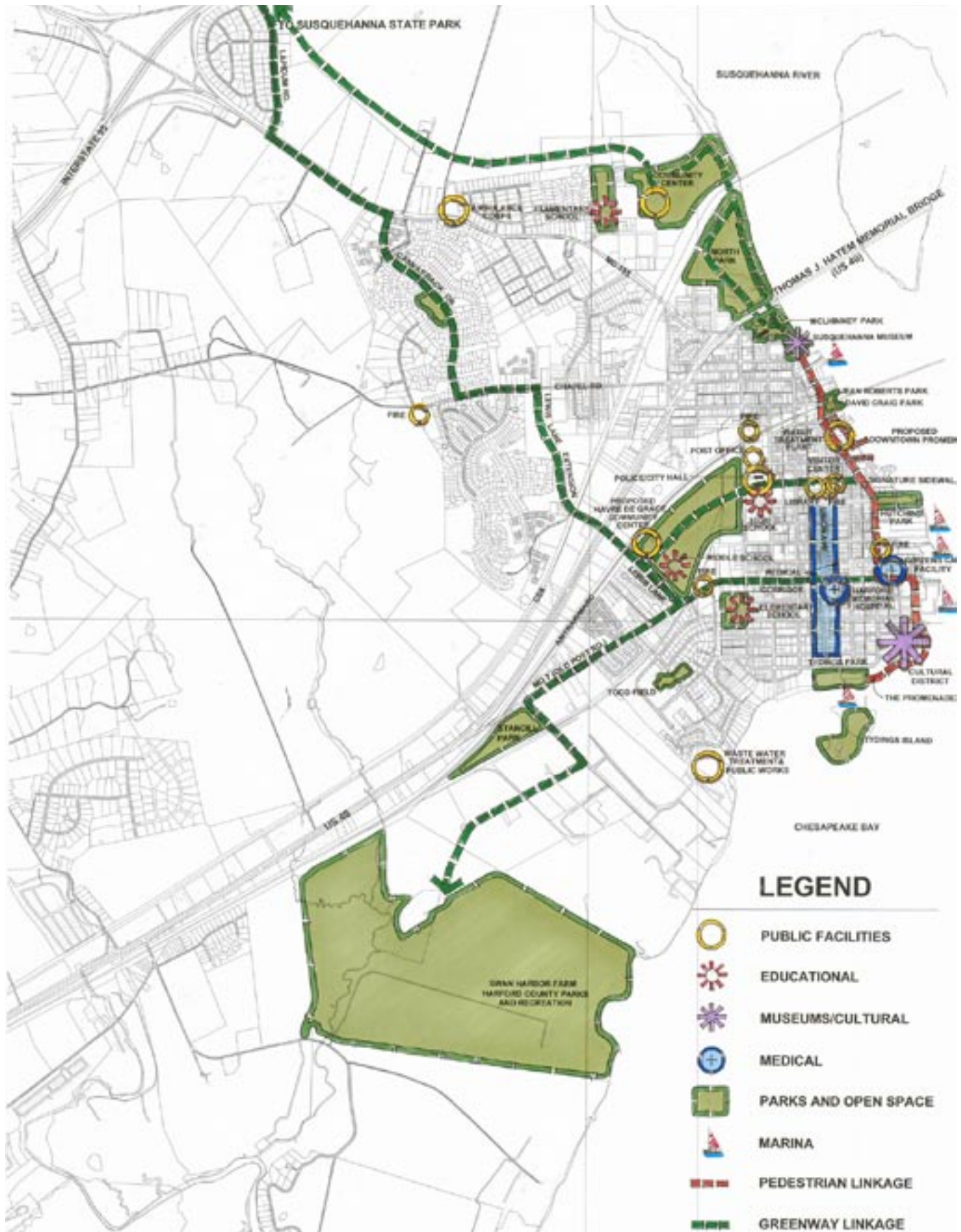
the ground floor will be enclosed and will serve as a wooden boat building school in cooperation with Harford Community College. Currently, the school operates out of the main portion of the building until permanent displays are completed. It is anticipated that the second floor would serve as a traditional museum, with state-of-the-art interactive and virtual reality displays to present the Museum's message in a contemporary fashion. In addition to the recently completed building and developing display area, the Maritime Museum: sponsors lectures on local maritime-related topics; provides educational programs on local maritime history; co-sponsors the wooden boat building class with Harford Community College; hosts the Annual Classic Boat Show; and facilitated the restoration of the Skipjack Martha Lewis.

The Susquehanna Museum of Havre de Grace at the Lock House is located in the historic lock house at the southern terminus of the Susquehanna and Tidewater Canal near Erie and Conestogo Streets. Typically known as the Lock House Museum, the Museum was incorporated in 1972 to collect, preserve, and disseminate data touching the history of the Havre de Grace area and its people, with special emphasis on the southern terminus of the Canal. In 1976, the Susquehanna Museum restored the 1840-era Lock House in North Park and uses it as its base of operations. The Lock House serves as the display area, educational facility, and archival storage center for the Museum. The organization has restored the Outlet Lock and reconstructed the Pivot Bridge across the lock since that time. The Museum is presently restoring the working gates in the Outlet Lock. Short-term and long-term goals for the museum include: completion of the reconstruction of the working gates; construction of a new 5,000 square foot display building to house the original working gates, which are presently in storage, and other canal artifacts; construction of a model to explain how lift locks work; construction of an authentic, full-scale canal boat; and restoration of the canal and towpath from Havre de Grace to Deer Creek.

The Chesapeake Heritage Conservancy, Inc. is a non-profit organization that owns and operates the Skipjack Martha Lewis, which is located in Frank J. Hutchins Park at the foot of Congress Avenue. Providing an experiential learning environment on an authentic Chesapeake Bay working Skipjack, the Chesapeake Heritage Conservancy is dedicated to educating school children about Bay ecology and wildlife, maritime history, and navigational skills. Sailing on the Skipjack, staff members and volunteer crew also participate in oyster dredging in months in which it is allowed, events around the Bay, public cruises and private charters.

The Havre de Grace High School Auditorium is the primary, indoor, cultural facility for the City. Located in Havre de Grace High School and accessed from Congress Avenue, the auditorium has excellent acoustics, viewing, and stage area capacity. With seating capacity for 999 persons, the auditorium has been the venue of the Havre de Grace Arts Commission's fall, winter, and spring presentations, Harford County Department of Parks and Recreation dance recitals, Miss Teen Harford County pageants, Havre de Grace High School concerts and shows, and numerous cultural presentations.

Figure 5.1



COMMUNITY FACILITIES

City of Havre de Grace Comprehensive Plan

Old City Hall at 121 North Union Avenue, formerly an opera house, is the home of the Tidewater Players and Tidewater Teens, two community theatrical groups based in Havre de Grace. Using the second floor as a theater, the groups present approximately four productions a year. The building also houses the office of The Chesapeake Heritage Conservancy, Inc., which operates the Skipjack Martha Lewis, and a medical office.

Tydings Park is the venue of the Havre de Grace Arts Commission's Summer Concert series. Using the open area along Commerce Street and Harford County's mobile stage, many Friday evening concerts have been performed at this location. Tydings Park also serves as home for the Havre de Grace Art Show in August, the Children's Art Festival in September, and numerous other festival events.

B. Enhanced Facilities

Heritage Park and Ecology Center is the continued creation of a public and private partnership to organize, interpret, communicate, coordinate, protect, and publicize the natural and cultural heritage of the Upper Chesapeake Bay Region. The partnership would be realized through the coordinated and connected use of a "gallery" of existing and new public buildings, sites, and spaces in the Heritage Park area of Havre de Grace located at the southern end of the City. Potential components of this "gallery" include the Concord Point Lighthouse, the restored Keeper's House with outbuildings, Decoy Museum, Promenade, the Maritime Museum, and all of the public park lands between. The existing interpretive signs along the Promenade are the initial components to this integrated cultural and ecology education center. Other concepts have included public art displays, parking areas, landscaping, and signage for the Heritage Park area.

IV. SCHOOLS

Public schools are an extremely important component of any community. They are the center of a great number of public activities, whether it be the education of school children and citizenry, centers for recreational programs, or public meeting space for events or discourse. In terms of community development, the expanded use of public buildings for these community-related activities is effective in establishing the school as a "central place". This results in a greater participation of neighborhood residents with respect to issues that affect the public school system. All the schools in Havre de Grace are used as multi-use buildings for these activities. School operations and functions are administered by Harford County Public Schools and the all-volunteer Harford County Board of Education.

A. Recommendations

- Support Harford County Public School staff and the Harford County Board of Education in their service in bringing excellent public education to the County's school children.

- Work with the Harford County Board of Education to expand existing facilities or redistrict attendance areas prior to constructing new school facilities.
- Work with the Harford County Board of Education to locate new schools so that they successfully relate to both existing communities and new planned neighborhoods. Consideration for adequate playing fields, site design, and location to neighborhoods (while avoiding commercial areas) is important.
- Encourage the establishment of a local culture/history component in the Harford County curriculum in conjunction with the local museums, such as the Maritime Museum, Decoy Museum, Susquehanna Museum at the Lock House, Chesapeake Heritage Conservancy, Inc., and Steppingstone Museum.
- Work with the Harford County Board of Education on the construction of a shared-use community recreation facility on Lewis Lane behind the Havre de Grace Middle School. The center would be used for youth and community recreation through the Department of Parks and Recreation, expansion of facilities for after-school programs offered through the Havre de Grace Boys & Girls Club, and senior activities through the Harford County Office on Aging and Department of Parks and Recreation.
- Work with the Harford County Board of Education and its staff members to successfully redevelop playing field areas for the maximization of the Havre de Grace High School/Middle School recreational fields complex. Consideration for strengthening this site and the existing public use buildings, such as the US Post Office, Havre de Grace Municipal Complex (City Hall and Police Department), schools, and proposed shared-use community recreation facility into an identifiable civic “hub” for the greater Havre de Grace community is desired. Integrated pedestrian routes, lighting, parking, pedestrian crossings, and appropriate traffic signals may be components of this concept.
- Expand informational resources to Havre de Grace residents about available higher education programs within Harford County.

A. Existing Facilities

1. Pre-Kindergarten through Grade 12

The Harford County Board of Education administers the educational system in Havre de Grace. Thus, the expansion or renovation of these facilities depends on the Board. Havre de Grace has four public schools serving its needs: two elementary schools (pre-kindergarten to 5th grade), one middle

school (6th through 8th grade), and one high school (9th through 12th grade).

Havre de Grace is very fortunate to have schools which are of very high quality and have facilities that are under capacity in terms of their enrollment. Havre de Grace Elementary is well under capacity at its current 72%, with enrollment projected to increase slightly over the next five years to 75% in 2005-2006 (from Harford County 2001 Annual Growth Report). Meadowvale Elementary is at 90% of its building capacity, with projected capacity expected to decrease over the next five years to 84% in 2005-2006. Havre de Grace Middle School is also well under capacity at 79%. Expected enrollment in the next five years is expected to increase to 85% for the 2002-2003 school year and then decrease over the following four years to 70% in 2005-2006. Havre de Grace High School is currently at 78% capacity, with anticipated enrollment steadily increasing over the next five years to 87%. Table 5.1 indicates the current enrollment and capacity of each of the four schools.

TABLE 5.1
SCHOOL CAPACITY, FROM HARFORD COUNTY 2001 ANNUAL GROWTH REPORT

School	Current Enrollment (2001-2002)	School Capacity	% of Capacity	Capacity Available	120% of School Capacity	Capacity Available at 120%
Havre de Grace Elementary	447	625	72	178	750	303
Meadowvale Elementary	517	575	90	58	690	173
Havre de Grace Middle	624	785	79	161	942	318
Havre de Grace High	663	849	78	186	1019	356

Table 5.2
PROJECTED SCHOOL UTILIZATION, FROM HARFORD COUNTY 2001 ANNUAL GROWTH REPORT

School	Capacity	2001/2002 Actual	2002/2003 Projected	2003/2004 Projected	2004/2005 Projected	2005/2006 Projected
Havre de Grace Elementary School	625	72%	71%	71%	74%	75%
Meadowvale Elementary School	575	90%	85%	83%	85%	84%
Havre de Grace Middle School	785	79%	85%	83%	77%	70%
Havre de Grace High School	849	78%	79%	83%	83%	87%

2. Higher Education

Numerous opportunities for higher education are available to Havre de Grace residents through enrollment at community colleges, colleges, and universities in the nearby Baltimore and larger Tri-state area. However, Harford Community College (HCC) addresses the diverse educational needs of the City's residents locally.

Founded in 1957, HCC occupies a 211-acre site on Thomas Run Road, ten miles west of Havre de Grace. The extensive grounds include a handsome stone mansion built in 1808, which houses the administrative offices, while fourteen additional buildings grace the campus, providing athletic, classroom, cultural and laboratory space. To meet the educational needs of the community, HCC, a public, two-year coeducational institution, offers programs with six specific educational functions - general education, college/university transfer programs, career education, continuing education/community service, transitional studies, and student development services. As the only public college located in the County, it serves as the coordinator of post-secondary education in Harford County, including the HEAT Center.

The Higher Education and Applied Technology (HEAT) Center provides an opportunity for expanded higher education access to the citizens of northeastern Maryland. The HEAT Initiative is a concept that brings the finest of Maryland's institutions of higher education together to offer programs that are in demand by residents and businesses in the region. The programs have been selected to articulate with associate degrees offered by Harford and Cecil Community Colleges. Students can earn an associate degree at either community college in programs such as business administration, teacher education, criminal justice, nursing, and engineering, and proceed to a bachelors degree, and in some cases, a masters degree program, without leaving the County.

The HEAT Center is located in Aberdeen, Maryland, at the juncture of I-95 and Route 22. The recently completed 10,300 square-foot academic building is the first phase of an overall 152-acre research and development park on State-owned land. The building houses a computer lab, three large classrooms, seminar rooms and offices, and incorporates the latest technology with the capability to interact with lectures being given on the university campuses at a distance.

V. PUBLIC BUILDINGS

Since the publication of the 1996 Havre de Grace Comprehensive Plan, there have been many accomplishments in the way of public buildings, at the

municipal, County, and even Federal levels. Public buildings can bring a sense of public purpose and civic pride to a local community, and the recent improvements within the City exemplify the role of the City as an important center of public activity within Harford County. New or renovated public buildings within the City include: the new Havre de Grace Police Department, expanded Havre de Grace City Hall, Havre de Grace Waste Water Treatment Facility, renovation of old Police Department structure for new Havre de Grace Visitor Center, completion of Susquehanna Hose Company Fire Station #5 on Chapel Road, new Havre de Grace Ambulance Corps facility on MD 155, and the new US Post Office facility on Juniata Street. These are all significant public projects from which City residents will benefit for years to come.

Population growth in Havre de Grace has been accompanied by increasing demands for new and augmented public services and requirements for increased public building space. Due to good planning and valuable opportunities, the City has the great majority of its public buildings centrally located within the City, making them easily accessible to both older and newer communities. These improvements in conjunction with the Board of Education buildings and recreation complex create a strong, identifiable civic ‘hub’ of activity which will prove advantageous for the public in terms of convenience, efficiency, economy in government affairs, and enhancement of the appearance of the community.

A. Recommendations

- Support and strengthen the concept of a strong civic hub located in the center of Havre de Grace which includes all public lands, such as the Havre de Grace Middle School and High School, Board of Education Recreation Complex, Havre de Grace City Hall and Police Department buildings, U.S. Post Office, and Susquehanna Hose Company buildings. Develop this planning concept through signage and enhanced pedestrian connections, and recognize it as an asset that contributes to the City’s sense-of-place and community.
- Continue to work toward the development of a permanent building for the Havre de Grace Visitor Center which will be in close proximity to the City’s Downtown Business District and Waterfront. The utilization of the Joseph L. Davis, Post #47 American Legion building as the future Visitor Center would be ideal as it would preserve a historically significant structure and expand public access to the City’s excellent waterfront.
- Expand the dialogue between the citizens and professional library staff to ensure an adequate selection of materials in the public library.

- Emphasize close cooperation between the City Police Department and the Harford County Sheriff's Office in order to reduce crime in Havre de Grace. High crime areas should be targeted for intensive prevention programs and innovative patrol strategies, such as increased patrolling, foot patrols and surveillance.
- Develop a community-oriented policing concept, with emphasis on education, crime prevention, drug awareness, and organized street watches.
- Support the strong volunteer organizations of the Susquehanna Hose Company and the Havre de Grace Ambulance Corps in providing emergency response services to the residents, property owners, and businesses within Havre de Grace and the region.

B. Existing Conditions

The City has numerous facilities within its municipal limits that support community service needs. Some facilities are owned by the City; others are operated by Harford County Government, such as the Havre de Grace Branch of the Harford County Public Library, or the Federal Government, such as the US Post Office.

1. Harford County Public Library, Havre de Grace Branch

The Havre de Grace Branch of the Harford County Library System is located on North Union Avenue and is approximately 8,520 square feet in area. This library has approximately 176,000 volumes available for circulation, with 2.8 million volumes available County-wide. Harford County library resources are available through all branches of the Harford County Public Library, which now includes eleven facilities including administration and support services.

2. Fire Protection

Fire protection in the City is provided by the Susquehanna Hose Company, a volunteer company with over 120 active volunteers spread through five divisions at five station locations.

- ***Fire Station #1*** consists of two bays and is located on the southeast corner of Warren and Juniata Streets. This building was constructed in 1982. It has the capacity to house two fire department vehicles, office space, and modern communications equipment.
- ***Fire Station #2*** consists of a single bay and is located at the intersection of Pennington and Union Avenues. This two-story building was constructed before 1900.

- **Fire Station #3** consists of two bays and is located at the intersection of Fountain and Market Streets. This single-story building, which replaced the original structure in 1989, also contains a training room with seating for fifty, lounge with a kitchenette, and offices.
- **Fire Station #4** consists of three bays and is located at the corner of Revolution Street and Bloomsbury Avenue. Built in 1994, in place of the original one bay structure, this station serves as the headquarters for the Susquehanna Hose Company. In addition to the bays, the building contains offices for both administrative and line officers, a board room, lounge, and a 1,000 square foot meeting room with kitchen facilities.
- **Fire Station #5**, which is the newest station built in 2002, consists of two equipment bays and is located on Chapel Road near Bayview Estates. It is a single story structure with a crew kitchen and recreation room for its volunteers.

The volunteer emergency response fire and rescue units are well coordinated in Harford County, and are dispatched from a central location in Hickory near Bel Air. The Harford County Fire and Ambulance Association determines policy and governs operations of all volunteer divisions. The Susquehanna Hose Company is unique in some of its equipment and rescue abilities, to include a 20-member volunteer dive unit with a fire/rescue boat for water-related emergencies, a ladder truck, and a heavy rescue truck. The City has a class “C” fire rating, with 223 fire hydrants spaced throughout the City. The existing fire stations are well dispersed throughout the City and are sufficient in terms of building space.

3. Ambulance Services

New Havre de Grace Ambulance Corp facilities are located on MD 155 across from the community of Grace Harbour. The new building consists of a five bay equipment area, two large meeting rooms, and commercial kitchen. Over sixty volunteers provide emergency medical response, to include a paramedic unit.

4. Police Protection

Located on the corner of Pennington Avenue and Juniata Street, the Havre de Grace Police Department provides police protection for the entire City. This new 10,000 square foot Police Department building was opened and became operational in January 2001. The building is equipped with: auxiliary generators for emergency power to continue police and government functions; radio capabilities to operate the Police Department and the City’s Department of Public Works, and communicate with four other law

enforcement agencies; a community meeting room which can be converted to an emergency operation center in the event of an extreme emergency or natural disaster; and intra- fiber-optic network with access to high speed internet cable. The Havre de Grace Police Department is working with the Harford County Sheriff's Office to enhance communication interoperability between local jurisdictions.

The Police Department is comprised of three Department Divisions: Administrative, Operations, and Criminal Investigations. The Department consists of 36 employees, with twenty-six sworn officers and ten civilian personnel. A Police Shooting Range with observation tower is situated on James Earl Walker Drive near Arundel Quarry.

5. City Hall

City Hall, located at 711 Pennington Avenue, was constructed in 1992 and opened in March of 1993. Expansion to the City Hall building was completed in March 2001. Havre de Grace City Hall is the main government building for the City, and holds activities for the City's elected Mayor and City Council and all administrative functions. Public areas consist of reception, bill payment, and permits areas, Council Chambers, and one conference room. Administrative offices for the Department of Public Works, the Department of Finance, the Department of Administration, and the Department of Economic Development and Planning, and Mayor and City Council offices are also located in this building.

6. Havre de Grace Visitor Center

The Havre de Grace Visitor Center opened August 2002 in the former Police Department building located at 450 Pennington Avenue. This facility provides a location for information for visitors to Havre de Grace through printed material, staff, and volunteer staff assistance. The Havre de Grace Visitor Center is expected to be a platform for promoting the City's and the surrounding region's many attributes. It is intended that this current facility be a temporary location for the Havre de Grace Visitor Center. A future permanent facility is to be located at the entrance to the Downtown Business District at David R. Craig Park or, possibly, in the historic Joseph L. Davis, Post #47 American Legion building (formerly the Lafayette Hotel; HA-790 Abraham Jarrett Thomas House, Maryland Historical Trust Historic Site Inventory).

7. Water Treatment Plant

The City's 4 million gallon per day water treatment plant is located on St. John Street in the Downtown Business District of Havre de Grace. The plant is a "Class IV" level plant as categorized by the Maryland Department of the

Environment. The water treatment plant is staffed by nine employees and is operated 24 hours a day. Immediately adjacent to the City's water treatment plant is a Harford County water treatment plant. The City currently sells 2 million gallons of treated water to Harford County per day, which is pumped from this adjacent facility to Harford County's primary Abingdon Water Treatment facility.

8. Wastewater Treatment Plant

The Wastewater Treatment Plant for Havre de Grace is located on City-owned property adjacent to the Chesapeake Bay and the Maryland National Guard Reservation, and is accessible through Wilson Street and Jerry Foster Way. Besides this 1.9 million gallon per day treatment plant, there are also eight sewer pumping stations distributed throughout the City, with large ones located on Erie Street and Lafayette Street. Modification to the wastewater treatment plant to accomplish biological nutrient removal has been completed and it will give the City the ability to handle 2.3 million gallons per day. Nine employees operate the wastewater treatment facility, which also runs 24 hours a day.

9. Department of Public Works Shop

This facility is located on Jerry Foster Way adjacent to the Maryland National Guard Reservation and the Wastewater Treatment Plant. The shop building consists of a 4,000 square foot repair garage and storage building with office space and locker room, a 3-pump gas facility, an open storage area for construction and snow removal materials, and a parking area for the Department of Public Works' vehicle fleet. It is anticipated that a new storage and office facility will be built in the near future. There are 24 employees for the Department of Public Works, Streets and Facilities division.

10. Postal Services

The Havre de Grace Post Office is a 16,100 square foot brick structure located on the northeast corner of Green and Juniata Streets. Built in 1996, this new structure consists of a postal retail store and large postal handling operation. There are presently thirty-five employees working in the Havre de Grace branch.

VI. HEALTH SERVICES

The citizens of Havre de Grace and Harford County are fortunate to have a new state-of-the-art community hospital and medical facilities located at the Upper Chesapeake Medical Center in Bel Air and the convenience and continued excellent service of Harford Memorial

Hospital in Havre de Grace. An acute care facility, Harford Memorial Hospital continues to serve residents of Harford and western Cecil Counties for medical and surgical inpatient needs, intensive/progressive care, rehabilitation, emergency care, surgery, behavioral health, dialysis, and cardiopulmonary, imaging, and laboratory services. In addition, Upper Chesapeake Health includes a wealth of affiliated practitioners and support staff, a large concentration having medical offices in Havre de Grace. Other medical care facilities located within the City are the Citizens Care Center for comprehensive nursing care and a public Health Clinic operated by the Harford County Health Department.

A. Recommendations

- Support the strong community health services provided by Upper Chesapeake Health and assist in marketing the expanded programs at Harford Memorial Hospital.
- Continue to work with Upper Chesapeake Health to develop new service initiatives at Harford Memorial Hospital.
- Continue to assist in the attraction of private medical affiliates to available office space in Havre de Grace through the Department of Economic Development and Planning.
- Develop strategies to strengthen Union Avenue as a Medical District through identification, marketing, and land use policies.
- Explore the concept of Havre de Grace as a naturally occurring retirement community (NORC) because of its strong medical presence and available facilities, increased attraction of active senior and waterfront communities, existing senior residential complexes, convenient shopping areas, and pedestrian and transit access.
- Continue to support Citizens Care Center as a comprehensive nursing care facility.
- Work with the Harford County Health Department to ensure that public health services are maintained in the City to serve its special needs population.

B. Existing Conditions

1. Health Care, General

Medical facilities and services in the City are generous, especially for a city of this size and population. Havre de Grace has approximately forty private practice medical, and dental offices. The offices are largely centered around Harford Memorial Hospital and are located along Union Avenue and

Alliance, Commerce, Girard, Green, Lewis, and Revolution Streets. Primary care and preventive medicine are provided mainly by private physicians, although there is a Family Care Center across Lewis Street from Harford Memorial Hospital operated by the Upper Chesapeake Health System. Numerous specialist practices are available, to include orthopedics, ophthalmology, pediatrics, oncology, allergy, cardiovascular, gastroenterology, obstetric/gynecology, dermatology, physical therapy, and chiropractic medicine.

2. Harford Memorial Hospital

Located within the center of the older portion of Havre de Grace, Harford Memorial Hospital is part of the not-for-profit Upper Chesapeake Health System. The hospital fronts South Union Avenue and occupies one city block bounded by Union Avenue, Lewis, Revolution, and Washington Streets. With approximately 725 staff members, this facility provides necessary medical services for Harford County and western Cecil County. Harford Memorial Hospital services are extensive and include: medical and surgical inpatient, intensive care and progressive care, transitional care, 24-hour emergency care, surgical, behavioral health, dialysis, sleep disorders, cardiovascular, and imaging. With 102 licensed beds, this facility is an integral part of Upper Chesapeake Health System, with 33,000 outpatient visits and more than 30,000 Emergency Department visits in the year 2002.

Harford Memorial Hospital is a general acute care hospital with a Level II Emergency Department with associated ancillary and support services. Emergency services include trauma, cardiac observation, expedient care, and SAFE (Sexual Assault Forensic Examiner) services. Recent renovations have improved the facilities of the Emergency Department, Imaging Services, and the Intensive Care and Coronary Care Units. Additional renovations were made for the establishment of a 25-bed Behavioral Health unit managed by Sheppard Pratt Health System.

3. Upper Chesapeake Medical Center

The Upper Chesapeake Medical Center is centrally located in Bel Air at MD 24 and MacPhail Road, and provides county-wide medical services in a modern campus setting. The campus includes the Upper Chesapeake Medical Center, Upper Chesapeake Family Birthplace, Upper Chesapeake Cardiovascular Institute, Ambulatory Care Center of Harford County, and Harford Surgery Pavilion. The Upper Chesapeake Medical Center offers 120 private rooms with a 24-hour visitation policy, medical and surgical inpatient services, pediatric services, the Family Birthplace, emergency department, intensive and progressive care units, surgical services, dialysis, and cardiopulmonary, imaging, and rehabilitation services.

The Ambulatory Care Center of Harford County houses the Upper Chesapeake Cardiovascular Institute, the Harford Surgery Pavilion, as well as ambulatory care imaging services and diagnostic testing. Services through the Cardiac Institute are provided in conjunction with St. Joseph's Medical Center's Heart Institute. Multi-specialty surgeries not requiring a hospital stay are performed in the Surgery Pavilion of this building. In addition, there is a medical office building located on the campus.

4. Citizens Care Center

Citizens Care Center is a non-profit, comprehensive nursing care facility located on Market Street near the City's waterfront. As a nursing care facility, Citizens Care Center provides 24-hour long-term care and can accommodate up to 180 residents. In addition, it provides shorter-term services for occupational, physical, and speech rehabilitation. The facility employs approximately two hundred staff members, with a nursing staff of 110. The modern facilities include private and semi-private rooms, planned activities, and a fully-equipped pharmacy.

5. Public Health Services

The Harford County Health Department has one of its four Health Clinics in Havre de Grace. Leasing a building on Pennington Avenue, the Health Department sponsors clinics for cancer screening, child health care, family planning, hypertension screening, immunizations, maternity care, and pregnancy testing. The Health Clinic in Havre de Grace also provides information and referral services, drug and alcohol abuse counseling, medical assistance screening for pregnant women, social work services and the Women, Infant, and Children (WIC) Program.

I. INTRODUCTION

This Water Resources chapter focuses on the issues relating to water resources for use and consumption, wastewater collection and treatment, and surface water stormwater management. This chapter, or element, of the Comprehensive Plan is a 2006 legislative requirement of the State of Maryland to insure that adequate public facilities are achieved by the various jurisdictions in their development process to protect our valuable water resources for consumption and recreation and to enhance our regional efforts in improving the health of the Chesapeake Bay. The ability to serve properties with public utilities, particularly water and sewer service, is a primary factor in determining existing land uses and future growth opportunities for any given jurisdiction. Public water and sewer are provided by the City of Havre de Grace through the Department of Public Works (DPW) and include water intake, treatment, and distribution and wastewater collection and treatment. In addition, stormwater management – for both the older portions of the City and in newer neighborhoods – is extremely important for the health of our surface water sources and, ultimately, the health of the Bay.

This chapter is divided into three sections: water treatment and distribution, wastewater collection system and treatment, and stormwater management and nutrient reduction. This is an expanded description of these topics, as required by state legislation, to develop a more in-depth approach to water resource protection while still allowing residential, commercial, and industrial growth. Passed in 2006 and referred to as House Bill (HB) 1141 *Land Use-Local Government Planning*, the Water Resources Element Law requires jurisdictions to: 1). Identify drinking water and other water resources that will be adequate for the needs of existing and future development proposed in the land use element of the plan, 2). Identify suitable receiving waters and land areas to meet the stormwater management and wastewater treatment and disposal needs of existing and future development in the land use element of the plan, and 3). Adopt a Water Resources Element (WRE) in the comprehensive plan on or before October 1, 2009, unless extensions [were] granted by Maryland Department of Planning (MDP) pursuant to law.¹ The goal of this Water Resources chapter is to ensure sufficient water supply and capacity and to identify suitable receiving waters for wastewater and stormwater impacts to support the City's planned land use.²

¹ The Water Resources Element: Planning for Water Supply and Wastewater and Stormwater Management, Maryland Department of Planning Models and Guidelines #26, p. 7

² Maryland Department of Planning 2008 Annual Report, p.10, Water Resource Elements

Havre de Grace provides its own water and sewer service to its municipal customers. Under required permits from Maryland Department of the Environment (MDE), raw water is withdrawn from the Susquehanna River at an intake just south of the Pennsylvania rail-line/Amtrak bridge, is treated, and distributed to city customers. Clean, treated effluent is released back into the Bay at the southern end of town, as per a required surface water discharge permit also overseen by MDE. In this way, the City is its own, independent unit providing these functions through highly-trained and dedicated operators in DPW.

The City also functions within a cooperative framework with Harford County. All municipalities coordinate with Harford County for determining growth areas and new service areas through the urban growth boundary of the Development Envelope. Havre de Grace – as well as the municipalities of Aberdeen and Bel Air – fall under the Harford County Water and Sewer Master Plan, which is updated biannually in the fall and spring. Treatment systems, major capital improvements, and new identified growth areas are all described in this Plan and shows existing service areas and planned short-term (0-5 years), mid-term (6-10 years), and long-term (11-20 years) service areas. This arrangement was established in the 1970's in mutual agreement for expediency as opposed to having separate plans for each Harford County jurisdiction.

In addition to planning coordination, limited inter-operability exists between Havre de Grace and Harford County, specifically for water distribution. The City currently sells 1.4 million gallons per day (mgd) to Harford County to mix with other water sources to supply County customers. The County also has a sister plant adjacent to the City's water treatment plant on St. John Street for their own direct withdrawal from the Susquehanna River. Multiple water systems traverse this region for the purposes of redundancy serving the greater Baltimore metropolitan area. A comprehensive study is underway to explore increased interdependent water systems governed by a regional water authority which could span county and municipal jurisdictions in the future.

The City of Havre de Grace is in good shape for providing an adequate water supply and sewage treatment capacity to accommodate future growth. The City is progressive in its recent planning, design, and construction of facilities for achieving Chesapeake Bay nutrient goals for wastewater effluent and has consistently been forward-thinking in maximizing its water treatment capacity. In addition, Havre de Grace has also successfully adopted its latest stormwater management ordinance to reflect changes in State requirements which were adopted legislatively in 2009. The following recommendations are provided for each section of this Water Resources Element chapter and followed by descriptions of existing and proposed facilities or expanded programs to meet current law. The recommendations are divided by section heading for ease of understanding their relationship to water distribution, wastewater collection, stormwater management, and the requirements of HB1141.

II. RECOMMENDATIONS***Water Treatment and Distribution***

- Implement water treatment plant improvements, to include equipment renewal of 1954 valves, filter controls, and chemical feed systems with new technology which will provide efficiency, sustainability, and safety and facility improvements for operations and equipment housing.
- Continue to monitor capacity of water treatment plant to serve current City demand and future residential and commercial growth.
- Continue to coordinate with Harford County regarding semi-annual revisions to the Harford County Water and Sewer Master Plan for planning water service area extensions and timelines.
- Continue to participate in biannual water utility meetings with Harford County, other municipalities, and Aberdeen Proving Ground for coordination, to share and monitor progress with respect to meeting the demands of each service area.
- Continue to coordinate with Harford County for water buy-back as City capacity demand increases.
- Support the study/investigation of a regional water authority with consideration for future impacts to City water service.
- Continue to implement equipment upgrades and renewal as needed which will provide efficiency, sustainability, and safety for water distribution system.
- Continue to support the interrelated water systems within Harford County to insure adequate drinking water within the City of Havre de Grace, Harford County, and the Baltimore Metropolitan Region.
- Revise ten-year capital improvement program for water infrastructure on a yearly basis so that needed capital projects continue to be identified and funded in a fiscally responsible manner.
- Continue to rely on the advisement of the Havre de Grace Water and Sewer Commission for the annual review of water and sewer rates, fee structure, and 10-year capital improvement program. Responsibilities include determining the strategic direction of the Water and Sewer Enterprise Fund (Fund 9) and establishing and monitoring operational goals and objectives.
- Continue to attract and retain highly-trained licensed professionals to operate the water treatment plant within the regulatory structure of Maryland Department of Environment Water Management Administration and federal law.

- Continue to coordinate with Harford County Government for land use planning and policy development to meet the intent of the State of Maryland's *Smart, Green, and Growing* initiative.

Waste Water Collection System and Treatment

- Operate state-of-the-art Havre de Grace WWTP Enhanced Nutrient Removal (ENR) facility completed in December 2009 to maximum efficiency to best meet Chesapeake Bay Restoration goals.
- Continue to monitor capacity of the wastewater treatment plant to serve current City demand and future residential and commercial growth.
- Continue to implement inflow and infiltration improvements to the sewer collection system which reduces the amount of surface and groundwater flowing into aging sewer lines, pipe intersections, and manholes.
- Continue to coordinate with Harford County regarding biannual revisions to the Harford County Water and Sewer Master Plan for planning sewer service area extensions and timelines.
- Continue to implement equipment upgrades and renewal as needed which will provide efficiency, sustainability, and safety for collection system and plant operations.
- Revise ten-year capital improvement program for sewer infrastructure on a yearly basis so that needed capital projects continue to be identified and funded in a fiscally responsible manner.
- Continue to rely on the advisement of the Havre de Grace Water and Sewer Commission for the annual review of water and sewer rates, fee structure, and 10-year capital improvement program. Responsibilities include determining the strategic direction of the Water and Sewer Enterprise Fund (Fund 9) and establishing and monitoring operational goals and objectives.
- Continue to attract and retain highly-trained licensed professionals to operate the wastewater treatment plant within the regulatory structure of Maryland Department of Environment Water Management Administration and Federal law.
- Continue to operate the compost facility at the wastewater treatment plant to maximum efficiency and provide high-quality compost material for soil enhancement.
- Explore progressive options with public and private landowners for innovative land applications of treated effluent for irrigation and nutrient offloading.

- Continue to coordinate with Harford County Government for land use planning and policy development to meet the intent of the State of Maryland's *Smart, Green, and Growing* initiative.

Stormwater Management and Nutrient Reduction

- Administer and enforce the latest State Stormwater Management regulations as per the Stormwater Act of 2007, which insures environmental site design (ESD) to the maximum extent possible (MEP) in new development projects and 50% impervious surface reduction or the equivalent for redevelopment. Ordinance No. 912 Stormwater Management was passed May 3, 2010 and took effect June 17, 2010.
- Review stormwater management plans at the concept, site plan, and final plan phase of design to insure adequate retention of stormwater runoff from new development and redevelopment projects, as required.
- Develop a formalized internal development review process in which all departments review development plans for regulatory, local zoning, stormwater management, facility, and infrastructure sufficiency to be applied to all new development and redevelopment projects, regardless of scale.
- Continue to inspect stormwater facilities or the construction of on-site environmental site design applications as they are built during the development process.
- Continue to inspect existing stormwater management facilities on a yearly schedule to insure that they are maintained and functioning properly, with necessary reporting as required by Maryland Department of Environment on an annual basis.
- Align existing City development regulations, such as zoning, parking requirements, road code, etc., with stormwater management regulations to reduce the impervious surface runoff of future development.
- Continue to work with Harford County Soil Conservation District to review and approve sediment and erosion control plans prior to site grading in construction projects within the City, as required. Projects include all new development and redevelopment as well as City infrastructure improvements which exceed 5000 square feet or 100 cubic yards of soil disturbance.
- Develop a local sediment and erosion control ordinance so that the City's Department of Planning – Inspection Services staff has enforcement capability to supplement MDE enforcement to insure that sediment and erosion control devices are properly installed and maintained during the development process.
- Continue to implement NPDES (National Pollutant Discharge Elimination System) Phase II requirements for Small Municipal Separate Storm Sewer Systems to be

performed by the City's Department of Planning – Inspection Services staff and as outlined in the general discharge permit.

- Participate in the development of inter-jurisdictional watershed management plans for nutrient reduction to meet Maryland Tributary Strategy goals and Federal Clean Water Act requirements.
- Identify and administer potential mitigation projects to meet anticipated nutrient reduction requirements, to include the direct storm drain discharge outfalls in the older portion of the City.
- Implement the *Lilly Run Improvement Plan* for flood relief/flood control in the interior portions of the City for the purposes of public safety and emergency access; protection of public and private property from damage; expedited floodwater exit; water containment; and environmental enhancement.
- Implement the priorities identified in the Havre de Grace Continuity of Operations Plan (COOP) of 2009 for disaster planning, to include flood emergencies.
- Continue to administer and improve on the voluntary Community Rating System for reduced flood insurance premiums for residents in the floodplain.
- Continue to administer required construction standards for all new buildings in the floodplain.
- Continue to administer and enforce Chesapeake Bay Critical Area regulations on shoreline parcels and land areas within 1000 feet of mean high water which are required in addition to stormwater management for protection of Chesapeake Bay water quality.

III. WATER TREATMENT AND DISTRIBUTION

The City of Havre de Grace serves its population's water needs by withdrawing raw surface water from the Susquehanna River, treating it, and then distributing it through a series of tanks, pumps, water mains, and smaller service lines to individual homes and businesses. The raw source of water for City of Havre de Grace is the Susquehanna River, with a withdrawal permit of 4 million gallons per day (mgd). Average daily water needs are 1.6 mgd currently (2009) for City residents and businesses with a maximum day withdrawal rate of 2.0 mgd for calendar year 2009 (year ending December 31, 2009). As of July 1, 2009, the City sells 1.4 mgd of finished water to Harford County in addition to what it produces for local consumption.

The City's water plant daily appropriation is 4.0 mgd (30-day average) with a safe yield of 3.9 mgd; maximum day allowance is 5.0 mgd. Havre de Grace is in a unique position to be located on such a large surface water source as the Susquehanna River. Its water treatment plant is located on the City's waterfront at the north end of the downtown

business district on St. Johns Street. Immediately adjacent is the Harford County water treatment plant, which also has a permitted daily appropriation of 4.0 mgd. The sister plants operate independently but share some facilities such as the recently completed sludge handling facility located closest to the waterfront in the rear of the building complex. Because of regional development pressure, more emphasis will be placed on the Susquehanna River for supplying raw water for Harford County and the Baltimore Metropolitan Regional growth needs.

The City and Harford County have been involved in a mutually supportive agreement since 1980 when the County made major improvements to the City's water treatment plant in exchange for building its own plant adjacent to the City's. A forty-year contract was established to have Harford County lease the land owned by the City for building the adjacent plant; to have the County make necessary improvements to the City's aging facility; and the right for any remaining water supply from the City's plant to be utilized by Harford County. A water buy-back arrangement was built into the contract so the City would be able reduce its obligation to Harford County as its own needs increased with development. Both water treatment plants have their own raw water intakes located south of the Amtrak Railroad at the mouth of the Susquehanna River and are regulated by the Maryland Department of the Environment. Other water intakes located to the north of the railroad are regulated by the Susquehanna River Basin Commission headquartered in Pennsylvania as well as by MDE, affecting regional water systems such as Baltimore City. This is important to the regional water systems that supply Harford County which uses water from the Susquehanna directly from its own plant, the Havre de Grace treatment plant, and the Baltimore City water system.

The Havre de Grace water treatment facility is a conventional mixed-media filtration plant with chemical addition, flocculation, and sedimentation as the initial processes for treating the raw water. The water then passes through mixed-media filters, is disinfected, fluoridated, and sent into the distribution system for consumer use. As a surface water source, the raw water from the Susquehanna River is expensive and highly-treated due to the water's turbidity, requiring advanced technology for plant operations. Ten licensed operators run the plant 24 hours a day, supplying potable water to City customers. Residual sediment is processed in the shared, three-story sludge handling facility and collected for land application. Necessary plant improvements are ongoing in three phases: phase I has been completed which included purchase and installation of a new generator, finished water pumps, and carbon feed system; phase II includes comprehensive valve replacement for filter valves from 1954 and new filter controls; and phase III includes new liquid chemical feed systems and substantial building improvements. Both phases II and III are engineered and ready to proceed for construction bids at this time.

The water distribution system is divided into three pressure zones, which include the downtown, older portions of the City; the newer neighborhoods located at the higher elevations, such as Grace Harbour and Bulle Rock residential community; and a lesser "drop-down" zone at Chapel Terrace and portions of Bayview Estates. A fourth pressure zone may be configured in the future to serve the Mixed Office Employment area at the I-

95/MD 155 interchange. Three storage towers work in tandem to supply reserve water storage for the system. The City's distribution system consists of 4", 6", 8", and 12" water mains throughout the older portions of town, with primarily 8" lines in the newer subdivisions. Utilizing a comprehensive Water System Master Plan developed in 1998 by MRA engineering firm, the City determines capital improvement priorities in a ten-year budget program to plan and fund needed long-term improvements. These improvements include older waterline replacements, relining of water lines, and valve replacements to ensure upgraded facilities in an aging system and to ensure adequate supply pressure systemically as new development occurs. In addition, the need for substantial water infrastructure near the I-95 interchange to serve future land uses at the Mixed Office Employment zoning district will be necessary for its development. This may include a new on-site tower or additional capacity at the Lapidum tower to ensure adequate supply and water pressure to this growth area.

As part of the Harford County development envelope, the City is identified as a growth area and it is necessary to estimate water capacity needs for planned development projects. The following table (Table 6.1) shows anticipated water treatment plant capacity needs which includes current use requirements; capacity needed for potential infill projects and smaller known projects; large projects under construction; and growth areas. The methodology for calculating daily water needs in Table 6.1 is based on an allowance of 300 gallons per day per estimated dwelling unit (EDU) for residential projects. An allowance of 1,300 gallons per day per acre was used for estimated commercial demand³. These residential and commercial water requirements are consistent with design guidelines used by the City in water supply capacity management plans required by MDE. The information in this table is based on residential development capacity calculated in the Municipal Growth Element as of January 1, 2010 and estimates for identified growth areas for full build-out of the 2004 Comprehensive Plan Areas.

Table 6.1 includes water capacity estimates for all planned projects and growth area identified in 2004 and will allow for build-out to year 2025. The numbers indicating planning areas on the water services map coincide with those listed on Table 6.1 for visual referencing. Several projects are already incorporated in the City, such as Bulle Rock Planned Adult Community, Scenic Manor, and Greenway Farm. Other smaller known projects, such as Ivy Hills and St. Johns Commons are accounted for in the in-fill capacity allowance. Projects such as Grace Manor and Havre de Hills are completely built out at this time and included in the current use requirements in the water capacity table. Several developments located outside of City limits – Shawnee Brooke, Havre de Grace Heights, and Susquehanna River Hills – are included for future water capacity only in the event that they have reduced well yields that require public water in the future.

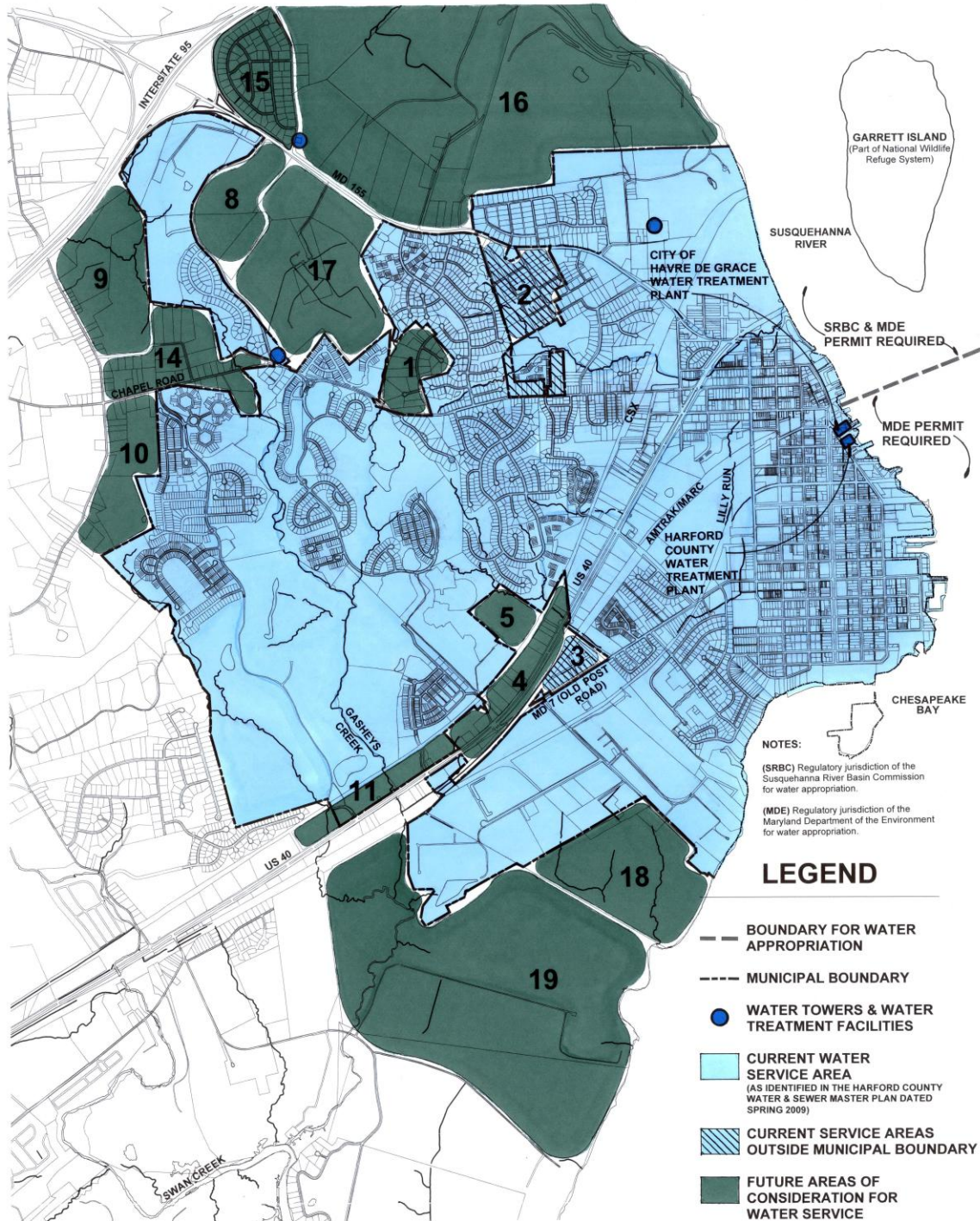
³ Based on Water Supply Capacity Management Plan generalized estimates which balance average day and maximum day demand (270 gpd vs. 270 gpd x 1.2 for maximum day demand of 324 for residential and 1,200 gpd per acre vs. 1,200 average vs. 1,440 maximum day demand for commercial).

TABLE 6.1
COMPREHENSIVE PLAN ESTIMATED WATER CAPACITY NEEDS

<u>Planning Area</u>	<u>Average Day (Gallon/Day)</u>	<u>Subtotals by Area</u>
Current Use Requirements*	2,037,000	2,037,000
Capacity Allowance for In-fill and Smaller Projects	219,600	219,600
<u>Capacity Allowance for Major Projects in Developing Areas</u>		
I-95 Interchange, Southeast Quadrant: Mixed Office Employment and Residential	142,000	
Bulle Rock Planned Adult Community (1,360 EDU's)	408,000	550,000
<u>Capacity Allowance for Growth Areas</u> (Green and Hatched Areas)		
1. Shawnee Brooke (21 existing homes)	6,300	
2. Havre de Grace Heights (35 existing homes or lots)	10,500	
3. Revolution Street Corridor	Currently served but not within municipal limits	
4. US 40 Commercial	60,000	
5. Lampson Property (70 EDU's)	21,000	
6. Scenic Manor (84 EDU's)	25,200	
7. Greenway Farm (573 EDU's)	171,900	
8. Green Properties	53,000	
9. Earleton Road (160 EDU's)	48,000	
10. Robinhood Road (96 EDU's)	28,800	
11. US 40 Commercial, Extended	39,000	
12. Bulle Rock Golf Course: Clubhouse/Restaurant and Inn/Conference Center	52,000	
13. Garrett Island	N/A, open space	
14. Chapel Road Communities (38 existing homes)	11,400	
15. Susquehanna River Hills (98 existing homes or lots)	29,400	
16. Vulcan Quarry (formerly Arundel Quarry)	N/A, mining activity	
17. Sion Hill (MET easement)**	N/A, open space	
18. Old Bay Farm (MET easement)**	N/A, open space	
19. Swan Harbor Farm	N/A, open space	
		556,500
Total for Current Use, In-fill, and Planning Areas	3,363,100	3,363,100

*Current use capacity is based on a maximum day demand for calendar year 2009/year ending December 31, 2009.

**Maryland Environmental Trust easements have been placed on portions or all of these properties at property owner's request. Because they are adjacent to municipal boundaries, it is appropriate that the City of Havre de Grace include these properties for land use planning consideration.



CURRENT & FUTURE WATER SERVICE AREAS

City of Havre de Grace Comprehensive Plan



Based on a current usage amount of 2.037 mgd maximum day demand in 2009 and future build-out of this plan as identified in Table 6.1, the City has sufficient capacity to serve future growth (safe yield capacity is 3.86 mgd). Currently, the City of Havre de Grace water treatment plant serves an estimated population of 14,515⁴ people as of January 1, 2010 as well as local businesses, institutional uses, and industry. Based on past growth trends, it is estimated that the City will have an estimated population of 19,383 in 2025 (or 1,995 additional households). These are conservative estimates and do not account for any surges in growth based on new demand from the Army's Base Realignment and Closure Act (BRAC) initiative that significantly affects this region due to its proximity to Aberdeen Proving Ground (APG). Careful monitoring of water usage as development occurs will be ongoing and initiatives for conserving water – such as property owner education or utilizing treated effluent for lawn irrigation – should be explored to maximize resources.

The City has an adequate water supply that will continue to serve the City and future growth beyond the scope of this plan. Because the Susquehanna River is such a reliable source of raw water, the potential to expand plant capacity is possible, whether for immediate growth around Havre de Grace or to sell additional water for Harford County's growth needs. This will be an ongoing planning effort which includes the findings of the Harford County Water Authority Study now in process. This study involves a full regional study of water sources of the Baltimore Metropolitan Region and their interrelationship as regional growth demands increase. The City will also continue to work directly with Harford County Government for biannual updates of the Harford County Water and Sewer Master Plan to ensure continued cooperation and long-range facilities planning as required by law.

Protection of the Susquehanna River as a water source is extremely important for all who utilize it – for human consumption, recreation, habitat, and fisheries. The quality of the Susquehanna River is dependent on many jurisdictions, requiring a regional, interstate approach to its long-term viability. Current land-use based efforts to curb pollution at the State and Federal levels include expanded stormwater management laws and discharge limits. To ensure the viability of its only public drinking water source, the City of Havre de Grace will continue to remain current with these changing regulations, incorporate infrastructure improvements (such as stormwater filtration devices), and provide necessary enforcement for infractions on private property.

Opportunities for additional water sources should be explored as the need for reliable water supplies are (and will continue to be) a growing necessity. Consideration for the Vulcan Materials quarry as a reservoir and ground water source would greatly enhance our supply options locally and would potentially improve the water quality of raw water for treatment. This massive hard rock quarry is located immediately adjacent to Havre de Grace to the north. In the long-term, Havre de Grace could increase its role as a point of finished water supply to the broader region. This effort would need to be studied extensively and could proceed only after site mining is complete and with concurrence of private property owners. In addition, the City should also consider the installation of ground water wells to supplement and improve the quality of its raw surface water supply.

⁴ Please see Municipal Growth Element for population estimates and methodology.

As the water customer base grows, City staff will continue to coordinate with Harford County in a phased buy-back of its finished water at 100,000 gpd increments (which requires eighteen month notification) to ensure an adequate supply as demand grows. Past buy-backs occurred in 2004 (from 2.0 mgd to 1.7 mgd), 2007 (to 1.5 mgd), then 2009 (to 1.4 mgd). Staff members will also continue to consult with the Havre de Grace Water and Sewer Commission, which was established in 2008, to advise the Mayor and City Council on its long-range capital improvement program, operational cost structure, and rate setting. Through the Department of Public Works, professional operators will continue to oversee successful operations and high-quality water supply to City customers and skilled staff will implement ongoing improvements and oversight to the distribution system. Yearly federal reporting requirements offer the public a published report of finished water quality so that customers are assured that their water supply meets or exceeds water quality standards.

III. WASTEWATER COLLECTION SYSTEM AND TREATMENT

The City of Havre de Grace is in an excellent position for meeting its wastewater treatment plant capacity needs and new Chesapeake Bay requirements for nutrient removal. The City has completed constructing improvements to the wastewater treatment plant, which include enhanced nutrient removal (ENR) technology for significantly reducing nitrogen and phosphorus in the treated effluent that is discharged into the Bay as well as increased capacity for limited development. The 3.3 million gallon per day (mgd) expanded plant was completed in December 2009 and is equipped with the latest technology for meeting the Bay Restoration Act and ENR Strategy which requires annual average nutrient goals of effluent quality of total nitrogen (TN) at 3 mg/L and total phosphorus (TP) at 0.3 mg/L. These treatment plant upgrades put Havre de Grace at the forefront of technology and timeliness for achieving Bay restoration goals.

The City of Havre de Grace owns and operates a system of gravity sewer lines, force mains, and pumping stations which collect household, commercial, and industrial effluent and send it to the wastewater treatment plant located at the southern edge of the City's shoreline. All improved properties within City limits are served by public sewer and are billed for this service on a quarterly basis. Prior to the latest wastewater plant improvements, the City maintained plant efficiency at a rated capacity of 1.89 mgd and met State effluent requirements with past improvements for secondary treatment in 1986 and biological nutrient removal (BNR) technology in 2002.

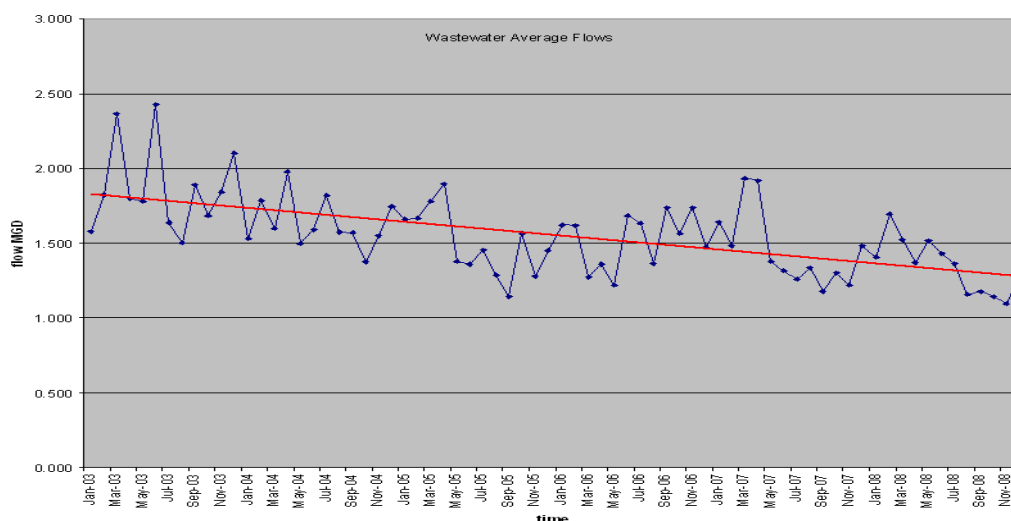
As part of the latest upgrades, Phase I improvements to the wastewater treatment plant were completed in March 2008 and allowed for planned capacity approved by Maryland Department of the Environment (MDE) to 2.3 mgd. Phase II completion of ENR implemented by an enhanced oxidation ditch process is the final phase of improvements which allows the plant to operate at rated design capacity to 3.3 mgd and achieve required goals set by the State of Maryland. These improvements are a direct result of new Chesapeake Bay nutrient goals passed in 2002 (immediately following the opening of the BNR plant) and the need for increased capacity for future growth. These facility improvements also included significant upgrades to the main pumping station located on Lafayette Street in the cultural district.

Havre de Grace constructed its first sewage collection system in 1910 as a combined sanitary and stormwater gravity flow system with raw sewage discharging directly into the Susquehanna River. Havre de Grace completed its first wastewater treatment facility in 1967 at the south shore of the City adjacent to the Maryland National Guard property. This plant was designed to provide primary treatment only (meaning that the solids were settled out and effluent disinfected before release into the Bay) and was originally intended to be built near the Concord Point Lighthouse on Lafayette Street, where the main pumping station is located. Improvements to the wastewater treatment plant were completed in 1986 to provide secondary treatment which enlisted biological processes for the treatment of the City's effluent and provided surge tanks for storm flow control, dewatering facilities, a lab, and a composting facility for the reuse of sludge. To meet State water quality goals set in 1987, BNR was added to the facility to deal with nitrogen and phosphorous removal. The latest upgrades to the plant reach the limits of technology for removing these nutrients, a leading cause of the degradation of the Chesapeake Bay.

The discussion of wastewater treatment does not just include the plant operations – the collection system is also very important. Havre de Grace has a system of gravity sewer lines, force mains, and pumping stations that need to be continuously maintained. Its series of sewer lines consist of pipes that have been recently installed from new development as Havre de Grace expanded its borders and those from a century ago. Older areas of the City suffer from aging sewer lines, which pose a particular challenge for maintenance. Disintegrating lines and aging pipe intersections allow for inflow of stormwater in rain events and cause the treatment plant to have to process high daily flows. Over the past five years, DPW staff have been aggressively working to eliminate such sources of inflow or flooding of the sewer collection system, commonly referred to as I&I for inflow and infiltration. Due to continued improvements, the City has regained measureable treatment plant capacity. These improvements include installation of waterproof manhole covers in floodplain areas, disconnection of roof leaders in older portions of the City, sealing of open manholes in areas of new construction, and disconnection of storm drain lines from the wastewater sewage collection system. The City continues to be vigilant in reducing inflow in an effort to reduce costs and increase plant efficiency.

With the expansion of the wastewater treatment plant capacity to 3.3 mgd, the City is in excellent position to serve future development in-fill and growth areas outlined in this plan. As of December 31, 2009, the City processed an average of 1.366 mgd per day, which is a 24-month rolling average. This is a substantial reduction from earlier rolling average data due to the focus on overall system efficiency through I&I reduction. The following graph of the recent six year span (from January 2003 to December 2008) shows generalized trends for treatment amounts that the plant has handled.

GRAPH 6.1
WASTEWATER AVERAGE MONTHLY FLOW TRENDS, JANUARY 2003 TO DECEMBER 2008



Source: City of Havre de Grace Department of Public Works data supplied to Stearns & Wheler, LLC for yearly Wastewater Capacity Management Plans

In year 2003 at the height of a major residential growth period, the graph indicates the 12-month average (1.87 mgd) as approaching the plant's rated capacity of 1.89 mgd. Much of this was due to inflow and infiltration and, during this time, City staff worked closely on a project by project basis with the Harford County Health Department to ensure that the City did not exceed plant capacity. The City's DPW staff went into an aggressive program for reducing these I&I sources over the next several years and is evidenced in later 12-month averages on the graph (1.63 mgd for calendar year 2004, 1.49 mgd for 2005, 1.52 mgd for 2006, 1.45 mgd for 2007, and 1.35 mgd for 2008). These later trends indicate improvements and increased efficiency of the collection system. In addition, interim Phase I improvements from 2008 allowed for .4 mgd of additional capacity which provided the City with a buffer until the completed ENR plant came online at the end of 2009.

As part of the Chesapeake Bay Tributary Strategy, wastewater treatment plants are required to be upgraded through state-of-the-art ENR technology to meet concentrations of 3.0mg/L or less of TN and 0.3 mg/L or less of total phosphorous (TP). As of January 31, 2010, the Havre de Grace WWTP Enhanced Nutrient Removal facility was fully operational and exceeding nutrient reduction requirements. Operating the treatment plant with BNR, the City achieved average total nitrogen (TN) from January to December 2009 of 7.1 mg/L. After the initial start-up period (from December 10, 2009 to January 31, 2010), the average TN from February has been less than 2.0 mg/L⁵, which is excellent performance. To continue to meet State requirements, nutrient load caps must be maintained at an annual average concentration of 4.0 mg/L TN and 0.3 mg/L TP⁶ for a plant the size of Havre de Grace (> 500,000 gpd), with an annual cap for TN of 27,715 lbs/year and 2,079 lbs/year for TP based on a 2.3 mgd flow. Additional flow can be accommodated (up to 2.8 mgd) as

⁵ From City of Havre de Grace Department of Public Works reporting requirements for MDE

⁶ Maryland's Chesapeake Bay Tributary Strategy Statewide Implementation Plan. January 24, 2008

long as the annual average nutrient levels stay within MDE requirements. Tables in Appendix A. show wastewater point source nutrient loading information of pounds per year with BNR from 2002 to 2009 and then following implementation of ENR.

The new ENR plant has been operational for less than a year and operations professionals are continuing plant refinement for wastewater processing. At this point in time, it is yet to be determined how the Tributary Strategy point source cap will constrain the City's implementation of its land use plan for future growth. Table 6.2 shows the City's estimated capacity demand of all growth areas at an estimated 2.5 mgd. As stated in the paragraph above, nutrient caps (for TN and TP) for the City's ENR plant are based on 2.3 mgd. Any additional flow greater than 2.3 mgd would require ENR treatment levels no greater than 3.25 mg/L TN. If the City cannot achieve this level of nutrient treatment and can only expect to achieve 4 mg mg/L TN, then the WWTP cap would present a constraint to implementing the land use plan for new growth. If this were the case, the City could pursue land application for nutrient offloading to stay within required limits or modify its land use plan for annexing new growth areas.

The City's ENR plant discharges directly into the Chesapeake Bay. One of the requirements of the Water Resources Element is to discuss the suitability of receiving waters for effluent discharge. As the City does not discharge into a tributary with identified impairments for limited assimilative capacity, Havre de Grace is in a good position for accepting additional growth within Harford County. State and Federal requirements for the Bay are ongoing and being addressed through the EPA and development of a Chesapeake Bay Total Maximum Daily Load (TMDL), which will further outline requirements affecting nutrient limits and the City's future growth.

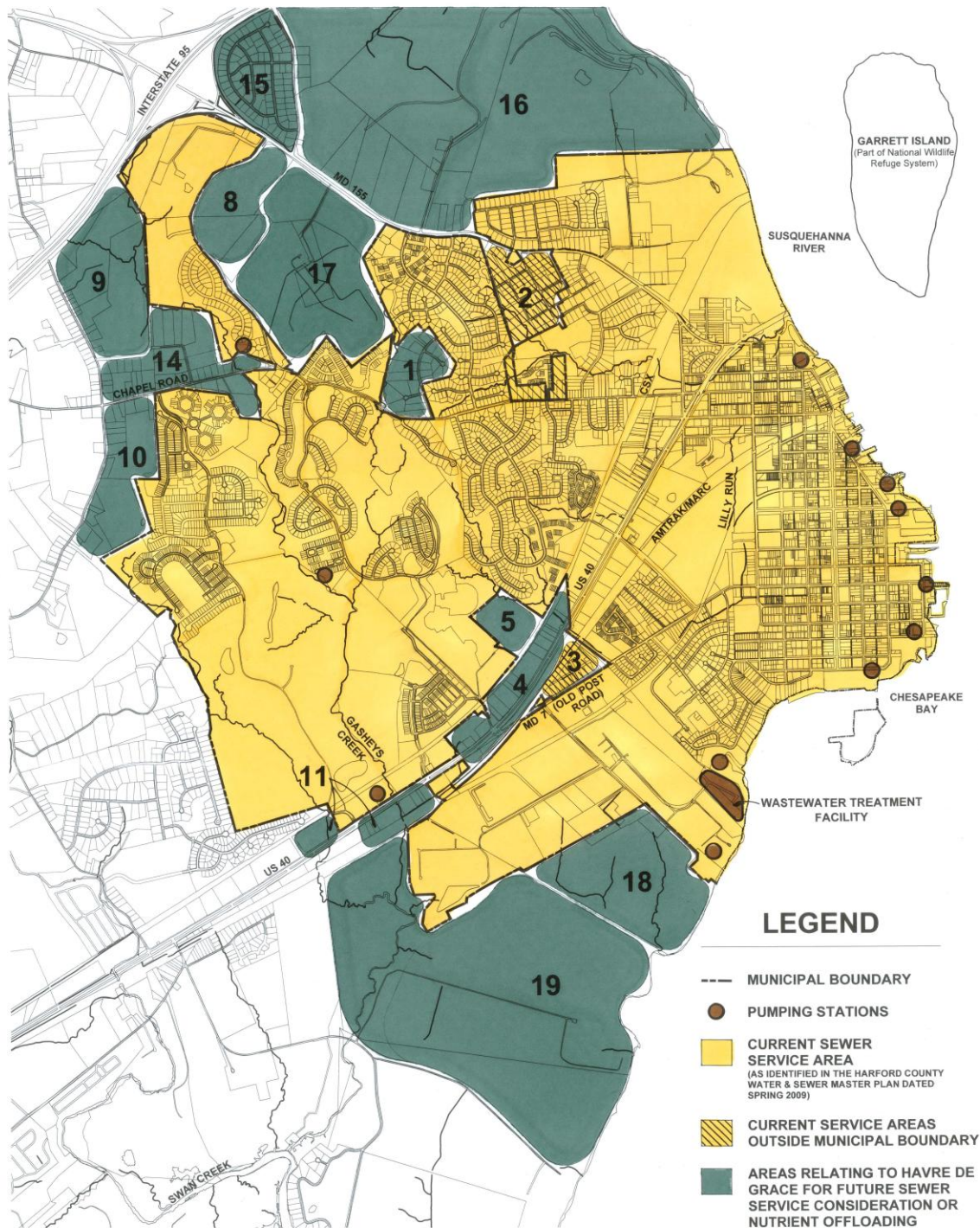
At a current flow of 1.366 mgd, the Havre de Grace WWTP facility has substantial capacity to serve a growing community as well as meet nutrient load requirements. As part of the Harford County development envelope, the City is identified as a growth area and it is necessary to estimate wastewater capacity needs for planned development projects. The following table (Table 6.2) shows anticipated wastewater treatment plant capacity needs which includes current use requirements; capacity needed for potential in-fill projects and smaller known projects; large projects under construction; and growth areas. An allowance of 270 gallons per day per estimated dwelling unit (EDU) is used for residential projects. For commercial flows, an allowance of 1,200 gallons per day per acre of commercial land is used. These residential and commercial unit flow values are consistent with the design guidelines used by the City in wastewater capacity management plans required by MDE. The information in this table is based on residential development capacity calculated in the Municipal Growth Element as of January 1, 2010 and estimates for identified growth areas for full build-out of the 2004 Comprehensive Plan Areas.

TABLE 6.2
COMPREHENSIVE PLAN ESTIMATED WASTEWATER CAPACITY NEEDS

<u>Planning Area</u>	<u>Average Day (Gallon/Day)</u>	<u>Subtotals by Area</u>
Current Use Requirements*	1,366,000	1,366,000
Capacity Allowance for In-fill and Smaller Projects	197,640	197,640
<u>Capacity Allowance for Major Projects in Developing Areas</u>		
I-95 Interchange, Southeast Quadrant: Mixed Office Employment and Residential	131,000	
Bulle Rock Planned Adult Community (1,360 EDU's)	367,200	498,200
<u>Capacity Allowance for Growth Areas</u> (Green and Hatched Areas)		
1. Shawnee Brooke	Water only based on future need	
2. Havre de Grace Heights	Water only based on future need	
3. Revolution Street Corridor	Currently served but not within municipal limits	
4. US 40 Commercial	55,000	
5. Lampson Property (70 EDU's)	18,900	
6. Scenic Manor (84 EDU's)	22,680	
7. Greenway Farm (573 EDU's)	154,710	
8. Green Properties	49,000	
9. Earleton Road (160 EDU's)	43,200	
10. Robinhood Road (96 EDU's)	25,920	
11. US 40 Commercial, Extended	36,000	
12. Bulle Rock Golf Course: Clubhouse/Restaurant and Inn/Conference Center	47,000	
13. Garrett Island	N/A, open space	
14. Chapel Road Communities	Water only based on future need	
15. Susquehanna River Hills	Water only based on future need	
16. Vulcan Quarry (formerly Arundel Quarry)	N/A, mining activity	
17. Sion Hill (MET easement)**	N/A, open space	
18. Old Bay Farm (MET easement)**	N/A, open space	
19. Swan Harbor Farm	N/A, open space, However possible site for future nutrient offloading	
Total for Current Use, In-fill, and Planning Areas	2,514,250	452,410 2,514,250

* Current use capacity figure is based on 24-month average for actual usage (average daily flow) for calendar year 2009/ year ending December 31, 2009.

** Maryland Environmental Trust easements have been placed on portions or all of these properties at property owner's request. Because they are adjacent to municipal boundaries, it is appropriate that the City of Havre de Grace includes these properties for land use planning consideration.



CURRENT & FUTURE SEWER SERVICE AREAS

City of Havre de Grace Comprehensive Plan



Table 6.2 includes capacity estimates for all planned projects and growth areas identified in 2004 and will allow full build-out to year 2025. The numbers indicating planning areas on the sewer service map coincide with those listed on Table 6.2 for wastewater treatment plant capacity for visual referencing. Several projects are already incorporated in the City, such as Bulle Rock Planned Adult Community, Scenic Manor, and Greenway Farm. Other smaller known projects, such as Ivy Hills or St. Johns Commons, are accounted for in the in-fill capacity allowance. Projects such as Grace Manor and Havre de Hills are completely built out at this time and included in the current use requirements of the wastewater capacity table. Swan Harbor Farm is included in the sewer service map only for the potential for nutrient offloading in the future.

Currently, the City of Havre de Grace wastewater treatment plant serves an estimated population of 14,515⁷ people as of January 1, 2010 as well as local businesses, institutional uses, and industry. Based on past growth trends, it is estimated that the City will have an estimated population of 19,383 in 2025 (or 1,995 additional households). As mentioned in the water treatment and distribution section, these are conservative estimates and do not account for any surges in growth based on new demand from the Army's BRAC initiative that significantly affects this region due to its proximity to APG.

As shown in Table 6.2, the City has wastewater capacity to accommodate the large development projects already being built, additional in-fill, commercial development, and the planning areas identified in 2004. Some areas identified on the map – such as Shawnee Brooke and Havre de Grace Heights – are included for water service in the event of failing wells, however full incorporation into the City with sewer service could also be considered based on public need. Future redevelopment projects and their impacts cannot be predicted at this time, such as potential relocation of the Harford Memorial Hospital facility and its current site reuse. These projects will be evaluated on a case-by-case basis to insure that adequate facility capacity for both water and sewer is available to accommodate them. The City will continue to work within the framework of the Harford County Water and Sewer Master Plan for service area planning with direct oversight by the Maryland Department of Environment and Harford County Health Department.

With the Havre de Grace WWTP Enhanced Nutrient Removal facility fully operational, the major capital projects are for continued inflow and infiltration reduction, replacement of older sewer lines, and other repairs relating to an aging collection system. Equipment upgrades and/or renewal will be identified and funded through the 10-year capital improvement program as needed to maintain service. Maximizing system efficiency is key for plant operations. In addition, inspection of new infrastructure as it is built is critical to ensure that new wastewater lines are constructed properly for reduced maintenance costs in the future.

From an operational standpoint, the City will continue to support highly-trained, licensed professionals to run the wastewater treatment facility and to retain skilled technicians and field crew. Operator training for ENR and general relicensing is ongoing and required by

⁷ Please see Municipal Growth Element for population estimates and methodology.

the State and many of the staff members are highly specialized. In addition to the plant operations, a substantial compost facility is also located on the grounds, which transforms solids from the WWTP into compost for soil enhancement. As a compost facility, the Havre de Grace plant offers grade A material – the highest rating – which allows for home and garden use. This is recycling at its best, where biosolids are reused in beneficial land application for farm and local residents.

A progressive idea for future effluent reuse is for irrigation distribution through a separate system of “purple pipes” which is under review and regulatory development by the State of Maryland. This is, again, a beneficial reuse where potential treated effluent can be distributed to public or private property through a system of separate water lines for land application. This would provide irrigation and fertilizer directly to golf courses, public parks, or private lawns without the need for chemical fertilizers providing a mutually beneficial arrangement of nutrient offloading for the City as well as providing reduced costs for golf course owners and maintenance companies. Potential locations for this opportunity are many in this region, with Swan Harbor Farm immediately adjacent to the City or the Bulle Rock Golf Course and/or residential community. Such an arrangement would allow the City to maximize plant capacity, reduce the City’s contribution to nutrient loading in the Chesapeake Bay, and provide a community benefit.

V. STORMWATER MANAGEMENT AND NUTRIENT REDUCTION

A basic, elemental question about the topics covered in this section is “why should we care about stormwater management and nutrient reduction?” To answer that, we have to understand the importance of water quality in relation to human health and clean drinking water sources, a beneficial environment for habitat and wildlife, and the overall health of our planet. In this section, concepts relating to tributary strategies, sediment and erosion control, point and nonpoint source pollutant loading, TMDLs (Total Maximum Daily Loads), nutrient reduction, and stormwater management will all be covered to show the interrelationship of different approaches for improving the quality of our waterways. In addition, the topic of flood control will also be covered since Havre de Grace is such a flood prone region. The health of our tributaries – streams, creeks, and rivers – affect Chesapeake Bay water quality, and what humans do on land affects those tributaries and larger water-bodies directly. The goal of this section is to define the issues and strategies being used currently at all levels of government – Federal, State, and local – and to show the heightened level of concern and attention for addressing the problems facing the region and the Chesapeake Bay.

Control of stormwater runoff is an important function of local government. In developed areas – cities like Havre de Grace – runoff comes from paved surfaces (roads, sidewalks, parking lots) and buildings (such as houses, shopping centers, industrial complexes, even sheds) during rain and snow events. These are referred to collectively as impervious surfaces. Due to the high density of development, there is little area for rainwater to infiltrate the soil naturally so the water runs off into streams and other tributaries. On a small scale, rainwater builds up velocity on paved surfaces, washing out soil and eroding stream banks, and causes nuisance complaints between neighbors for misdirected

downspouts and yard grading. On a large scale, it floods roadways and property, causing damage and threatening public safety. The goal of stormwater management is to successfully limit stormwater runoff as areas develop, to reduce flooding, and to improve water quality so that streams and major waterways are not adversely affected by human-made pollution – such as oil, chemicals, and trash – carried in the runoff. It is also to have as much water return to the soil, which filters it naturally and replenishes groundwater.

Stormwater management is critically important in maintaining the health of stream systems as land is developed. Related to stormwater management is the concept of nonpoint source loading which describes the amount of pollutants that come from the impervious surface created by development. As with Havre de Grace, more intensive land uses in towns, cities, and suburban areas have a great degree of impervious surface due to high density of buildings and pavement. The design of stormwater management facilities and the way land is developed can significantly reduce nonpoint source pollutant loading which, in turn, will measurably affect the quality of our waterways. In addition to increased runoff as a result of development, nonpoint source pollutants can also come from: excess fertilizers, herbicides and insecticides from agricultural lands and residential areas; oil, grease and toxic chemicals from urban runoff and energy production; sediment from improperly managed construction; bacteria and nutrients from livestock, pet wastes, and faulty septic systems; and atmospheric deposition (emissions from power plants and motor vehicles)⁸. Nutrient runoff in the form of nitrogen and phosphorous is particularly problematic because it leads to increased algae growth (or algae blooms) which then die and decay, leading to large dead-zones in the Chesapeake Bay due to oxygen depletion.

From an ecological and a human health standpoint, all waterways are important. Our major water resource in Maryland is the Chesapeake Bay; however all the streams, creeks, and rivers leading to the Bay contribute to its overall health and water quality. This system of waterways is defined in terms of its respective watershed, which is the region draining into a river, river system, or other body of water. The Chesapeake Bay watershed includes a 64,000 square mile land mass within six states – Delaware, Maryland, New York, Pennsylvania, Virginia, and West Virginia and all of Washington, D.C. The cumulative effect of this land mass and its waterways on the Bay is profound. On a local scale in Havre de Grace, the geographic relationship the City has with the Chesapeake Bay is immediate. The City lies directly on the shores of the northernmost Bay where the Susquehanna River opens up to the Susquehanna Flats and the Chesapeake itself. Portions of the City lie in the Harford County watersheds of the Lower Susquehanna and Swan Creek⁹ which drain to the River and upper Bay and are shown on the watershed map included in this chapter. Because of the City's direct relationship to the Bay, Havre de Grace has additional environmental regulations – through the State's Chesapeake Bay Critical Area law – that modify land use and development immediately adjacent to the Bay.

This section of the Water Resources Element is important for describing the benefit of the various regulations relating to water quality. It includes the following subsections:

⁸ U.S. EPA website for polluted runoff (nonpoint source pollution)

⁹ From Maryland 8-digit identified watersheds

stormwater management implementation, point and nonpoint source (NPDES) program implementation, sediment and erosion control, tributary strategy and reduction of nutrient impairment, flood control, and local options for nutrient reduction. Though tiny in comparison to the overall watershed at 5.4 square miles, Havre de Grace must adhere to all water quality programs and regulations. In addition, new initiatives at the Federal level will be described briefly to show the focus at all levels of government for protecting and restoring the Chesapeake Bay.

Stormwater Management Implementation

Stormwater management is a method of controlling the quantity and quality of runoff from precipitation events in more densely developed areas. Historically and today, the State of Maryland is progressive in its stormwater management law, developing State regulations and requiring local ordinances for stormwater management. Stormwater management law drives the way land is developed or redeveloped and new road improvements are constructed. The need for stormwater runoff regulation is made forefront in this State due to years of effort in restoring the water quality of the Chesapeake Bay whereby land development practices are recognized as major contributors to the Bay's degradation. Ultimately, statewide, the goal is to change land use practices through improved best management practices (such as construction of stormwater management facilities) to make measureable improvements to the Bay's health and water quality.

To meet stormwater management law, Havre de Grace adopted its first ordinance in 1984 with the stated purpose to reduce stream channel erosion, pollution, siltation and sedimentation, and local flooding. New development was required to provide quantitative and qualitative control of stormwater runoff, with plans submitted and approved by the Director of Public Works. Grading and building permits could be suspended for infractions due to lack of progress or failures of stormwater management facilities. Minor amendments relating to fees were added to the original ordinance. In 2002, the City passed Ordinance No. 826 which was based on the State's model ordinance and the 2000 Maryland Stormwater Design Manual, Volumes I & II. This Ordinance superseded prior stormwater management ordinances and revised its program relative to State requirements. Stormwater management facilities were designed to reduce impervious area by twenty percent (20%) of pre-development; provide best management practices (BMPs) that would treat water quality for twenty percent (20%) of the existing impervious area; or a combination of impervious area reduction and the area treated by BMPs equal to twenty percent (20%) of the existing impervious area.

Best management practices, or BMPs, are "structural devices or nonstructural practices designed to temporarily store or treat stormwater runoff in order to mitigate flooding, reduce pollution, and provide other amenities".¹⁰ They include stormwater management ponds and wetlands, infiltration and sand filter practices, bioretention facilities, open channels, filter strips and buffers. During the course of new development or redevelopment, stormwater runoff control must be designed and built into the landscape so that the runoff does not affect watercourses and adjacent or downstream properties. This is for both large-scale

¹⁰ Maryland Model Stormwater Management Ordinance, June 2009

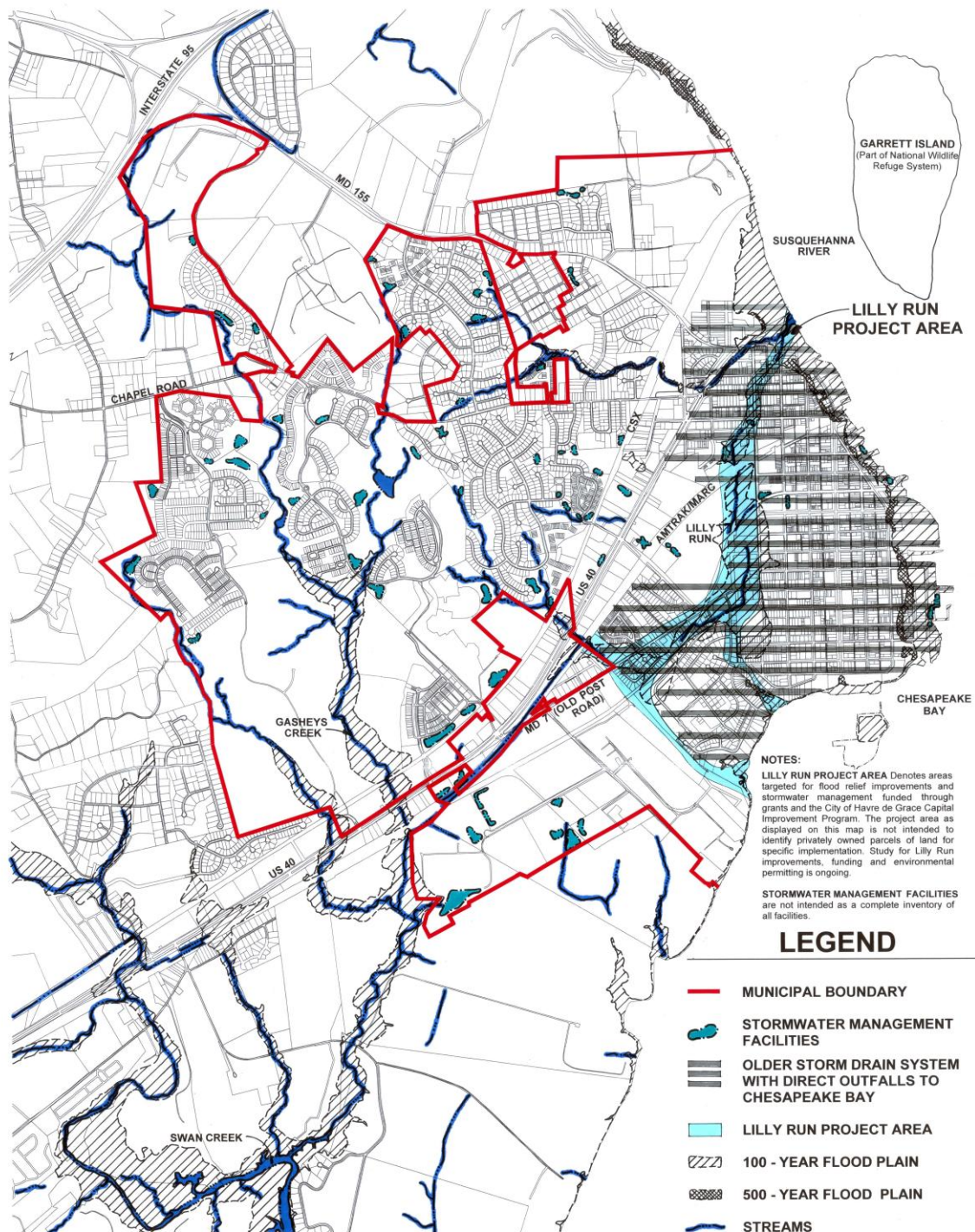
projects, like new multi-unit housing subdivisions or an industrial park, and smaller projects, like redevelopment of a quarter acre site in the middle of the City. Examples of BMPs in recent development in Havre de Grace include the stormwater management pond adjacent to Lewis Lane for the Havre de Hills townhouse development or (on the south side of US 40 on Lewis Lane) the underground filtration system that was built into the parking lot of the Havre de Grace Medical Center. Other ponds and stormwater management facilities have been built into development projects since the 1980's in the City for water quality and quantity benefits.

Most recently, the State of Maryland has again strengthened its water quality laws through implementation of The Stormwater Management Act of 2007. In these new regulations, developers are required to use state-of-the-art Environmental Site Design (ESD) wherever possible to control runoff and pollution from new development and to provide water quality treatment or impervious surface reduction by fifty percent (50%) for redevelopment¹¹. As stated in the MDE press release (October 17, 2008), "[t]his comprehensive approach to reducing stormwater runoff and pollution uses a combination of enhanced site planning techniques, alternative permeable covers, vegetative buffers, and small-scale treatment practices to address the impacts associated with development." Local jurisdictions – counties and municipalities – in the State were to have adopted the new regulations by May 4, 2010. Havre de Grace met this deadline by passing its updated Stormwater Management Ordinance No. 912 on May 3, 2010 which took effect June 17, 2010.

Currently in Havre de Grace, there are over one hundred ten (110) stormwater facilities for which the City is responsible, either in terms of maintenance enforcement or direct ownership. These facilities include ponds, open swales, underground filtration systems, and outfall filters to name a few. All stormwater management facilities require regular maintenance and are inspected every two (2) years by Department of Planning – Inspection Services staff. In addition, Planning and Inspection Services staff members oversee the initial design, facility construction, and any sediment and erosion control conversion. The City also utilizes professional engineering consultants for technical plan review and required volume calculations for facility design. The new regulations also require a three-phase design review for stormwater management to include concept, site development, and final stormwater management plans.

Stormwater management is one aspect of environmental regulation that is considered in land development in Havre de Grace and within the State. Additional but related regulations exist for sediment and erosion control, development within a floodplain, and the Chesapeake Bay Critical Area Law. These laws are separate but related regulatory measures that interplay during the design and construction phases of development and redevelopment. Specific questions regarding these laws can be directed to the Department of Planning located at City Hall, 711 Pennington Avenue in Havre de Grace. Resource information and websites are also listed in Section IV of this chapter for additional reference.

¹¹ Maryland Department of the Environment Press Release, October 17, 2008



STORMWATER MANAGEMENT RESOURCES

City of Havre de Grace Comprehensive Plan



Point and Nonpoint Source (NPDES) Program Implementation

Federal law administered through the Environmental Protection Agency (EPA) directs State action for limiting pollution sources in waterways, from either nonpoint or point sources. The Federal Clean Water Act was passed in 1972 to restore waters of the United States to fishable or swimmable conditions. Originally, it regulated point source discharges such as municipal and industrial wastewater discharges through NPDES (National Pollutant Discharge Elimination System) permit requirements. In 1987, Congress broadened the definition of point source to include industrial stormwater discharges and municipal separate storm sewer systems, which were divided into Phase I and Phase II for implementation. The City of Havre de Grace falls under Phase II requirements because of its small size (population less than 100,000), the rules of which came into effect in 2003. The City is required to participate in a five-year NPDES permit as a point source for its storm drain system as well as its stormwater management program which outlines a plan of action for reducing its contribution to pollutant loading in local waterways. Havre de Grace is covered under a general permit with over fifty other jurisdictions – towns, cities, and counties – of similar size within the State of Maryland.

The general permit for Phase II jurisdictions requires that each jurisdiction has a program in place to provide: public education and outreach; public participation and involvement; illicit discharge detection and elimination; construction site runoff control; post-construction runoff control; and pollution prevention and good house-keeping. To comply with these requirements, Havre de Grace has a program in place to meet each of the six requirements. Measures such as the City's intense street sweeping program, consistent oversight for stormwater management construction and maintenance, and sediment and erosion control enforcement are just a few of the major initiatives that the City performs to meet the requirements of the permit. In addition, City staff work with the public schools to educate students on the human effects on water quality and stencil storm drain inlets on a regular basis with "Chesapeake Bay drainage" to keep the general population informed as to how their respective actions contribute to overall Bay health. Like stormwater management, this program is administered through staff in the Department of Planning—Inspection Services.

For the purposes of NPDES, Havre de Grace is considered a point source for its storm drain collection system and series of stormwater management facilities. Point sources are individual sewage treatment plants, industrial wastewater systems, and urban and suburban stormwater systems. As covered in the wastewater collection and treatment system section of this chapter, the City also holds a separate permit for its point source pollutant discharge for the Havre de Grace Wastewater Treatment Plant. This permit caps, or limits, the amount of nutrient loading discharged directly into the Chesapeake Bay from that plant. Industrial discharge permits are required from separate industries located in City, such as J.M. Huber Corporation. As of 1991, NPDES permits are also required for construction activity under a general permit for stormwater associated with construction activity. Nonpoint source pollution, on the other hand, comes from many diffuse sources such as excess fertilizers, herbicides, and insecticides from agricultural lands and residential areas, individual household septic systems, sediment from construction sites, and bacteria and nutrients from livestock and pet waste.

Sediment and Erosion Control

Sediment and erosion control law came into effect statewide in 1970, prior to stormwater management regulations which followed in the early 1980's. The intent of sediment and erosion control is to reduce the amount of soil (and thereby nutrients and sediment) that get into waterways as a result of land disturbance, largely through construction but also from agriculture and other practices. Sediment and erosion control plans are required for land disturbances greater than five thousand (5000) square feet or 100 cubic yards or more, which are reviewed and approved by the local Soil Conservation Districts through the Department of Agriculture. Upon approval, the City or other local jurisdiction provides a grading permit to respective applicants and provides inspection and enforcement.

The level of sediment and erosion control is dependent upon site characteristics and the amount of land disturbance, with the goal of keeping soil on the site with containment. For instance, simple sediment and erosion control practices may include placement of silt fences to retain soil on a site, temporary swales, or stabilized (stone) construction entrances to keep soil off of roadways as vehicles leave a construction site. Major projects may require sediment trapping devices (such as the construction of sediment basins) or significant land grading, such as re-grading the terrain into serrated slopes which are then stabilized with vegetation. Often in cases of land development, sediment basins were later converted to permanent stormwater management facilities to deal with post-development runoff volume. Due to the requirement of environmental site design to the maximum extent possible, the permanent creation of stormwater management ponds may be greatly diminished.

Tributary Strategy and Reduction of Nutrient Impairment

Maryland's Tributary Strategy is an initiative to substantially reduce human-made impacts to the Chesapeake Bay and its many tributaries and to make measurable improvements to water quality. The Tributary Strategy Program has been in place since the 1992 Amendments to the Chesapeake Bay Agreement, which was first signed in 1983 by the U.S. Environmental Protection Agency, the Chesapeake Bay Commission, the District of Columbia, and the States of Pennsylvania, Maryland, and Virginia. This interstate agreement established specific nutrient reduction targets for the watersheds of each of the Bay's major tributaries. Most recently, the Chesapeake Bay 2000 Agreement committed its signatories to the latest science and established greater reductions in nitrogen and phosphorous in an effort to restore the Bay. A statewide implementation plan was developed in 2008 with specific strategies and timelines outlined for meeting set goals¹².

The *Maryland's Chesapeake Bay Tributary Strategy Implementation Plan* sets the framework for the State and all local jurisdictions for achieving set targets to meet and maintain nutrient reduction goals, outlining both point and nonpoint source strategies. These targets include the construction of 47 ENR wastewater treatment plants in the State by 2010 (with Havre de Grace being one) using the Bay Restoration Fund established in 2004. The combined flow of the State's significant wastewater treatment plants (those with a design capacity greater than 500,000 gallons per day) comprise 95% of the total sewage flow generated in Maryland. In addition, the plan outlines strategies and specific

¹² Maryland's Chesapeake Bay Tributary Strategy Statewide Implementation Plan, January 24, 2008

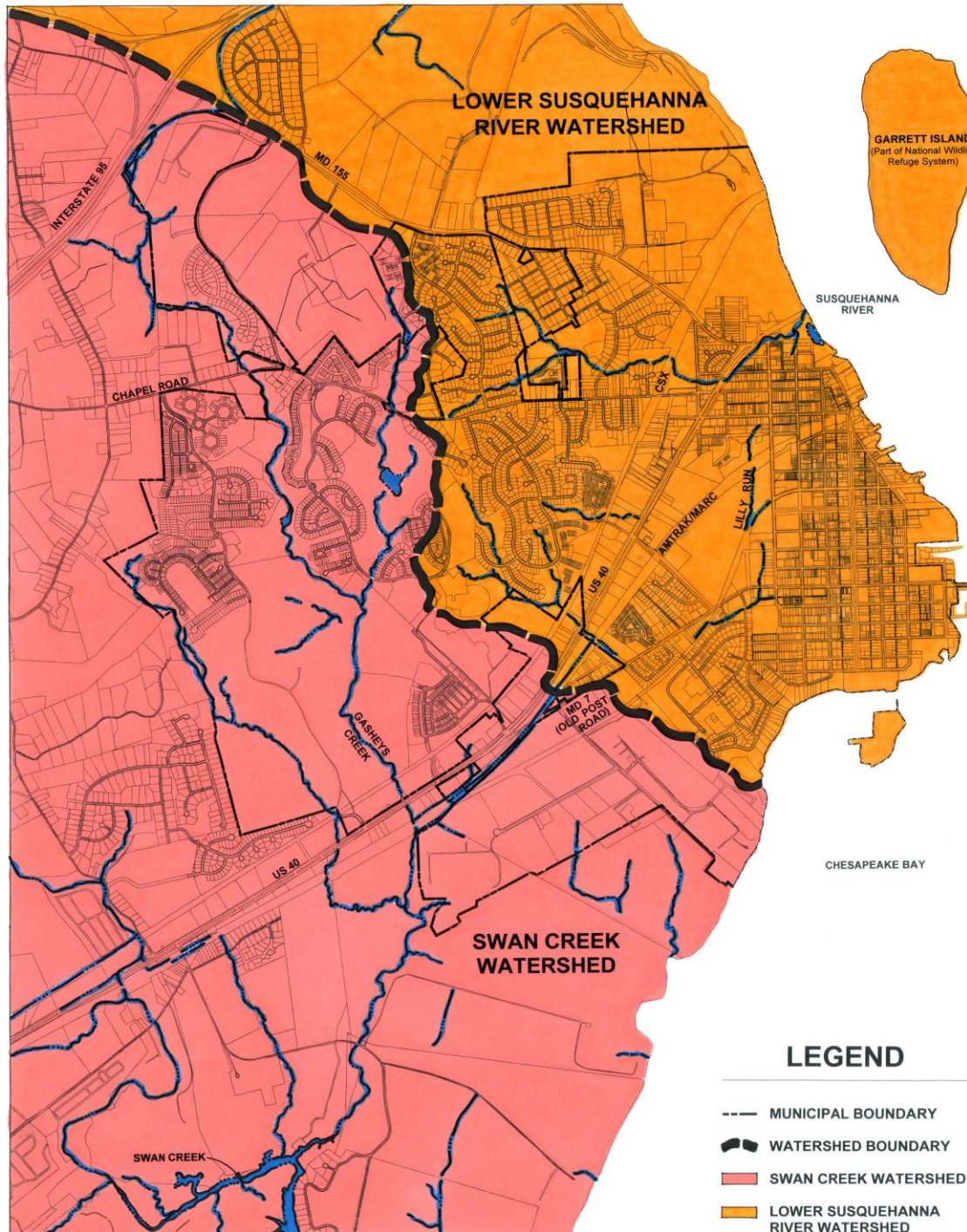
implementation targets for stormwater, onsite sewage disposal, growth management, agriculture, and air deposition.

The Tributary Strategy is directly related to TMDLs (Total Maximum Daily Loads) which have a basis in regulation and regulatory action, such as more restrictive permits. Complimentary to TMDLs, Tributary Strategy is a cooperative implementation program as opposed to strictly regulatory. TMDLs define set limits for nutrients and other pollutants for individual tributaries which are identified as impaired. A list of impaired waters is commonly referred to as the “303(d) list” for the section of the Federal Clean Water Act and U.S. Environmental Protection Agency regulations is referenced. Presently, TMDLs are applied to tributaries, such as nearby Swan Creek, which had a TMDL applied for nutrient loading. In the future, it is anticipated that a TMDL will be applied to the Chesapeake Bay in its entirety, commonly referred to as a “pollution diet”. Nutrient loading limits will be allocated to individual states comprising the Bay’s watershed and then subsequently divided among the local jurisdictions – counties, cities, and towns.

As a point of reference in this broader regional picture, Havre de Grace is divided between the Lower Susquehanna River and Swan Creek watersheds and, respectively, between the larger Susquehanna and Upper Western Shore basins. Both the Lower Susquehanna River and Swan Creek have been identified as impaired. Due to high nutrient loads in Swan Creek, a TMDL was developed by MDE in 2002 for nitrogen and phosphorous¹³. TMDLs for Swan Creek were established for low-flow (May – October) and average annual flow conditions, which limit point source discharge of the City of Aberdeen and the Swan Harbour Dell wastewater treatment plants. In addition, the document addresses contributing nonpoint sources of agriculture and the continued monitoring of the stream quality through Harford County’s Phase I NPDES Stormwater Permit and the City of Aberdeen’s Phase II NPDES Stormwater Management Permit. A study of the Lower Susquehanna River in 2005 did not require a TMDL for nutrient loading at that time; however, other impairments are to be addressed at a future date¹⁴. As part of the Swan Creek watershed, Havre de Grace must ensure that land use practices do not further contribute to nutrient loading of Swan Creek and must recognized the need for stormwater runoff recapture for Bulle Rock Golf Course and the residential developments of Bulle Rock, Scenic Manor, and Greenway Farm.

¹³ See Total Maximum Daily Loads of Nitrogen and Phosphorous for Swan Creek, Harford County, Maryland. January 28, 2008

¹⁴ Water Quality Analysis of Euthrophication for the Tidal Lower Susquehanna River, Harford and Cecil Counties, Maryland. June 24, 2005



WATERSHED MAP

City of Havre de Grace Comprehensive Plan



Flood Control

As a coastal city, Havre de Grace is subject to significant flooding. Many factors contribute to this – an extensive shoreline, exposure to extreme weather from easterly and southerly directions, many substantial tributaries, ditches, and waterways in the coastal plain, increased development, and a major hydro-electric dam eight miles up-river which at times releases great volumes of water requiring notification to downstream communities. Major flooding has happened along the shoreline as with Hurricane Isabel in 2003 storm surge or interior to the City due to heavy rain event such as with Hurricane Floyd in 1999 or, most recently, the unnamed storm on July 12, 2004. Historically, other flood events included Hurricane Agnes in 1972, which left Maryland devastated and the submerged aquatic vegetation (SAVs) in the Susquehanna Flats decimated. In a worst-case scenario, a tidal surge and flood rains could occur in a single event where a major section of old town becomes cutoff and residents on the waterfront forced to leave homes without emergency evacuation options.

Because of the recurring threat to public safety and property, the City has undertaken a series of studies to identify specific measures to reduce the impacts of flooding and provide for emergency access to the older portions of town. The focus of the study has been on the interior portions of the City which are part of the floodplain associated with Lilly Run and its tributaries. Historic changes to topography through massive re-grading for transportation systems (such as the Amtrak, formerly Pennsylvania Railroad), altered watercourses, channelization, undersized culverts, and new development all contribute to the interior flooding problem in severe rain events. The City's geography relative to the fall line (which demarcates coastal and higher piedmont regions) and the topography of its contributing watershed are factors in the severe flood recurrence. Engineering studies to alleviate flooding date as far back as 1966, but it was a documented problem well before then.

The most recent study was performed by URS Corporation in 2007, identifying priorities and providing cost estimates for improvements. This engineering firm has been retained for continued implementation of the *Lilly Run Improvement Plan* and submitted a Joint Federal/State Application Permit¹⁵ in March 2010 for constructing several flood relief projects. The priority for these flood relief efforts are for public safety – to provide emergency access into the older portions of the City which include several fire stations, the Havre de Grace Police Department and City Hall, and Harford Memorial Hospital as well as a dense residential and commercial area. In addition, the protection of public and private property from damage, expedited floodwater exit, water containment, and environmental enhancements are all part of the overall strategy to address flood impacts.

The permit application review for the multi-tiered project is anticipated to take eight months to a year to complete. In that time, City staff and the consulting engineers are identifying funding sources and prioritizing implementation projects that can move forward independently. More detailed construction drawings may also be required for some segments of the plan. A generalized boundary of the project area is included in the

¹⁵ Full title: Joint Federal/State Application for the Alteration of any Floodplain, Waterway, Tidal or Nontidal Wetland in Maryland.

Stormwater Management Resources Map located in this chapter. Please see the *Lilly Run Improvement Plan* for more specific information.

Any new development or structures within a floodplain are required to meet additional construction standards to withstand flood events. Such requirements include the elimination of living/occupied space, plumbing fixtures, and mechanical/electrical fixtures (as measured to specific heights above mean high water) and installation of breakaway panels and flood vents for enclosures in the flood areas. All structures within a floodplain also require MDE approval, including fences and sheds. The City has recently implemented the voluntary Community Rating System (CRS) in Havre de Grace for reduced flood insurance premiums for residents of flood-prone properties. First certified in 2009 with a Class 9 rating, staff members are continuing to reduce flood insurance rates through a points/percentage system through FEMA and the Insurance Service Office, Inc. (ISO). Each decrease in rating steps results in a five percent reduction in flood insurance rates for policyholders in the community. Please see identified floodplain on authoritative FEMA (Federal Emergency Management Agency) maps for locating affected properties within the floodplain. The City also outlines alternative emergency operations in its 2009 Havre de Grace Continuity of Operations Plan (COOP) for disaster planning, to include flood emergencies.

Local Options for Nutrient Reduction

The goal of stormwater management and NPDES programs is for nutrient reduction, which is the decrease of nitrogen and phosphorous in our waterways – nutrients which come from both nonpoint and point sources. As mentioned prior, nutrient-filled runoff leads to increased algae which then die and decay, causing large dead-zones in the Chesapeake Bay from oxygen depletion. The passage of new stormwater management regulations in Maryland for better site design and redevelopment requirements will provide automatic reductions in nutrient loading from nonpoint sources throughout the State. The new regulations will be applied to all new development projects or major redesign of existing projects with the City of Havre de Grace. In addition, new regulations for allowable wastewater treatment plant nutrient loads have been mandated, so overall nutrient loads in the Bay from point sources will be reduced, even as new development occurs.

A requirement of the HB1141 Water Resources Element is to provide nonpoint source nutrient loading analysis at the local level. In the case of Havre de Grace, as with many small jurisdictions, the analysis is limited. In addition, the opportunity for various scenarios for future development is also limited. Most of the City's major development projects are known and approved, to include site plans with lot layout, road network, and finalized stormwater management plans. Substantial changes to existing site plans would require new stormwater management design which would automatically lead to nutrient reduction. For any development projects that did not have site plan and sediment and erosion control plan approval by the State-mandated date of May 10, 2010, new stormwater management regulations will be applied which require environmental site design to the maximum extent possible.

Nutrient loading analysis requires that jurisdictions understand known impervious surface

quantities by land use, which leads to the understanding of nutrient loading quantities, and then develop scenarios for alternate land uses and improved best management practices. Utilizing data from 2004 provided by Harford County Government, Table 6.3 shows the various acreage of land use by category within the City. Taking those data a step farther, Table 6.4 shows impervious surface calculations by acreage and 2004 land use using established rates of imperviousness provided by MDE.

TABLE 6.3
HAVRE DE GRACE LAND USE ACREAGES BY CATEGORY

2004 Land Use	Acreage	Percent of Total Area
Low Density Residential	249	7.2%
Medium Density Residential	680	19.6%
High Density Residential	395	11.4%
Commercial	294	8.5%
Industrial	179	5.2%
Institutional	389	11.2%
Open Urban	25	0.7%
Transportation/Rights-of-way	27	0.8%
Large Lot Subdivision	20	0.6%
Undeveloped ¹⁶	1,208	34.5%
Total Acreage	3,467*	100%

Source: Harford County Government (Department of Public Works, Water Resources Division)

*Sum is from rounded from decimal totals.

TABLE 6.4
IMPERVIOUS SURFACE CALCULATIONS FOR HAVRE DE GRACE BY 2004 LAND USE CATEGORIES

Land Use	Acreage	Impervious Rate	Impervious Acreage
Low Density Residential	249	0.14	35
Medium Density Residential	680	0.28	190
High Density Residential	395	0.41	162
Commercial	294	0.72	212
Industrial	179	0.53	95
Institutional	389	0.34	132
Open Urban	25	0.09	2
Transportation/Rights-of-way	27	0.95	26
Large Lot Subdivision	20	0.04	1
Undeveloped	1,208	0.00	0
Total	3,467		855

Source: Harford County Government (Department of Public Works, Water Resources Division) for acreages and Maryland Department of Environment for impervious surface rates

Though a small jurisdiction, Havre de Grace is located in both the Susquehanna BFL (below fall line) and Western BFL basins. Each land use category has a level of measureable nutrient loading based on pounds per acre of impervious and pervious surface, and nitrogen and phosphorous amounts are calculated separately. Any analysis is based on the types of BMPs used and by watershed – no easy task. As prescribed by the State for the development of the Water Resources Element, 2002 BMPs and Tributary Strategy Implementation are to be utilized with a baseline of current land use (in this case, 2004 from Harford County Government) and projected land use for 2025.

¹⁶ 28 acres of this total not available for development, wetland (8 acres) and water (20 acres) included here.

Based on 2004 land use and pervious and impervious calculations, Havre de Grace contributes 26,793 lbs of nitrogen and 2,081 lbs of phosphorous per year from nonpoint sources¹⁷. In addition, the wastewater treatment plant with past BNR processes contributed 28,567 lbs of nitrogen and 2,783 lbs of phosphorous in year 2009. Combined, this shows a base level of the City contributing over 55,000 lbs of nitrogen and close to 5,000 lbs of phosphorous per year of total nutrient loading. In contrast, future land use practices and improved best management practices will reduce the City's nutrient loading from nonpoint source runoff. Most striking, however, is the anticipated nutrient reduction with the operation of ENR at the wastewater treatment plant. With ENR in effect, the City's wastewater treatment plant is now expected to contribute less than 9,000 lbs per year total nitrogen and 720 lbs per year total phosphorous, based on its first three months of efficient operation (February, March, and April, 2010).

To show the effectiveness of Tributary Strategy best management practices, scenarios were developed for 2004 land uses (totaling 3, 467 acres) and the projected 2025 build-out of all City planning areas (totaling 3, 671 acres). If Tributary Strategy BMPs were utilized, nutrient loading estimates for 2004 land uses within the City would be reduced to 19,236 lbs of nitrogen and 1,421 lbs of phosphorous per year – a thirty percent reduction. Full build-out of all planning areas by 2025 increases the size of the City by just over 200 acres; the nutrient loads increase to 22,666 lbs and 1,831 lbs of nitrogen and phosphorous, respectively. Though the amount of impervious surface is greatly increased (from estimated 855 acres to 1,188 acres), the nutrient load stays significantly lower using Tributary Strategy best management practices as compared to 2002 practices.

In future analyses, the City would like to be included in the Harford County Water Resource Element which will allow for a watershed focus, especially with regard to future TMDLs and the continued need for regional watershed planning. However, it is beneficial to capture the City's nutrient load separately to understand the impact to water quality of the Bay at a smaller scale as well. This local focus may be more meaningful to individual citizens and to City officials for understanding the collective role that smaller municipalities play in the health of the Chesapeake Bay. An outline of potential mitigation projects to meet future nutrient reduction requirements and water quality goals may include the following:

1. Portions of the Lilly Run Improvement project which have environmental enhancements appropriate for mitigation funding, such as storm drain outfall filters, in-stream stormwater management pond with water quality benefits, native planting and reforestation
2. Grass filter strips or bio-retention areas along waterfront municipal parking areas, including the Havre de Grace yacht basin parking
3. Outfall filters for direct outfalls (22) for old town storm drain system
4. Innovative stormwater filtration or bio-retention in park-like setting behind Citizen's Care Center

¹⁷ From Harford County Government Department of Public Works Water Resources Division analysis for nutrient loading for the City of Havre de Grace.

5. Continued community education for conservation, yard planting guidance, rain barrel construction, and pet waste impact on nutrient loading
6. Opportunities for retrofitting small bio-retention areas at private commercial development
7. Environmental restoration along shoreline, where possible
8. Homeowners association education and assistance with stormwater management pond maintenance
9. Potential nutrient offloading from wastewater treatment plant to Bulle Rock Golf Course and Swan Harbor Farm to replace use of fertilizers for grounds maintenance and provide irrigation

Further refinement of these projects should be explored and included in a stormwater master plan to satisfy future NPDES requirements and an improved rating for flood insurance premiums through CRS and FEMA.

Federal Strategy for Protecting and Restoring the Chesapeake Bay

Increased restoration efforts for the Chesapeake Bay are going forward at the Federal level. On May 12, 2009, President Obama issued the first presidential directive on the Chesapeake Bay and the first Executive Order of the Obama Administration on the environment.¹⁸ Calling the Bay a “national treasure”, the purpose of the Executive Order is “to protect and restore the health, heritage, natural resources, and social and economic value of the nation’s largest estuarine ecosystem and the natural sustainability of its watershed”. It acknowledges the need for a strong Federal leadership role in the restoration of the Bay, but it also states that its success is dependent on a collaborative effort of State and local governments, the private sector, nonprofit organizations, and the region’s residents.

In the *Executive Order 13508 Draft Strategy for Protecting and Restoring the Chesapeake Bay*, the focus of the strategy is to restore clean water; conserve treasured places and restore habitats, fish, and wildlife; and to adapt to the impacts of climate change. These actions are to be achieved through three primary means: empower local efforts; decision-making through science; and a new era of federal leadership. Specific actions are also stated in the *Draft Strategy*. One of the main strategies is to develop a Chesapeake Bay TMDL for nutrient loading for all six watershed states and the District of Columbia. It is expected that the EPA will establish this Bay-wide TMDL in December 2010 and will be a key to improving overall water quality by requiring accountability for individual State and local jurisdiction nutrient loading.

To meet the Chesapeake Bay 2000 Agreement and Federal Clean Water Act, nutrient loading must be cut in half from year 1985 levels from all sources. For Maryland, the allocation cap is set at 39.09 million pounds of nitrogen and 2.72 million pounds of phosphorous per year. Maryland’s Tributary Strategy provides the framework for achieving Bay restoration and nutrient reduction goals¹⁹, with 2-year, 5-year, and long-term initiatives

¹⁸ From Executive Order 13508, Draft Strategy for Protecting and Restoring the Chesapeake Bay. November 9, 2009. Developed by the Federal Leadership Committee for the Chesapeake Bay.

¹⁹ Maryland’s Phase I Watershed Implementation Plan for the Chesapeake Bay Total Maximum Daily Load draft document, submitted September 2010.

that are realistic and attainable, actions which include ENR upgrades to wastewater treatment plants such as Havre de Grace has attained. In addition, local governments must examine land use policy to minimize impacts to water quality and incorporate Bay restoration efforts into capital and operating budgets to support nutrient reduction goals. As part of the growth area of Harford County, it is very important that the City of Havre de Grace participates in subsequent watershed implementation plans for meeting nutrient loading caps, so that the City may plan and fund projects that mitigate nutrient loading to meet future Chesapeake Bay TMDL requirements.

VI. SUPPORTING RESOURCES

The City maintains technical documentation for City services relating to water supply, wastewater treatment, stormwater management and non-point source program implementation. The following is a list of major sources of information for the development of this Water Resources chapter and other supporting documentation for further inquiry. Please contact the City of Havre de Grace Department of Planning or Department of Public Works, Harford County Department of Public Works Water and Sewer Division, the Maryland Department of the Environment or other agencies for more specific information regarding Havre de Grace described in this Water Resources chapter.

Water Supply Capacity Management Plan – required yearly by Maryland Department of the Environment Water Management Administration to show available capacity of water treatment plant to serve current and future planned needs for public water supply.

Water Allocation Permit: HA1971S004 (05) for Havre de Grace Water Treatment Plant. Intake point: Susquehanna River. Water Allocation Permit administered through the Maryland Department of the Environment Water Management Administration.

Annual Drinking Water Quality Reports: PWSID #0120012 (Public Water Source Identification Number) required annually by Federal Environmental Protection Agency for potential contaminant levels, source of contaminants, turbidity, and treatment techniques.

Wastewater Capacity Management Plan – required yearly by Maryland Department of the Environment Water Management Administration to show available capacity of wastewater treatment plant to serve current and future planned needs for wastewater disposal.

Wastewater Discharge Permits: State Discharge Permit Number: 06-DP-0673, NPDES Discharge Permit Number: MD0021750 for Havre de Grace Wastewater Treatment Plant. Discharge point: Chesapeake Bay. (NPDES; National Pollutant Discharge Elimination System administered through Maryland Department of the Environment).

General Permit for Discharges from Small Municipal Separate Storm Sewer Systems, NPDES (Phase II): General Discharge Permit Number: 03-IM-5500, General NPDES Permit Number: MDR055500.

Harford County Water and Sewer Master Plan – formally adopted by Harford County Council spring and fall of each year and also includes the basis for water and sewer planning for the municipalities of Havre de Grace, Aberdeen, and Bel Air.

Ordinance No. 912, Stormwater Management (Chapter 169, General Code eCode360, City of Havre de Grace, MD), formerly Ordinance No.826 Stormwater Management from 2002.

Ordinance No. 654, Subdivision of Land (Chapter 173, General Code eCode360, City of Havre de Grace, MD)

Ordinance No. 718 and 769, Site Plan Approval (Chapter 155, General Code eCode360, City of Havre de Grace, MD)

Ordinance No. 896, Establishment of Water and Sewer Commission (Chapter 25, General Code eCode360, City of Havre de Grace)

List of Development Activity: Individual Projects/Subdivisions. Status as of January 1, 2010. See Residential Development Capacity in Municipal Growth Element, Addendum B.

VII. APPENDIX

A. Point Source Nutrient Loading from Wastewater Treatment Plant

The following table shows the nutrient loads in pounds per year for the City's wastewater treatment plant utilizing Biological Nutrient Removal (BNR) processes, improvements which were completed in 2002.

Year	Total Nitrogen (TN) (lbs/year)	Total Phosphorous (TP) (lbs/year)
2002	38,372	3,187
2003	36,636	2,396
2004	34,527	3,714
2005	34,772	2,410
2006	31,776	2,464
2007	35,292	2,531
2008	29,891	2,862
2009	28,567	2,783

This table shows monthly nutrient loads for the Enhanced Nutrient Removal (ENR) wastewater treatment facility, improvements which were completed in December 2009 to meet Bay Restoration requirements. Data from the month of January are not included in the averages due to systems calibration.

Month, 2010	Total Flow, million/gallons	Average ppm*/TN	Total TN lbs/month	Average ppm*/TP	Total TP lbs/month
January	38.1	5.60	1,782.2	0.33	106.1
February	40.9	2.17	738.8	0.19	63.1
March	52.2	2.15	937.2	0.23	98.7
April	39.8	1.7	567.1	0.06	18.2

*parts per million

B. Nonpoint Source Nutrient Loading for 2004 and 2025 Land Use Scenarios

The following tables provide the **summary results** on the City's nutrient loading based on watershed factors provided by Maryland Department of the Environment, impervious surface rates, acreage by land use, and future land use. This information supports text in the Nutrient Reduction section of this Water Resources Element and is consistent with the methodology of the Harford County Natural Resources Element (which incorporates their respective Water Resources Element). This analysis has been provided by Harford County Government Department of Public Works Water Resources Division.

<u>Land Use Acreages</u>	2004 Land Use, 2002 BMPs (acres)	2004 Land Use, Trib Strategies (acres)	2025 Land Use, Trib Strategies (acres)
Development	1,844	1,844	2,661
Agriculture	262	262	84
Forest	926	926	523
Water	20	20	15
Other	414	414	388
Total Area	3,467	3,467	3,671

<u>Nitrogen Loading</u>	2004 Land Use, 2002 BMPs (lbs/year)	2004 Land Use, Trib Strategies (lbs/year)	2025 Land Use, Trib Strategies (lbs/year)
Development NPS	18,158	12,839	18,568
Agricultural NPS	3,000	2,063	524
Forest NPS	1,456	1,394	827
Other Terrestrial NPS	4,179	2,939	2,748
Total Terrestrial Load	26,793	19,236	22,666

<u>Phosphorous Loading</u>	2004 Land Use, 2002 BMPs (lbs/year)	2004 Land Use, Trib Strategies (lbs/year)	2025 Land Use, Trib Strategies (lbs/year)
Development NPS	1,506	998	1,749
Agricultural NPS	168	155	41
Forest NPS	15	13	15
Other Terrestrial NPS	392	255	24
Total Terrestrial Load	2,081	1,421	1,829

<u>Impervious Surface and Open Space</u>	2004 Land Use, 2002 BMPs (acres)	2004 Land Use, Trib Strategies (acres)	2025 Land Use, Trib Strategies (acres)
Total Impervious Cover	855	855	1,188
Agriculture	262	262	84
Forest	918	918	515

[NOTE: THIS CHAPTER WAS FORMERLY THE PUBLIC UTILITIES CHAPTER ADOPTED IN THE 2004 HAVRE DE GRACE COMPREHENSIVE PLAN. THIS WATER RESOURCES CHAPTER AMENDMENT IS A RESULT OF REQUIREMENTS OF HB 1141 FROM 2006 AND REPLACES THE FORMER CHAPTER IN ITS ENTIRETY.]

I. INTRODUCTION

The purpose of this transportation chapter is to plan for a safe, efficient, and convenient multi-modal transportation system which recognizes the current needs of the community, provides for future travel demand, and supports compatible land uses within the City of Havre de Grace and its planning area. The chapter describes how people can be moved to, from, and within the City safely and efficiently. It also recognizes the need to plan and provide mobility for persons who are transit dependent, such as persons without access to automobiles, some members of the senior population, and those with disabilities. In addition, there is recognition of the importance that transportation infrastructure plays in development and land use decisions insofar as the future of Havre de Grace is concerned. This chapter includes a review of the existing transportation system and services and identifies both problems and opportunities for improvements and enhancements. Recommendations to address current and future roadway, transit, bicycle, pedestrian, aviation and water transportation needs are also included.

The transportation system in Havre de Grace can be grouped into six general categories: (1) Street System, (2) Rail Service, (3) Bus Service, (4) Bicycle/Pedestrian Facilities, (5) Aviation Facilities, and (6) Water Transport. Various local, State, and Federal agencies are involved in the planning, capital improvements, maintenance, and general oversight of the various aspects of transportation. These include but are not limited to the City's Departments of Public Works and Economic Development and Planning, the Maryland Department of Transportation, which incorporates both the Maryland Transit Administration (MTA) and State Highway Administration (SHA), the Maryland Toll Authority, the Federal Aviation Administration, and the Coast Guard. The following is an overview of each of the six categories:

- 1) Street System – Havre de Grace has a mix of different street designs, reflecting the City's historical development. The street system in the older portions of the City is comprised of a traditional grid pattern, with north/south and east/west street orientation. Some streets, such as Union Avenue, Revolution, Otsego, and Juniata Streets serve as arterial and collector streets within the Old Town framework. The building of US 40 in the 1930's and I-95 in the 1960's, both major interstate thoroughfares, resulted in a shift away from the City's central core as a transportation route to highways that bypass the Old Town.

Connections from Old Town Havre de Grace to areas north of US 40 are limited to MD 155 and Chapel Road. However, a third connection extending Lewis Lane from US 40 to Chapel Road is expected to open in the near future. Street patterns within Havre de

Grace changed through time to include a modified grid pattern street system in older communities along Revolution Street and a curvilinear/cul-de-sac street system in newer neighborhoods. The Federal Highway Administration Functional Classification System has been applied to the City's road network for planning purposes. This classification system can be utilized for assessing the inter-relationship of the streets, land uses, and trip generators/destinations within the City. Presently, the street system is generally successful in handling traffic volume in relation to street widths and current configuration, however proactive planning for the road network in terms of future growth must be accomplished.

- 2) Rail Service – Within the immediate vicinity of Havre de Grace, there is excellent access to rail service for both regional and national passenger destinations. Located only three miles away, the City of Aberdeen offers daily rail service for AMTRAK, the national rail provider, and weekday commuter rail service through MTA. Commuter rail service is provided by MTA MARC service for regional destinations of Baltimore City, Baltimore/Washington International (BWI) Airport, and Washington, D.C. Stopping locally in both Aberdeen and Perryville, these trains utilize the AMTRAK line with service available on weekdays during the morning and evening commuting times. In addition to extensive passenger service, local freight service is available through the CSX Rail Line and Norfolk Southern Railroad to the Chesapeake Industrial Park and J.M. Huber via a spur line from AMTRAK.
- 3) Bus Service – During the week, residents of the City are served by MTA commuter bus options to Downtown Baltimore and Harford County Transportation Services (HCTS) to Aberdeen and Bel Air. The MTA 420 commuter buses serve the US 40 communities in Harford County. This service begins and ends in Havre de Grace with three morning and three evening runs. In addition, mid-day MTA bus service (the 731) is provided from Baltimore to Havre de Grace for MARC commuter needs. The 1 and 1A local bus service is provided through HCTS between Havre de Grace, Aberdeen, and Bel Air. This service operates hourly during the week and is well utilized. Local connections to other communities along US 40 can be made via the Aberdeen transit hub.
- 4) Bicycle/Pedestrian Facilities – Pedestrian and bicycle opportunities are great in Havre de Grace. As a traditional small town, the City is and always has been very pedestrian friendly, with sidewalks along most streets in the older portions of the community. The City has diligently focused on improving sidewalk connections throughout the City and requiring them in new neighborhoods as they are built. In addition to pedestrian access, it would be advantageous that the City also pursue signed bike routes. These bike routes would connect to the hiking and biking paths of the Lower Susquehanna Heritage Greenway (LSHG), a regional recreational trail system.
- 5) Aviation Facilities – Commercial airline service is available at BWI and Philadelphia International Airports. In addition, local aviation facilities include a seaplane base in Havre de Grace and Harford County Airpark, which is located on MD 156 approximately five miles from the City. The seaplane base consists of docking facilities located on the waterfront of the Downtown Business District, and provides limited

refueling and minor repair services. Harford County Airpark is a small, private airport with hangars, tie-downs, fuel, and maintenance services. Phillips Army Airfield located on nearby Aberdeen Proving Ground is currently used for military purposes. Over the past several years, consideration has been given to converting that facility to a joint-use civilian/military operation.

- 6) Water Transport – Commercial water transport is limited to the shipment of stone products by the Arundel Corporation located just north of the City. Mined stone is loaded onto barges and pushed by tugboat to other destinations via the Chesapeake Bay. At times, the empty barges are moored off the City's shoreline. Future operation of a private commercial water taxi between Havre de Grace, Perryville, Port Deposit, Susquehanna State Park, and Swan Harbor Farm is being considered and would be a great amenity for the region.

Transportation improvement planning and funding requires a significant effort on the part of City and State agencies. The City has been fortunate in recently receiving funded streetscape improvements by SHA, which have greatly enhanced street function, pedestrian accessibility, and appearance. These include the beautification of Legion Square on Union Avenue (MD 7) completed in the fall of 2002, US 40 improvements to be completed in 2003, and Otsego Street (also MD 7) improvements which have been designed. The City is also working with SHA with regard to necessary safety improvements for MD 155. Future considerations for State road enhancement include improved signage to the Downtown Business District, streetscape/revitalization improvements for MD 7/Old Post Road, and the continued improvement of pedestrian access along State roads.

The City's DPW continues to maintain and improve streets within Havre de Grace through a regular road maintenance program. As with the recent Clark Road improvements, grant funds for major road reconstruction will also be pursued. In addition, the City must develop an integrated Capital Improvement Program (CIP) that addresses utility infrastructure repair with street and sidewalk improvements. A CIP process generally provides a five-year timeline for planned physical improvements and includes enhancements, such as bikeway, park, and streetscape improvements. All capital improvements should also be identified and included in the CIP so that they may be implemented in a reasonable and accomplishable sequence.

II. RECOMMENDATIONS

Street System

- Conduct a traffic study of Chapel Road, which includes specific design recommendations and focuses on the road's function, safety, capacity, opportunities for traffic calming, and pedestrian access. Utilize current information regarding vehicle trip generation related to planned development in the City's recently annexed areas and planned growth areas.

- Review the SHA study findings regarding suggested safety improvements on MD 155. Support implementation of improvements that slow traffic and support the Havre de Grace Police Department in their enforcement of traffic laws, particularly speed limits.
- Consider constructing traffic calming measures on roadways where excessive speed is documented.
- Work with law enforcement officers on roadways that are problematic for excessive traffic speeds, such as MD 155, Chapel Road, Canvasback Drive, Juniata Street, and others.
- Ensure that road improvements are required along road frontage for development projects during the development review process. All road improvements must be standardized for the segment of roadway that the project fronts and must be consistently applied.
- Consider the number of access points along major road arterials and carefully manage entrances so that they are aligned wherever possible and the number is reduced but adequate for neighborhood egress.
- Coordinate with MdTA on their 20-Year Master Plan for Interstate 95.
- Continue to work with SHA to develop and promote Park and Ride facilities, car-pooling, and van-pooling in Havre de Grace.
- Continue to implement the City's DPW road maintenance schedule.
- Work with SHA to identify and implement necessary improvements on Old Post Road/Revolution Street (MD 7) as part of a future Consolidated Transportation Program. Items of particular importance are the need for at-grade rail spur crossing and beautification improvements for the purpose of neighborhood commercial revitalization.
- Support the extension of Lewis Lane from US 40 to Chapel Road to provide improved roadway connections between older and newer communities.
- Continue roadway improvements within the Chesapeake Industrial Park, to include right-of-way ownership of Old Bay Lane and grant funding for road reconstruction.
- Coordinate with MdTA and SHA on I-95/MD 155 interchange improvements in relation to future anticipated growth.
- Establish an integrated Capital Improvement Program to ensure that roadway, utility, and pedestrian improvements are efficiently planned and funded. Funding

priorities should be established based on the severity of the problem and functional classification of the street.

- Coordinate with SHA to address needed intersection improvements for US 40 and Lewis Lane, Otsego and Ohio Streets, and Ohio Street and Ontario Street Extended.
- Work with SHA to coordinate the placement of directional signs for attractions and businesses within the City to ensure the signage directs the visitors to the desired gateway and attractions. This includes the redirection of traffic from MD 155 to Juniata and Otsego Streets to reduce traffic volume and intersection problems on Ohio Street.
- Conduct a comprehensive City-wide traffic capacity study using best available information on existing and proposed development and intended annexation.
- Perform a sight-line analysis for intersections within the older portions of the City to ensure adequate visibility.
- Seek additional parking opportunities within the Downtown Business District.
- Review the Harford County Road Code to ensure the Code accomplishes the necessary street system objectives of the City.

Rail Service

- Coordinate with MTA to publicize the availability of MARC commuter train service at the Aberdeen station.
- Support City of Aberdeen in their efforts to strengthen the Aberdeen station as an AMTRAK and MARC transit hub.
- Work with MTA and HCTS to improve the coordination of bus service to Aberdeen's rail service for those who are transit dependent and to encourage the use of multi-modal mass transit as opposed to commuting in individual automobiles.
- Consider opportunities for transit-oriented development in the City's Old Town in regard to future in-fill or redevelopment sites.
- Support the existing mid-day reverse MARC rail service provided by MTA Bus 731 to Harford County from Baltimore and Washington, D.C.
- Continue to explore the long-range possibility of a train station in the City of Havre de Grace within close proximity to the Downtown Business District.

Bus Service

- Coordinate with the MTA to establish a new bus stop on Old Post Road to serve residential communities along the corridor.
- Work with the MTA to relocate the Otsego Street bus stop to the new SHA Park and Ride located at the corner of Otsego and Juniata Streets. This will require the reverse routing of commuter buses through the City.
- Support the concept of transit-oriented development through increased zoning densities, pedestrian connections, and potential bus stop and shelter locations. Evaluate regulations in regard to transit-oriented development and consider the role of transit during project review.
- Implement the MTA bus shelter program, which initially will include the installation of five bus shelters in the City to serve MTA commuter and HCTS local service buses.
- Work with HCTS to investigate expanded local bus service within Havre de Grace. This may include the development of a local circulator bus, re-routing of existing buses to better serve low to moderate income communities, or the reverse routing of the alternate 1A bus to serve the function of a circulator bus. Expansion of bus stop locations, evening service, and limited weekend service may also be considered. Consideration for tourism objectives should be included.
- Coordinate with HCTS for expanded bus service along US 40, which effectively links transit dependent employees with employment destinations.
- Work with HCTS for improved bus and rail transfer connections in Aberdeen, as Aberdeen serves as the only opportunity for transfers to other destinations in the US 40 corridor for Havre de Grace transit-dependent riders.
- Expand paratransit service for the elderly and handicapped population to the fullest possible extent by HCTS.
- Encourage maximum utilization of the Park and Ride facility. This includes incorporating the facility into as many MTA and HCTS bus routes as possible and identifying it as an entrance point for the City's proposed bikeway system and the Lower Susquehanna Heritage Greenway.
- Coordinate with MTA to publicize transit services that are available in the immediate region, to include commuter bus routes, mid-day MARC bus service, and MARC rail service.

Bicycle/Pedestrian Facilities

- Require sidewalks and/or bikeways within new residential developments during the development review process. Ensure that successful sidewalk and/or bikeway connections are made to adjacent neighborhoods and to the planned regional trail system of the LSHG.
- Implement the proposed bikeway system by designating the routes with pavement markings and signs as appropriate.
- Install bike racks throughout the City to encourage ridership and provide security. Bike racks, at a minimum, should be placed at shopping facilities, schools, parks, bus stops and employment centers.
- Continue to replace older stormwater drain grates with bicycle-friendly grates along bike routes to improve safety.
- Continue the City's sidewalk maintenance program to assure pedestrian safety on existing sidewalks and systematically retrofit connections for missing (discontinuous) sections of the sidewalk system to provide continuity as part of the City's walk-able community. This should be done in concert with the CIP process.
- Revise the Site Plan Ordinance to address sidewalk and bikeway standards to assure consistency throughout the City. Require all new sidewalks to be at least five (5) feet wide. Wider sidewalks may be required in areas of high commercial and pedestrian traffic.
- Continue to implement the brick accented "signature" sidewalk design to connect key pedestrian pathways in the Downtown Business District, the Waterfront revitalization area, the North Park Loop Trail, and the LSHG.
- Continue to implement ADA accessibility standards throughout the City for all sidewalks and crosswalks.
- Publicize the advantages of Havre de Grace as a walk-able and bicycle-friendly community in regard to the City's excellent quality of life. Continue to incorporate bicycle and pedestrian amenities in both the comprehensive and site planning process so that the need for motor vehicles is reduced and the recreational benefits of inter-connected residential communities is attained.

Aviation Facilities

- Encourage the owners of the seaplane base to successfully maintain and improve operations as a commercial and recreational facility. Assure that plans are shared with the adjacent community to facilitate a positive relationship regarding the shared

use of the river for recreational and commercial uses as well as overall public enjoyment.

- Support Harford County's efforts to contract with BWI shuttle bus service providers to provide services to Harford County air passengers.
- Work with Harford County Government on the joint use of Phillips Army Airfield so that commercial opportunities are maximized and residential impacts are reduced.

Water Transport

- Support the LSHG in their effort to establish a water shuttle service between Havre de Grace, Perryville, Port Deposit, Susquehanna State Park, and Swan Harbor Farm. Work with the LSHG to provide water shuttle docking facilities at key points along the City's shoreline.

III. STREET SYSTEM

The City of Havre de Grace is served by a hierarchy of streets, roads and highways. These various types of roadways have specific purposes, depending upon the volume of traffic, physical characteristics of the street, location, and the type of development they serve. These purposes are defined according to their functional classification, a description of which follows. Maintaining the integrity of the street hierarchy is very important to assure efficiency of travel, maximum use of street capacity and the safety of motorists, pedestrians, and bicyclists.

A. Functional Classification

Functional Classification is a methodology by which all roads and streets are identified as to the purpose or function in moving traffic within a network. The hierarchy of roads relates directly to access, travel distance and traffic volume. The functional classification of a street or highway is determined by considering its role in providing access to property and mobility. The highest classification, interstate highway, has very limited access but has capacity for moving many people and goods. The lowest classification, minor collector, has virtually unlimited access but significantly smaller capacity for moving people and goods. Each road in the hierarchy has a different purpose, which is reflected in the assigned functional classification. The value of this system is in understanding how different streets work in regard to adjacent land uses and destinations. This inter-relationship is critical in accomplishing good land use planning.

1. Functional Hierarchy

Streets and highways are ranked according to a nationally established hierarchy through the Federal Highway Administration, and include the following classifications:

- Interstate Highway
- Principal Arterial
- Minor Arterial
- Major Collector
- Minor Collector

An *Interstate Highway* is a high-speed, limited access road intended to link large population centers. Interstate highways are constructed as divided, arterial highways that allow through-traffic movement with full control access only at grade separated interchanges.

A *Principal Arterial* links major centers of activity of a metropolitan area. Its primary function is for mobility and it serves to carry a high proportion of trips through an area. It is not intended to provide direct access to individual properties along its path and such service should be purely incidental to the primary function of the road for use of through traffic.

A *Minor Arterial* provides for a lower level of travel and trip length as compared to the *principal arterial* and serves intra-community continuity. Its primary function is mobility, however it may provide limited access to major community centers along its path.

Major Collectors provide access to abutting land and circulation within neighborhoods and business areas. These streets serve residential, commercial, and industrial areas by collecting and distributing trips from local streets and channeling these trips into arterial roadways for reaching their final destination.

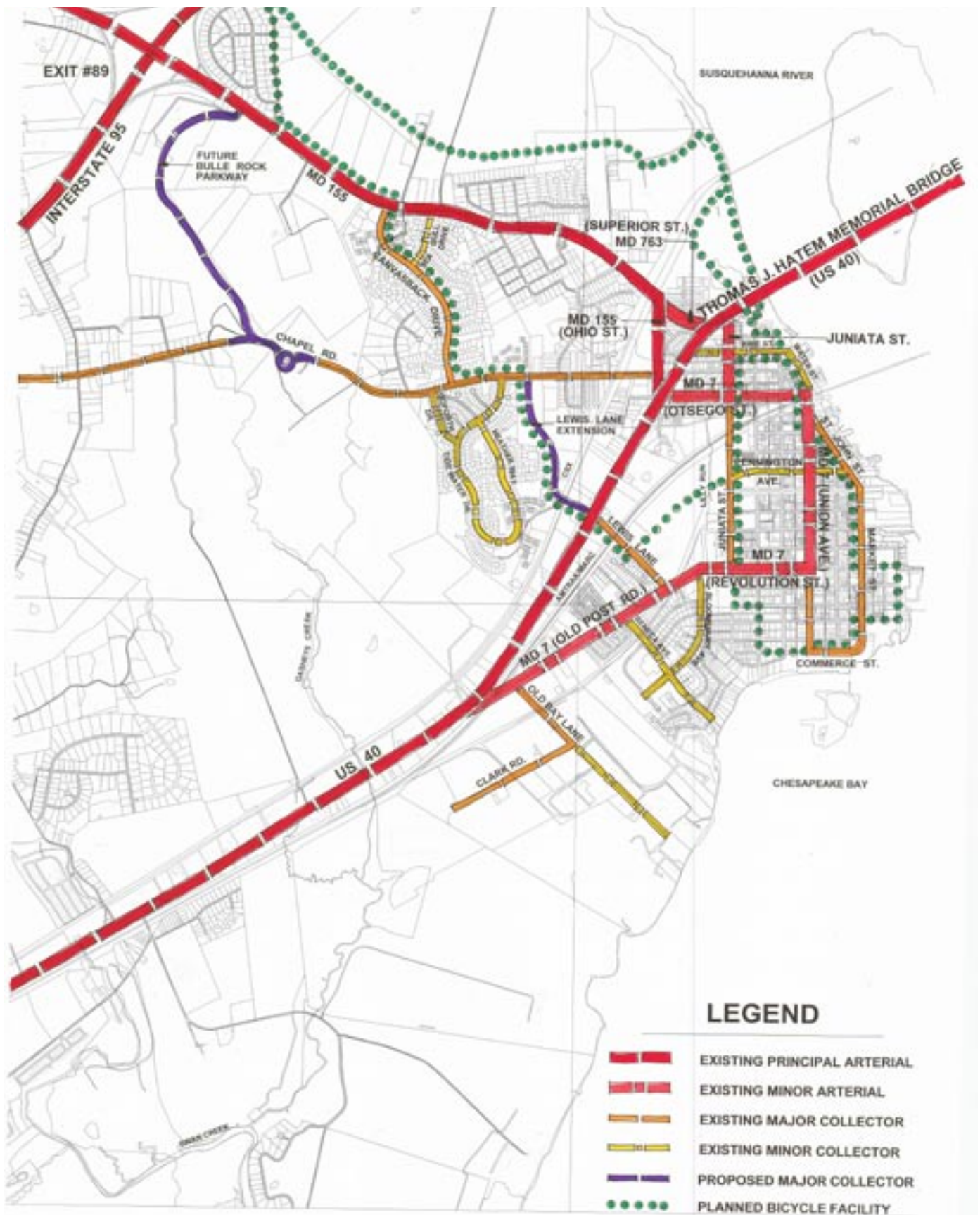
Minor Collectors provide for low traffic volumes but the most direct access and service to residential, commercial, and industrial land uses.

The functional classifications for streets in the Havre de Grace Planning Area are listed in Table 7.1. In addition to the existing street system, two new major road connections are proposed or under construction: Bulle Rock Parkway, which will directly link MD 155 and Chapel Road, and Lewis Lane, which will extend Lewis Lane from US 40 to Chapel. These linkages will further improve access and general circulation within the newer communities of Havre de Grace and provide enhanced connections to the Old Town areas. The Transportation Map located at the end of this chapter illustrates functional classification designations.

TABLE 7.1
FUNCTIONAL CLASSIFICATION

Name of Thoroughfare	From	To
INTERSTATE		
I-95 (John F. Kennedy Memorial Highway)	Susquehanna River	Earlton Road
PRINCIPAL ARTERIAL		
US 40 (Pulaski Highway)	Susquehanna River	Robinhood Road
MD 155 (Level Road - Superior Street - Ohio Street)	I-95 Interchange	US 40
MINOR ARTERIAL		
Juniata Street	Superior Street	Otsego Street
Otsego Street	Union Avenue	US 40
Revolution Street	US 40	Union Avenue
Superior Street (MD 763)	MD 155	Juniata Street
Union Avenue	Revolution Street	Otsego Street
MAJOR COLLECTOR		
Canvasback Drive	Chapel Road	MD 155
Chapel Road/Ontario Street	Earlton Road	MD 155
Clark Road	City Limits	Old Bay Lane
Commerce Street	Union Avenue	Market Street
Congress Avenue	Union Avenue	Market Street
Juniata Street	Revolution Street	Otsego Street
Market Street	Commerce Street	Congress Avenue
Old Bay Lane	Clark Road	Revolution Street
Revolution Street	Union Avenue	Market Street
St. John Street	Congress Avenue	Union Avenue
<i>Bulle Rock Parkway (proposed)</i>	MD 155 (at I-95 interchange)	Chapel Road
<i>Lewis Lane (proposed)</i>	Revolution Street	Chapel Road
MINOR COLLECTOR		
Bloomsbury Avenue	Wilson Street (west)	Revolution Street
Erie Street	US 40	Water Street
Giles Street	Bloomsbury Avenue	Market Street
Goforth Drive	Tidewater Drive	Chapel Road
Heather Way	Tidewater Drive (west)	Tidewater Drive (east)
Lapidum Road	MD 155	I-95 (at overpass at Lapidum)
Old Bay Lane	City Limit	Clark Road
Pennington Avenue	Juniata Street	St. John Street
Robinhood Road	US 40	Chapel Road
Seagull Drive	Canvasback Drive	MD 155
Seneca Avenue	Chesapeake Drive	Revolution Street

Figure 7.1



TRANSPORTATION

B. Existing Conditions

To respond to land use, population changes, and planned future development in Havre de Grace, the existing street system was examined. Considerations include: (1) configuration and connectivity, (2) street widths, (3) existing pavement conditions, (4) traffic control devices, (5) street capacity, (6) impediments to traffic circulation, (7) accident reports, and (8) on-street and off-street parking conditions.

1. Configuration and Connectivity

The present City street system consists of three patterns or configurations. In Old Town, the street system is an adaptation of the traditional grid pattern forming uniform blocks and numerous intersecting streets at intervals of 400 feet on east/west streets and 500 feet along north/south streets. A modified grid pattern appears in the older subdivisions of Bay Brook, Concord Fields, and Meadowvale. The predominant street pattern in the newer subdivisions (west of Route 40) is curvilinear, with streets often ending in cul-de-sacs.

In general there is good connectivity throughout the City, afforded by the configuration of the existing street system. The most significant obstacle to this connectivity is US 40, an arterial highway that serves as a physical divide between the Downtown Business District and older neighborhoods and the newer communities located west of US 40. There are only two existing crossing points along US 40 – MD 155/MD 763 (Superior Street) and Ontario Street extended – that enable movement from the older neighborhoods to residential areas located to the west. This area of transition in the street system along Ohio Street is less than successful and has subsequently created some difficult intersections as a result of increased residential growth and commercial truck traffic. MD 155/Ohio Street must be evaluated in terms of safety and improved traffic flow.

Future road connections include the extension of Lewis Lane from US 40 to Chapel Road. This will be provided with the completed development of Grace Manor and Havre de Hills neighborhoods. As a connection through those communities, Lewis Lane will be classified as a Minor Collector primarily to serve the immediate residents.

2. Street Widths

Similar to many other historic cities like Havre de Grace, there are no uniform street widths within the City. Union Avenue and Congress Avenue have 132 foot rights-of-way, with a street pavement width of 40 feet. The majority of the remaining streets in the older sections of the City average 70 foot rights-of-way with 30 to 35 foot pavements, although most streets in the Concord Fields neighborhood have 40 foot rights-of-way with 35 foot

pavements. The newer subdivisions, such as Bayview Estates and Grace Harbour, have 50 and 60 foot rights-of-way with 30 and 36 foot pavements which is the result of the City having adopted the Harford County Road Code. A few streets within the City, such as Alleghany and Hebditch Streets, have unusually narrow rights-of-way. All lanes in the City have rights-of-way of 20 feet.

Some local streets are not wide enough to accommodate two lanes of traffic with parking lanes. It is necessary to study the desirability of allowing on-street parking or the possibility of converting streets to one-way traffic. Determining factors include traffic volume, functional classification, adjacent land use and availability of and accessibility to off-street parking.

3. Existing Pavement Conditions

There are approximately forty-four miles of paved streets in the City of Havre de Grace's road system, consisting of both open and closed sections. In addition to the streets, the City maintains approximately 4.4 miles of paved lanes in the older neighborhoods. A ten-year cycle street maintenance program has been developed and utilized by the City's DPW.

As a result of the street maintenance program, approximately 21 percent of the City streets have been resurfaced since the 1996 Comprehensive Plan was completed. Reconstruction of one section of Clark Road in the Chesapeake Industrial Park was completed in 2003. The City will also seek to secure grant funds and the right-of-way to Old Bay Lane so that future access improvements to the Industrial Park may be completed.

4. Traffic Control Devices

The primary purpose of traffic control devices, such as traffic lights, railroad signals, and stop signs, is to ensure safe traffic movement. Havre de Grace has nine traffic signals, three fire station warning lights, three school warning lights and two traffic caution lights within its boundaries. Currently, improvements are planned at 40 locations (signs and pavement markings). Since the last Plan update in 1996, a traffic signal has been installed at the intersection of MD 155 and Canvasback Drive. SHA will monitor the intersection of MD 155 and Bulle Rock Parkway (currently under construction) to determine if a future traffic signal is warranted.

Railroad crossing signs and signals are present along both the CSX main line and the Norfolk Southern Railroad (formerly Conrail) spur line in Havre de Grace. Railroad crossing signs on the spur line are located at Clark Road, Old Bay Lane, Revolution Street, and Seneca Avenue. An industrial railroad crossing signal is located on Juniata Street. Two

railroad crossing devices are installed on the CSX line in the City. A crossing signal is located at Chapel Road while a sign warns of the crossing at Lewis Lane Extended. This latter grade crossing will be upgraded with gates and flashing signals with the construction of the Havre de Hills townhouse development.

The City has an inventory of sixteen hundred directional, information, and regulatory signs, which are maintained by the City's DPW staff, and over thirty-four miles of pavement markings. To manage the sign inventory, the City utilizes a street signage program that provides for the continuous upgrading and maintenance of City-owned signs. DPW adheres to the policy established under the Manual on Uniform Traffic Control Devices in which signs are installed when warrants are met. This is beneficial when there are many requests for signs at a location where signs may not be required or justified.

5. Road Capacities

The capacity of a street is the maximum number of vehicles that it can carry during any given period of time. This capacity is usually determined by the maximum number of vehicles that can pass a given section of a roadway in either or both directions during a certain time-period under prevailing roadway and traffic conditions. Prevailing road conditions can seriously hinder traffic flow and, thus reduce capacity. For instance, if a portion of a street is utilized for parking, the traffic capacity is proportionately reduced. Another factor that affects a street's capacity is the number of access points onto and from the street; numerous access points greatly reduce traffic capacity. Traffic signals and stop signs, although required for safety, also reduce roadway capacity.

Level of Service (LOS) is a set of operational conditions describing the ability of a roadway or intersection to accommodate traffic. Different ratings are used to evaluate the efficiency of vehicular movement on a transportation facility. The LOS operation of a facility is measured by many factors, including speed, delay, freedom of maneuver, and frequency of traffic flow interruptions. There are six established Levels of Service – A through F – to measure the operational efficiency of a transportation facility. The following is a general definition of each Level of Service.

LOS A – A free flow of traffic with no restriction or significant delay.

LOS B – A stable flow of traffic with very little restriction or delay.

LOS C – A stable flow of traffic with low to moderate restriction or delay.

LOS D – Approaching unstable flow of traffic with moderate to heavy restriction and delay.

LOS E – Unstable flow of traffic with significant restriction and delay.

LOS F – Force flow of traffic. The flow rate drops significantly.

The overall Level of Service for road sections within the City is excellent. There are only a few streets which operate at LOS C and this occurs primarily at morning and afternoon peaks. These streets are MD 155, Old Post Road/Revolution Street (MD 7), and Chapel Road. A comprehensive review of City-wide traffic capacity is necessary to update the information related to road section capacities.

There are several intersections where improvements are needed to provide a better Level of Service. Problematic intersections are Ohio Street and Ontario Street extended, which operates at LOS D at certain times of the day, and Ohio and Superior Street. The City must work with SHA on addressing intersection issues for Ohio Street (MD 155) from US 40 to Superior Street. One other intersection that experiences operational problems is Seneca Avenue at Old Post Road, which also needs to be addressed with SHA. Currently all signalized intersections are operating at a LOS B or better.

6. Impediments to Traffic Circulation

From a traffic engineering viewpoint, impediments to good traffic circulation can be many and varied. They include inadequate sight distance, roadway design, inappropriate traffic routing, and a lack of proper traffic control devices. The City's street system experiences some of these conditions as might be expected in an older urban community.

Limited sight distance occurs in Havre de Grace due to man-made physical obstructions such as fences and hedges, delineation of parking spaces too close to intersections, and road alignment dictated by topography. Some intersections in the Downtown Business District, such as the intersections of Green, St. John, and Washington Streets and St. John and Franklin, are examples of locations where there is poor visibility or limited sight distance. MD 155 also has a number of intersections which due to a combination of steep grades and intersecting street angle, result in poor visibility and reduced sight distance. SHA is reviewing MD 155 from I-95 to Ohio Street to determine what engineering solutions might be applicable.

Roadway design and aesthetic improvements are being addressed through several streetscape projects, and include the reconstruction of Legion

Square at Union Avenue, the US 40 Improvement Project, and downtown streetscape improvements performed by the City. Union Avenue has been narrowed in the vicinity of Legion Square to better define turning movements and landscaping has been added to improve appearance. US 40 will be resurfaced, landscaped and defined with pavement treatments designed to slow traffic and improve the appearance. In addition, SHA improvements are planned for Otsego Street from Union Avenue to US 40. The City will continue to work with the community and the SHA to identify, plan, design, and provide streetscape improvements to address road function, pedestrian access, and appearance.

Problems related to traffic routing occur when traffic is directed onto an already heavily used street when other options exist. Ohio Street is a prime example in Havre de Grace. Current signage on eastbound Superior Street directs traffic onto Ohio Street resulting in traffic back-ups at the US 40 traffic signal and congestion at the Ohio and Ontario Street extended intersection. Traffic destined for eastbound US 40 and Downtown could be directed to continue east on Superior Street to Juniata Street, and then south to Otsego Street. At Otsego Street, the traffic would disperse according to its destination. This would serve to relieve Ohio Street, particularly when traffic is detoured off I-95 during period of heavy congestion. The City will work with the SHA on routing issues and signage.

Traffic control devices including signals, signs, and pavement markings are very important elements in the efficient and a safe movement of motor vehicles and pedestrians. When these devices are not present or are no longer effective, they serve as clear impediments to traffic circulation. The City's Department of Economic Development and Planning and the DPW must work cooperatively to assure that traffic control devices are present, operational, and replaced when required according to the upgrade and maintenance schedule.

7. Accident Reports

Traffic accident information from the Havre de Grace Police Department was considered for identifying problem areas. The highest accident location in Havre de Grace is the intersection of US 40 and Lewis Lane. The City will work with SHA to ensure that the redesign and current reconstruction of US 40 successfully addresses safety issues of that intersection. Other intersections that are problematic are Ohio and Ontario Street extended and Ohio and Superior Streets.

8. On-Street and Off-Street Parking Conditions

Pedestrian-friendly environments encourage on-street parking on all streets, except for arterial roads. Besides helping to meet the demand for vehicle storage, on-street parking helps to reduce speeds and protect pedestrians by creating a buffer between moving vehicles and the sidewalk. On-street parking in commercial areas also contributes to the small-town feel of Havre de Grace and supports similar site design for new development. It is consistent to build a pedestrian environment where walking is encouraged.

For the most part, parallel parking is the recommended on-street parking design for the Downtown Business District. However, angled on-street parking is acceptable along some streets within core commercial areas where slow drive-by traffic occurs and where the street width is sufficient to permit such parking. There are some practical difficulties with existing on-street parking on particular streets. These include: the 300 block of Green Street because of the lack of adequate maneuver space, the 400 block of Franklin Street due to insufficient road width, and the 100 block of St. John Street because of traffic speed and backing movements.

The City offers free public off-street parking in the Downtown through the provision of three surface parking lots. The largest of the lots is located along the Susquehanna River between Warren and Franklin Streets behind the City's Water Treatment Plant. This lot is designed to accommodate eighty-eight automobiles. A second lot, which provides twenty-four parking spaces, is located on Lodge Lane between Green Street and Pennington Avenue, and a third surface lot located at the foot of Pennington Avenue accommodates thirty-eight vehicles. It is necessary for the City to complete a parking study of the Downtown Business District because of increased demands as a result of current efforts in revitalization.

IV. RAIL SERVICES

A. Existing Services

Due to the location of Havre de Grace within the mid-Atlantic region, the right-of-ways and track infrastructure for AMTRAK and CSX pass through the City, both in a northeast-southwest direction. The AMTRAK line provides the services of three railroads, which include AMTRAK, Norfolk Southern Railroad and MARC. This line runs east of and parallel to US 40 and has no at-grade crossings in the Havre de Grace planning area. A spur line off of the AMTRAK main line serves the J.M. Huber Corporation and the Chesapeake Industrial Park and has at-grade crossings on Clark Road, Old Bay Lane, Seneca Avenue, Revolution, and

Juniata Streets. The CSX line, paralleling US 40 to the west, has four at-grade crossings in the planning area. Two of the crossings, Ontario Street extended and Lewis Lane extended, are within City limits. The remaining two crossings involve the access roads to the Bulle Rock Golf Course and Greenway Farms.

Passenger rail service is available three miles away in Aberdeen for both AMTRAK and the MTA MARC Commuter Rail Service. AMTRAK provides daily long distance rail service throughout the United States, along with high-speed service from Boston to Washington, DC. MARC Commuter Rail Service provides weekday commuter service from Perryville to Washington DC, via Baltimore's Penn Station. A study completed by the MTA in March 2002 concluded that development of a MARC commuter rail station in Havre de Grace was not feasible in the near term. The MTA report cited proximity to the nearby stations at Aberdeen and Perryville and track infrastructure issues. The City will continue to pursue a commuter rail station in its long-range planning, however residential densities supporting transit (i.e. transit-oriented development) must be achieved for the City to warrant a station in the future.

Freight service in Havre de Grace is provided solely by the Norfolk Southern Railroad. By using the AMTRAK main line and its rail spur, this freight line serves J.M. Huber and the Chesapeake Industrial Park. Though it passes through Havre de Grace, the CSX line has no rail spurs within the Havre de Grace planning area and lacks accessibility to the City's industrial base. Due to future land uses in the growth areas, it is not anticipated that this line will be accessed for freight service.

V. BUS NETWORK

A. Existing Services

Bus service in Havre de Grace consists of Baltimore Metropolitan Region MTA commuter service and local HCTS service. The MTA commuter bus service, the Baltimore Flyer Route No. 420, is provided through a private contractor and operates during the week from Havre de Grace and other points along US 40 in Harford County to Downtown Baltimore. Two bus stops are currently available for this commuter service in Havre de Grace, one at Union Avenue and Franklin Street and the corner of Otsego Street and Legion Drive. Due to the construction of a Park and Ride facility at the corner of Otsego and Juniata Streets, this second stop will be relocated and may result in the reverse routing of the bus through the City. In addition, a third stop on Old Post Road at Seneca Avenue is desired.

Harford County Government operates HCTS local bus service through the Office on Aging. This service is provided for intra-county transit needs between and within the major population centers and route destinations of Bel Air, Aberdeen, Havre de Grace, Riverside, Edgewood, and Joppatowne. HCTS buses 1 and 1A

LEGEND

- MTA #420 COMMUTER BUS SERVICE TO DOWNTOWN BALTIMORE
- HARFORD COUNTY TRANSIT SERVICE #1 AND #1A BUS TO ABERDEEN AND BEL AIR
- FUTURE PARK AND RIDE FACILITY
- BUS STOP

City of Havre de Grace Comprehensive Plan

serve Havre de Grace residents on an hourly basis during the weekday hours of 6 AM to 6 PM. These two buses circulate between Havre de Grace and Bel Air via Aberdeen and require approximately two hours to complete each full loop. For Havre de Grace riders, bus transfers are required at Aberdeen for other US 40 destinations. HCTS also provides transportation services for the elderly and disabled populations of the County on a dispatched basis. These services are in accordance with the Americans with Disabilities Act of 1990.

The need for additional transit service within Havre de Grace was discussed at a public hearing in January 2002 for Harford County's Five-Year Consolidated Plan, a plan which outlines identified community service needs. Senior citizens in particular articulated the need for a circulator bus service within Havre de Grace due to increased cab fares. The need for improved transfers and employment connections within the US 40 corridor were also noted for transit dependent populations. A feasibility study and implementation plan for a small circulator bus system is warranted. Combined with existing tourist demand and senior citizens, a regular shuttle bus system with short headways (time between buses) can likely be supported.

Desired transit improvements also include the installation of bus shelters throughout the City to serve both MTA and HCTS customers. A bus shelter program offered through MTA is currently being pursued, however the more immediate Baltimore Metropolitan areas are being considered first for installation of these shelters. In addition, the MTA is completing a Harford County Transit Study through a private consultant and will address both local and regional identified transit needs. The study will provide a demographic and land use profile for the County, a description of currently available transit services, and future service recommendations.

VI. BICYCLE/PEDESTRIAN FACILITIES

Other important, but sometimes overlooked, forms of transportation are bicycling and walking. Sometimes referred to as non-motorized transportation, trip purposes of bicycling and walking include work, shopping, school, and recreation. Most areas within the City of Havre de Grace have interconnected sidewalks which allow full opportunity for pedestrian access. As in most communities, drivers must share the road with bicyclists. To support and encourage more bicycling and walking as a means of transportation, sufficient and safe facilities must be provided throughout the City.

A. Bicycle Facilities

1. Existing Conditions

Havre de Grace offers an attractive opportunity for cyclists which can be further augmented if safe, defined bike routes are developed throughout the City. An increase in bicyclists is desired as the result of the Lower

Susquehanna Heritage Greenway, further underlining the need to establish designated bikeways that link to the Greenway. Three bike routes have been proposed and are described below and illustrated on a map located at the end of this chapter. The signification of these routes has not been implemented, but they should be identified with signs or road stencils in the future.

Route 1, The Old Town Loop: This trail is a loop trail that primarily traverses streets in the historic portions of the City linking the waterfront, Downtown Business District, and cultural attractions. From the North Park parking lot on Conestee Street where linkage to the trail system of the LSHG occurs, travel south to Erie Street; west on Erie to Juniata Street; south on Juniata to Alliance Street; east on Alliance Street to Adams Street; south on Adams to Commerce Street; east on Commerce to Market Street; north on Market to Lafayette Street; east on Lafayette to Concord Street; north on Concord to Revolution to Market Street; north on Market to St. John Street; north on St. John to Union Avenue; north on Union to Water Street; north on Water to Erie Street; west on Erie to Conestee Street; north on Conestee to the North Park parking lot, thus completing the loop.

Route 2, The North Park Loop: This trail, which is located along the north shoreline of the City, is a hiking and biking trail within a natural setting. From the North Park parking lot, travel north past McLhinney Park, crossing Fountain Run, to the semi-paved area under Thomas J. Hatem Memorial Bridge. The loop diverges here and rider may proceed along the Susquehanna River shoreline or slightly inland to follow trail in either clockwise or counterclockwise direction to beginning point. Future walking trails around the Arundel Corporation mining operation to the North Park Loop Trail will complete connections to the LSHG trail system. Long-term connections along the shoreline through the quarry operation would be ideal but may not be possible.

Route 3, Proposed Old Town/New Town Bikeway: This trail would serve to connect older portions of the City with the newer neighborhoods west of US 40. From the North Park parking lot travel south to Erie Street, west on Erie to Juniata Street, south on Juniata to Harris Stadium/Recreation Complex, west on trail through the Recreation Complex to Lewis Lane; northwest on Lewis Lane through Grace Manor to Chapel Road; west on Chapel Road to Canvasback Drive; north on Canvasback to MD 155; west on MD 155 to Lapidum Road; north on Lapidum to Susquehanna State Park and LSHG.

As tourism continues to increase in Havre de Grace, boosted by the operation of the City's Visitor Center, recreational bicycling will likewise increase. Designated bike routes will assist in directing new groups of visitors along safe pathways so they can enjoy the City's attractions and

atmosphere. Bicycle connections to Swan Harbor Farm on the Oakington Peninsula are also desired.

B. Pedestrian Facilities

Havre de Grace has been and continues to be very pedestrian-friendly. Due to the nature of the traditional street configuration, with sidewalks often on both sides, full pedestrian access is available in the City's older portions. Requiring sidewalks in new areas as they develop and providing for their interconnections (between neighborhoods) in a comprehensive manner is paramount for pedestrian accessibility throughout the City. "Walkable communities" are desirable communities in that they reduce auto-dependence for short trips, provide for daily recreation, and provide for an overall improved quality of life.

1. Existing Conditions

Sidewalks are installed throughout most of the City's Old Town residential neighborhoods and the Downtown Business District, making this area very pedestrian-friendly. However, some of the major streets that link the residential areas with destinations such as the Chesapeake Industrial Park, Stancill Park, and Havre de Grace High and Middle Schools, do not have complete pedestrian connections. These links need to be implemented over time through the City's DPW capital improvements or with SHA so that full pedestrian accessibility is achieved. The City will continue to maintain an inventory of these needed sidewalk connections and address them as funds allow. In addition, the City's DPW will continue its annual sidewalk maintenance program to ensure that existing pedestrian facilities are passable.

Newer neighborhoods and growth areas west of US 40 present a bigger challenge for interconnectivity between neighborhoods and with the Old Town areas of the City. Though sidewalks have been required in most new communities during the development process, some older existing neighborhoods, such as Havre de Grace Heights and Meadowvale, do not have them installed. Retrofitting pedestrian access in most instances is not practical. There are, however, some limited opportunities along Chapel Road and along Lewis Lane Extended where short sidewalk links would serve to connect large neighborhoods, such as between Canvasback and Tidewater Drives and along Lewis Lane at US 40 (which will then connect to Havre de Hills and Grace Manor). As areas develop, planning for future interconnections is extremely important at the site plan review stage. These interconnections will serve to link new neighborhoods with schools, community facilities, and the LSHG.

Great emphasis has been placed on the development of a complete waterfront "signature" sidewalk, which links North Park, the Downtown

Business District, the Promenade, Heritage Park, and the City's numerous cultural amenities. While many segments have been completed, sections along Water, Erie, St. John, Market, and Revolution Streets are still unfinished. Priority will be placed on sections where no pedestrian access is currently available. The North Park Loop Trail is also available within the City for those who are interested in natural areas hiking and biking. Ideally, this will connect directly with the LSHG through Susquehanna State Park in the future.

VII. AVIATION FACILITIES

A. Existing Services

Commercial airline services are primarily available through BWI and Philadelphia International Airports. Harford County Airpark, a primary non-military airport in Harford County, is a 58-acre privately owned aviation facility. Located on a high plateau on Aldino Road (MD 156), the airport consists of a 2,140 foot lighted paved runway and two turf runways of 1,600 and 1,800 feet in length. Service facilities available at the airpark include hangar space for fifty airplanes and a fuel, repair and maintenance operation. Only five miles away, the airport is readily accessible from Havre de Grace for private corporate and recreational fliers.

There are two aviation facilities in the Havre de Grace area which represent additional opportunities. The first is the seaplane base in Havre de Grace, located on the City's shoreline in the 300 block of St. John Street. This facility is the only seaplane base in the Upper Chesapeake Bay Region. The designated FAA landing area is located in the Susquehanna River east of the main channel. The owners of the seaplane base intend to enhance operations by replacing the existing deteriorated pier with a longer floating pier which will improve access and safety. The seaplane base will be expanding its operation with new dock facilities for seaplanes and smaller boat slips. It is anticipated that flight training and sightseeing rides as well as future charter service may be offered at this unique location.

The second facility is Phillips Army Airfield located on a 500-acre tract within the Federal installation of Aberdeen Proving Ground and is used for military purposes. In 1991, the City of Aberdeen, Aberdeen Proving Ground and U.S. Department of Defense agreed to study the joint use of Phillips Field. Proposed plans for the use of the airfield, to include continued military operations, shipment of commercial cargo, a corporate jet facility, and scheduled commercial airline service, are uncertain due to events of September 11th, 2001 and citizen opposition. If an acceptable master plan can be developed, the potential benefits to Havre de Grace would include close proximity to commuter air service and enhanced economic development potential. Noise impacts as it relates to the

orientation of flight paths need to be considered for existing and future residential development.

VIII. WATER TRANSPORTATION

Being located at the confluence of the Susquehanna River and Chesapeake Bay, water played an important role in the development of the community. The establishment of Susquehanna Lower Ferry, Concord Point Lighthouse, and Susquehanna and Tidewater Canal contributed both to the development of the City and the availability of water transportation in the area. Water was used by mining, fishing, ice harvesting, canning and milling operations in Havre de Grace to transport products for almost a century

A. Existing Services

Today, with the exception of the Arundel Corporation Quarry, which uses tugboats and barges to carry stone, there is very little utilization of the water as a means of commercial transport. This is the result of the loss of water transportation-oriented industries in the City. Some ceased operations due to natural attrition caused by increased or more efficient competition while others were affected by the environmental regulations developed to save the Bay. The primary use of the Susquehanna River and Chesapeake Bay is now for recreational purposes. With the development of the LSHG on both sides of the Susquehanna, which includes the waterfront revitalization efforts in Havre de Grace, Port Deposit, Perryville, Susquehanna State Park, and Swan Harbor Farm, a new industry may be served by water transportation – *tourism*.

Tourists visit the area to enjoy the water. Many partake of the opportunity to sail on the Skipjack Martha Lewis as well as visit other ships which may dock in Havre de Grace, such as the Pride of Baltimore II. By providing water transportation via a water shuttle, there is an opportunity for residents and visitors to experience and enjoy the water while reducing individual vehicular trips between waterfront destinations. Ideally, a privately operated water shuttle will be used to connect the Harford and Cecil County portions of the LSHG and provide an alternate and enjoyable means of transportation between sites. To ensure success of the operation, frequency, cost, comfort, convenience, and safety must be addressed as in the case of any other form of mass transit. It is intended that each jurisdiction benefiting from this venture would provide adequate docking facilities for the proposed shuttle.

I. INTRODUCTION

Article 66B states that if current geological information is available, a mineral resources plan should be developed. The plan should:

- *Identify undeveloped land that should be kept in its undeveloped state until the land can be used to provide or assist in providing a continuous supply of minerals, as defined in §7-6A-01(i) of the Natural Resources Article;*
- *Identify appropriate post-excavation uses for this land that are consistent with land planning process;*
- *Incorporate land use policies and recommendations for regulations to balance mineral resource extraction with other land uses and, to the extent feasible, to prevent the preemption of mineral resources extraction by other uses; and*
- *Be reviewed by the Maryland Department of Natural Resources to determine whether the proposed plan is consistent with the programs and goals of the Department.*

Approximately eighty percent of Harford County is underlain by crystalline rocks that are a rich source of crushed stone and granite materials such as gneiss. Large amounts of gneiss are found in the Setters and the Port Deposit Formations and are currently being mined in the County. The Port Deposit gneiss formation begins at Franklinville (Harford County), west of MD 152, and runs in a northeasterly direction toward the Susquehanna River. Small areas of this formation are located along the Susquehanna River and run south toward Havre de Grace.

Mining activity in Harford County is concentrated in the US 40/I-95 corridor. There are eight active, licensed surface mining sites in Harford County. No such mining activities exist within the corporate limits of Havre de Grace, however the Arundel Corporation is a crushed stone quarry located adjacent to the City. Located to the immediate north of the City, the Arundel Corporation owns over 650 acres, 231 acres of which are permitted and zoned by Harford County for mining. This operation is expected to move incrementally over the course of the next several decades.

The Harford County Master Plan/Land Use Element Plan designates the area north of Havre de Grace as industrial/commercial because of the current mining activity at this location. This plan also aims at channeling non-mining development away from mining sites. Where

mining activities occur adjacent to other land uses, such as low density residential, buffer zones must be provided.

II. RECOMMENDATIONS

The City of Havre de Grace should:

- Allow new or expanding quarrying operations only as a special exception, subject to extensive conditions.
- Require substantial buffer zones between a quarry and any development that may occur adjacent to it.
- Meet with the mining operators on a periodic basis to identify appropriate post-excavation uses for the existing quarry which are consistent with the land use planning process.
- Ensure, with the cooperation of Harford County Government and the State of Maryland, that the effects of mining operations on the immediate neighborhoods are minimized and that existing infrastructure, such as the road system, can accommodate the increased demand of any mining operation expansion.
- Work with Harford County Government and the Lower Susquehanna Heritage Greenway to establish a hiking trail around the perimeter of the Arundel Corporation mining operation in their required buffer. In addition, work with the Arundel Corporation to establish a hiking trail along the shoreline.

I. INTRODUCTION

Preservation of the City's historic resources is key to maintaining the beauty, uniqueness, and heritage of Havre de Grace. Havre de Grace boasts a National Register Historic District of approximately 1,100 properties, of which nearly 800 contribute to the historic and cultural significance of the City. This large district is comprised of residential, commercial, and older industrial buildings that predate the mid-twentieth century, and includes the historic downtown, the waterfront, and much of the older housing stock of the community.

The City of Havre de Grace has a rich and active history. European exploration began in the Upper Bay region in 1608 with Captain John Smith, who first mapped the Chesapeake Bay and the Susquehanna River to the limits of navigable waters just north of Havre de Grace. English settlement in Havre de Grace began in the mid-1600s, first as a site called Harmer's Town, then as Stockett's Plantation. The area grew as a result of the establishment of a ferry crossing in 1695. Havre de Grace was so-named in about 1782 and was incorporated as a town in 1785, making it Maryland's second oldest municipality.

Transportation is an important and recurring thread in the historical development of Havre de Grace. Located at the head of the Chesapeake Bay, Havre de Grace was a small port as well as the most reasonable, available point for overland travel between the eastern and western shores of Maryland. Its central location allowed it to become a significant thoroughfare between Baltimore, Philadelphia, and other colonial settlements along the mid-Atlantic coast, much traveled by Revolutionary leaders. The City's importance as a transportation center heightened with the building of the Philadelphia, Wilmington, and Baltimore Railroad (later, the Pennsylvania Railroad) in 1836 and the opening of the Susquehanna and Tidewater Canal in 1840. With access to water and rail opportunities, Havre de Grace was prime for economic activity, growth, and industry. It grew to become a thriving, prosperous center of commerce, the evidence of which can be seen in the concentration of the historic residences and commercial structures today.

Mapped in 1799, the City was laid out in a traditional grid pattern, with streets running north/south and east/west; Union Avenue and Congress Avenue were the principal streets. The grid street pattern provided order in anticipation of future growth, and development in the older portions of the City occurred under this design. Remaining historic structures within the City are many and run the gamut in terms of their age, design, detailing, and functions. Simple but well crafted Carpenter Victorian duplexes and single-family residences are mixed with intricate Queen Anne homes of the wealthy. Working class row-homes, older industrial buildings (such as the Lock House for the Susquehanna and Tidewater Canal, the Concord Point Lighthouse, and the Seneca Cannery), architecturally

divergent churches, and an intact commercial downtown are just a few of the uses within the historic portions of the City. More modern structures were built within the older areas of the City (sometimes referred to as “in-fill” development), but the grid streets and small lanes serve to maintain and control the historical development patterns.

Preservation of the historic resources and the historic context of the City are greatly desired. The healthy inventory of historic structures within the setting of evenly measured, tree-lined streets is what makes Havre de Grace interesting and beautiful, for residents and tourists alike. In communities that have the benefit of concentrated historic resources, historic preservation is a powerful economic development tool in attracting visitors interested in heritage tourism and those seeking a unique, small town experience. For residents, historic preservation is a wellspring of community pride, identity, and collective memory. It is imperative that City stakeholders develop the necessary tools, such as local historic preservation incentives or design guidelines within the National Register Historic District, to succeed in preserving resources within Havre de Grace. Tools such as these will strengthen the City’s ability to manage the historic assets that are unique to Havre de Grace and lend to its physical character as the City moves into the future, blending old and new.

II. RECOMMENDATIONS

- Educate the public about historic preservation tax credit programs offered through the State and Federal governments that are available for renovations to historic structures (commercial and residential).
- Develop design standards for new development within the National Register Historic District. Determine different design standards for areas within the District, such as the Downtown Business District, the Waterfront, and the Old Town Areas. Specific attention needs to be placed on building scale, setbacks that complement historic patterns, site configuration, parking, and view protection. Work with Maryland Historical Trust to develop specific requirements for in-fill development that would address street layout and design, pedestrian facilities, lot configuration, mix of uses, mix of housing types, scale, and density.
- Revise the current Historic Preservation Ordinance so that a local historic district designation is not voluntary in nature.
- Consider the character and cultural resources during all development activity, to include streetscape and general road improvements as well as property subdivision and building construction.
- Educate business and property owners about the Maryland Building Rehabilitation Code (or Smart Codes) for the renovation of existing structures in keeping with their historic character.

- Recognize the economic importance of historic preservation and develop marketing strategies that will benefit Havre de Grace in terms of heritage tourism.
- Support the volunteer efforts of the Historic Preservation Commission members in their development of historic preservation strategies, educational and promotional material, and public outreach for the purpose of historic resource preservation.
- Develop incentives and/or regulations as a means of assuring protection and maintenance of historic structures in a historically appropriate manner (avoiding inappropriate materials, such as vinyl siding, shutters, windows etc.; preventing demolition and redevelopment). Examples of incentives include the continuance of the façade improvement program, local tax incentives, or tax assessment freezes for improvements. An example of regulatory protection is the establishment of a local historic district with design guidelines.
- Continue to document the historic structures within Havre de Grace to update the existing inventory of resources.
- Utilize the National or State of Maryland Main Street programs to assist the City in reaching its revitalization goals and to encourage historic rehabilitation and reuse of existing commercial structures within the Downtown Business District.
- Concentrate preservation efforts on properties of high historic and public value (such as museums) while at the same time promoting historic preservation throughout the City's extensive National Register Historic District.
- Recognize the City's rich multi-cultural history and support efforts for educating the public about the City's diverse cultural heritage.
- Emphasize the educational importance of cultural museums in interpreting the City's rich history and relaying the historical significance of Havre de Grace in relation to American history. Support the staff and volunteers of the numerous museums in their work in interpreting local cultural history.
- Work with Harford County Public Schools to incorporate important local history into the public education curriculum. This may be provided through existing museums and publicly-owned historic resources.
- Develop a signage plan that is complementary to the historic character of Havre de Grace and provide better directional signs to and within the Historic District.
- Revise the sign ordinance and incorporate changes that enhance the character of the historic areas of the City.
- Continue streetscape improvements throughout the Historic District.

- Re-institute the use of historic plaques to identify buildings of significant historic value.
- Support the operation of the Havre de Grace Visitor Center and other tourist outlets as resources for the distribution of educational materials regarding the historical and cultural assets of the City.
- Continue to work with private property owners of the outlying farms to preserve the structures of historic value during subsequent development processes.
- Provide information to realtors about the historic significance of structures and rehabilitation tax credits, and generalized information about the historic significance of Havre de Grace.

III. SUPPORTING VISIONS, GOALS, AND OBJECTIVES

The following are the community visions and goals that were identified in Chapter 2. These were developed with the help of public involvement in the Comprehensive Plan in 1996 and confirmed as still valid in the 2002 workshop process for this Comprehensive Plan. Historic preservation figures prominently in the community vision and three specific goals were identified to support that vision. In addition, this section includes eight objectives that outline the desired results of preservation efforts, when progressive historic preservation efforts are implemented.

A. Community Vision

This section recommends policies directed toward preserving the City's historic assets. These policies further the City's efforts in attaining the following visions written earlier in this Comprehensive Plan.

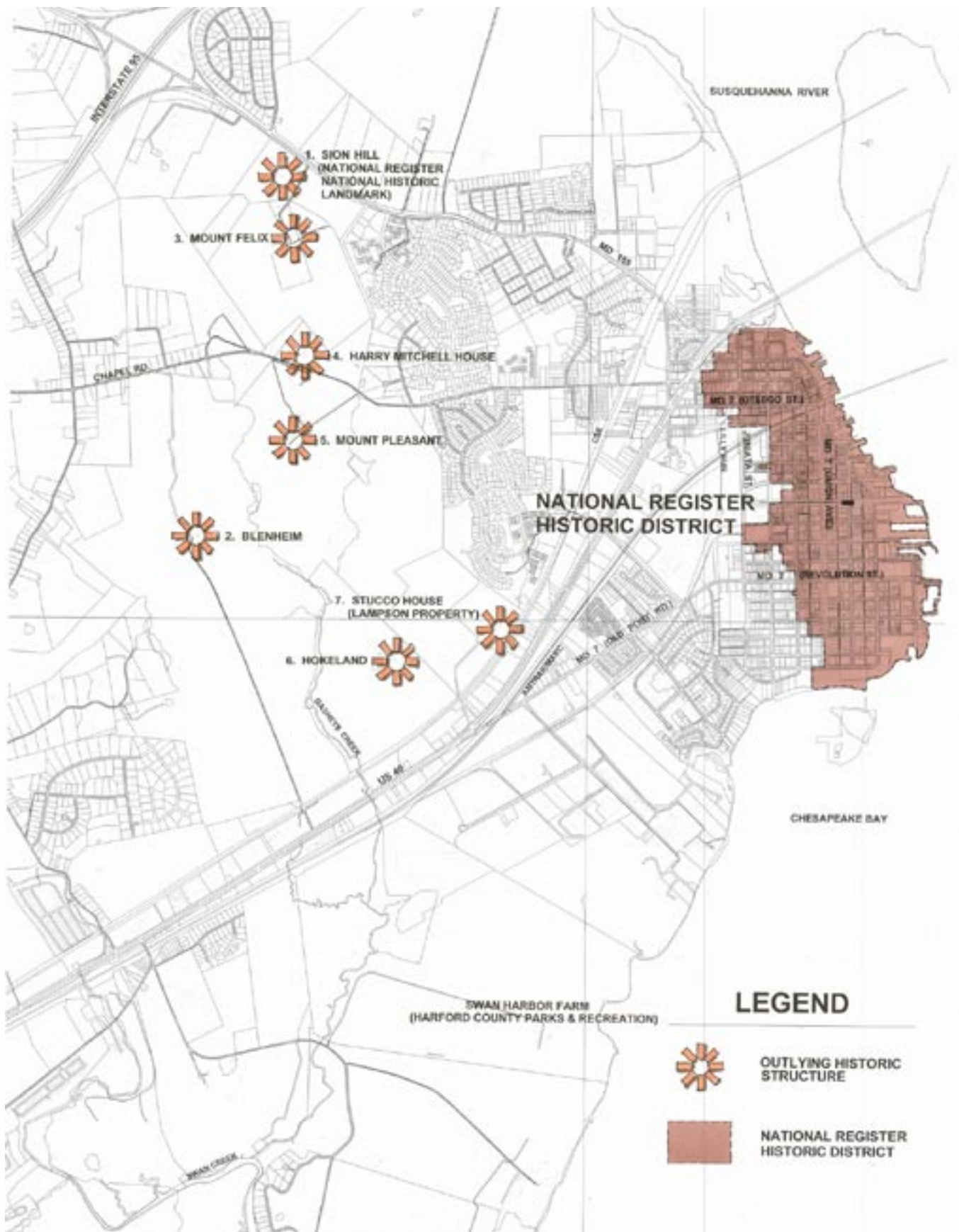
- *A Good Family Life*
- *A Small Town Ambience*
- *An Environmentally Sensitive Community*
- *A Historic And Cultural Center*
- *A Good Place To Do Business*

B. Goals

In order to establish and enhance Havre de Grace's opportunity to become a historic and cultural center, the City adopted four goals oriented toward historic preservation. These goals are:

1. Protect and enhance the historical elements and building architecture which contribute to the distinctive image of the City.

Figure 9.1



HISTORIC RESOURCES

2. Protect and enhance the visual and historic character of the various periods and styles of Havre de Grace's evolution.
3. Protect and preserve the historically significant manor houses in the Havre de Grace planning area.
4. Support the City's numerous museums in their efforts to interpret the important cultural heritage of the region.

C. Objectives

The general objectives for the development of a historic preservation program are to:

1. Safeguard the local heritage by preserving the cultural, social, economic, political, and architectural elements of the local history.
2. Stabilize or improve property values by upgrading historic structures and environments.
3. Promote the use and preservation of historic places for the education, welfare and pleasure of the City's residents, and for the interest of tourists.
4. Integrate the historic buildings and sites with the existing environment to produce a diversity of visual effect.
5. Improve the structural and environmental quality of individual homes through preservation and restoration of historic properties.
6. Strengthen the local economy through preservation work and possible tourist interest and travel in the restored district.
7. Establish a program of public, semi-public, and private historic preservation activities to foster coordinated efforts by all sectors of the community.
8. Develop financial incentives to implement the program.

IV. HISTORIC PRESERVATION FOR URBAN PROPERTIES

A. Background of Local Preservation

Early preservation efforts in Havre de Grace were carried out by the Susquehanna Museum of Havre de Grace, Inc. which restored the Lock House of the Susquehanna and Tidewater Canal. In 1975, it was determined that a broader community effort was needed, and a preservation committee, appointed by the Mayor and City Council, established a list of sixty-five structures that were significant to the City. In

1976, sixty-five other structures were added to the original list and, subsequently, another 130 structures were identified as having the potential for inclusion on the list.

In a 1979 study of Havre de Grace by Harford County, a historic district was defined, and each structure within it was assigned a code relating to its significance. In 1982, this historic district, with approximately 1,100 properties, was listed on the National Register of Historic Places by the Maryland Historical Trust. Nearly 800 of the structures within the district were designated as contributing to the historic and architectural significance of the area. This large district includes all of the historic downtown and older residences of the City generally from Juniata Street eastward to the waterfront. Figure 9.1 shows the extent of the National Register Historic District, and the blocks and neighborhoods that it includes.

An amendment to the local zoning ordinance creating historic area zoning was enacted in 1990 (Ordinance No. 729, *Historic Area Zoning*, passed April 1990; then Ordinance 757, *Historic Area Zoning*, passed October 7, 1991). This provision established a Historic District Commission to recommend to City Council the designation of any local historic districts. These districts were to be made up of any publicly-owned structures or privately-owned structures (with the permission of the owner). Any exterior changes to a building designated a historic landmark or located within a historic district was then subject to design review by the Historic District Commission. Normal maintenance was excluded from review.

In 2001, Ordinance No. 815 *Historic Preservation* was passed (September 17, 2001) to establish historic preservation as a public policy as opposed to a zoning category. The ordinance included additional defining terms, renamed the “Historic District Commission” to “Historic Preservation Commission”, and clarified the role and membership requirements of the Commission. It also contains provisions for the development of rehabilitation and new construction design guidelines, as well as defines standards (as based on the Secretary of the Interior’s Standards for Rehabilitation) for designated structures located in the local Havre de Grace Historic District. Property owner concurrence is also necessary under this ordinance for a structure’s inclusion in the local district. Historic Preservation Commission review is required for all improvements to structures that have been placed in the local district.

Review by the Historic Preservation Commission is guided by the State of Maryland. The State of Maryland enabling legislation, Article 66B, requires the following criteria to be used as the minimum standards in determining the historic nature of a property during the Historic Preservation Commission's review of building permit applications:

- a. *The historic or architectural value and significance of the structure.*
- b. *The relationship of the structure to the historic value of the surrounding area.*

- c. *The relationship of the exterior architectural features of the structure to the remainder of the structure and to the surrounding area.*
- d. *The general compatibility of exterior design, arrangement, texture, and material proposed for use.*
- e. *Pertinent aesthetic and environmental considerations.*

B. Current Issues in Preservation

1. Local Preservation Program Framework

A typical local preservation program usually consists of three phases: identification of historic resources; designation of the most significant of those resources; and protection of those resources. (Protection can take the form of local regulations, local incentives, and public awareness efforts, or some combination of all three factors.) Havre de Grace has largely completed the first two steps in implementing a local preservation program: identification and designation. An inventory has been completed and a historic district has been listed on the National Register of Historic Places. All properties within the district have been rated into one of several categories and these categories seem appropriate. While the nomination might encompass a few more properties on the fringes of the district, it is a large district that includes various periods of neighborhoods and commercial areas from Havre de Grace's past.

In regard to the protection phase of a typical local preservation program, Havre de Grace has taken some key steps, but may in time fall short of real historic preservation implementation. It has created a local historic preservation ordinance to protect the character of the City. However with individual owner consent required for listing, few of the approximately eight hundred contributing buildings in the National Register Historic District may ever come under its review. Thus, the ordinance in its present form may not likely play any significant role in the protection of local historic resources.

Some outstanding examples of local rehabilitation and restoration projects have been accomplished, both by the private sector as well as by museums in the Historic District. However, there also appears to be a continuing remodeling movement that, in some cases, may cause the gradual erosion of the historic character of the district. Currently, there are no safeguards (i.e. regulatory mechanisms) against modern improvements that degrade the historic integrity of structures within the City. Design guidelines must be created and adopted to provide guidance in regard to rehabilitation and new construction in the National Register Historic District. Such design guidelines would establish preservation goals for the City of Havre de

Grace and voluntary minimum standards for any construction activity throughout the district.

2. Historic District Inventory Categories of Buildings

Most National Register nominations make only two distinctions in cataloguing buildings: those that contribute and those that do not contribute to the character of the Historic District. Any contributing building may qualify for Federal rehabilitation tax credits. This broad view of contributing historic buildings reflects a concern by National Register officials that preservation has often only concentrated on very old large homes and has not encompassed all the periods of architecture and social groups that truly make up a community's historical development. The most successful historic districts from an economic perspective are those that recognize that real historic areas are made up of all the older structures from all periods. When this view is realized, a district of older structures can take on a dramatic new image based on its history. Annapolis, Easton, St. Michaels, Ellicott City, and Alexandria, Virginia are several area examples of this economic development strategy based on historic preservation of the entire district, not just the occasional building.

In Havre de Grace, there is continuing discussion about which historic buildings are more significant than others and how further distinctions about these ratings can be made. Often, the general public may not believe that many of the more recently constructed (up to the 1950's) and more modest houses within the district have any preservation value. This unending discussion keeps the community in the identification and designation phases of a preservation program instead of dealing with protection issues. It also may confuse the public and property owners because it may appear that the community may not agree completely with the State and Federal professional preservation officials who have designated the National Register district.

It would be beneficial if general community agreement were achieved on what is historic if the program is to move beyond identification and designation. If more effort were put into explaining the rationale behind the broader view of preservation, and, if more local history were publicized, the community may take more pride and interest in its local heritage instead of continuing the discussion about which buildings should be in which category.

3. Public Awareness and Assistance for Property Owners in the Historic District

Protection of historic buildings may be accomplished by providing economic inducements, such as low interest revolving loan programs or tax credit

incentives. Financial incentives are offered at the State and Federal levels but not locally, although there has been some discussion about local real estate tax credits for rehabilitation. Public awareness is also an important aspect of historic preservation, and there have been various activities over the years to promote local preservation efforts. These activities include several, very visible museum restoration projects such as the Concord Point Lighthouse, the Keeper's House, and the Susquehanna and Tidewater Canal Lock House.

If the majority of property owners in the Historic District can appreciate the rationale behind the broad view of the significance of the district, then they may be more interested in rehabilitation of their buildings. While some of the incentives encourage rehabilitation and maintenance, more encouragement should be given to property owners in their private efforts. Public awareness campaigns need to promote preservation by focusing on the property owner as well as attracting the visitors. All incentives should be explored by the Historic Preservation Commission, and the most effective ones should be implemented as soon as possible, along with other public awareness techniques such as a series of newspaper articles, talks to civic groups, published tours, and continuation of local preservation awards.

4. Economic Development and Preservation

Havre de Grace has an opportunity to link economic development to historic preservation. It has a very large Historic District that is mostly intact from a visual perspective; it is located on the water which is an additional attraction in itself; it is very accessible to visitors with its location next to a major Interstate highway; and it is convenient to a very large population base of several East Coast metropolitan areas.

However, in order to sell preservation and history to visitors, it must first sell the concept to its own local officials and property owners. The Historic District is so large and encompassing that some may feel that only its core needs to be preserved. If the rest of the district is neglected and there is not a common vision for the whole, then its integrity begins to erode. Since wholesale clearance of blocks of buildings may seem unlikely under any scenario in the near future, it would appear advantageous to adopt a more active and positive preservation policy and to relate it to tourism and economic development.

C. Historic District Sub-Areas for Focused Preservation Strategies

The following are sub-areas of particular importance for focused preservation strategies, either because of their relationship to the historical development of the City, their integrity as a neighborhood or district, or as a contributing resource to the City's economic future.

1. Downtown Business District

A "Main Street" approach which emphasizes rehabilitation of the existing buildings is desired in the Downtown Business District. This program should be combined with improved promotions and economic strategies based on tourism and the local market. There is a great amount of information available from the *National Main Street Center* on this program.

2. Union Avenue Corridor

This is the main corridor of the National Register Historic District. Its integrity should be maintained through targeted historic preservation efforts. Review of the existing attraction signs and new directional signs may lend character to this central historic corridor.

3. Congress/Union Area

As Congress and Union Avenues were the primary streets in the initial layout for the City of Havre de Grace, this is a focal point intersection of the National Register Historic District and offers the opportunity for quality restoration of buildings in this area.

4. Waterfront

Much of the waterfront has been redeveloped, and several parcels are candidates for continuing redevelopment. However, the historic Seneca Cannery is one of the few historic, privately owned buildings that remain on the waterfront and should be preserved. Views and access to the waterfront from the rest of the National Register Historic District should be maintained in all redevelopment projects.

5. Lighthouse Area/Heritage Park

This is an area of mixed uses and offers a concentration of museums and cultural venues for visitors. The scenic views to and from the Concord Point Lighthouse and the O'Neill House (the Lightkeeper's house) are important to preserve.

6. Commerce Street Corridor

The western edge of the Historic District in this area could be extended to Stokes Street to include the Carrier House. The integrity of this corridor should be maintained through targeted preservation strategies. While there is the potential for some in-fill development in this area, it should be scaled to existing structures.

7. Washington Street Neighborhood

This area is made up of contiguous blocks of interesting historic residences, and its integrity should be maintained through targeted preservation efforts. Any in-fill development should be scaled appropriately to be in keeping with the character of the existing neighborhood structures.

8. Pennington Avenue West of Freedom Lane

This short corridor which connects the Downtown Business District with Havre de Grace City Hall and new Police Department building is a significant gateway to the commercial downtown. Historically, Pennington Avenue was originally St. Clair Street and provided a rail spur, known as “The Cut”, to the waterfront. Though there are a few historic buildings in the area, its central location offers the opportunity for some appropriate redevelopment and visual enhancements. This will strengthen Pennington Avenue as a more attractive thoroughfare between the downtown commercial area and the numerous civic uses adjoining it.

9. The area west of Union Avenue to the AMTRAK line and the Otsego-Ontario Street Neighborhood

These neighborhoods have experienced a considerable amount of residential rehabilitation, and the continuation of this trend is greatly desired.

V. HISTORIC PRESERVATION FOR RURAL PROPERTIES

D. Background

New development is occurring in the outlying rural areas that surround the City. Once grand estates are now becoming residential neighborhoods due to growing population demands and increased development pressures in areas where public infrastructure, such as public water and sewer, already exists. This Comprehensive Plan accommodates growth through annexation of the surrounding large farm tracts. However, preservation of the historic manor houses with some surrounding acreage (to set historic structures apart from newer homes) is greatly desired during the subdivision and development process.

Historically, the City was a tight, and fairly densely populated town, and became the center of commerce for Harford County due to its relationship to the water, major roads, and rail lines. The mercantile nature of the City and the easy access to greater markets resulted in a considerable amount of wealth to be concentrated in the City and the surrounding region. Several large farm tracts with magnificent, ornate mansion houses remain in the immediate vicinity of Havre de Grace. It has only been in recent years that these large landholdings have been under increasing

pressure to be developed. This is, in part, the result of Maryland Smart Growth policies, which encourage new development and growth in areas where public infrastructure exists, and new-found appreciation for the beauty of Havre de Grace, its waterfront, and its convenient location within the I-95 corridor.

Protection of the historic manor houses is important, as they include some excellent examples of various periods in history and are the visible remnants of historically significant families both locally and, in some cases, nationally. Many of these structures have been documented (as denoted by *HA*, meaning Harford, and a sequence number), and are part of the inventory of historic structures compiled by the Maryland Historical Trust. One structure, Sion Hill, is a National Historic Landmark, the highest designation of historical importance, because of the significance of various family members in relation to national history.

E. Property Descriptions

The following are property descriptions of the outlying historic structures in need of consideration in future development activity, two of which have already been annexed into Havre de Grace. These include Blenheim (HA 107) and Mount Pleasant (HA 763, 764). It is imperative that elected City officials and staff representatives work with the individual property owners during future annexation processes to preserve the important historic assets located on the remaining tracts.

1. Sion Hill (HA 525), National Register; National Historic Landmark

This structure is significant architecturally and, more importantly, because of the Rodgers family who occupied it. The two-story brick Federal structure was built by the Reverend John Ireland about 1785 for his residence with a wing for a private boys' school, the Sion Hill Seminary. It changed hands in 1795 and from there the structure receives its primary historic significance as it relates to the Rodgers family, which included Commodore John Rodgers and three generations of descendants who were prominent naval leaders. This site has been given the highest recognition of National Historic Landmark as a result of the importance of individual family members' roles in the nation's history.

Sion Hill is a three-part, Flemish bond brick structure with a central 2 ½ story gable-roofed main house and two two-story shed roof wings. It was designed as a (neo) classical villa, with expansive views of Havre de Grace and the Chesapeake Bay. The house itself has numerous significant architectural features, the lunette windows set within the central pediments, the keystones over the nine-over-nine double sash windows, the three part window over the garden facade entry, and the medallion block cornice on that same facade.

2. Blenheim (HA 107)

The statement of significance for this property from the Maryland Historical Trust includes the following: "Blenheim is a grand county estate dating back to the eighteenth century. The estate is dominated by an extremely large, two-and-one-half story Victorian villa which was built for the Osborn family in the late nineteenth century. It is significant for its architectural style and for its place in the development of Maryland architecture and its association with some of the leading figures in Harford County history". This property is eligible for the National Register.

Blenheim is a composition of Victorian era architectural elements blended to create a magnificent Queen Anne styled mansion. The dwelling is sited on a terraced knoll at the end of an open field. The frame two-and-one-half story residence consists of a central block with two end wings which project off the facade. The steeply pitched complex roof has intersecting gables, dormers, tall elaborately corbelled chimneys and is crowned with a prominent hip-roofed cupola. Other architectural elements include projecting bays, stick-like framing in gable ends, a variety of stained glass windows, projecting bay windows, various porches, and galleries with turned balusters and latticework, and elaborately carved oak woodwork in the interior. This structure along with 166.2 acres of land were annexed into Havre de Grace in March 2002. The house is being renovated as a guest house for the Bulle Rock Golf Course.

3. Mount Felix (HA 526)

Mount Felix was built by Jacob Giles, one of Harford County's first large scale entrepreneurs and owner of many business interests in the mid-eighteenth century. The large, brick, multi-part Georgian Mansion, with its kitchen wing, which may have replaced an earlier dwelling, is architecturally significant, as are the extant outbuildings, such as the meathouse and slave quarters. This structure is eligible for the National Register.

Mount Felix is a two-and-one half story brick Georgian manor house with two- story wings. The slate gable roof has three pedimented dormers, double chimneys incorporated within the brick end walls, and a central platform that may have been the base of an earlier cupola. The brickwork is laid in a stretcher bond, and there are jack arches over the nine-over-nine double sash windows. The main entrance located within the central bay is unusual and is probably a later change. It consists of a one-story portico that is capped by a Palladian window located within a wood panel. There are several early outbuildings as well as a number of later frame agricultural buildings and barns.

4. Harry Mitchell House (Cherry Hill Farm) (HA 760-762)

The Mitchell House, currently known as Cherry Hill Farm, is a late nineteenth century Victorian farmhouse reflecting the influence of A.J. Downing's romantic country house designs. The house is a three-bay frame cottage with a cross gable roof and a one-story, full width front porch. This structure is, most likely, eligible for the National Register.

Decorative features include the scrollwork on the bargeboards of the gables, a detail that extends along the eaves of the house as well as an entrance containing sidelights and a transom. Two matching corbelled interior chimneys protrude from the roof. There are several outbuildings constructed of coursed stone rubble, including a hip-roofed icehouse with a cupola vent, and a similarly designed springhouse. There is mature landscaping throughout the property, which also includes a barn, gazebo, swimming pool, and various rear additions to the house.

5. Mount Pleasant (HA 763, 764)

Mount Pleasant is a grand county estate of the eighteenth century. The first house on the estate, and the first truly great house in Harford County, was built around 1750 by Jacob Giles. The current Colonial Revival structure, with the garden and original outbuildings, is highly significant, architecturally, as an example of this style that was very popular in the early twentieth century. This structure is eligible for the National Register.

This fine example of a two-and-one half story Colonial Revival mansion has a number of interesting features, including Flemish bond brickwork, a slate roof with arched dormers, keystones over the eight-over-eight double sash windows, and a classically inspired entry with Ionic columns, a fanlight, and sidelights. The garden facade contains an unusual projecting one-story conservatory with five bays, each containing a pair of arched full-length windows. Above this composition is a Tudor-arched opening containing a traditional Palladian window. The interior has fine classically inspired and elaborate woodwork. The house is sited on a terraced knoll with commanding views of the Chesapeake Bay. Mount Pleasant farm was annexed by the City of Havre de Grace in July 1999. It is anticipated that the house will be preserved to support the Bulle Rock project.

6. Hokeland (Greenway Farm)

Hokeland is a mid-nineteenth century rural example of a restrained Italianate-style dwelling located west of Havre de Grace. It exemplifies the early, mid-century phase of the Italianate style, characterized by simple detailing. It was built in the 1850s by the Hoke family and was retained by descendants until being acquired by the Steele Family in 1938. This large

house is significant as a rare and relatively grand example of the style executed in the early years of its popularity. This structure is, most likely, eligible for the National Register.

Hokeland is a significant example of the Italianate-style with its shallow pitched hip roof, large brackets, and its pairs of long narrow four-over-four sash and four-over-six sash windows. The highly ordered symmetrical nature of its facade is somewhat unusual for a large domestic example of the Italianate style. Besides the rear addition and the application of vinyl siding, other changes include the addition of a Colonial Revival style entrance and the probable removal of the original front porch. There is a small barn on the property as well as tennis courts. The cedar lined lane and boxwood gardens are presently overgrown and need attention.

7. Stucco House (Lampson Property)

This house is located off the lane to Hokeland and east of the property. The house is a two and one-half story, gable-roofed stucco dwelling with twin end chimneys and dormers. The roof is slate and there are granite sills below each window. The house appears to date possibly from the early nineteenth century, but has been considerably altered over time. More research is necessary to determine if the structure is eligible for the National Register.

The facade has a recent one-story, gable-roofed portico with broad proportions. The garden facade has an open porch off the second floor. This feature is supported by large rectangular brick columns that project through the porch floor and receive the balustrade. The entry to this porch consists of a pair of double doors framed by a transom and sidelights. This second floor also contains longer windows than the first floor openings, indicating that the second floor could have been the original major floor of the house. Besides entry and porch changes, a long, one-story wing has been added to the north end of the house, and the stucco could also be a later feature. There are several twentieth century outbuildings on the site.

C. Preservation/Development Approaches in Growth Areas

Currently, there are no mechanisms in place to preserve the manor homes on the outlying historic farm tracts. Documentation through Maryland Historical Trust and designation on the National Register of Historic Places is recognition of historical importance, however it does not protect historically important structures from alteration or demolition. Strategies for protecting historic resources must come from the local regulatory level or must be the personal initiative of individual property owners. Property owners for two of the above-mentioned estates, Sion Hill and Mount Felix, have given easements to the State of Maryland in order to ensure the preservation of these properties. The remaining properties are not under preservation easements.

Given the proximity to Interstate 95, it would appear that it is very likely in the near future that many of the rural properties surrounding the City will be converted to other, more intense uses. If adjacent farm tracts are to be subject to annexation and ultimate development within the City, strategies must be devised to preserve the integrity of the historic resources while acknowledging the possibility of some level of future development on the properties. These strategies may include property owner education about rehabilitation tax credits for structural renovation, general notification of the significance of their structures, solicitation of preservation easements, and development guidelines that preserve historic resources. It is also desirable to have outbuildings and some of the land surrounding the main manor houses preserved, so that the original historic setting or context can remain.

Donation of preservation easements, establishment of local district protection to outlying structures, and the development guidelines which require clustering new development away from historic resources could be required at the time of annexation (i.e. annexation is contingent on the preservation of the important historical structures). This must be accomplished during the annexation process with Mayor and City Council and would require the fortitude of elected officials to require preservation of historic structures when a property owner petitions for annexation. It is a policy as outlined in this Comprehensive Plan that the historic resources of these manor houses be preserved. In return for these preservation measures, new development designed to complement the historic resources could be allowed on the remaining acreage. The result would allow for the preservation of historic properties, while allowing additional development opportunities.

I. INTRODUCTION

The Economic Growth, Resource Protection, and Planning Act (commonly referred to as the Growth Act) requires local governments to adopt a "Sensitive Areas" element in the Comprehensive Plan to address specific environmental resources. The Growth Act requires protection of the following four types of sensitive areas across the State of Maryland: (1) streams and their buffers; (2) 100-year floodplains; (3) habitats of threatened and endangered species; and (4) steep slopes. In addition to these four environmental considerations, this chapter also discusses the Chesapeake Bay Critical Area, non-tidal wetlands, forest conservation, storm water management, and generalized soil types of this region.

Much of the City's environmental regulations, such as stream buffer, floodplain, non-tidal wetland, storm water management, and forest conservation requirements, are mandated by the State of Maryland. For development projects, environmental impacts to these items are addressed at the subdivision and site plan review stages for individual properties. In addition to these regulations, the City's location adjacent to the Chesapeake Bay requires a heightened level of environmental oversight. The City developed its Chesapeake Bay Critical Area Program in 1988, and periodically reviews its program under the auspices of the Chesapeake Bay Critical Area Commission staff. The program is tailored to the historical development patterns of Havre de Grace, and it serves to regulate land uses and development practices immediately adjacent to the tidal waterways of the Susquehanna River and Chesapeake Bay.

State agencies that oversee environmental regulations are the Maryland Department of the Environment (MDE) and the Department of Natural Resources (DNR). These agencies assist with local ordinance review and interpretation and, in some cases, carry out enforcement actions for environmental infractions. MDE enforces 100-year floodplain compliance and is responsible for issues related to stormwater management, shoreline, and tidal and non-tidal wetlands. Offices within DNR address streams and their buffers, forest conservation, habitats of threatened and endangered species, steep slope protection, and individual jurisdictions' Chesapeake Bay Critical Area programs. Recommendations for this chapter are geared toward strengthening the City's local ordinances to address sensitive areas and environmental resources and to clarify the role of State agencies in the City's development review process.

This chapter includes a generalized map of environmental protection areas, such as the floodplain, the Chesapeake Bay Critical Area designations, contours, streams and waterways. Designations on this map are not specific to individual properties. More specific map information may be obtained at Havre de Grace City Hall through the Department of Economic Development and Planning.

II. RECOMMENDATIONS

- Review and revise existing ordinances, such as the Chesapeake Bay Critical Area Program, Forest Conservation Ordinance, and Storm Water Management Ordinance, on a regular basis to ensure consistency with State policies and law.
- Continue to coordinate with State and local agencies to ensure that all environmental resources are adequately protected during the development review process.
- Amend the Site Plan Ordinance to define requirements for stream buffers, steep slopes, and habitats of threatened and endangered species.
- Formalize the City's development review process so that the roles of State environmental regulatory agencies are outlined and clarified.
- Amend the Site Plan and Subdivision Ordinances to reflect proper review authority.
- Evaluate the City's current environmental standards for consistency with State and County requirements.
- Improve our knowledge base of threatened and endangered species within the local region so that protection measures can be applied during the annexation process and/or development review process. This includes identification of plant and animal species on land and within tidal and non-tidal waters.
- Improve storm water management and runoff water quality in the older portions of Havre de Grace through innovative techniques, such as small bio-retention facilities, storm drain filters, and grass filter strips, where appropriate.
- Continue to inspect newer stormwater management facilities on a semi-annual basis so that their effectiveness is maintained.
- Encourage the use of native plantings along the Susquehanna River and Chesapeake Bay shoreline in areas where development already exists.

III. SENSITIVE AREAS

This section describes sensitive areas and other environmental resources, with necessary definitions and justification for protection.

A. Streams and their Buffers

1. Definitions

Streams are parts of a watercourse, either naturally or artificially created, that contain intermittent or perennial base flow of groundwater origin.

Ditches that convey surface runoff exclusively from storm events are not included in this definition.

Stream buffers, as defined by the State, are areas that extend a minimum of twenty-five feet from the top of each stream bank along both sides of a stream.

2. Justification for protection of streams and their buffers

Streams and their buffers are valuable to people and vital to our natural resources. Streams provide drinking water for local communities and crop-saving irrigation for farmers during droughts. They also support recreational fishing and serve as spawning areas for commercial fish stock.

Streams and their buffers are home to countless species of animals and plants, and streams themselves serve as lifelines to the Bay, transporting valuable nutrients, minerals, and vitamins to the Chesapeake. The floodplains, wetlands, and wooded slopes along streams are very important parts of the stream ecosystem, and in many ways determine the diversity and health of a stream.

As development activity becomes more intense and consumes larger amounts of land, forests and natural vegetation along streams are diminished. The cumulative loss of large amounts of open space and natural land reduces the ability of remaining land along streams to buffer the effects of such intrusions as high stream flow and pollution. Many of Maryland's streams have lost part of their "immune system" and are now more vulnerable to harsh conditions and pollution stress than ever before.

Buffers are a crucial "best management technique" that reduces sediment, nitrogen, phosphorous, and other runoff pollutants by acting as a filter, thus minimizing damage to streams. The effectiveness of buffers depends on their width (which should take into account such factors as contiguous or nearby steep slopes, soil erodibility, and wetlands), the type of vegetation within the buffer (some plants are more effective at nutrient uptake than others), and maintenance of the buffer (natural, unmowed vegetation is preferable).

The Healthy Stream: The character of a stream is determined by the soil type, steepness, vegetation, climate, and artificial ground covering in its upstream watershed. Healthy streams, however, have certain things in common. Within each healthy stream is a diversity of habitat, including slow-moving runs, deep pools, gravel riffles, bends, and cover such as overhanging vegetation, submerged logs, and branches. Just as important is the stream's response to rainfall. A healthy stream will have much of its stormwater captured in its watershed upstream. Wetlands, upland vegetation, and organically rich soil help hold floodwater and release it gradually between storms. Healthy streams rise more slowly during storms,

do not flow as high at peak flow, and have more water in them at low flow than damaged streams. Higher and steadier base flows provide more habitat for aquatic life.

Less visible, but no less important, is the overall water quality of a healthy stream. Stream water should contain sufficient oxygen and provide suitable temperatures for plants and animals. Each animal and plant species has optimum temperature requirements for feeding and breeding. Trout and other types of fish, for example, require cool waters. Stream acidity and alkalinity should be balanced, the water should be clear, and dissolved minerals should be in natural proportions. Toxic substances such as oils, metals, solvents, and pesticides should not be carried in the water or concentrated in the bottom sediments.

As a result of both steady flows and good water quality, the diversity of habitat in a healthy stream provides for a complex and balanced community of plankton, streamside and instream vegetation, aquatic insects, worms, clams, snails, crayfish, fish, salamanders, frogs, turtles, snakes, birds, and mammals. This biota is not only found directly in the stream, but is also found burrowing in its banks, hiding in its wetlands, resting in the adjoining thickets, and browsing on the rich organic matter in its wooded ravines. While a healthy stream is dependent on the many activities occurring throughout the watershed, a large measure of protection can be provided by insuring the integrity of the stream's adjoining natural areas--particularly floodplains, wetlands, steep slopes, and wooded areas.

The Damaged Stream: With the growth of human population and its increasing need for food, shelter, and goods, natural areas and farmland are being converted into developed areas. Changes in ground cover and intensity of land use have the greatest impact on the quality of streams. Increased use of agricultural chemicals and the farming of marginal lands, combined with urban and suburban development in former woodlands, have dramatically altered the landscape in the watersheds of Maryland's streams, while carrying invisible contaminants as well.

Both the extreme high and low flows carry extra pollutants in a damaged stream. During wet weather, a damaged stream receives warm, muddy water from field ditches and the urban drain spouts and storm drains that form its headwaters. The wet flow can be intensely high. Flooding of developed areas may occur and banks often cave in. Mud and sand deposits in the stream, and the streambeds and banks widen from erosion. Former cool shaded pools, deep runs, and clean gravel beds are now scoured, buried, and open to the hot summer sun.

With development, normal infiltration into the soil is hindered because increased impervious surfaces and cleared land cause rainwater to run off of the land faster. This causes groundwater seeps and springs to dry up

following only a short period of dry weather and causes low stream flows to decrease further. Much of the streambed may dry out until the next flush of stormwater. During low stream flow, nitrogen which passed through a farm field or a suburban, grassed yard concentrates in a stream. Without adequate stream buffers or stormwater management, high flows wash heavy metals and oils from automotive and industrial sources into a stream in urban areas, and phosphorous, bacteria, and sediment from farm fields and dairy feed lots. Severely damaged streams no longer perform their natural functions and cannot support the recreation and water supply functions they may also provide.

In Maryland, most of the pollutants from damaged streams find their way into the Chesapeake Bay. Pollution from streams without natural buffers is one of the most serious cumulative factors affecting the overall health of the Bay. The nitrogen and phosphorous compounds, in particular, are overfeeding the Bay – a term called "eutrophication"— creating algae blooms out of once clear water, and depleting the water of its dissolved oxygen as the microscopic plants that thrive on the nutrients begin to die and decay. Greater sedimentation also results where natural buffers are absent.

Buffer Values: Buffers are protection areas or zones placed around streams to preserve some of the biological and hydrologic integrity of the stream basin. Stream buffers act as run-off and groundwater pollution control systems by filtering pollutants through the soil and root zone. For example, microscopic organisms that inhabit the soils in a forested buffer assist in the decomposition of pollutants much like the microbes in a sewage treatment plant.

Buffers provide habitat for wetland and upland plants that form the basis of healthy biological systems. A wide variety of animals use the natural vegetation as a corridor for food and cover. A natural buffer system provides safe passage from one patch of remaining forest to another. The leaves from natural vegetation are diverse and provide a good mix of nutrients, vitamins, and minerals to feed the many aquatic insects inhabiting a healthy stream bottom. A diverse and productive stream buffer leads to a diverse and productive insect community and to a diverse and productive fish community.

Stream buffers, in many cases, include adjoining wetlands, the floodplain, forests, and steep slopes. Apart from the valuable habitat in these sensitive areas, there are also clear benefits to people that result from protecting buffers. Wetlands and floodplains slow storm flows and dissipate floodwater energy, allowing more of it to percolate into the ground. The result is decreased flood damage and decreased need for expensive flood control structures. Ground water may be replenished if the buffer areas lie above drinking water aquifers.

In summary, the buffer of a stream should be conceived as more than a line on a map; it is part of the stream ecosystem, whose boundaries often depend on conditions of slope, soil, ground cover, and hydrology. The buffer encompasses parts of the stream ecosystem that are often dry, and yet integral to the stream's health. Although locally-adopted definitions may vary, stream buffers ideally include:

- *Floodplains where most stream's wetlands are formed and where energy dissipation, natural filtration, food storage, and water storage occur.*
- *Stream banks and steep slopes which should remain intact to prevent erosion from clogging the stream bed and provide protected habitat for mammals and refuges for many plants.*
- *Stream side forests and other vegetation, which provide habitat, stabilize banks, provide shading, reduce pollutants, and produce leaf-litter supporting a host of microscopic shredders, filter feeders, and decomposers that form the base of a healthy stream food chain.*

B. Hydrology

1. Definitions

Surficial hydrology refers, in general, to water on the land surface. This includes all visible water, including streams and wetlands.

Subsurface hydrology is generally referred to as *water table*.

Defining the 100-year floodplain involves engineering studies, field observations, and other available information. In this respect, the definition, as it translates to a map, leaves little room for interpretation in comparison to other sensitive areas. Local protection regulations under the Growth Act may exceed, but may not, diminish State standards. Because of the distinction between tidal and non-tidal floodplains under State Law, the definition should reflect that distinction and closely mirror the following:

- ***Tidal 100-Year Floodplain:*** *The land along or adjacent to tidal waters that is susceptible to inundation by the 100-year flood generated by coastal or tidal flooding due to high tides, hurricanes, tropical storms, or steady off-shore winds.*
- ***Nontidal 100-Year Floodplain:*** *The land area along or adjacent to nontidal streams and bodies of water that is susceptible to inundation by the 100-year flood as a result of rainfall and runoff from upland areas. Nontidal streams convey flow downstream under the force of gravity and are not influenced by tidal (lunar) forces.*

Definition of Nontidal Wetlands: The U.S. Army Corps of Engineers (Federal Register 1982) and the U.S. Environmental Protection Agency (Federal Register 1980) jointly define nontidal wetlands as: those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.

Diagnostic Environmental Characteristics: Wetlands have the following general diagnostic environmental characteristics:

- *Vegetation: The prevalent vegetation consists of macrophytes that are typically adapted to areas having hydrologic and soil conditions described above in the definition. Hydrophytic species, due to morphological, physiological, and/or reproductive adaptation(s), have the ability to grow, effectively compete, reproduce, and/or persist in the anaerobic soil conditions.*
- *Soil: Soils are present and have been classified as hydric, or they possess characteristics that are associated with reducing soil conditions.*
- *Hydrology: The area is inundated either permanently or periodically at mean water depths of less than 6.6 feet, or the soil is saturated to the surface at some time during the growing season of the prevalent vegetation.*

Technical Approach for the Identification and Delineation of Wetlands: Except in certain situations, evidence of a minimum of one positive wetland indicator from each parameter (hydrology, soil, and vegetation) must be found in order to make a positive wetland determination.

2. Justification for Protection

a. 100-Year Floodplain

The historical reasons for floodplain protection have been to guard against injury to people and to prevent the destruction of property. In the context of sensitive areas protection under the Act, relatively undisturbed floodplains serve a variety of additional functions having important public purposes and benefits.

Floodplains, the products of natural floods, moderate and store floodwaters, absorb wave energies, and reduce erosion and sedimentation. Wetlands found within floodplains help maintain water quality, recharge groundwater, protect fisheries, and provide

habitat and natural corridors for wildlife. Stream buffers found within floodplains also help to maintain water quality.

Safeguarding the many natural functions performed by floodplains benefits adjoining and downstream communities by minimizing the risks and costs associated with the loss of life and property; by contributing to the maintenance of water quality and quantity which may directly affect drinking water supplies and recreation opportunities; and, in many cases, by helping to restore the health of the Chesapeake Bay--a goal which will benefit the entire public.

b. Wetlands

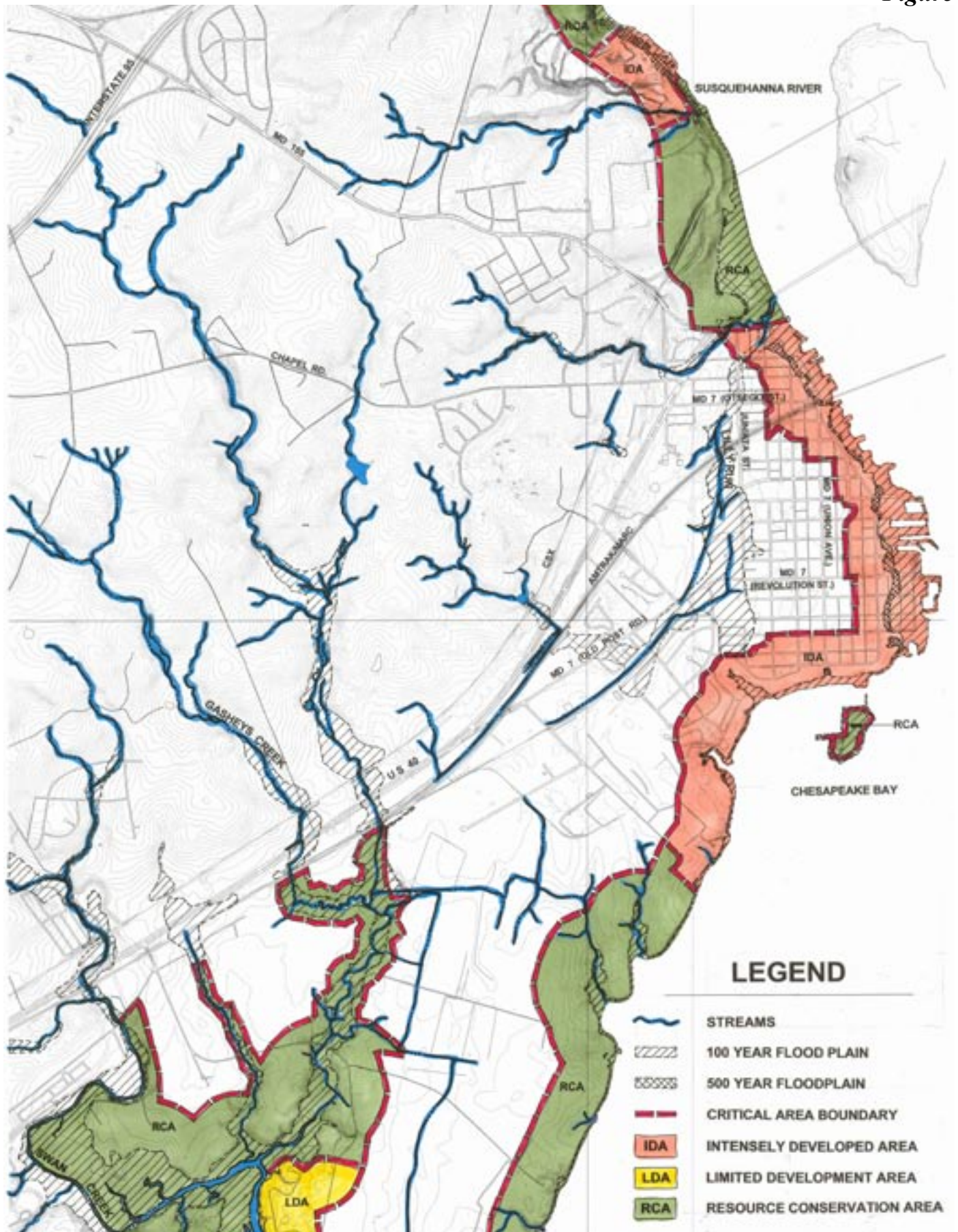
Upstream wetlands perform various functions within a given watershed:

- Influence the water quality of the adjacent river or stream by removing pollutants such as sediments, nutrients, and organics/inorganics.
- Increase detention time of floodwaters thereby reducing flow velocity, erosion, and flood peaks in downstream areas.
- Provide habitat for wildlife including waterfowl, mammals, and unique vegetation.
- Serve as spawning and nursery grounds for many estuarine and marine species of fish.
- Contribute to the aquatic food chain by providing detritus (decaying organic matter) to the biota of the adjoining waters.
- Prevent excessive water temperatures during summer months which could be lethal to invertebrates or fish.

There are many threats to wetland resources due to physical, chemical, and biological impacts. A few examples are:

- When an agricultural area is cultivated right to the edge of a river or stream, runoff of agricultural chemicals or pesticides increases. As these chemicals are deposited into the tributaries, the chances of transport to the estuary are greatly increased. In addition, some timber harvesting practices, such as clear cutting, may significantly degrade wetlands.
- Development activities in urban areas pose threats to wetlands. The most obvious impacts are filling or draining

Figure 10.1



SENSITIVE AREAS

wetlands for development. Urbanization of these areas typically has introduced high levels of nutrients, toxics, and sediments into upland runoff.

- Levees for flood control and water supply may completely eliminate some wetlands and may substantially change water flow patterns.
- Other channel alterations such as dams, channel diversion structures, and linear canal diversion structures, and linear canals all contribute to the limitations placed on wetlands in the natural functions they perform.

C. Habitats of Threatened and Endangered Species

1. Definitions

The following definition for **habitat of threatened and endangered species** has been adopted by the State:

An area which, due to its physical or biological features, provides important elements for the maintenance, expansion, and long-term survival of threatened and endangered species listed in COMAR 08.03.08. This area may include breeding, feeding, resting, migratory, or overwintering areas. Physical or biological features include (but are not limited to): structure and composition of the vegetation; faunal community; soils, water chemistry and quality; and geologic, hydrologic and microclimatic factors. This area may need special management or protection because of its importance to conservation of the threatened or endangered species.

2. Justification for Protection

In Maryland, over 200 species have been documented as disappearing over the past 350 years. Although elimination of large predators, such as wolves and panthers was intentional, essentially all human-induced disappearances in Maryland were incidental, due to habitat destruction. At least one ecosystem, the prairie-like grassland of the Hagerstown Valley, has been totally destroyed.

Other natural communities such as serpentine grasslands, bogs, and Delmarva bays have been reduced in number or altered to the point that they are in danger of disappearing. This habitat destruction and degradation threatens another 400 native Maryland species with elimination.

There are ethical and cultural reasons for stemming the loss of species. When a species is driven to extinction by the current generation of humans, all future generations must bear the cost. The well-being of future generations is the social responsibility of the present generation. Support is growing for an ethic that recognizes that every form of life warrants respect,

regardless of its worth to humans. This ethic has been adopted by the United Nations in the World Charter for Nature as a part of its principle for conserving biological diversity. Additionally, the plants and animals that make up "nature" have considerable abstract value, playing significant roles in art and many religions.

The key to protecting threatened and endangered species is protecting the habitat in which they occur. Propagation in zoos or botanical gardens is prohibitively expensive. Transplants of plants and animals are both expensive and often unsuccessful. Maintaining rare species in their habitats is cost-effective and biologically sound over the long term.

D. Topography/Steep Slopes

1. Definitions

Topography is the slope gradient of a site expressed as a relationship of vertical feet of elevation over horizontal feet of distance (rise over run) as well as the visual lay of the land. Topography has specific implications for site development. It controls the location of roads, pathways, buildings, and utilities. Topography also affects the overall visual character of the site.

Steep slopes are defined as areas with slopes greater than 25%.

2. Appropriate Uses

In most climates and locales 0 to 8% is an optimum slope range for driving a vehicle or walking. Depending upon building design, a site can accommodate structures on grades of up to 15%. Slopes of more than 15% are prohibitive for most uses. Optimum gradients for general development are 2% to 8%. Slopes of less than 2% require grading to enable drainage, whereas slopes more than 8% often require excessive grading as well as costly structural solutions. Although severe topographical conditions often create dramatic landscapes, the ability to develop steeply sloping sites in conventional ways is limited.

Slopes beyond 20%, on the average, create cut and fill difficulties for siting structures with rear level walkouts for basement or ground floors. Private streets and walks also become unworkable on slopes over 20%. In terms of public utilities, slopes beyond 20% become unmanageable for the efficient and environmentally acceptable construction of storm drainage systems and sanitary sewer laterals. A slope of 30% is normally the cutoff beyond which cut and fill can be benched without accelerated engineering treatment. Furthermore, it should be noted that the great majority of soils found in Maryland are highly erodible at 30% or greater and are unacceptable, for the most part, for useable yards, active recreation open spaces, or accessory uses.

3. Justification for Protection

Slopes provide an environment for movement of soil and pollutants when land disturbance occurs. While soils have varying degrees of erodibility, all soils are, nonetheless, subject to movement and increasingly so as the slope of the land increases. Control of erosion potential is usually achieved in the context of slope regulation, where environmental protection is focused on those where soil movement is most likely to be a problem, i.e. on steep slopes.

There are multiple reasons for protecting steep slopes:

- Preservation of steep slopes adjacent to watercourses is especially important because of the potential harm to water quality and aquatic habitat. Communities must pay the economic costs associated with loss of water quality, as well as hazards such as flooding and landslides and other problems caused by disturbances to steep slopes.
- The identification and protection of steep slopes within a community helps to protect the community and downstream communities from these hazards.
- Protection also provides aesthetically pleasing open space and maintains local biodiversity found on the slopes.

Effects of Erosion and Sedimentation: Clearing and grading land results in increased runoff and accelerated erosion and sediment transport, even on moderate slopes. Once vegetation is removed from steep slopes, it is often difficult to re-establish. Bare slopes expose soils to repeated rainfall. Rainfall carries the sediment into streams which previously carried smaller amounts of material. The increased sediment results in channel bars, the stream banks erode, and the channel becomes wider and more shallow. As sediment fills culverts, and the stream's ability to carry water is decreased due to excess sedimentation and channel enlargement, flooding becomes a serious problem.

Economic Costs of Erosion and Sedimentation: Significant expenditures are often required to repair damage by flooding, sedimentation, and erosion. For example, floods undercut roads, scour bridge abutments, and destroy homes and property. Costly stream bank stabilization may be needed to combat erosion in developed areas, and sedimentation decreases reservoir capacity and increases water treatment costs.

Slope Instability: Landslides and other mass movements of soil on a slope can threaten life and property. Landslides are present in all five of the physiographic provinces of Maryland. The largest extent of landslides, with highest total damage costs, occurs in the Coastal Plain province. Most of the

landslide problems in the Appalachian Plateau and the Valley and Ridge provinces have been generated by highway construction.

When slope stability is disturbed, downslope movements may occur. As slope angles increase, downslope forces increase, although the interrelationship between slope gradient and stability is not simple. Landslides can occur on moderate slopes. The three most significant natural factors that contribute to landslide potential are water, slope, and geology (underlying lithology and stratigraphy). The structure and form of the slope are important – old slides and incompetent formations (i.e., where soils do not support weight) are vulnerable.

Loss of Local Biodiversity: Steep slopes are known by botanists and wildlife biologists to be areas where a surprising number of different plant and animal species can be found within a short distance from one another. Historically, many of these areas have not been disturbed as they are hard to farm, log, and develop. Ecologists are interested in steeply sloped areas because they are areas of high biodiversity compared with areas of the landscape which have relatively uniform living conditions. Scientists have found that, in places where steep slopes occur, a variety of living conditions also occurs. These small habitats are called microhabitats. Microhabitats are the small shaded bogs, the dry steep slopes, and the nooks and crannies in the larger steeply sloped landscape where very specific living conditions occur on a small scale. They are the home for a diversity of plants and other organisms that have adapted to specific site conditions. Some of these areas provide habitats for threatened and endangered species, which require protection under the Growth Act.

Local biodiversity is important to all of us whether we live in cities, towns, suburban developments, or in the countryside. Local diversity of native plants, animals, fungi, and bacteria survive and flourish in habitats where they are more efficient, and, therefore, more likely to survive than other species. On steep slopes that are altered, for example by construction projects, or by the creation of lawns, other less efficient organisms, or none at all, take the place of the local native life forms. New vegetation is less efficient than the native community of plants and animals which once protected the slope against wind and water erosion. Each community of plants and animals that once occurred on the slope in a specific microhabitat was best suited to hold moisture in the soil, capture energy, capture and recycle nutrients, and produce and preserve soil in the microhabitat without the help of erosion control structures, fertilizers, insecticides, or irrigation.

4. Description of the Area

This eastern Harford County region (including Havre de Grace) is divided into two physiographic provinces which are clearly defined along US 40. To the north and west of US 40 lies the Piedmont Plateau Province, which is

characterized by rolling hills and valleys that vary from moderate to extreme in degree of slope. The range of slope is mostly between 1% and 10% and is suitable for residential building sites. Steep slopes from 15% to 20% and generally not suitable for development are found along stream valleys and the western bank of the Susquehanna River.

In contrast to the rolling hills of the Piedmont, the portion of the planning area to the south and east of US 40 lies in the flat terrain of the Coastal Plain Province. Variation in elevation ranges from sea level to sixty feet above sea level with most of the land area within this portion being between twenty to forty feet above sea level. Most of the developed area of Havre de Grace is located in the Coastal Plain Physiographic Province.

The drainage pattern found in the planning area is divided between flows toward the Susquehanna River and upper Chesapeake Bay. The northern part within the Piedmont Plateau drains in both directions - easterly toward the Susquehanna and southerly toward the Bay. The drainage pattern of the area's southern part within the Coastal Plain is less defined.

E. Forest Conservation

1. Definition

A **forest** is a biological community dominated by trees and other woody plants covering a land area of 10,000 square feet or greater. A forest includes areas that have at least one hundred live trees having two-inch or greater diameter at 4.5 feet above the ground. A forest also includes areas that have been cut but not cleared, but does not include orchards.

The **Forest Conservation Ordinance** requires a forest stand delineation and forest conservation plan for a development plan where land disturbance is 40,000 square feet or greater. This local ordinance is guided by State law and contains requirements for forests to be retained and/or replanted upon development.

2. Justification for Protection

Forests, woodlands, groves, hedgerows, and their associated vegetation are perhaps our most conspicuous and most easily appreciated environment and landscape resources. It is when trees are cleared for development that the vulnerability of the environment in suburban areas is suddenly and starkly emphasized. Mitigation of such losses has usually been limited to decorative landscaping rather than the creation of ecologically balanced plant communities.

The benefits of maintaining large tracts of undisturbed woodlands or other natural vegetation within developments are many. Such stands help control

stormwater run-off, minimize erosion and sedimentation of streams, provide wildlife habitats, and provide shade to help moderate local temperatures. They form visual buffers and are scenic in their own right. All in all, trees and woodlands are the most efficient means to control and mitigate the most common sources of water quality degradation and the problems this degradation causes for the Chesapeake Bay.

F. Chesapeake Bay Critical Area Program

1. Definitions

The **Chesapeake Bay Critical Area Program** was established by the State of Maryland to protect the important land and water resources of the Chesapeake Bay and its tributaries. The Critical Area consists of all land within 1,000 feet of Mean High Water Line of tidal water of the Bay and its tributaries and the landward edge of tidal wetlands.

The 1,000 foot Critical Area overlay protection zone within the City of Havre de Grace includes areas designated as **Intensely Developed Areas (IDA)** and **Resource Conservation Areas (RCA)**. The majority of the City is designated IDA with only the natural portions of land within the corporate limits, such as North Park and Tydings Island, designated as RCA. Because of the City's intense historic development patterns, much of the IDA area immediately adjacent to the water's edge (the 100 foot buffer) is designated as a **Buffer Exempt Area (BEA)**. Though they are recognized as BEA, these shoreline areas are subject to more stringent design criteria because of their immediate proximity to the Chesapeake Bay.

2. Justification for Protection

The goal of the Chesapeake Bay Critical Area Program is to improve the water quality of the Chesapeake Bay. This is done by reducing and/or mitigating for impervious surfaces in those areas that are most critical to the Bay, and providing intensive planting requirements for any new development immediately adjacent to the shoreline. Impervious surfaces include parking areas, buildings, driveways, and streets – any surface which blocks the soil from absorbing rain and storm water runoff. The object is to slow storm water runoff to allow for natural soil infiltration. Sixty-one (61) counties and municipalities in Maryland are affected by the Critical Area Law and are required to develop individualized protection strategies tailored to their local conditions.

Within the 1,000 foot Critical Area overlay protection zone in Havre de Grace, new development is subject to building guidelines that offset the impact of new impervious surface or a fee of \$1.25 per square foot of new impervious area. Building requirements often include the addition of small, gravel-filled rain retention areas adjacent to new improvements. Impervious

surfaces reduce the area for soil infiltration of rain and storm water runoff. This is significant, especially next to the Chesapeake Bay shoreline, because soil and vegetation filter pollutants before they reach the Bay. Additionally, parking areas have their own pollutants associated with them. Oil and other fluids from vehicles collect on paved surfaces and are flushed into nearby waterways. Slowing storm water runoff and allowing it to be filtered naturally or treated are the primary goals of the City's Critical Area Program.

With the most recent review of the Chesapeake Bay Critical Area Program, redevelopment and new development projects immediately adjacent to the Bay are also subject to intense planting requirements. This is required as part of recent State policy changes regarding Buffer Exempt Areas (April 2000). These buffers provide a heavily vegetated filter strip adjacent to the shoreline for storm water infiltration and water quality improvements on projects that have direct and immediate impact on the Chesapeake Bay.

G. Stormwater Management

1. Definitions

Stormwater management is for both qualitative and quantitative control of stormwater runoff.

For **quantitative control**, stormwater management is a system of vegetative and structural measures that control the increased volume and rate of surface runoff caused by human-made changes to the land.

For **qualitative control**, stormwater management is a system of vegetative, structural, and other measures that reduce or eliminate pollutants that might otherwise be transported by surface runoff.

A **retention structure** is a permanent structure that provides for the storage of runoff by means of a pond or pool of water.

2. Justification for Protection

Stormwater management laws were put into effect for public safety and improved environmental quality as a result of land development practices. The Maryland Department of the Environment oversees the local implementation of stormwater management regulations for all jurisdictions within the State of Maryland. Because land development impacts the natural flow and infiltration of surface water, stormwater management is a mitigating effort to direct rain and stormwater runoff, often capturing it in stormwater management ponds or retention structures. These retention structures are sized appropriately to handle potential storm events for two-, five-, and ten-year storms.

Stormwater management directs surface runoff to areas that are most advantageous on a site, often enhancing and/or creating non-tidal wetlands in the process. In addition, controlled stormwater management prevents soil erosion and provides areas for soil infiltration of stormwater runoff. Retention ponds are designed with shallow slopes and outfitted with concrete outfalls that control the flow speed of water from the structure into adjoining waterways or wetlands. During the development process, stormwater management ponds serve as sediment and erosion control facilities, and then later graded and planted with native vegetation to serve as permanent retention structures.

Long-term maintenance of the stormwater management ponds is important so that the structures continue to adequately serve their function. Within the City of Havre de Grace, maintenance of these structures is required to be performed by the owner, often a community's Home Owners Association. Trained landscaping companies may be contracted to perform the specialized maintenance that is required annually, which includes inspection of the outfall, mowing twice a year (spring and fall), and removal of any brambles and unwanted trees. The stormwater management facilities are subject to routine inspections and property owners may be fined if the facilities are not adequately maintained.

H. Soils

1. Definitions

A **soil association** is a landscape that has a distinctive proportional pattern of soils. It normally consists of one or more major soil and at least one minor soil, and is named for the major soils. The soils in one association may occur in another, but in a different pattern.

The Havre de Grace area has a wide variety of geologic formations. The geology of a region determines the rock types from which the soils of the area arise. There are numerous types of soils in Harford County. These soils are grouped into thirteen basic soil associations. Three of these associations are in the Havre de Grace area and will be further described.

The physical parameters of each soils association reflect the characteristic development potentials for each parcel of land within the Havre de Grace area. For example, specific soils and/or the presence of rock may restrict, to some degree, urban development potentials for building construction and public utility installation, or the presence of wetlands may preclude any development or land disturbance activities in areas before they have been field verified. The three soil associations that overlay the Havre de Grace area are:

- *Soils of the Piedmont Plateau:* The soil association in this group in the Havre de Grace area is formed mainly in residuum that weathered in place from acid or basic rocks. They are nearly level to steep. Some of the steep soils are very stony.
- *Soils of the Atlantic Coastal Plain:* The soils in the two associations in this group formed mainly in thick deposits of Coastal Plain sediments. They are nearly level to steep, and some are sandy and gravelly.
- *Soils of the Flood Plains and Low Terraces:* The soil in these associations formed mainly in alluvium that was washed down from upland areas of the Piedmont or Coastal Plain. These soils are nearly level to gently sloping.

Within the three soil associations, there are seven varieties of soils that are in the Havre de Grace area. These are Chester loam, Elkton silt loam, Keyport silt loam, Manor stony loam, Montalto clay loam, Sassafras gravelly loam, and Sassafras silt loam. Table 10.1 indicates the characteristics of these soils.

The Sassafras silt loam predominates in the area southeast of the AMTRAK Line and covers most of the built-up area of Havre de Grace. Elkton silt loam is found on both sides of the AMTRAK Line in the southeast part of Havre de Grace. This soil may cause problems that will require artificial means of disposing of excessive water upon development. The Keyport silt loam is found around the area of Swan and Gasheys Creeks, and in a strip running from the southwest to the northeast between the CSX Rail Line and the AMTRAK Line.

To the north of the CSX Line are found Chester loam, Montalto clay loam, Manor stony loam, and Sassafras gravelly loam. The Chester loam covers the greatest portion of this area, and the other three soils are found in pockets within it; Manor stony loam along the Susquehanna River, Sassafras in the high lands to the northwest of the City, and Montalto clay loam in the northwest corner of the City.

Table 10.1 shows the suitability of the planning area's soils as they relate to urban and agricultural uses. The drainage characteristics of these soils are of primary concern to urban use, particularly in the sections of the planning area where public sewage service is not yet available.

In general, soils containing silts, such as the Sassafras silt loam, Keyport silt loam, and Elkton silt loam, may be unstable in the presence of water and have a tendency to become "quick" when saturated in a loose condition. Silts are fairly impervious, difficult to compact, and are highly susceptible to frost heaving. Silty soils, however, vary considerably, and, therefore, require

analysis prior to development construction. Two additional soils, the Aldino silt loam and the Montalto silt loam, are found in the outlying portions of the planning area.

TABLE 10.1
SOIL TYPES - HAVRE DE GRACE PLANNING AREA

Soil	Soil Depth & Drainage Characteristics	Suitability for Building Development	Surface Condition
Sassafras Silt Loam	Moderately deep, 10 to 16 inches; Good drainage, except in some level spots	Generally suitable	Gently rolling and in places nearly flat
Keyport Silt Loam	Deep, 18 to 36 inches; Fairly good drainage	Generally suitable	Gentle slopes
Elkton Silt Loam	Shallow, 7 to 10 inches; Poor drainage	Fair	Flat to slightly depressed
Chester Loam	Shallow, 7 to 10 inches; Well drained	Generally suitable	Gentle rolling, rolling, or hilly
Montalto Clay Loam	Shallow, 6 to 10 inches; Good drainage	Generally suitable	Level, gently rolling, and hilly.
Manor Stony Loam	Shallow, 6 to 12 inches; Surface drainage excellent, if cleared, it erodes seriously	Steep, but suitable for development	Steeply sloping and hilly
Sassafras Gravelly Loam	Shallow, 8 to 10 inches; Surface drainage good, under-drainage is excessive	Fair	Rolling to steep sloping.

2. Justification for Protection

Soils unsuitable for development have the potential for frost heaving, poor drainage, liabilities in shear strength, and compressibility and potential expansion. Nearness to bedrock and the water table and the presence of a hardpan are also major considerations. Specific soils bearing these traits, or soils which are conducive to wetlands, may restrict development potentials for building construction and public utility installation.

The importance of physiographic conditions in determining the unique potential of future land uses for a given site in the Havre de Grace area must be emphasized. Particularly important to this assessment are the terrain, soils, wetlands, and existing floodplains. From an environmental perspective, these items are mutually dependent. When the physical planning units in the Havre de Grace area are viewed in the aggregate,

planning recommendations can be imposed which reflect environmental determinants identified in the early stages of the planning process.

Hydrology, geology, and soils are a set of physiographic characteristics among the components determining development suitability. The Soil Conservation Service of the United States Department of Agriculture has prepared extensive geological and soil conditions studies for the Havre de Grace area (*Soil Survey of Harford County Area, Maryland*). Their findings have been summarized in the previous pages, though it is suggested that the source be consulted for more detailed, site-specific information.

I. INTRODUCTION

In recent years, Havre de Grace has undergone a significant increase in housing opportunities which has resulted in a substantial increase in population as well. These changes of the past decade have created a healthy mix of housing types within the City. The Old Town area, which is the historic housing core of the City, has maintained its blend of historic homes, affordable small-lot residential development, mixed-use residential/commercial, and other uses as well as more recent additions of higher-end condominium housing along the waterfront. To the west, new subdivisions have added significantly to the availability of single-family units and townhomes in price ranges attractive to young families. In addition, projects that are currently being built will appeal to “empty-nesters” with up-scale units located in newly planned neighborhoods. These recent and anticipated changes have moved the City from a community with an aging housing stock where less than half the residences were occupied by owners, to a vibrant range of housing availabilities with an appeal to all age and socio-economic groups.

This chapter outlines current housing characteristics and trends, and reflects on issues raised in the 1996 Comprehensive Plan. It also makes recommendations for the improvement of housing through design as it relates to the historic areas of the City, property maintenance and livability, and innovative development in new communities. The City of Havre de Grace truly represents a healthy mix of housing choices and opportunities for new and future residents. The data presented in this chapter clearly reflect the changes that have taken place.

II. RECOMMENDATIONS

- Continue to enforce the Property Maintenance Code for improved livability throughout the City. As established by State Law, the Property Maintenance Code is the basis for all public health, safety, and welfare actions by the City’s property maintenance enforcement staff for upholding standards of livability for residents within the community.
- Adopt and implement a Residential Rental Housing Ordinance to provide access for the property maintenance enforcement staff to enable the interior inspection of rental units. Once in place, develop a rental housing inspection program for all rental units.

- Work with property owners in the Downtown Business District, Waterfront, and the Old Town areas of the City so that improvements and new construction are compatible with existing structures and the surrounding built environment.
- Develop design guidelines for in-fill development and redevelopment within the National Register Historic District so that new buildings are in keeping with the historic character of the older portions of the City. The Historic Preservation Ordinance enables the implementation of design guidelines for the historic areas of the City.
- Amend the Zoning Ordinance to incorporate new residential zoning districts and requirements to meet the opportunities for innovative development in the annexed areas. Regulations should address the need for useable recreational open space and active playing fields as part of the newly emerging communities.
- Reevaluate the fee structure for new residential permits and inspections.
- Continue to support the Havre de Grace Housing Authority in their administration of housing assistance for low- to moderate-income families in the region.
- Develop partnerships with private, non-profit agencies, and financial institutions for application of homeownership programs within Havre de Grace.

III. PROFILES OF SELECTED CHARACTERISTICS AND TRENDS

The information contained in this chapter is based upon U.S. Census Bureau, Census 2000 data. The data are available in two forms: by census tract and in a consolidated table by the geographic area, City of Havre de Grace. Both sets of information are useful and utilized within this chapter. Consolidated information by the U.S. Census Bureau provides profiles related to general demographic and selected social, economic, and housing characteristics for 2000. This type of information is used for a majority of the trend analyses where data between jurisdictions are compared. Data provided by individual census tracts, on the other hand, allow for analytical comparisons in trends between different areas within the City and are used to illustrate those differences. Though they are mutually supportive, the two data sets cannot be used together directly due to the fact that the census tract information does not conform to the municipal boundaries for Havre de Grace on which the consolidated information is based.

For the purpose of the tract comparison within the City, Havre de Grace is divided into three census tracts: 3061, 3062, and 3064. For the purpose of this plan, census tract 3061 will be referred to as *Northern Old Town*. Census tract 3062 is *Southern Old Town*, whereas tract 3064 is comprised primarily of the newer neighborhoods located to the north and west of the CSX rail line to the right-of-way of I-95 and will be referred to as *Newer Communities*.

A. Age of Housing Stock

The following table shows the age of housing stock among the four jurisdictions of Havre de Grace, Aberdeen, Bel Air, and Harford County. Since 1990, a total of 1,314 new homes have been constructed within the City of Havre de Grace, over a thousand of which are located in the newer subdivisions north and west of US 40. The surge of new construction is reflected in Table 11.1, which shows that 27% of the existing housing stock in Havre de Grace was built within the last decade. This reflects a significant shift in growth rate patterns for the City, where the decades prior to 1990 were characterized by relatively slow growth in housing construction. One striking comparison between Havre de Grace and Harford County is that, during the past decade, the City's rate of new housing stock is comparable to Harford County's rate of 27.6%.

TABLE 11.1
AGE OF HOUSING STOCK
FROM CENSUS 2000, PROFILES OF SELECTED HOUSING CHARACTERISTICS

HARFORD COUNTY			HAVRE DE GRACE		
Year Structure Built	No.	% of Total	Year Structure Built	No.	% of Total
1990 to 2000	22,938	27.6	1990 to 2000	1,314	27.0
1980 to 1989	16,921	20.4	1980 to 1989	300	6.2
1970 to 1979	16,292	19.6	1970 to 1979	453	9.3
1960 to 1969	11,774	14.2	1960 to 1969	494	10.1
1940 to 1959	9,480	11.4	1940 to 1959	1,158	23.8
1939 or earlier	5,741	6.9	1939 or earlier	1,155	23.7
Total Housing Units = 83,146			Total Housing Units = 4,874		
BEL AIR			ABERDEEN		
Year Structure Built	No.	% of Total	Year Structure Built	No.	% of Total
1990 to 2000	690	15.4	1990 to 2000	734	12.5
1980 to 1989	796	17.8	1980 to 1989	870	14.9
1970 to 1979	1,073	24.0	1970 to 1979	993	17.0
1960 to 1969	842	18.9	1960 to 1969	1,008	17.2
1940 to 1959	811	18.2	1940 to 1959	1,802	30.8
1939 or earlier	253	5.7	1939 or earlier	448	7.7
Total Housing Units = 4,465			Total Housing Units = 5,855		

B. Households and Average Household Size

The total number of households in Havre de Grace grew 30.0% during the 1990-2000 decade, increasing from 3,505 to 4,557. This exceeds Harford County's household rate of change during the same time period (26.1%) and projections from the City's 1996 Comprehensive Plan. At that time, the projected household growth rate was anticipated to be 22.3% based on new housing and occupancy approvals

issued from 1990 to 1996. The household rate of growth for Havre de Grace during the prior decade (1980 to 1990) was 9.1%.

Over the past two decades, the average household size has steadily decreased for all jurisdictions within the County. The 2000 census data indicate that the average household size in Havre de Grace is 2.44 persons. Harford County consistently has the highest average household size, which may be attributable to the comparatively large number of families with children living at home.

TABLE 11.2
TOTAL HOUSEHOLDS
FROM CENSUS 2000, PROFILES OF GENERAL DEMOGRAPHIC CHARACTERISTICS

Households	1980	1990	% Change	2000	% Change
Harford County	46,547	63,193	35.8	79,667	26.1
Havre de Grace	3,213	3,505	9.1	4,557	30.0
Bel Air	3,150	3,679	16.8	4,235	15.1
Aberdeen	4,190	5,001	19.4	5,475	9.5

TABLE 11.3
AVERAGE HOUSEHOLD SIZE
FROM CENSUS 2000, PROFILES OF GENERAL DEMOGRAPHIC CHARACTERISTICS

Persons per Household	1980	1990	2000
Harford County	3.14	2.83	2.72
Havre de Grace	2.73	2.49	2.44
Bel Air	2.48	2.41	2.25
Aberdeen	2.75	2.61	2.51

C. Ownership

Homeownership is an indicator of stability and long-term commitment in a community, providing that enough housing is available for purchase. Tables 11.4 and 11.5 show the owner-occupancy versus tenant-occupancy for 1990 and 2000 for Harford County and the three municipalities in order to compare trends between jurisdictions. In 1990, less than half of all housing units in Havre de Grace were owner-occupied (45.5%). Since the construction of new subdivisions during the 1990's, such as Bayview Estates and Grace Harbour, the percentage of owner-occupied residences increased to 56.5% in 2000.

Table 11.6, on the other hand, compares owner-occupancy versus tenant-occupancy of the three census tracts within the City of Havre de Grace and more fully illustrates the local dynamic of tenant- vs. owner-occupancy rates. It can be noted that the older portions of the City represented by tracts 3061 and 3062 have significantly higher percentages (at 58.7% and 60.6%, respectively) of tenant-occupied residences than the newer communities. The encouragement of home-ownership programs by

local non-profits and financial institutions, which target low- to moderate-income individuals in these areas, may be desired.

TABLE 11.4
OWNER-OCCUPIED VS. TENANT -OCCUPIED HOUSING, 1990

	Total No. of Occupied Units	No. of Units, Owner-Occupied	% of Units, Owner-Occupied	No. of Units, Tenant-Occupied	% of Units, Tenant- Occupied
Harford County	63,193	46,704	73.9	16,489	26.1
Havre de Grace	3,505	1,595	45.5	1,910	54.5
Bel Air	3,679	2,294	62.4	1,385	37.6
Aberdeen	5,001	2,623	52.4	2,378	47.6

TABLE 11.5
OWNER-OCCUPIED VS. TENANT-OCCUPIED HOUSING, 2000

	Total No. of Occupied Units	No. of Units, Owner-Occupied	% of Units, Owner-Occupied	No. of Units, Tenant-Occupied	% of Units, Tenant-Occupied
Harford County	79,667	62,148	78.0	17,519	22.0
Havre de Grace	4,557	2,575	56.5	1,982	43.5
Bel Air	4,235	2,793	66.0	1,442	34.0
Aberdeen	5,475	3,232	59.0	2,243	41.0

TABLE 11.6
OWNER-OCCUPIED VS. TENANT-OCCUPIED HOUSING
WITHIN HAVRE DE GRACE BY CENSUS TRACT, 2000

	Total No. of Occupied Units	No. of Units, Owner-Occupied	% of Units, Owner-Occupied	No. of Units, Tenant-Occupied	% of Units, Tenant-Occupied
<i>Northern Old Town 3061</i>	1,843	762	41.3	1,081	58.7
<i>Southern Old Town 3062</i>	1,258	496	39.4	762	60.6
<i>Newer Communities 3064</i>	1,660	1,494	90.0	166	10.0

D. Units in Structure

The following table compares the units in structure (i.e. units by type of structure, such as single-family dwellings, multi-family, etc.) and their respective percentage by Harford County jurisdiction. Looking back from the 1996 Comprehensive Plan, a substantial change has occurred in the percentages of types of housing within the City of Havre de Grace. According to 1990 census data, multi-family housing accounted for 39.8% of the total units City-wide. By 2000, this ratio had dropped to

31.4 %. Single-family residences, on the other hand, rose from 39.6% in 1990 to 46.7% in 2000. Much of the change is attributable to the new single-family developments of the 1990's. During that decade, 775 single-family homes were constructed.

Comparatively, all municipalities have a greater number of multi-family residential units than Harford County. Multi-family units account for 16.4% of all housing units in Harford County, whereas Havre de Grace, Bel Air, and Aberdeen have percentages of 31.4, 40.1, and 26.8 respectively. This is due to the more densely populated and focused development in those areas.

Table 11.7
UNITS IN STRUCTURE, 2000

Type of Unit	Harford County		Havre de Grace		Bel Air		Aberdeen	
	Units	% total	Units	% total	Units	% total	Units	% total
Single-Family, detached	51,187	61.6	2,274	46.7	1,819	40.7	3,327	56.8
Single-Family attached	15,107	18.2	1,051	21.6	857	19.2	652	11.1
Multi-Family, 2 units	804	1.0	210	4.3	53	1.2	92	1.6
3 to 4 units	1,796	2.2	425	8.7	68	1.5	125	2.1
5 to 9 units	3,498	4.2	395	8.1	639	14.3	492	8.4
10 to 19 units	5,592	6.7	183	3.8	718	16.1	535	9.1
20 or more units	1,926	2.3	318	6.5	311	7.0	327	5.6
Mobile Home	3,218	3.9	6	0.1	0	0.0	305	5.2
Boat, RV etc.	18	0.0	12	0.2	0	0.0	0	0.0
Totals	83,146		4,874		4,465		5,855	

E. Housing Conditions

Housing conditions within the City of Havre de Grace are generally good. However, there are some areas of the City that must continually be addressed through the enforcement of the Property Maintenance Code. Often, the subject properties are rental units, or tenant-occupied housing. The City is working to strengthen the existing regulations to improve community livability through a residential rental property ordinance, which will require property owners of rental units to register their properties and provide for the regular interior inspection of all rental units. This is an overall effort to inventory, map, and track rental housing units for the purpose of understanding the impacts of those residences, both positive and

negative, on the City and to protect the health, safety, and welfare of the citizens who reside in leased residential units.

The City adopted the International BOCA 2000 Property Maintenance Code through Ordinance 827 in 2001. Addressing both the interior and exterior of all structures in the City, this code was established to ensure the safety and health of residents and to inhibit property value degradation. Examples of exterior property maintenance items included under the Property Maintenance Code are the condition of main structures, fencing, and auxiliary structures, the condition of the property itself (such as ponding water, high weeds and/or grass, sink holes), the accumulation of rubbish and garbage, and untagged and inoperable vehicles. Interior items addressed in the code include but are not limited to: electrical; plumbing; heating and ventilation; fire and safety codes for egress, smoke detection, and fire extinguishing apparatus; and condition of the interior structure, such as paint, floor coverings, ceilings, and walls. The code is very comprehensive in its scope, even to the extent of the establishment of square footage requirements as related to occupancy (i.e. the number of residents based on unit size, number of bedrooms, etc.).

The difficulty that is faced in Havre de Grace in terms of enforcing livability standards through the Property Maintenance Code is that it is extremely cumbersome to apply. City enforcement staff members are limited in their authority to inspect the interiors of tenant-occupied housing for code compliance unless requested by a tenant or property owner or through a court order based on probable cause. At times, tenants are intimidated from requesting inspections related to housing conditions for fear of retribution (i.e. discontinued rental contract) by their landlords. An ordinance that establishes a registration of rental residential properties and a cycle for inspection would reduce potential conflicts between landlords and tenants and provide for improved safety and general living conditions of City residents.

F. Housing Design

As stated in prior chapters, attention to housing design is extremely important in both in-fill development in the older portions of the City and in newer neighborhoods. The creation of design standards in the City's National Register Historic District for all new structures (residential, commercial, and institutional) would be very beneficial so that new buildings blend – in scale, massing, and site design — with existing building character. Although housing design in new developing neighborhoods is important, it is not anticipated that the City will be determining architectural design standards for these areas. Modifications to the current zoning ordinance will be aimed at encouraging innovative site design, such as clustering residential development and requiring useable active and/or passive open space. In addition, the creation of landscaping requirements for residential and commercial areas is desirable.

G. Future Housing

Due to the City's proximity to major road networks, the beauty of its waterfront, availability of large adjacent land tracts, and existing public utilities, it is anticipated that the City of Havre de Grace will grow rapidly during the next ten years. Since the 1996 Comprehensive Plan, adjoining property owners have requested nearly 1200 acres be annexed into the City. The City has a significant number (over 400) of building units with plan approval, the bulk of which will be built within the next three years. Because of a new concept plan for residential housing at Bulle Rock (1900 estimated units), a housing rate of over 40% is estimated over the next ten years. It is anticipated that other annexations for residential development, such as Greenway Farm, will also be requested. In total, the City projects approximately 3500 units total to be built in the immediately surrounding region in the next ten to fifteen years.

In addition to the anticipated residential growth continuing north and west of US 40, it is expected that opportunities for in-fill development in the older portions of the City will be maximized. Currently, this is evidenced in increased building activity on single, small vacant lots throughout the City, the subdivision of larger parcels (i.e. Chesapeake Heights), and the development of waterfront condominiums, such as at Penns Beach. There is also a growing movement of re-conversion of large older residences that were once used as apartments back into single-family homes. Most likely these re-conversions will not be noticeable statistically, however the housing context of the older portions of Havre de Grace will change as a result of a greater number of owner-occupied dwellings. In consideration for community stability among low- to moderate- income families, homeownership programs and additional opportunities for affordable rental housing to replace these apartments should be explored.

I. INTRODUCTION

The City of Havre de Grace holds a wealth of opportunity in terms of economic development. Assets within the City include a beautiful waterfront and unique Downtown Business District for specialty shopping and tourism, a strong base of well established industries, and an excellent community hospital with an extensive group of medical affiliates. With direct access to Interstate 95, US 40, major rail lines and employers, the City is ideally positioned for sustained economic growth. Recent initiatives by the City and by Harford County are increasing the focus on the role of Havre de Grace in the County's economic future. These include the establishment of a full-time tourism and marketing manager for the City, the establishment of Small Business Development Center office within the City, and the identification of Havre de Grace as a key component within the Harford County Technology Development Strategic Plan. The City also boasts a well-established Chamber of Commerce and an Economic Development Commission, both of which serve to advance economic development in the City.

Within the corporate limits of the City of Havre de Grace, there are several identifiable geographic areas that serve as current economic generators. The first is the Downtown Business District, which is the heart of the historic City and is located immediately adjacent to the Susquehanna River. Located within the older portion of the City, but distinct in its function, is a medical district centered on Harford Memorial Hospital, a facility of Upper Chesapeake Health System. Medical office uses radiate outward from the hospital location and dominate portions of Union Avenue. The City's industrial center is the Chesapeake Industrial Park and the western end of Old Post Road/Revolution Street in Havre de Grace. Major industries along this corridor are concentrated and easily accessed via US 40 and rail. Lastly, corporate retail and highway commercial uses are found along US 40, a major regional route which bisects Havre de Grace into older and newer communities. These businesses serve the daily retail and service needs of Havre de Grace area residents as well as serving highway customers.

Future economic opportunities include land areas that have been annexed by the City of Havre de Grace designated as Mixed Office/Employment, the availability of small flexible office space for start-up businesses, and the proximity to Aberdeen Proving Ground for attracting technology affiliates. The southern quadrant of the I-95/MD 155 Interchange was annexed by the City in 2000 and was designated Mixed Office/Employment (MOE) as its zoning classification. The City encourages the development of a corporate or technology office park at this location. As the primary gateway into the City and its visibility from I-95, maximizing the site for corporate or technology office park uses is preferable to retail or large distribution uses. It is desired that future uses in the MOE not be in competition with existing retail/service business areas within the City, such as the Downtown Business

District or US 40 Commercial Corridor. It is anticipated that Harford County's Technology Development Strategic Plan will increase the City's position in attracting technology affiliates and small, start-up research facilities into the City.

As a part of this Comprehensive Plan, the addition of this Economic Development chapter provides the framework for economic growth and development for the City as a whole. All economic development segments are identified and addressed in this chapter so that they work in tandem to propel the City's collective economic growth. These include: Business Support Services, Downtown Business District, Tourism, Medical, Industrial, Route 40 Commercial Corridor, and Corporate/Technology/Research and Development. The primary objectives are to sharpen the competitiveness of business and enterprise within the City and to reduce competition between areas (such as the Downtown Business District, Route 40 Commercial Corridor, and future Mixed Office/Employment). This will be done by defining the various economic segments within the City and by determining the distinct role of each geographic location in terms of the City's total economic future.

It must be noted that the economic development effort for the City of Havre de Grace can not be considered the sole responsibility of any one individual, organization, or government entity. The recommendations in the following section are intended to outline the City's role in advancing economic development and to continue to encourage public/private partnerships within the City and the region. At its best, economic development is truly a partnership between private individuals, business enterprise, and multiple government segments.

II. RECOMMENDATIONS

- Support the Greater Havre de Grace Chamber of Commerce in its role of providing business support services, which include conducting informative business-oriented programs, development of local advertising and marketing strategies, and general networking/information sharing.
- Support the role of the Economic Development Commission in its transition to a not-for-profit Community Development Corporation. Work with them to establish their role in supporting business and community revitalization within the City.
- Support the Small Business Development Center in its role of providing business assistance to local businesses, which includes instructional programs on loan packaging, business planning, available funding sources, and local tax incentives. Reinforce the connection of the U.S. Small Business Administration and local institutions of higher learning to provide a consistent flow of business and technology information to local participants through the Small Business Development Center.

- Strengthen the distinct but complimentary relationships of the Downtown Business District with specialty retail/service, Route 40 Commercial Corridor with service, office, and commercial retail uses, and future Mixed Office/Employment as corporate office and technology. The goal is to support existing commercial areas and ensure their future viability by reducing competition between geographic areas.
- Reevaluate the Mixed Office/Employment (MOE), Commercial (C), and Residential Business (RB) zoning classifications, so that allowable uses, site requirements, and building scale are adequately addressed.
- Encourage appropriate development of the commercial and employment areas, including the Downtown Business District, Route 40 Corridor, Chesapeake Industrial Park, other industrial sites, and future Mixed Office/Employment area. Blend incentives and zoning regulations to support and direct appropriate development.
- Continue to work with the Harford County Office of Economic Development to support the business community in the City.
- Continue to work with existing industrial entities within the City to ensure that their respective enterprises are supported, through infrastructure and physical improvements as well as by general information and business support.
- Aggressively pursue opportunities for technology, corporate, and research and development facilities to locate here.
- Support the medical services provided through Upper Chesapeake Health System and the numerous medical offices within the City of Havre de Grace. Develop land use strategies, such as overlay zoning, and incentives for identifying and strengthening Union Avenue as a medical corridor.
- Continue to market the Enterprise Zone Tax Credit as a method of attracting new business and expanding existing projects.
- Continue to develop local small business incentives, such as the Revitalization and Development Loan Program. Investigate the feasibility of local tax incentives for current and prospective business or commercial property owners.
- Continue the physical improvements to the Downtown Business District and waterfront areas for the purpose of community and business revitalization.
- Continue to explore and develop the concept of a waterfront jetty as a protection measure for the City's shoreline and as an enhancement for further economic development.

- Work with property owners within the Downtown Business District to reassess the uses of their property and promote new upscale utilization of second floor space to such use as apartments, offices, or overnight accommodation facilities. Provide educational information and encourage owners to utilize the Maryland Smart Codes to maintain and improve their property investments.
- Support the development of non-profit Community Development Corporations (CDC) within the City, which will advance projects and/or programs that benefit the community as a whole. It is anticipated that such entities will prove valuable as a source of fundraising, grant writing, and possible management of a Main Street initiative for the Downtown Business District.
- Analyze existing traffic, transit, and parking conditions within the City.
- Continue to develop and maintain a database of available commercial property and lease space within City limits.
- Introduce the resources of the Harford County Office of Economic Development, the Maryland Department of Housing and Community Development, and the Maryland Department of Business and Economic Development to the business community of Havre de Grace.
- Strengthen and expand the tourism industry in the City. This will be accomplished through the operation of a Visitor Center; advertising campaigns to attract visitors outside of the immediate region; the development of high quality, informative publications that will generate increased visitor activity; improved signage to the City's various attractions; organized promotional events; and general information sharing.
- Target specific businesses that will enhance the City, and encourage the development of office space to increase commercial traffic.
- Encourage the development of compatible entertainment facilities in the Downtown Business District.
- Encourage local banks to provide Community Reinvestment Act (CRA) funding geared to support investment in the City.
- Review local and State government regulations and assess their impact on economic development in the City.
- Support the City's and the region's various museums, recreation areas, and cultural attractions that contribute to the economic vitality of the region. These include the Lower Susquehanna Heritage Greenway, Susquehanna State Park, Swan Harbor Farm, Bulle Rock Golf Course, the Susquehanna Museum of Havre de Grace, the Havre de Grace Decoy Museum, the Havre de Grace Maritime

Museum, Friends of the Concord Point Lighthouse, the Chesapeake Heritage Conservancy, Inc., and Steppingstone Museum, and various public and private marinas.

- Cultivate strong local consumer support through targeted marketing and promotional events.

III. BACKGROUND

The purpose of the Comprehensive Plan is to provide a roadmap for the community's future growth and development. It also serves as an indicator of the direction for decision-makers to follow over the next several years for the orderly growth of the City. Within this process the economic development of the City is an important aspect. To provide a complete approach to the development of the City, the cooperation of public and private entities throughout the community must be secured. The continued revitalization of the Downtown Business District is important, but the inclusion of such areas as the US 40 Commercial Corridor, and the industrial, medical, and future corporate or technology areas located at the I-95 Interchange are equally significant to the economic vision of Havre de Grace. The unique location of Havre de Grace on the Bay, its proximity to Aberdeen Proving Ground, the Ripken Baseball Stadium, and the easy access to major transportation systems are only a few of the assets available to support the City's economic development efforts.

At one time, Havre de Grace had a thriving Downtown Business District which served as the City's main commercial center, but it has had to contend with different forms of competition during the past forty years. Competition was first generated in the 1960's from strip shopping centers and then in the 1970's by large malls in Bel Air, Baltimore, and Wilmington, DE. The 1990's introduced new competition in the form of the major national retailers that caused a steady decline in the strip shopping centers located in the Route 40 Commercial Corridor. The City is, therefore, faced with two commercial districts, both of which used to be competitive and now need economic revitalization.

Several stabilizing factors, however, contribute to the revitalization of the City's economic engine. The strengths present in the City include the waterfront and its historic charm as well as attractions provided by local restaurants, museums, and unique specialty stores. The City can also boast of several major corporations in the Chesapeake Industrial Park and Revolution Street corridor. The addition of several new neighborhoods of medium to high-income housing, such as Canvasback Cove, Seneca Point, and Grace Manor, and planned projects, such as Penns Beach and Bulle Rock Planned Adult Community, contribute in a positive manner to the economic improvement of the City.

Harford County is a diverse community comprised of 226,565 residents, according to 2000 Census statistics. The median household income of the County is \$54,300 per year. Havre de Grace with a population of 11,331 represents 5.2% of the County's population and has a median income of \$41,218. Harford County and the municipalities benefit from

over 20,000 employment opportunities provided by its major employers throughout the County, of which 12.5% are located within the City of Havre de Grace. The recent emphasis of the Harford County Technology Development Strategic Plan on proposed technological development in the County, and its promise of new business and employment in Harford County, places Havre de Grace in the position of being a prime location for this type of development.

The future need in the County for convenient, quality office space at reasonable rates is enticing to many communities within the County. The City not only provides a quality of life which is most attractive to office development, but has the available land to support this type of use. The availability of approximately 150 acres of land zoned as Mixed Office/Employment adjacent to the I-95 Interchange is a prime asset to meet the challenge. In addition, numerous vacant and underutilized parcels exist along US 40. As a major regional thoroughfare with attractive amenities, such as the Bulle Rock Golf Course, this corridor is ripe for new and better uses.

IV. BUSINESS SUPPORT SERVICES

Business owners have multiple resources immediately available within the City to call upon for business support. These include knowledgeable staff within the Department of Economic Development and Planning (DEDP), business development programs and individualized assistance through the recently opened Small Business Development Center on Washington Street, the Greater Havre de Grace Chamber of Commerce, and the Economic Development Commission. In addition, Harford County Government through the Office of Economic Development has business support services that include financing, loan assistance, and general business resource information. Both City and County staff representatives work with the Maryland Department of Business and Economic Development to further local business advancement in the State. All businesses are served – regardless of scale and location within the City – through these agencies or organizations.

Specific assistance that the City offers includes information on the established Aberdeen/Havre de Grace Enterprise Zone for new business development or business expansion, low-interest loan opportunities through the City's Revitalization and Development Loan Program, and available space for lease. The City's DEDP administers a low-interest loan program and is finalizing a survey of all commercial lease properties so that potential new business prospects can be matched to available properties, to include office space, storefronts, and industrial uses. The role of staff within DEDP is to attract new businesses into the City, to facilitate the well-being of businesses – established and new – to the extent possible, and to provide information on other available resources.

One excellent resource within this area is the Aberdeen/Havre de Grace Enterprise Zone. This Zone was established in 1996 through the Harford County Office of Economic Development in conjunction with the Cities of Aberdeen and Havre de Grace. The

program provides both property tax and income tax incentives for new businesses and expanding businesses within the Route 40 Commercial Corridor in the southeastern Harford County region. This program has been extremely successful in that it has created \$58 million in new capital investment in Havre de Grace alone through construction, rehabilitation of facilities, and equipment and the equivalent of approximately 600 new jobs. The duration of this incentive program is ten years, and it will expire in 2005.

The Havre de Grace office of the Small Business Development Center (SBDC), which operates through Harford Community College, is a recent addition to the City and opened in March, 2003. This is an ancillary branch of the main campus center and offers assistance to local businesses, including business planning, identification of available funding sources, and instructional programs on loan packaging. The SBDC is charged with small business development services under the U.S. Small Business Administration and is supported through the Harford County Office of Economic Development. In general, the SBDC works in concert with the Service Corps of Retired Executives (SCORE) to assist new entrepreneurs in establishing their respective business and with existing businesses having specific problems related to marketing, finance, or human resources. Classes, seminars, and individualized business services are provided on site in the Havre de Grace office.

Both the Greater Havre de Grace Chamber of Commerce and the Economic Development Commission have been local connections to business assistance for many years. As the oldest Chamber in Harford County, the Greater Havre de Grace Chamber of Commerce celebrated its seventy-fifth anniversary in September 2003. It has proven successful in conducting informative topic-specific programs, fund-raising through organized events, and general networking and information sharing. Along with the City, the Chamber participates in the distribution of low-interest loans through the established Revitalization and Development Revolving Loan Fund. Individual committees within the Chamber organize monthly meetings with speakers, fundraisers, the Farmer's Market, business card exchanges, and other networking events. With offices located in the Havre de Grace Visitor Center, the Chamber works hand-in-hand with City staff to promote tourism, festivals, and community events. It is also a participating member in both the Havre de Grace Tourism Advisory Board and the Economic Development Commission. As a primary advocate for local business enterprise, the Chamber will continue to work to advance local business through its numerous activities and through the development of local advertising and marketing strategies.

The Economic Development Commission was established as an advisory commission to Mayor and City Council in 1984. The Commission's role has consistently been to advance the City's position in terms of economic development, and it has worked to foster relationships between the corporations located in the City and City Government. In addition, the Commission retains various speakers from industry, local and State government agencies, and other areas of expertise to give lectures on pertinent, timely, topic-specific subjects. Recently, the Commission has applied for non-profit status as a Community Development Corporation (CDC) for a greater role in charting economic development initiatives. With not-for-profit status, the Commission will be in a position

to advance many aspects of economic development in more than an advisory role. The not-for-profit corporation's efforts may include: obtaining grants to serve its mission; fundraising; implementing physical improvements to the Downtown Business District, the waterfront, or other areas of the City; and general economic planning through market studies and other means. Under the not-for-profit CDC, the Commission would be in an excellent position to pursue National Main Street designation and administer its program initiatives, both of which would be beneficial for the City and the Commission.

V. DOWNTOWN BUSINESS DISTRICT

As mentioned in previous chapters, the Downtown Business District is the historic core of the City. Its health and vitality – which include the health and vitality of the individual businesses that comprise it – are paramount to the economic development of the City as a whole. A primary policy of this Comprehensive Plan is to support the Downtown by assisting existing businesses, attracting new enterprises, continuing physical improvements such as streetscapes, and marketing the historic charm and unique shopping experience both locally and regionally. A strong partnership between the business community, the Chamber of Commerce, the Economic Development Commission, the Small Business Development Center, and City Government is essential for the advancement of the City's Downtown Business District.

The Downtown Business District consists of numerous specialty retail shops, offices, antique stores, and restaurants in a quaint, historic commercial setting. Built to a human scale, the structures are attached to each other, have varying facades, and are built right up to the sidewalks. Due to the comprehensive Downtown Revitalization strategy developed in the 1996 Plan, the City has made great strides in infrastructure improvements, to include street re-paving, sidewalks, lighting, and landscaping appropriate to the historic Downtown. Continuation of these physical improvements to create an overall design impression will proceed, as funds allow. Specific goals for the physical design and planning established in the 1996 Comprehensive Plan are still valid and are restated here as follows. These improvements are specifically tailored to heighten the beauty and charm of this commercial area and attract more consumers to the Downtown.

- Increase waterfront exposure for the public.
- Unify the Downtown into an identifiable shopping district.
- Maintain a small town atmosphere.
- Develop a theme that incorporates traditional planning and design.
- Identify the pedestrian and automobile districts for visual clarity and safety.
- Encourage and facilitate pedestrian traffic throughout the Downtown.

- Improve traffic flow and safety through the Downtown.

In addition, specific design objectives needed to accomplish the goals are as follows:

- Improve water views at street ends.
- Provide accessible and convenient parking.
- Remove overhead wires to improve vision of buildings and reduce clutter.
- Establish guidelines for building improvements to maintain an appropriate sense of scale, color, and design.
- Establish guidelines for signs that relate to existing buildings and are appropriate to the Downtown Business District.
- Preserve historic architecture.
- Retain on-street parking as an important element to separate pedestrian traffic from vehicular traffic.

Future public improvements for the Downtown Business District include, but are not limited to, the redevelopment of David R. Craig Park into a permanent Visitor Center facility, better directional signage to and throughout the district, continued improvements to Frank. J. Hutchins Park (such as restroom facilities), additional parking, and increased waterfront accessibility through a Downtown Promenade. In addition, the City is exploring the possibility of constructing a jetty structure that would create a safe harbor for waterfront protection. Through the development of this protective harbor, it will be possible to expand private marinas and create additional public docking, fueling facilities, anchorage, and mooring space to accommodate larger vessels and transient boaters. The economic benefit to the City warrants the continuation and serious consideration of the feasibility of this project.

The City must also evaluate the Historic Preservation Ordinance and develop standards and/or guidelines to sensitively accommodate future Downtown development and revitalization. Facade renovation, sign standards, level of historic replication, and materials are all areas which must be stringently, yet flexibly, enforced. Care must be taken to balance historic preservation goals against economic revitalization goals in order to preserve the historic character and enhance the economic vitality of the Downtown. Developing design standards insures that the Downtown Business District will retain its charm and attraction as a historic commerce center that continues to draw people desiring a pleasant, small-town experience.

The promotion of a strong Downtown Business District is vital to strong economic development for the City. In order to achieve this, the City (through staff or private consultant) should prepare an updated marketing analysis for the business community.

This will provide a clear understanding of existing markets and identify the competitive advantage and “niche” for Havre de Grace. The study should provide the following:

- An analysis of how retail sales in the community has changed over recent years.
- Analysis of how the local and regional population have changed in past years and what significance it has to the economy of the City.
- Surveys of existing and potential customers and product needs.
- An analysis of real estate values and ownership patterns.
- A study of how commercial buildings are being used and how efficiently.
- An analysis of the quality of life features as they effect the types of businesses or industries in Havre de Grace.

By examining the above information, the City will be able to assist businesses:

- Identify better ways to meet existing customer needs and expand to meet new identified market opportunities.
- Encourage property owners to make gradual physical improvements to their buildings, and help retailers take a fresh look at their merchandise, pricing and sales strategies.
- Help business owners to analyze their advertising and make cost-effective adjustments.
- Look at methods to coordinate promotions within the City for businesses that share the same or similar customers.
- Define the business clusters to take advantage of consumer interest.
- Use the information to recruit new businesses to complement the current mix and boost the City’s share of the marketplace.
- Create targeted marketing campaigns and materials to promote the City and its appeal to potential entrepreneurs and businesses.

The City will continue to market the Downtown Business District through its tourism efforts, and work aggressively to attract new shops as well as support existing businesses within it. Tourism and the historic Downtown naturally go hand-in-hand. In addition to the tourism effort that focuses on marketing to those outside Harford County, it is extremely necessary to have a more local marketing effort to areas nearby, such as the

Greater Bel Air area, Harford County (in general), and Cecil County. These are areas that need to rediscover the charm, beauty, and interest of the City, and have populations that are within a half-hour's drive which can return repeatedly to patronize shops, restaurants, and other offerings. New and future households within the City should also be reached within the local marketing effort, bringing new residents into the customer base. This local marketing effort may be a shared venture between the City, the Chamber of Commerce, or private interests, but it is absolutely essential to the Downtown businesses.

The City will also work to provide better signage to and throughout the Downtown Business District. This includes getting travelers successfully to the district from I-95, US 40, MD 155, MD 7, and future Bulle Rock Parkway. In addition, the placement of directional maps in the Downtown and various public attractions is necessary to help those unfamiliar with the City find key points of interest.

Supporting the business community and attracting new businesses are the primary goals of the City's economic development initiative. These efforts include attracting new professional offices, retail shops, restaurants, and entertainment venues into the Downtown. The re-use of upper-story space for offices and upscale studio apartments (through State of Maryland Smart Codes) is desired to make the City's historic commercial center truly vibrant. In addition, the City would like to initiate a National Main Street Program which would be administered through a not-for-profit organization. This program opens the opportunity to tap other resources for the City's downtown revitalization efforts.

VI. TOURISM

Havre de Grace has a wealth of attributes that make it a desirable tourist destination. Its waterfront, museum attractions, numerous festivals and events, beauty, and historic charm lend to a pleasant traveler experience. The City's proximity to regional recreational resources, such as Susquehanna State Park, the Lower Susquehanna Heritage Greenway, and Swan Harbor Farm, contributes to its regional draw. It is also easily accessible from the transportation networks of I-95 and US 40, and is within a one hundred-mile radius of sixteen million people in the mid-Atlantic region.

For the past twenty years, the City has successfully advanced its tourism efforts through the dedication of volunteers. Many active citizens have and continue to organize signature events, such as the Arts Festival, the Seafood Festival, and the Decoy Festival, and it has been only in recent years that many of the City's museums have had any paid staff. For many years, the all-volunteer Tourism Commission was charged with orchestrating tourism activities, including the development of marketing publications and the annual event calendar on behalf of the City.

As of 2002 however, the City organized a more formal tourism effort with the opening of a Visitor Center on Pennington Avenue and the hiring of a Manager of Marketing and

Tourism. The Visitor Center operates through volunteers and staff seven days a week and is located in the heart of the Downtown Business District. The Tourism Advisory Board continues to assist in all aspects of tourism, advising the Tourism Manager. The role of the City staff is to coordinate the marketing and tourism effort to those outside of Harford County through advertising, development of publications, solicitation of travel writers into the City, provision of information for bus tours, and operation of the Visitor Center. Primary objectives are to increase the number of visitors into the City and to have visitors stay longer in the various overnight accommodations located in the region.

Specific goals of the tourism effort through the City include the following:

- Inspire the travel consumer to choose Havre de Grace as a destination, encourage them to stay longer, and motivate them to return. This is to be done through the development of high quality, informative, and creative publications that will generate increased visitor activity with the tourism industry attractions and retail sectors.
- Define and expand Havre de Grace's destination recognition in the travel marketplace.
- Secure third-party editorial coverage of the City as a travel destination through outreach to travel editorial professionals in the media.
- Facilitate communication and business growth with the City tourism industry about programmatic activities and opportunities as well as fostering alliances between industry segments and stakeholders.
- Develop an advertising program that delivers a strong "call to action" designed to encourage consumers in selected target markets to respond directly to Havre de Grace's marketing message. The success of these messages will be tracked by lead generation from telephone inquiries, web site activity, and reader service labels.
- Increase group travel business to City facilities, attractions, and retailers.
- Increase length of stay and spending of visitors to the Havre de Grace area.
- Demonstrate the benefits of investing in a strong tourism-marketing program.

A coordinated, successful tourism effort for the City of Havre de Grace is directly linked with the Downtown Business District and its specialty shops and restaurants, the waterfront and its amenities like the Promenade and numerous marinas, all museums (the Decoy Museum, Maritime Museum, the Susquehanna Museum of Havre de Grace, Concord Point Lighthouse and Lightkeeper's House, and Steppingstone Museum), and

the City's entire historic district. New attractions include the nationally renowned Bulle Rock Golf Course and nearby Ripken Stadium. Major recreational features are the Lower Susquehanna Heritage Greenway, Susquehanna State Park, and Swan Harbor Farm. In addition, two vessels – the Skipjack Martha Lewis and sternwheeler Lantern Queen – are available for charter. Approximately 75 transient slips are available to accommodate nautical guests during the boating season, and opportunities for canoeing and kayaking abound. These individual attributes and their collective presence make the Greater Havre de Grace region an excellent destination in terms of tourist travel.

VII. MEDICAL

The presence of many established medical service providers and Harford Memorial Hospital is a great asset to the Havre de Grace community. The City, through DEDP staff, supports its medical service providers by maintaining an inventory of vacant office space and by assisting in efforts for physician recruitment. In addition, the City supports Upper Chesapeake Health System in their continued investment in the Harford Memorial Hospital facility and their recently acquired office space on Revolution Street. A major employer, Upper Chesapeake Health System has approximately 725 employees at Harford Memorial Hospital, with a payroll of \$22 million.

As an economic development strategy and land use policy, the City will work to strengthen the Union Avenue medical corridor through the establishment of an overlay zone specifically designed to maintain and attract medical service providers. The City supports the development of new services, such as the new Sleep Center and Joint Rehabilitation Center, offered through Upper Chesapeake Health System at the Harford Memorial Hospital location. In addition, the City will explore and encourage the potential for new market opportunities, such as that of a naturally-occurring retirement community, and relationships to the established medical resources in this area. With the influx of new age-targeted active adult housing, excellent quality of life, pedestrian accessibility, and public and private amenities, the City can advance its medical community by promoting specialized services targeted to an aging population.

VIII. INDUSTRIAL

Primary industrial areas within the City of Havre de Grace are the Chesapeake Industrial Park located just off of MD 7/Revolution Street and industries along the western portion of Revolution Street itself. These industries are very important to the City in regard to tax revenue, and the support of existing industry and the attraction of new is paramount for the economic balance and employment base of the City and the region. Major industries within the City include: Cleaning Solutions Group, Collins & Aikman, Constar International, Cytec Fiberite, J. M. Huber Corporation, On-Guard Industries, Pepsi-Cola, Smuckers Quality Beverages, and Solo Cup Company, Inc. to name a few. Limited space is available in the Chesapeake Industrial Park for other industries, and it is anticipated

that EFC, Inc. (which is currently located just outside of City limits) will build in the industrial park in the near future.

The City supports existing industry by facilitating and implementing physical improvements in the industrial areas. Recent physical improvements include the reconstruction of Clark Road in the Chesapeake Industrial Park in 2003. Continued improvements are necessary for Old Bay Lane, which is the access road to the industrial park, and MD 7/Revolution Street. The City will pursue right-of-way acquisition from the adjoining property owners and funding for reconstruction of Old Bay Lane to continue access improvements into the Chesapeake Industrial Park. Improvements to MD 7/Revolution Street will need to be initiated with State Highway Administration in the future.

The City also works with Harford County Office of Economic Development for attracting or retaining industries and providing information on tax incentives, such as those offered through the Maryland Department of Business and Economic Development, the Aberdeen/Havre de Grace Enterprise Zone, or other sources. City staff members work closely with the Office of Economic Development to attract new industries to vacated buildings, support employee training and job fair initiatives, and provide general information about available business resources.

Within the City, industrial uses are focused in the Chesapeake Industrial Park and large land areas along MD 7/Revolution Street. Additional opportunities for industrial use exist along US 40 both inside and outside of current City limits. Under the City's present Zoning Ordinance, all industrial use has a zoning designation of *C, Commercial*. It would be beneficial to create a separate zoning category, *Industrial*, to differentiate industrial uses from general commercial uses, such as those on US 40, and to apply additional standards in terms of landscaping and site design for each category of development.

The following table indicates current major industrial companies within the City and number of employees:

Table 12.1
MAJOR INDUSTRIAL EMPLOYERS

Employer	Number of Employees
Cleaning Solutions Group	55
Collins & Aikman	230
Constar International, Inc.	330
Cytec Fiberite	224
J. M. Huber	160
On-Guard Industries	130
Pepsi-Cola	54
Smuckers Quality Beverages, Inc.	45
Solo Cup Company	102

IX. ROUTE 40 COMMERCIAL CORRIDOR

The Route 40 Commercial Corridor provides many of the daily retail and service needs of local residents – in both older and newer communities – as well as serving highway users travelling through the area. As a significant commercial corridor, Route 40 offers grocery stores, pharmacies, automotive service, a range of restaurant choices including fast-food varieties, and commercial strip-retail venues. The City supports the businesses along US 40 and will work through its policies and initiatives to maintain the corridor's viability in the future. The City desires to strengthen the Route 40 Commercial Corridor as an identifiable retail/service/office core that serves as a bridge between the older, historic portions of the City located to the south of US 40 and the newer, developing areas to the north.

The City would like to enhance the Route 40 Commercial Corridor through the attraction of new uses (such as offices) and new businesses, the development of landscaping and site design standards, and improved pedestrian connections to and through the corridor. The State Highway Administration is currently in the process of completing a \$3.2 million streetscape improvement project along US 40 between the Thomas J. Hatem Memorial Bridge and Robinhood Road. This project will improve roadway safety and the aesthetic appeal of the highway through the City of Havre de Grace, and includes pedestrian connections along US 40, signaled pedestrian crosswalks, improved stormwater drainage, landscaping, and monument entrance signs. Specific focus areas for pedestrian improvements are the Ohio/Otsego Streets intersection and the Lewis Lane intersection. These nodes are areas of known pedestrian activity. Future improvements along City rights-of-way, such as Lewis Lane extended and/or Chapel Road will be necessary to complete pedestrian connections to both older and newer portions of the City.

The primary objective of the City for the Route 40 Commercial Corridor is to create a more attractive corridor that will continue to support existing businesses and attract potential new uses. New uses include Class A office space, mixed-use commercial of high quality design, and possible entertainment venues, such as a water park, a private pool, or other privately operated facilities. These uses are not intended to compete with the Downtown Business District but to complement it. It is also desired that future non-residential uses at the I-95 Interchange be limited in retail so as to not compete with the Route 40 Commercial Corridor or the Downtown Business District.

As the City continues to grow in a westerly direction, the increased strength of this core commercial area is extremely important for both the Cities of Aberdeen and Havre de Grace. Redevelopment potential exists for under-utilized parcels along US 40, through annexation and the provision of public water and sewer. These properties include the various junkyards and abandoned commercial buildings between the Cities. With the nationally renowned Bulle Rock Golf Course, new residential development, offices, and well-designed commercial uses, the Route 40 Commercial Corridor can be a source of pride for the communities along it and for Harford County in general.

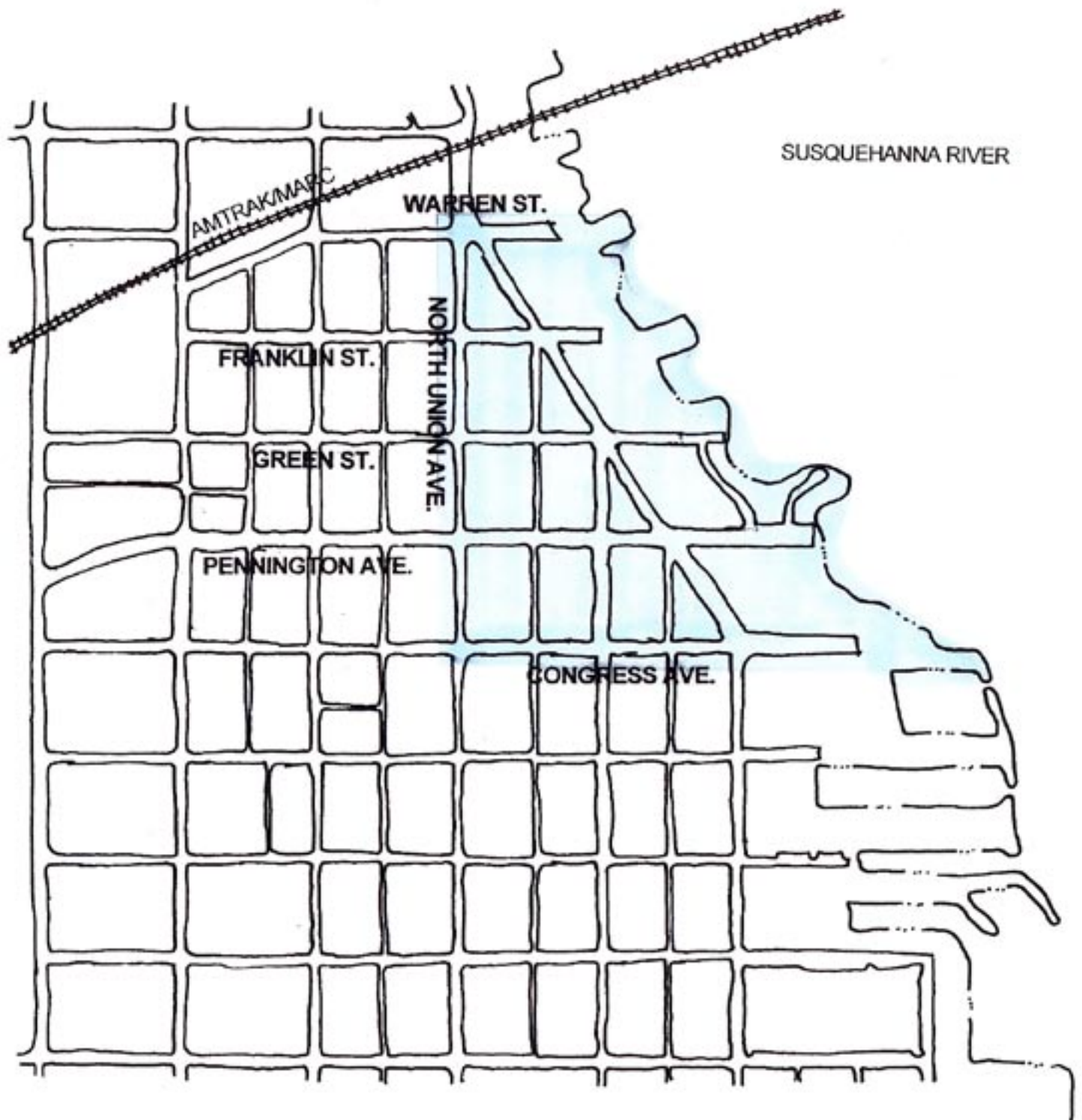
X. CORPORATE, TECHNOLOGY, RESEARCH AND DEVELOPMENT

The City is in an excellent position to attract corporate offices, technology development, light assembly, and research and development facilities into the area. Directly accessible from I-95, Havre de Grace has an excellent quality of life, offering both natural and cultural amenities as well as excellent housing for bringing new employment opportunities to the region. Proximity to Aberdeen Proving Ground – a major Federal research and testing facility — and the Baltimore/Washington D.C. and Wilmington/Philadelphia metropolitan regions contribute greatly to the potential economic growth of the City. Prime location combined with a capable, available workforce places Havre de Grace at an advantage for future corporate, technology, and research and development growth.

The City featured prominently in the Technology Development Strategic Plan, which was completed in 2002 by the Harford County Office of Economic Development. Various partners contributed to the development of the plan, including the City of Havre de Grace. The Technology Development Strategic Plan recognizes the City's excellent quality of life, waterfront amenities, reasonable land costs, and easy access to major communications networks, highways, and rail systems. Harford County is in close proximity of several international airports and numerous world-class educational institutions. Specific opportunities to attract new technology industry exist through Aberdeen Proving Ground, to include private contractual services, research and development, and commercialization of technologies. The plan has defined emerging technology clusters that may be focused in this region, to include advanced materials and testing, information technology, and some bio-sciences.

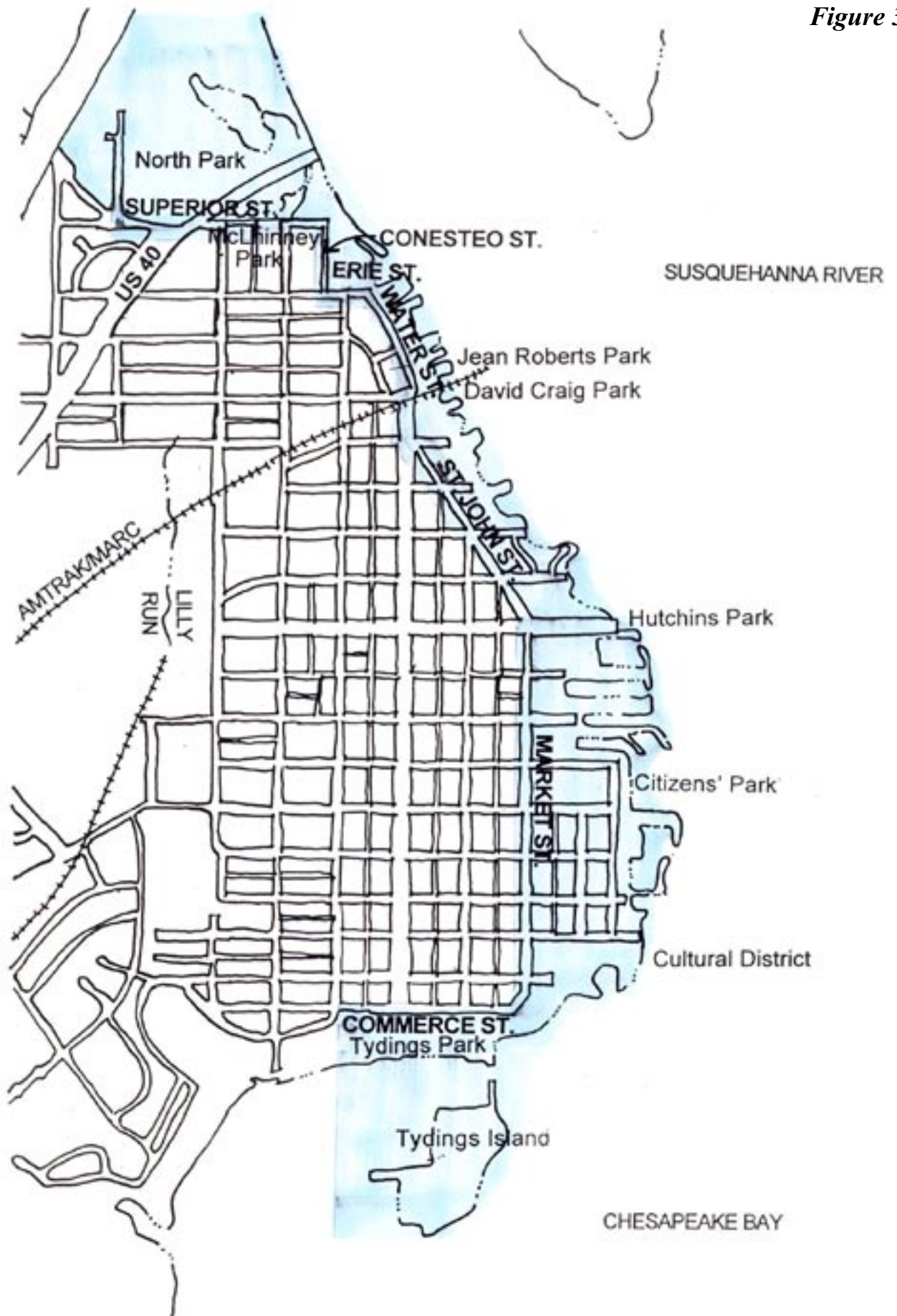
Primary locations for the development of corporate offices or technology offices include land tracts at the I-95 Interchange (which are designated as Mixed Office/Employment in their zoning classification) and commercial areas along US 40, both inside and outside of current City limits. Due to future residential projects, such as the age-targeted Bulle Rock Planned Adult Community and others, an estimated thirty-five hundred homes will be built in newly annexed areas in the City of Havre de Grace over the next ten to fifteen years. In addition, there are opportunities for some waterfront residential uses and continued gentrification of the City's beautiful, historic housing stock. Based on these projects, the cultural attributes, and recreational amenities, the City is truly in a position to attract corporate offices, technology, and research and development into the region.

Figure 3.1



REVITALIZATION AREA #1 (DOWNTOWN BUSINESS DISTRICT)

Figure 3.2



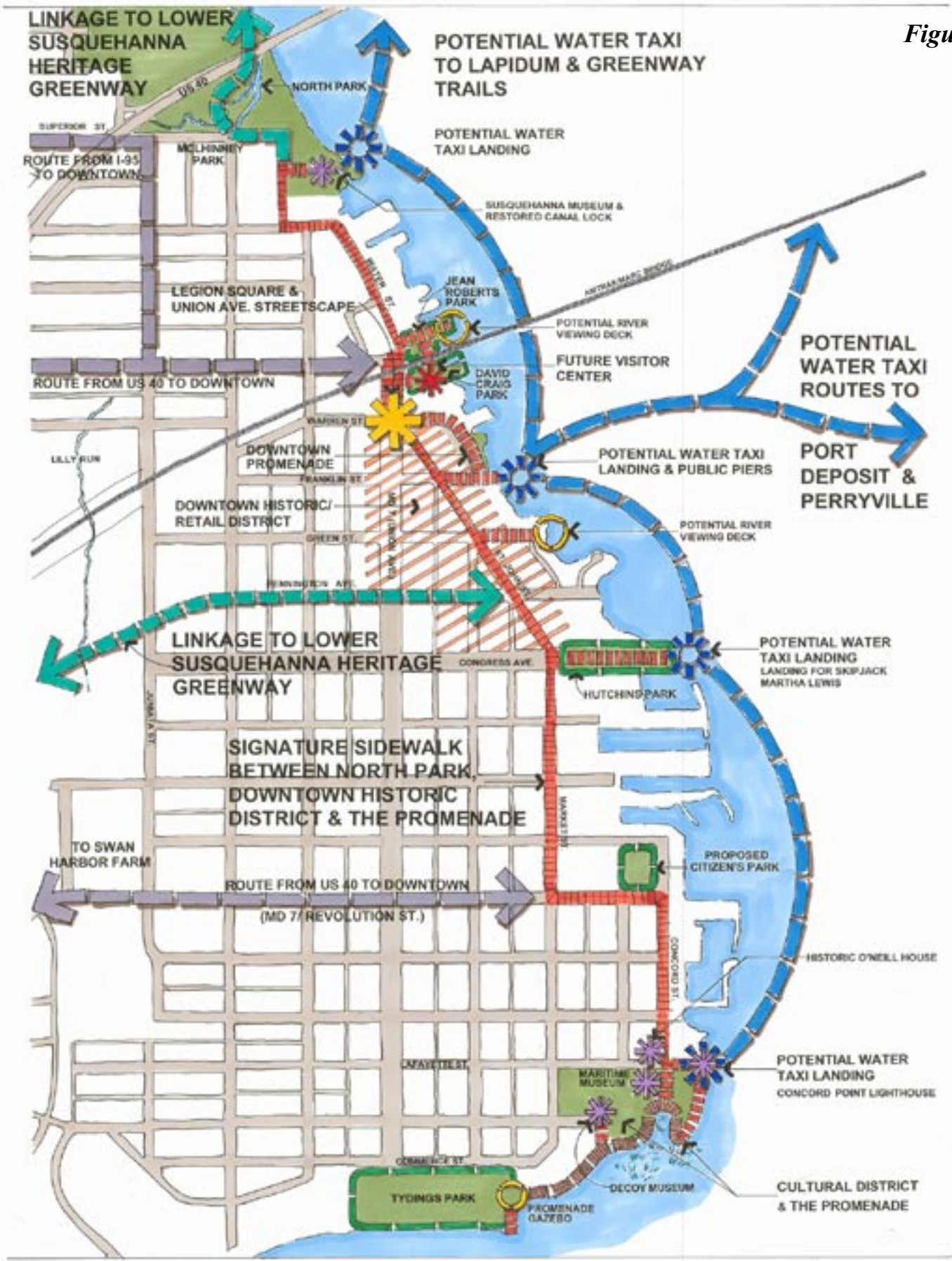
REVITALIZATION AREA #2 (WATERFRONT)

Figure 3.3



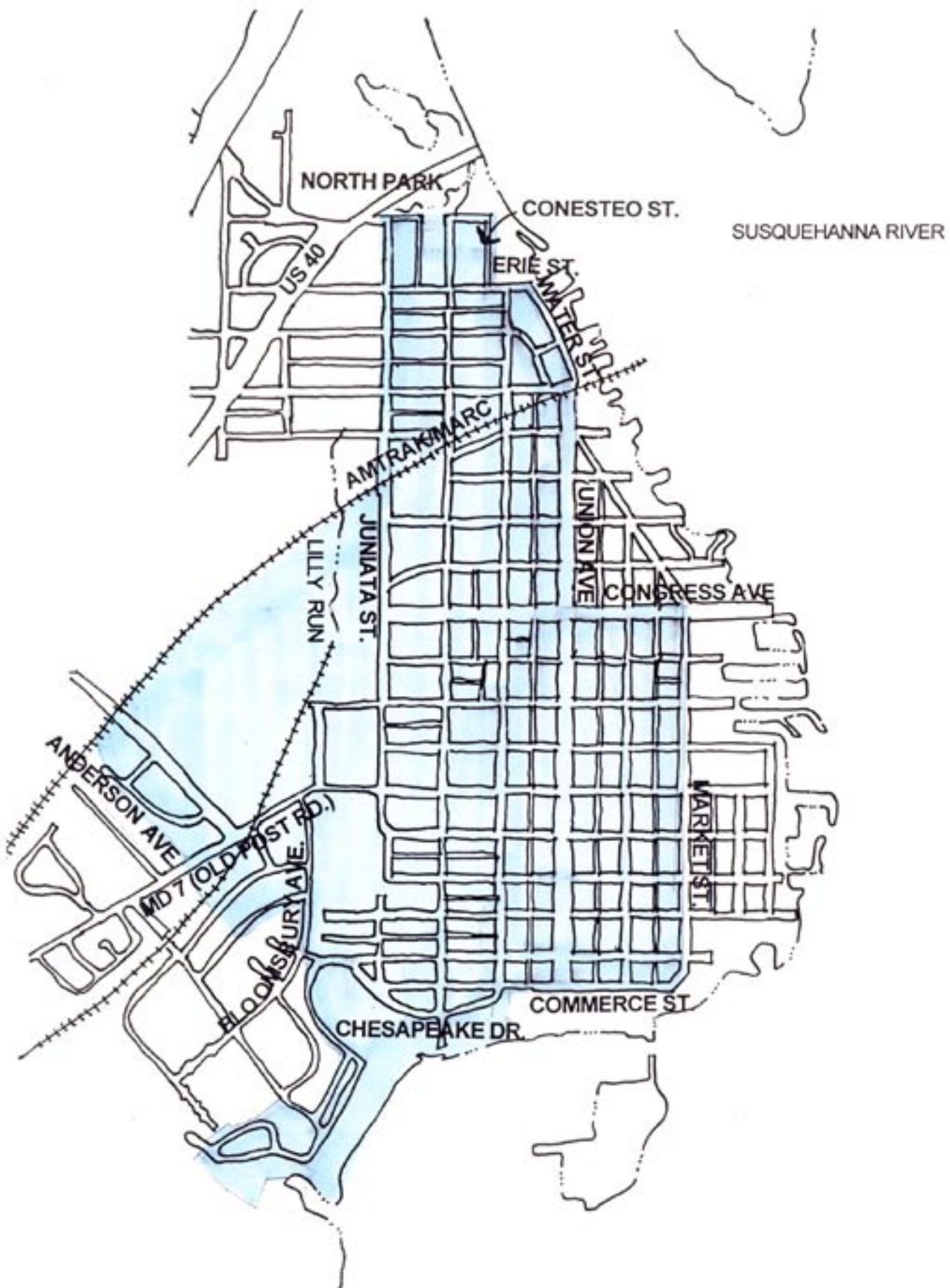
DOWNTOWN WATERFRONT PROMENADE

Figure 3.4



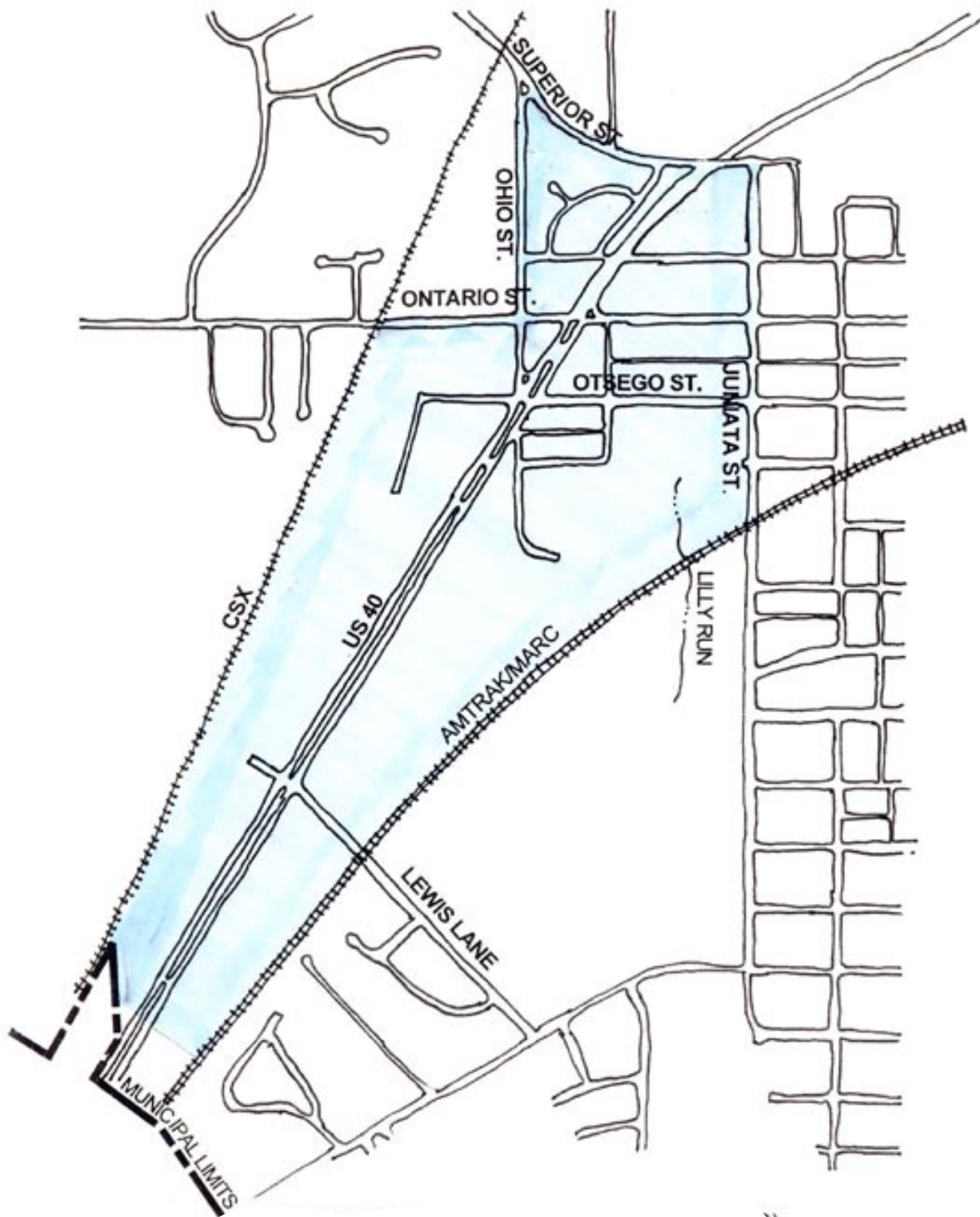
HERITAGE CORRIDOR PLAN

Figure 3.5



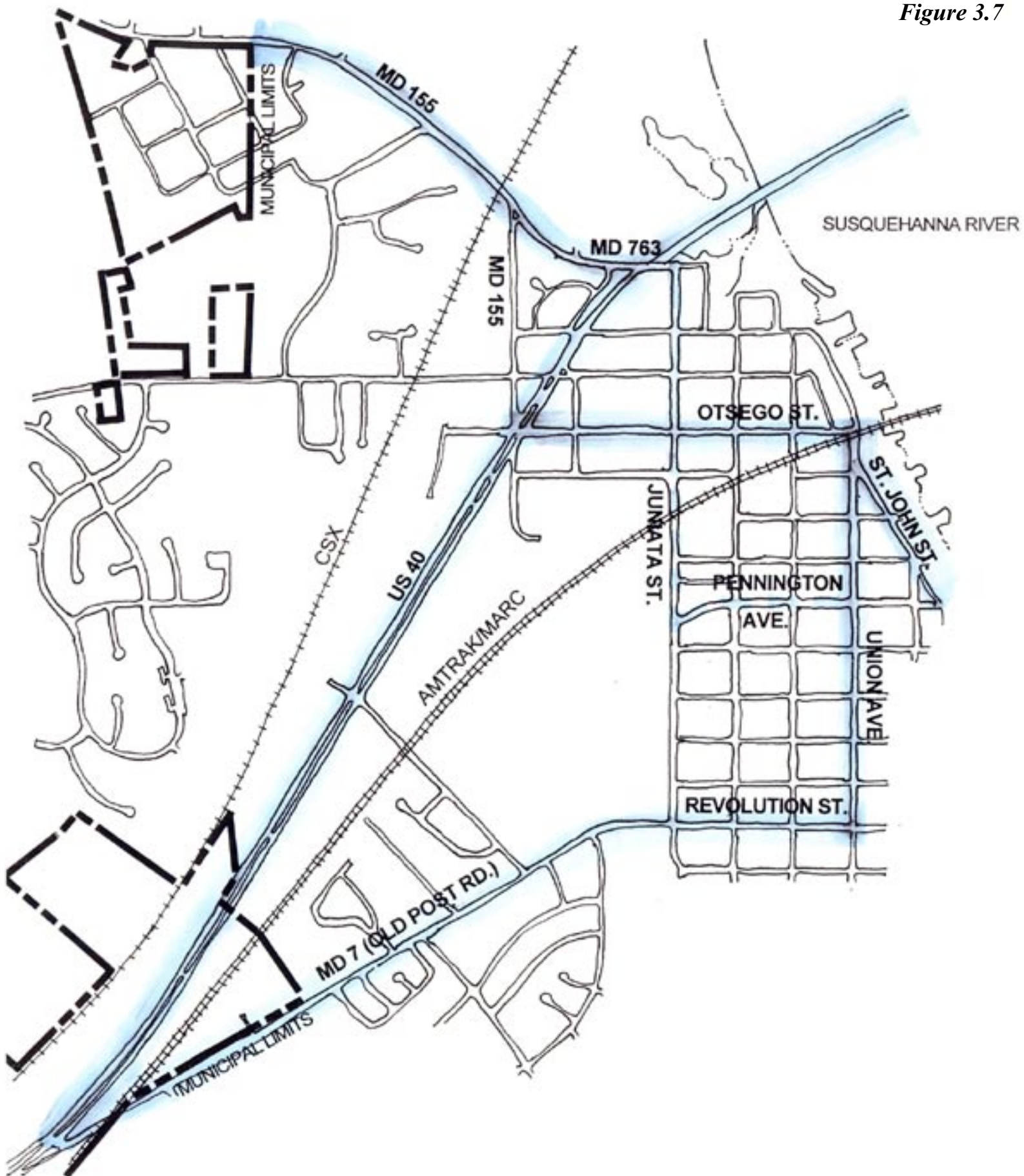
REVITALIZATION AREA #3 (OLD TOWN)

Figure 3.6



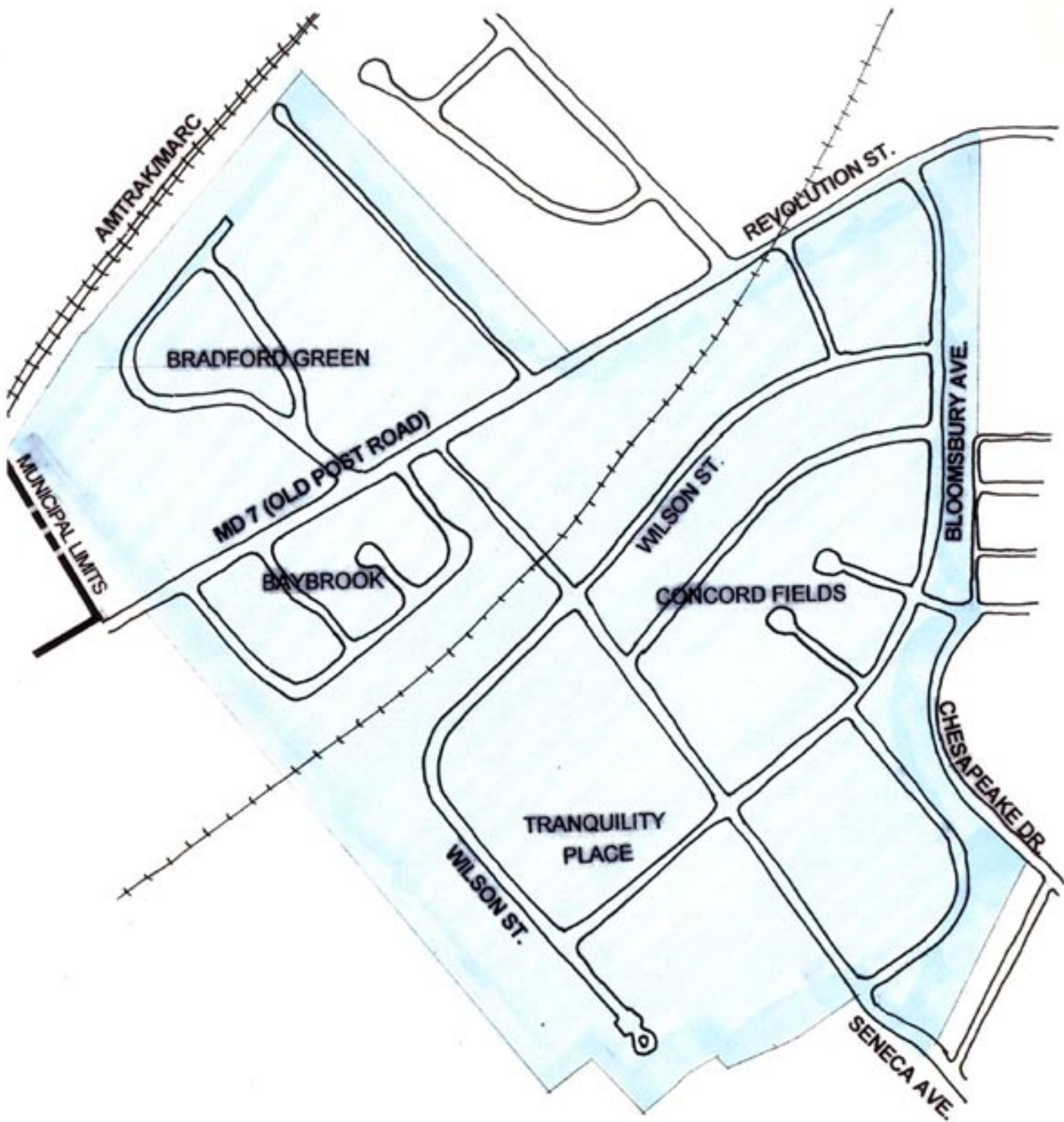
REVITALIZATION AREA #4 (US ROUTE 40)

Figure 3.7



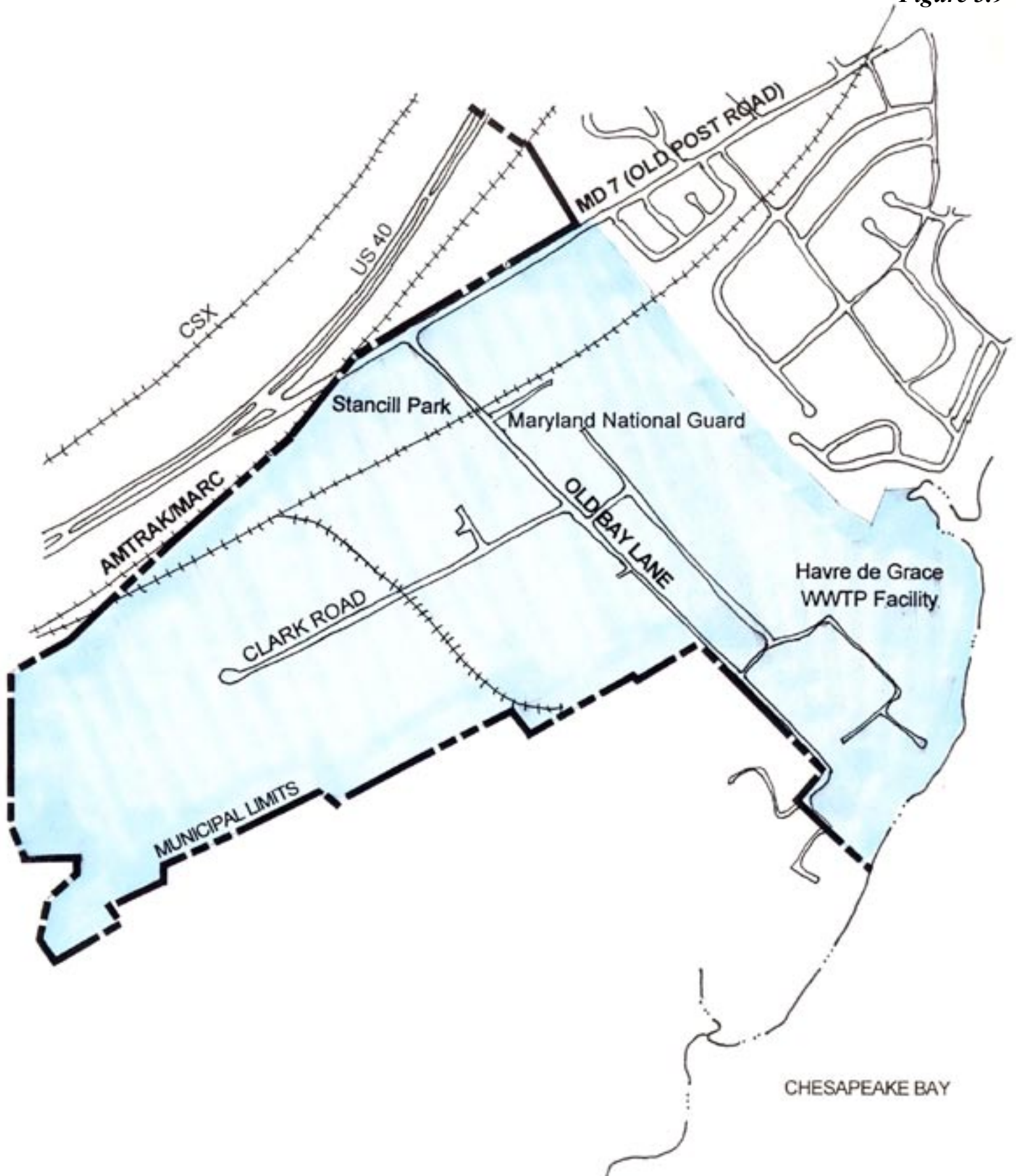
REVITALIZATION AREA #5 (GATEWAY ROAD CORRIDORS)

Figure 3.8



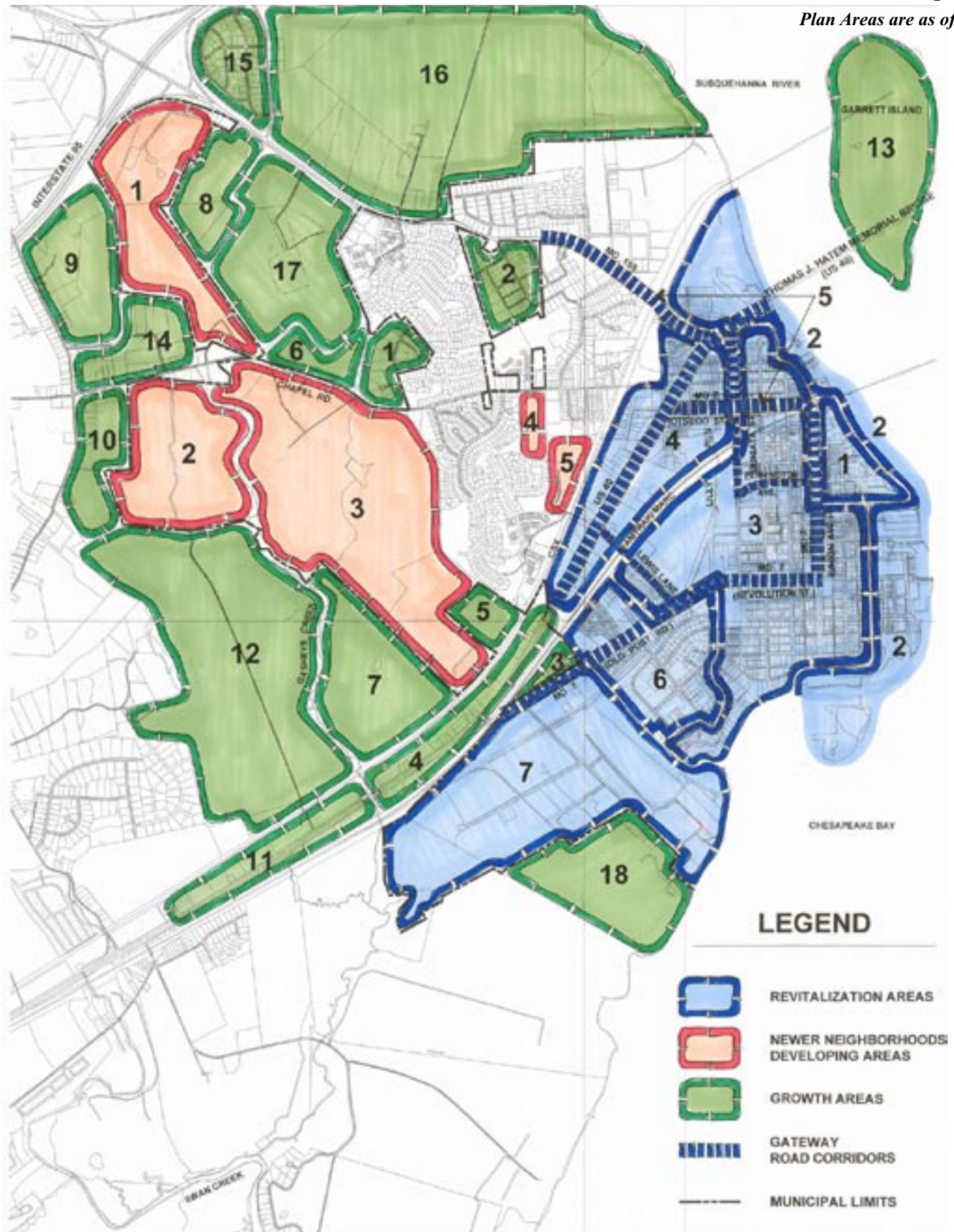
REVITALIZATION AREA #6 (REVOLUTION STREET COMMUNITIES)

Figure 3.9



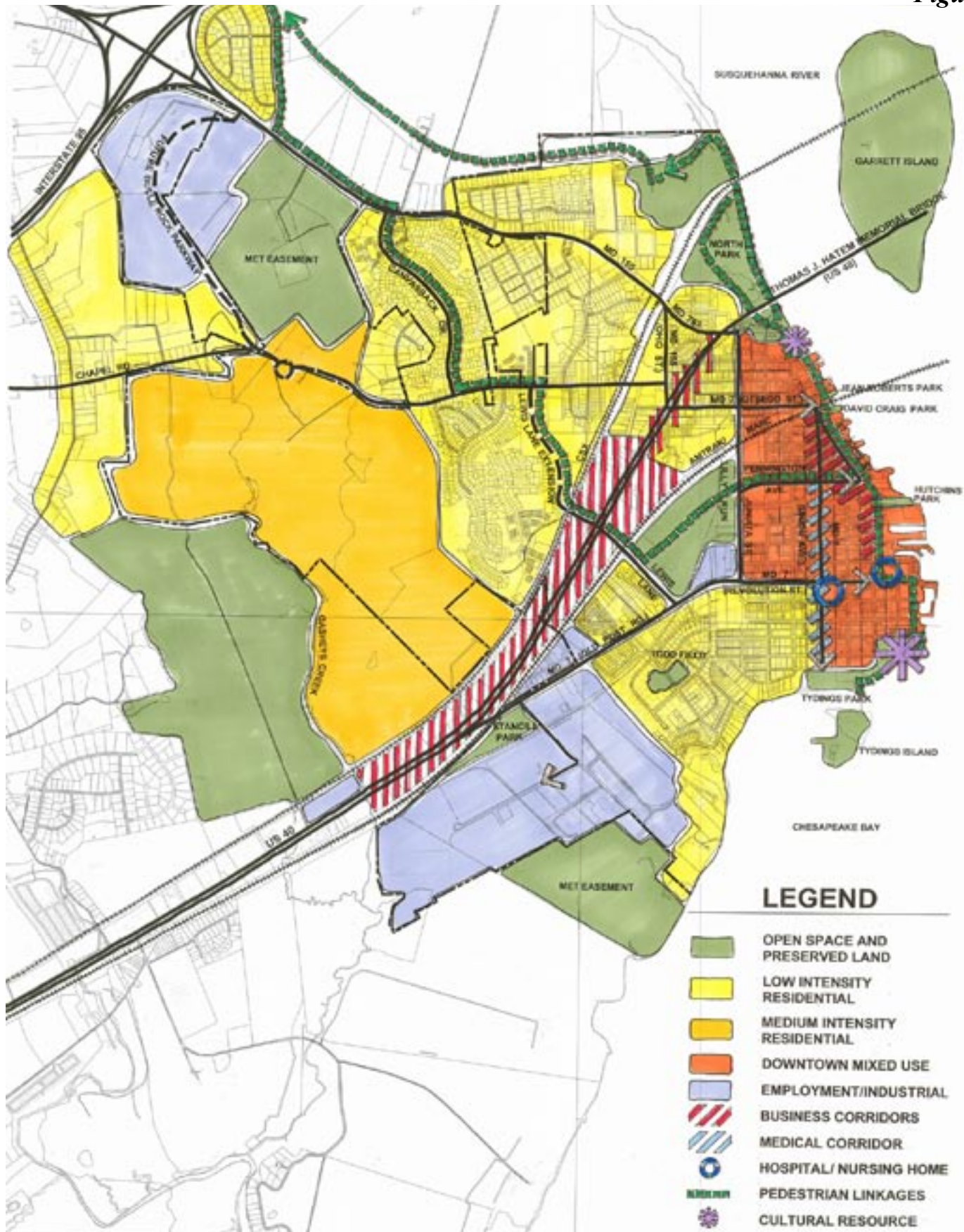
REVITALIZATION AREA #7 (INDUSTRIAL AREA)

Figure 3.10
Plan Areas are as of July 2003



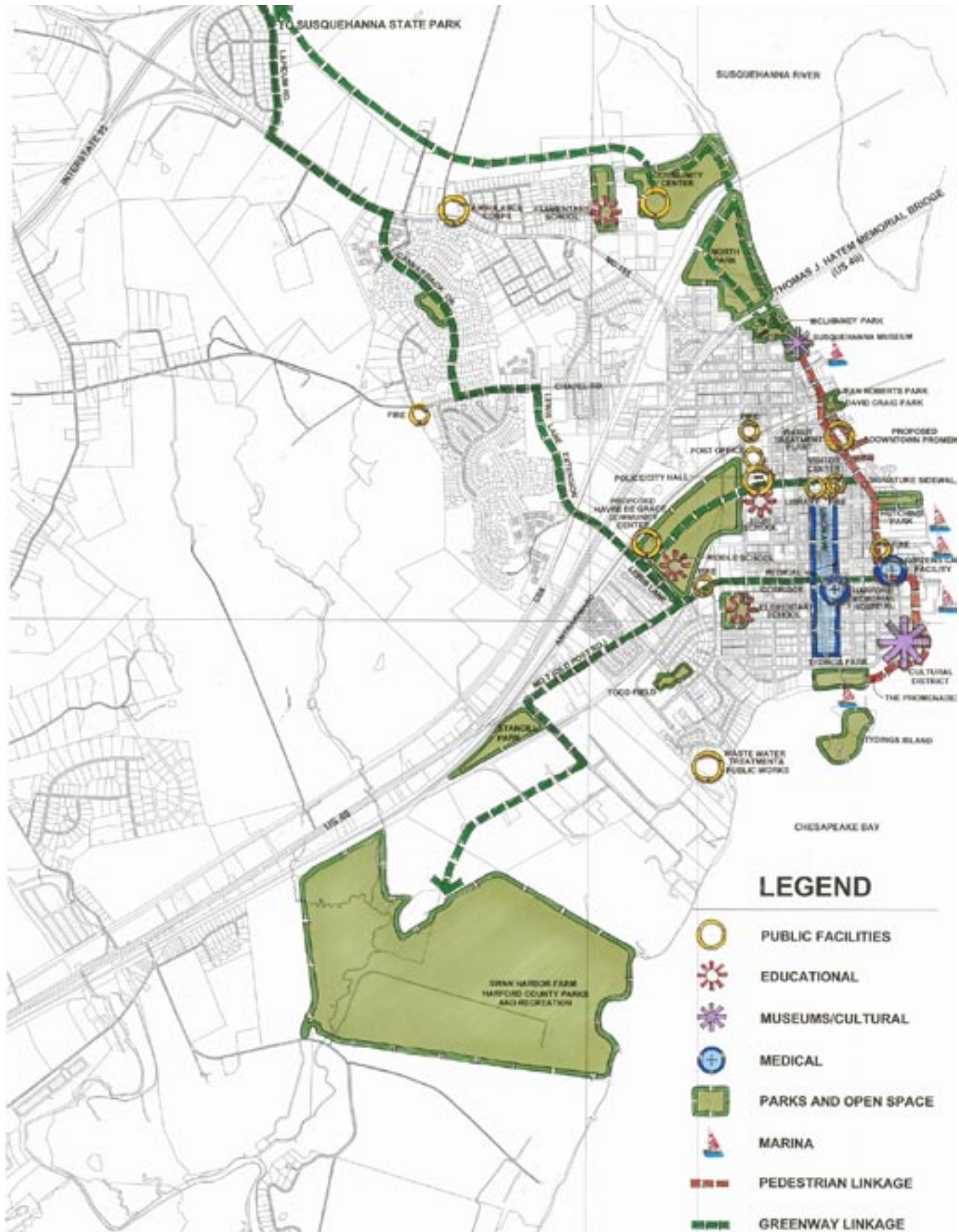
COMPREHENSIVE PLAN AREAS

Figure 3.11



LAND USE PLAN

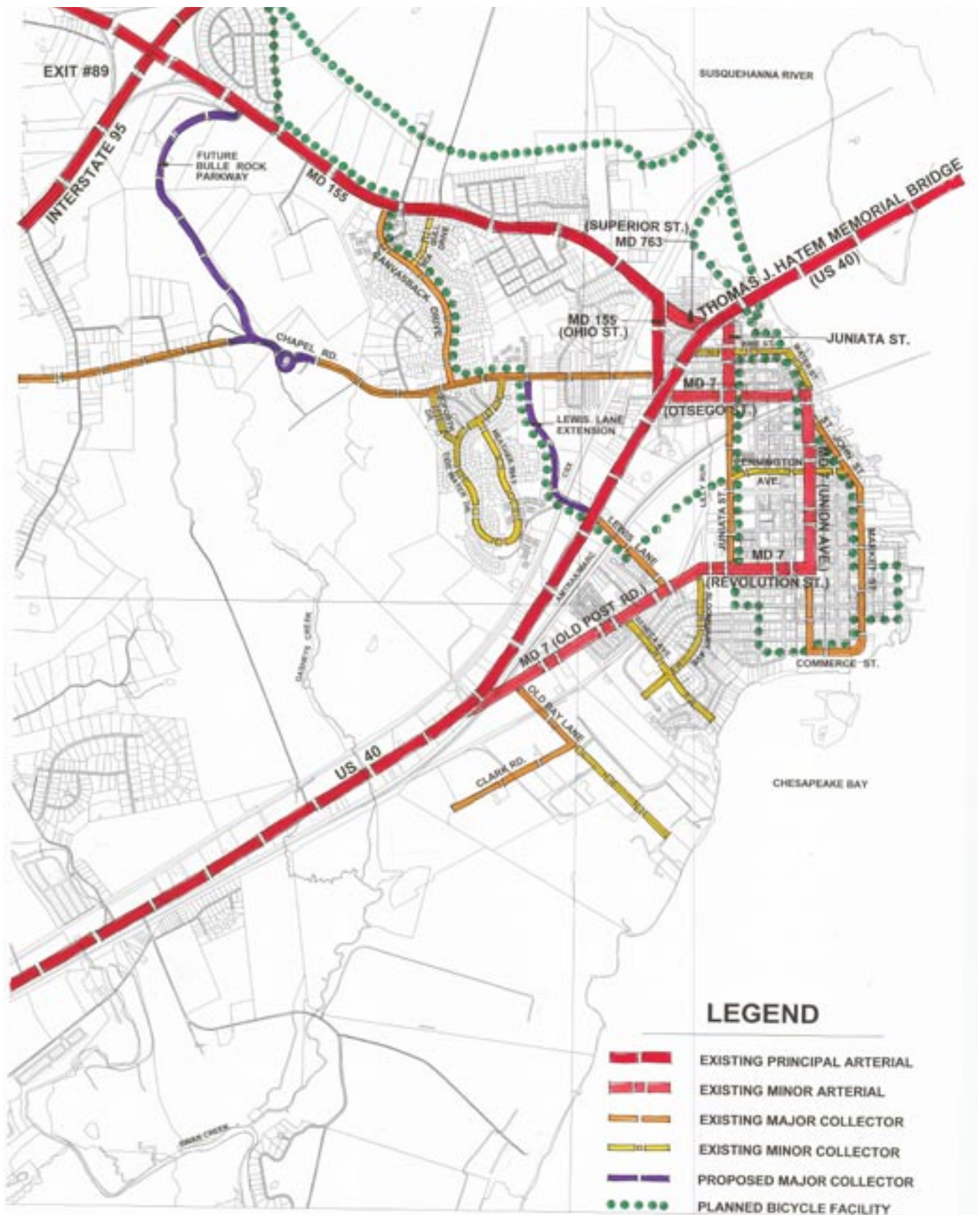
Figure 5.1



COMMUNITY FACILITIES

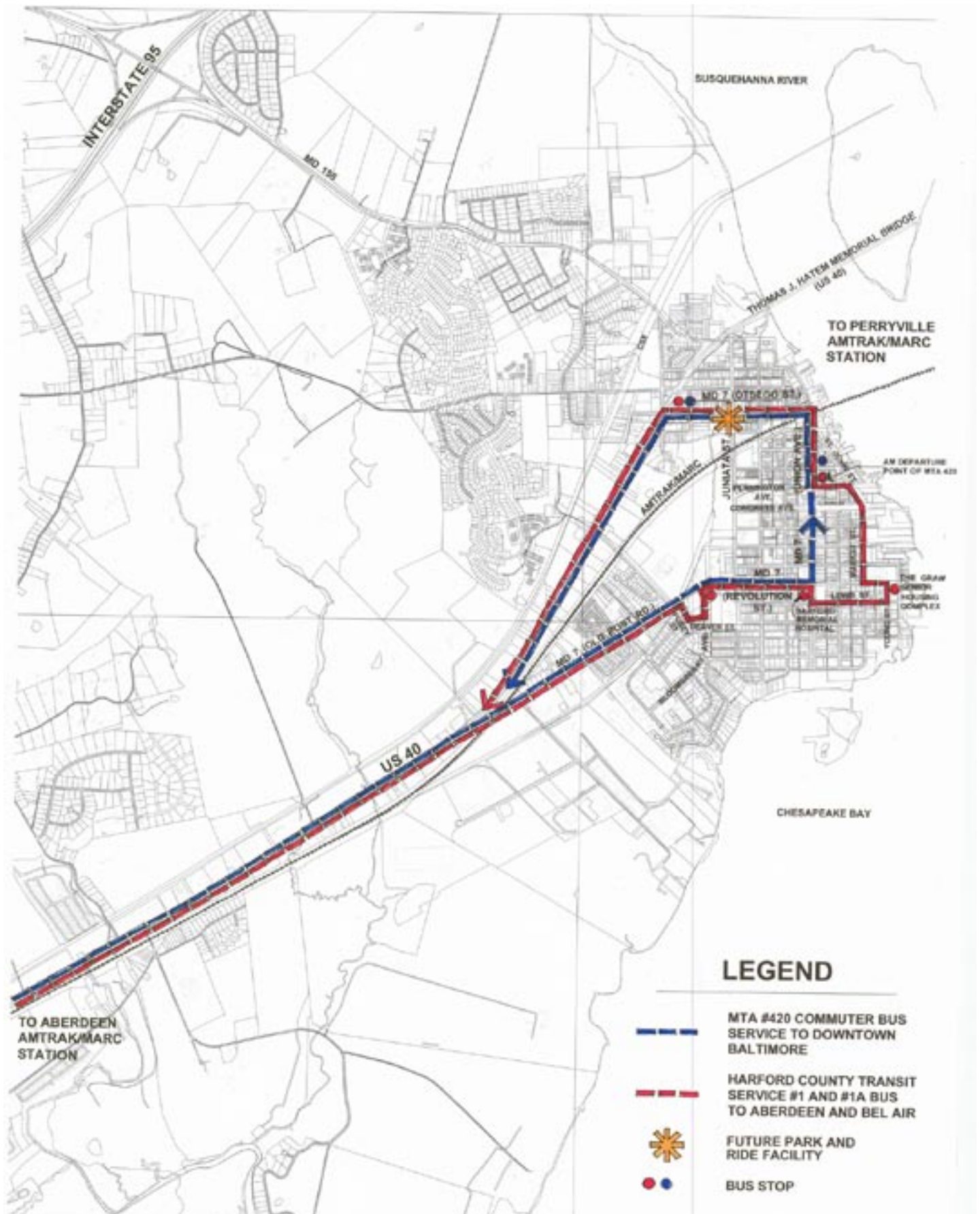
City of Havre de Grace Comprehensive Plan

Figure 7.1



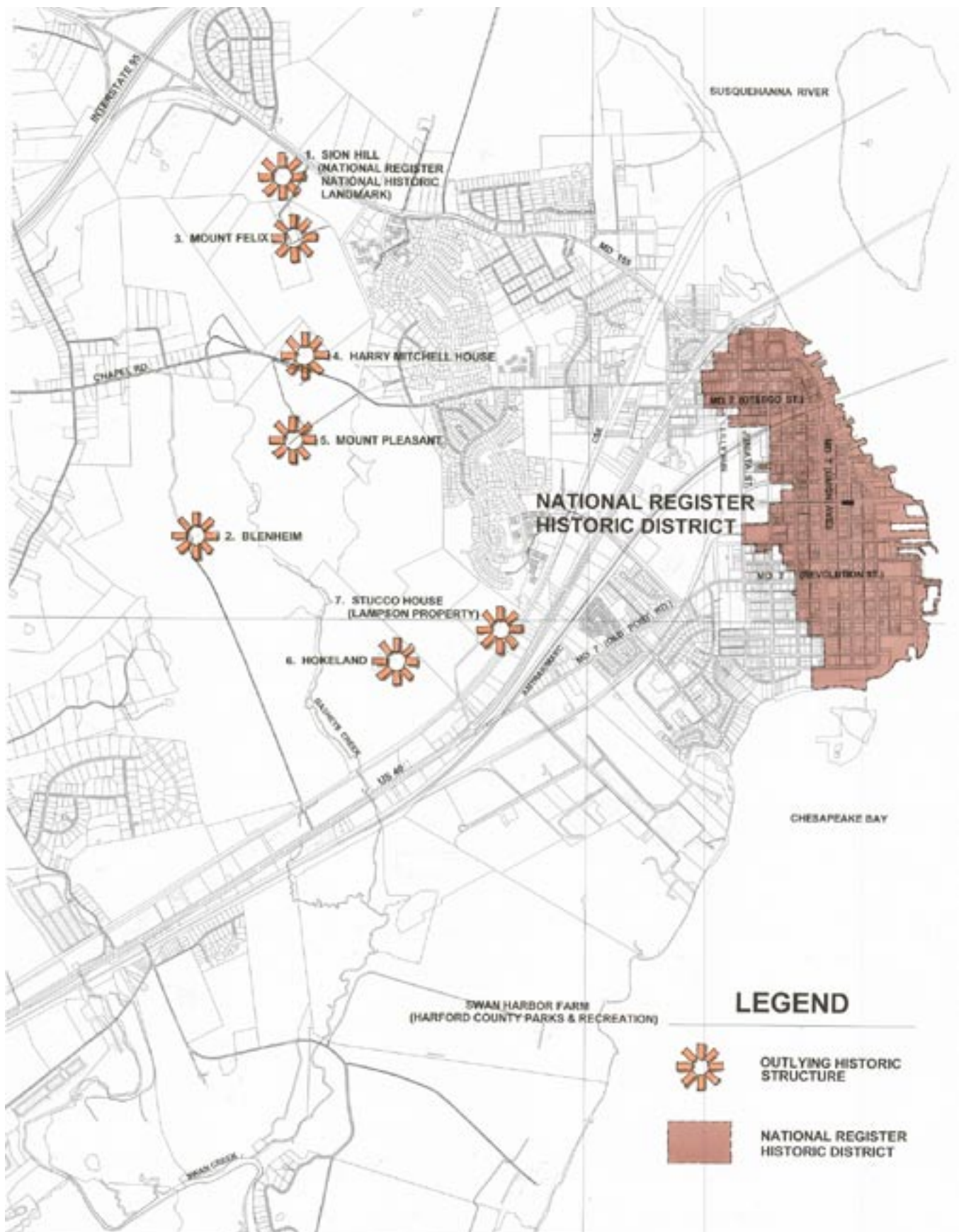
TRANSPORTATION

Figure 7.2



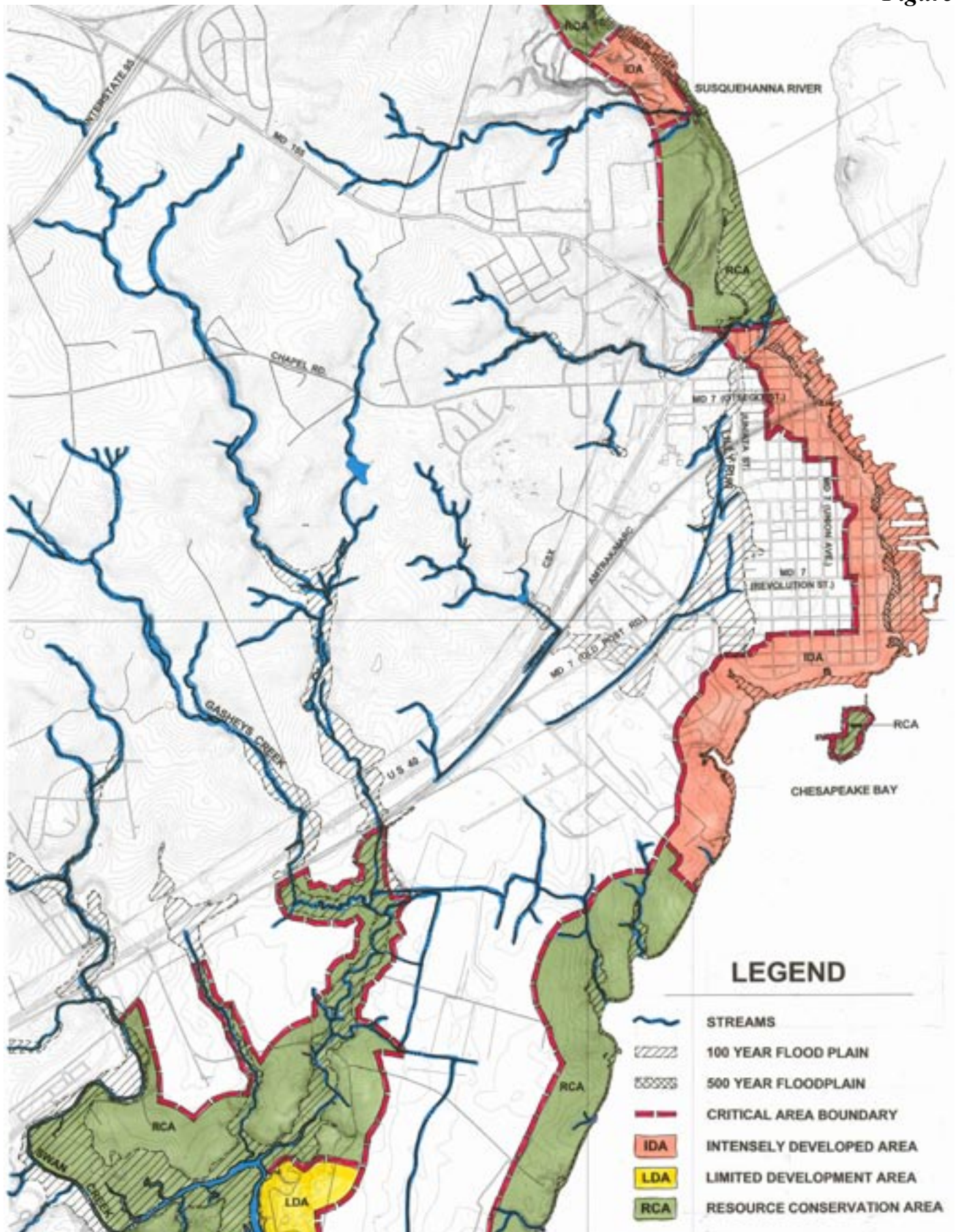
PUBLIC TRANSIT

Figure 9.1



HISTORIC RESOURCES

Figure 10.1



SENSITIVE AREAS