

# 2022 ANNUAL GROWTH REPORT



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*"MARYLAND'S NEW CENTER OF OPPORTUNITY"*

# The 2022 Annual Growth Report

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# INTRODUCTION

In accordance with State law, this report must provide information on development activity and planning programs to ensure that these activities are being completed in a manner consistent with the State's goals and visions. This report also addresses the implementation status of HarfordNEXT. The indicators required by the State are included in this report.

Starting in July 2010, Harford County was required to submit a report to the Maryland Department of Planning (MDP) on its Adequate Public Facilities (APF) provisions and any development restrictions within Priority Funding Areas (PFAs) that are the result of these provisions. Harford County provides this information annually to MDP.

The 2022 Annual Growth Report is an ongoing analysis of growth trends, facility capacity, and service performance. The report also contains information on updates to the County's Development Regulations and updates of all planning documents as required by the State. It addresses State requirements regarding planning consistency and opportunities for improving the planning process. This report was prepared by the Department of Planning and Zoning in coordination with the Department of Public Works and the Harford County Public Schools. This report provides information on the present development activity as well as past trends and future projections for Harford County and the region.

The information in this report will be used by public officials, citizens, and private developers for various purposes:

- To assess facility adequacy during the development review and approval process.
- To assess facility capacity in when considering zoning reclassifications.
- To support the evaluation of priority projects in the annual Capital Budget review.
- To identify critical deficiencies which require prompt attention by the County.

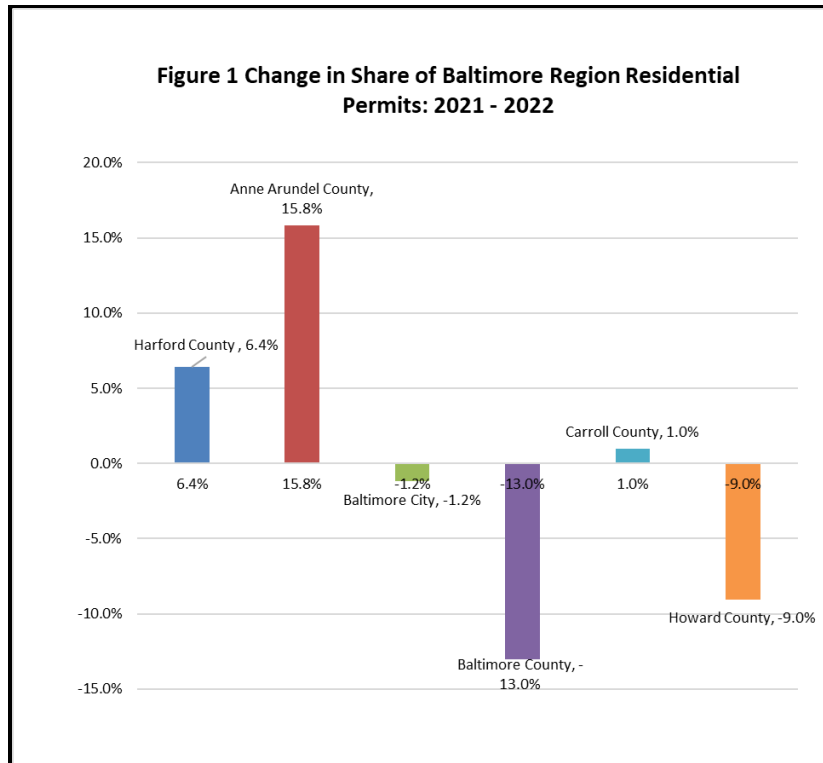
# GROWTH TRENDS

## Regional Data

In accordance with the Harford County Adequate Public Facilities provisions of the Harford County Code, the annual growth report must include data on growth trends for the previous one-year and five-year period, including comparisons with the other jurisdictions in the Baltimore region. Tables 1A – 5A (Appendix A) address the requirements specified in §267-126 A (2) of the Harford County Zoning Code.

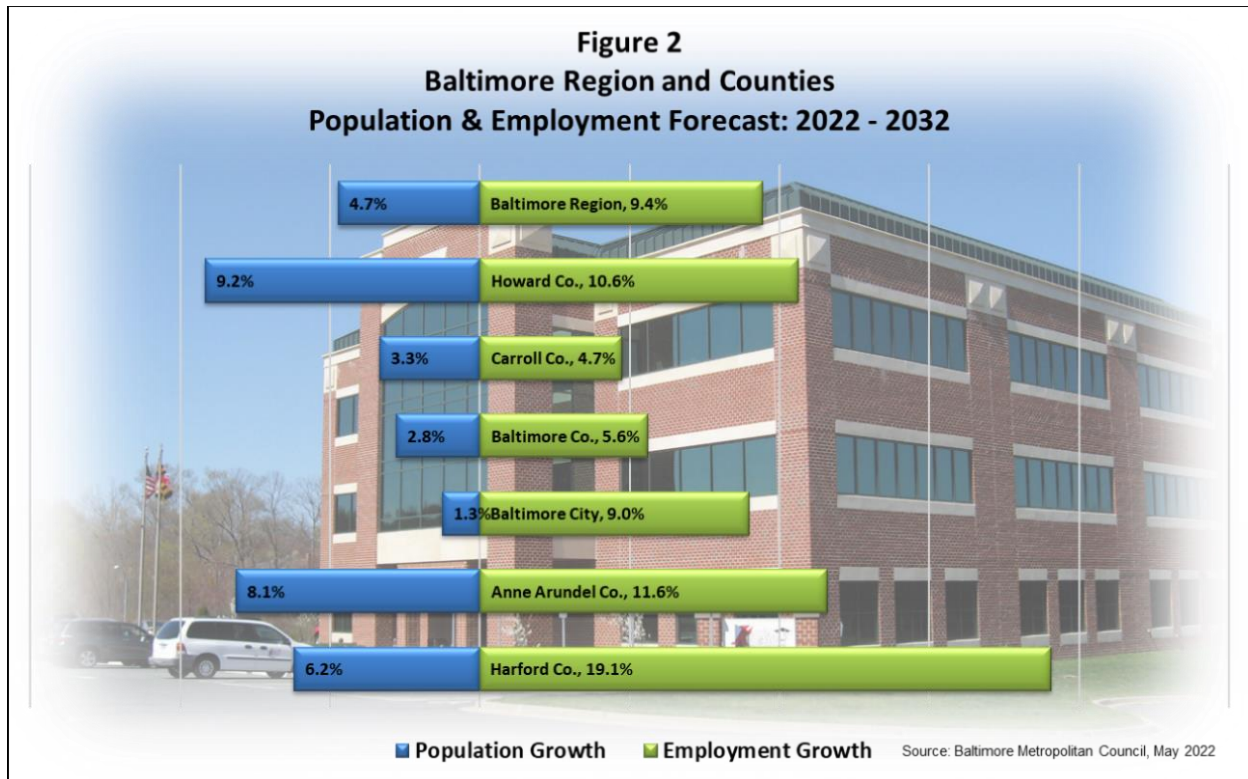
### *Baltimore Region Permit Activity*

Harford County’s share of the region’s residential permits over the past five years represents 10.3% of the region’s total permit activity. Harford County’s share of the regional residential building permits activity increased 6.4% between 2021 and 2022 (Figure 1). This is primarily due to a few multi-family projects in the City of Baltimore. See Table 1A in Appendix A for residential permit activity for the Baltimore Region for the 2018 to 2022 period.



### Baltimore Region Population / Household Projections

Harford County's population is projected to grow by 16,417 residents over the next ten years from 264,578 in 2022 to 280,995 in 2032 (Figure 2). This represents a 6.2% increase in population growth and is slightly greater than the Baltimore region's projected growth rate of 4.7%. See Table 2A in Appendix A for population and household projections for the Baltimore region for the 2022 to 2032 period.



### Baltimore Region Employment Projections

Harford County's employment is projected to grow by over 19,968 jobs between 2022 and 2032, which represents a 19.1% increase in jobs over the next ten years. By contrast, the Baltimore region employment is projected to grow by 9.4% or 139,984 jobs between 2022 and 2032.

Harford County is strategically located on I-95 in the heart of the East Coast and Mid-Atlantic markets. Harford's location, highly skilled workforce, and progressive, business-friendly environment offers the ultimate setting to a wide range of prospective companies and industry sectors. See Table 3A in Appendix A for employment projections for the Baltimore region for the 2022 to 2032 period.



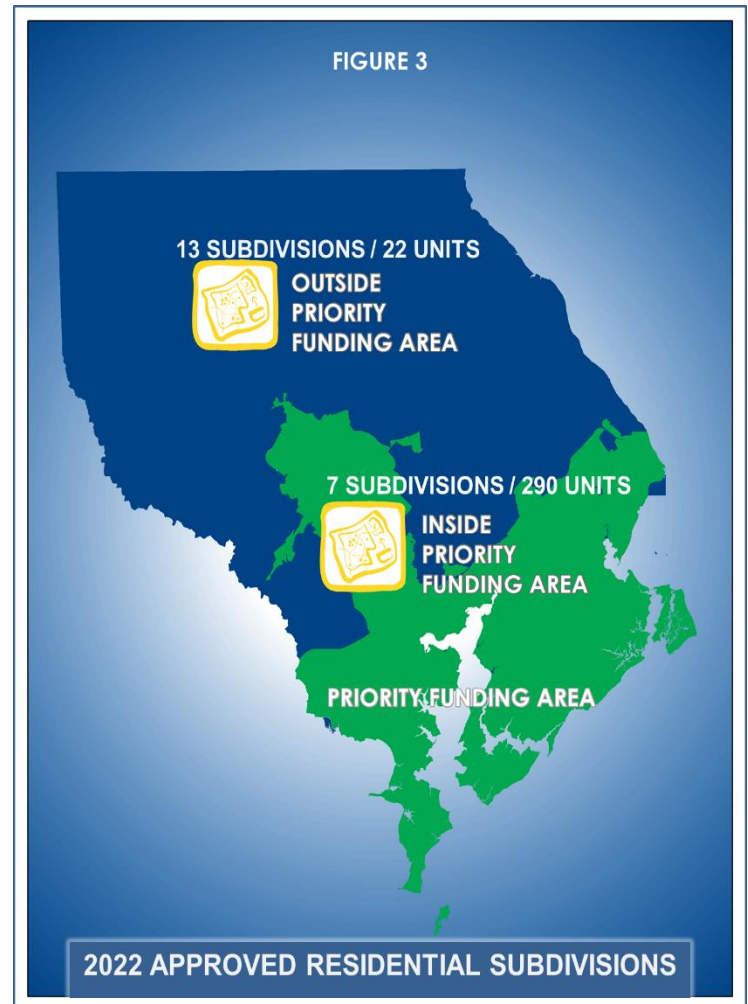
## Harford County Development Activity

As required by State Land Use Article §1-207, Harford County is also required to prepare an annual report on development activity and planning programs. Reporting is required to be based on designated Priority Funding Areas (PFAs). PFA's coordinate state and local government efforts to support economic development and new growth. Funding for projects in municipalities, other existing communities, industrial areas, and planned growth areas designated by counties receive priority for state funding over other projects. In Harford County, the PFA includes the Development Envelope, the municipalities, designated rural villages, University Center, Harford Community College, and areas designated for Mixed Office.

### *New Subdivisions*

In 2022, Harford County approved 20 residential subdivisions, totaling 230 acres. The residential subdivisions resulted in the creation of 312 units. Seven of the subdivisions (290 units) were in the Priority Funding Area. The remaining 13 residential subdivisions were located outside of the PFA and created 22 units. (*Figure 3*) As part of Maryland's 2009 Smart, Green, and Growing law, Harford County must submit an annual report showing the county is following the statewide land use goal of targeting development within designated Priority Funding Areas and minimizing development outside of these areas.

There were six non-residential plans approved, all except two were located within the PFA. A list of the approved subdivisions is located in Appendix E.



### *Permit Activity*

A total of 1262 building permits were issued by Harford County in 2022, which represents a 29% increase over the 2021 permit total of 974. This number includes new construction residential, non-residential, and accessory structure permits.

### *New Residential Building Permits Issued*

A total of 718 new residential permits were issued by Harford County in 2022, which represents a 8% decrease over the 2021 total of 749. The unit type breakdown includes 137 single family detached units, 124 townhouse units, and 81 apartment units. The municipalities of Aberdeen, Bel Air, and Havre de Grace issued 375 of the new construction residential permits collectively. 559 or 78% of the 718 new residential permits (county and municipal) were located within the County's Development Envelope (*Figure 4*).

### *New Non-Residential Building Permits Issued*

The County issued a total of 11 permits for new non-residential construction (larger-scale projects valued at \$50,000 and over - including municipal) for a range of commercial and industrial uses. These permits can be broken out by value as \$27.4 million in new construction and \$32.4 million in additions, alterations, and repairs.

### *Development Capacity*

The Department of Planning and Zoning routinely updates the inventory of residentially zoned land in the Development Envelope. This inventory provides a total residential land capacity and includes vacant undeveloped zoned land, preliminary and site plan approvals, vacant land capacity in the municipalities, and potential redevelopment/infill capacity. Based on this update, there is an estimated capacity of 12,203 units (*Figure 5*) in the Development Envelope.

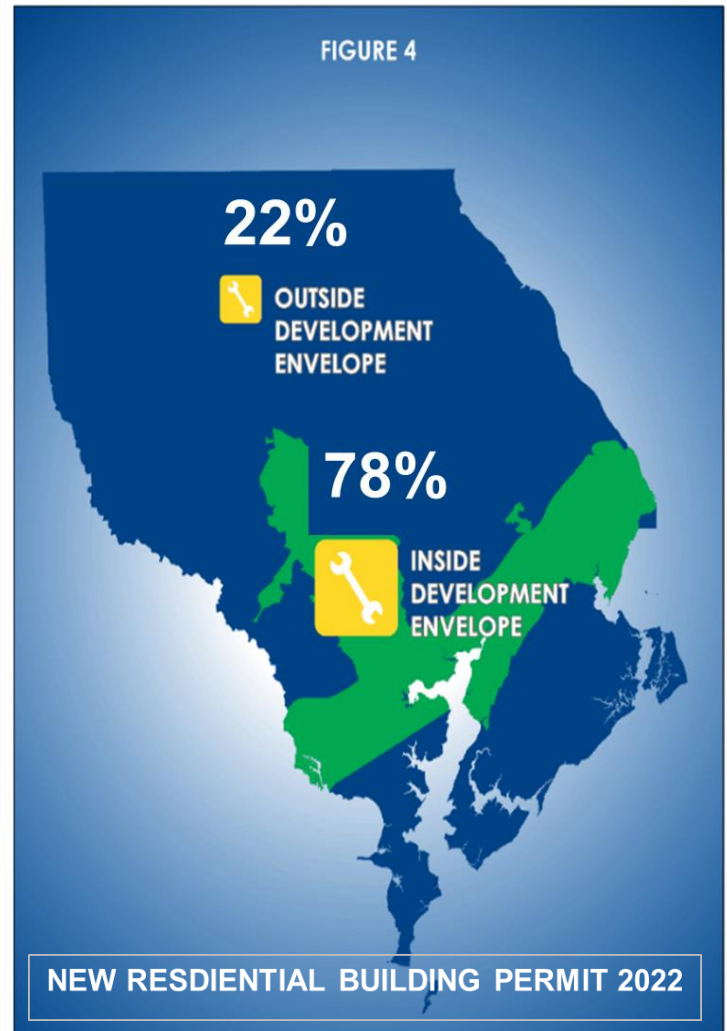


FIGURE 5



## PLANNING DOCUMENT UPDATES

This section addresses state reporting requirements regarding code amendments and new or updated comprehensive plans and plan elements.

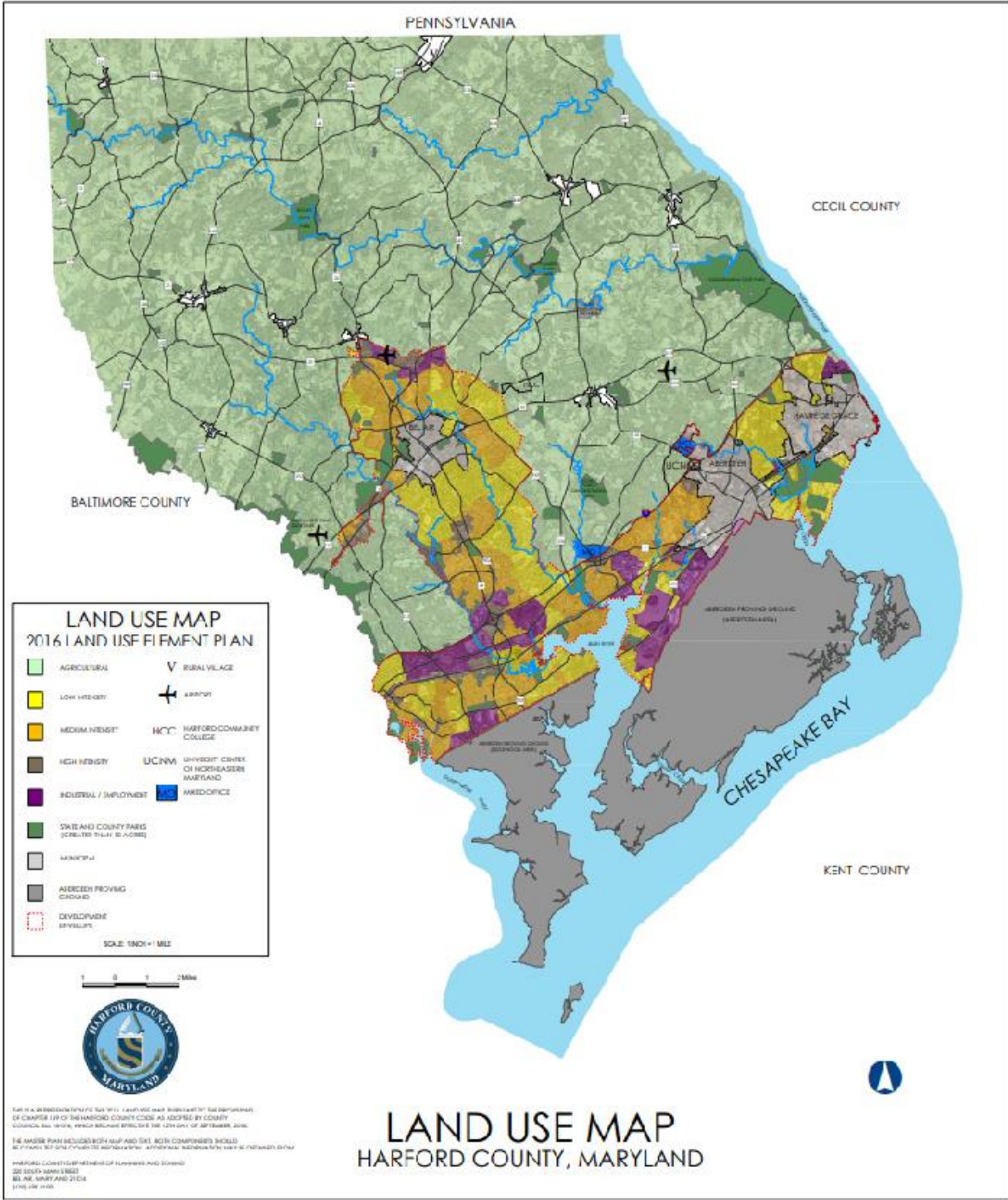
### Zoning Code Amendments

In 2022, the following bills were enacted that resulted in changes to the County’s Zoning Code:

Effective Date	Bill	Description
1/10/22	21-23	267-65G ENOD - housing for the elderly and COS development standards - additional road access
7/19/2022	22-06	Cidery - 267-4 add definition. 267-50 Permitted Use Charts – Services add Cidery as Permitted (P) in B2, B3, CI, and GI
7/25/2022	22-08	Entertainment and Events Center - 267-4 add definition; 267-88A(13) Special Exceptions standards; 267-50 Permitted Use Charts Amusements add as SE in B2, B3, CI, LI, GI and MO
8/22/2022	22-14	267-27C(1) Accessory Uses and Structures: replace square footage of habitable space with total square footage of principal structure
10/5/2022	22-11	Critical Area Program re-write 267-4 and 267-63 Note: Bill 22-11 indicates an effective date of 8/22/22; however, the Critical Area Commission did not officially notify the County of their concurrence until 10/5/22 which is the effective date per the Law Dept.
10/12/2022	22-19	This legislation renews the temporary moratorium per Bill 21-04 related to setbacks, parking requirements, temporary uses, signs, outdoor storage and display and seating capacity with regard to uses that include nightclubs, bars, breweries and restaurants. There is no text amendment. Note: this extension sunsets 12/31/23 unless renewed.
12/19/2022	22-24	267-4 modify definition of Day-Care Center to allow supplemental kindergarten classes.

### Comprehensive Plan and Element Plan Updates

HarfordNEXT, the County Master Plan (Figure 6), was adopted and became effective September 12, 2016 by the Harford County Council.



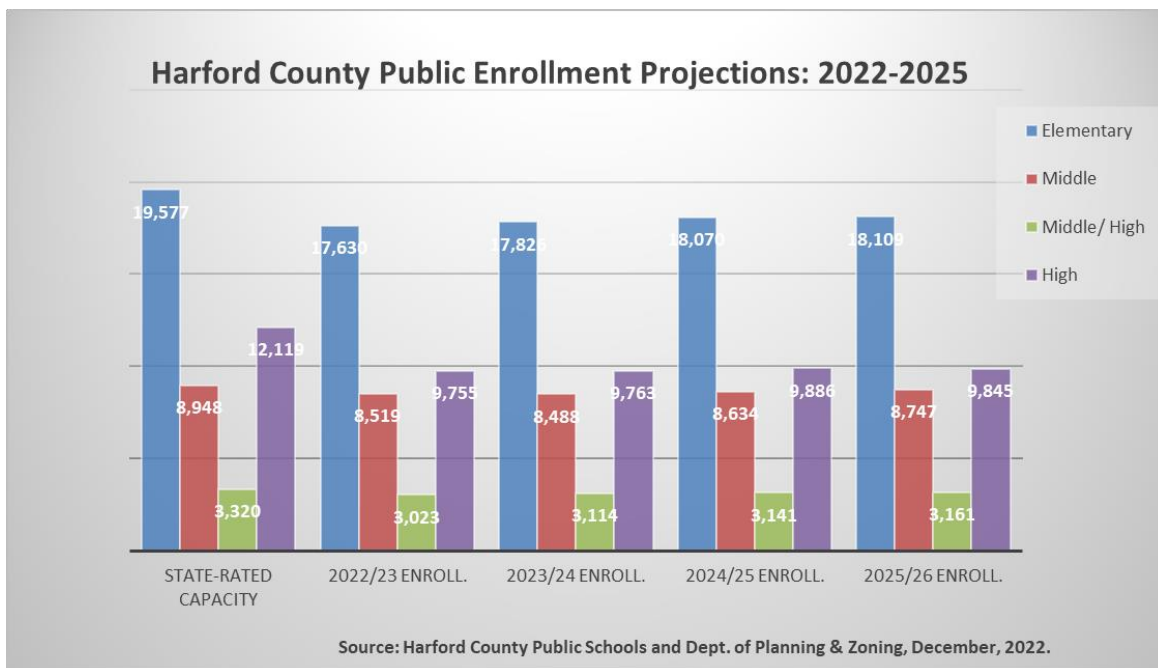
## ADEQUATE PUBLIC FACILITIES

The County’s Annual Growth Report must be updated annually to identify any public facilities that are functioning below the County’s adopted minimum standards. This year’s Annual Growth Report includes information and analysis regarding public schools, the water and sewerage system, road intersections and government facilities.

This report also addresses State reporting requirements for Adequate Public Facilities provisions; including reporting requirements for roads, transportation facilities and schools as they relate to development patterns. In the report, Harford County must identify any restrictions that occur within a PFA because of APF restrictions, and the report must address how the restrictions will be resolved.

### Public Schools

To assess current and future adequacy of public school facilities, the capacities of existing schools, school utilization and future populations are analyzed. The data in this report regarding the public school system is aggregated by the elementary/middle/high school districts, and include school enrollments, State-rated capacities for each school facility, utilization of each school facility, and three-year projected school enrollments (*Tables 6B, 10B, and 14B in Appendix B*). Modified school enrollment projections are included and take into account planned units remaining and projected units from vacant residential zoned land (*Tables 7B, 11B, and 14B in Appendix B*). In addition, development information such as building permits issued by dwelling type (*Tables 8B, 12B, and 16B in Appendix B*) and population and household estimates (*Tables 9B, 13B, and 17B in Appendix B*) are included in this report. Figure 7 shows enrollment projections by grade level.



## **Analysis**

Each school facility has been analyzed for historic growth trends, current conditions, and future enrollment projections. The information is based on factual data and is aggregated by current school districts. Based on the Adequate Public Facilities provisions of the County Code, the level of service standard for Public Schools is 110 percent of rated capacity within three years for elementary and secondary schools.

### *School Adequacy Standards*

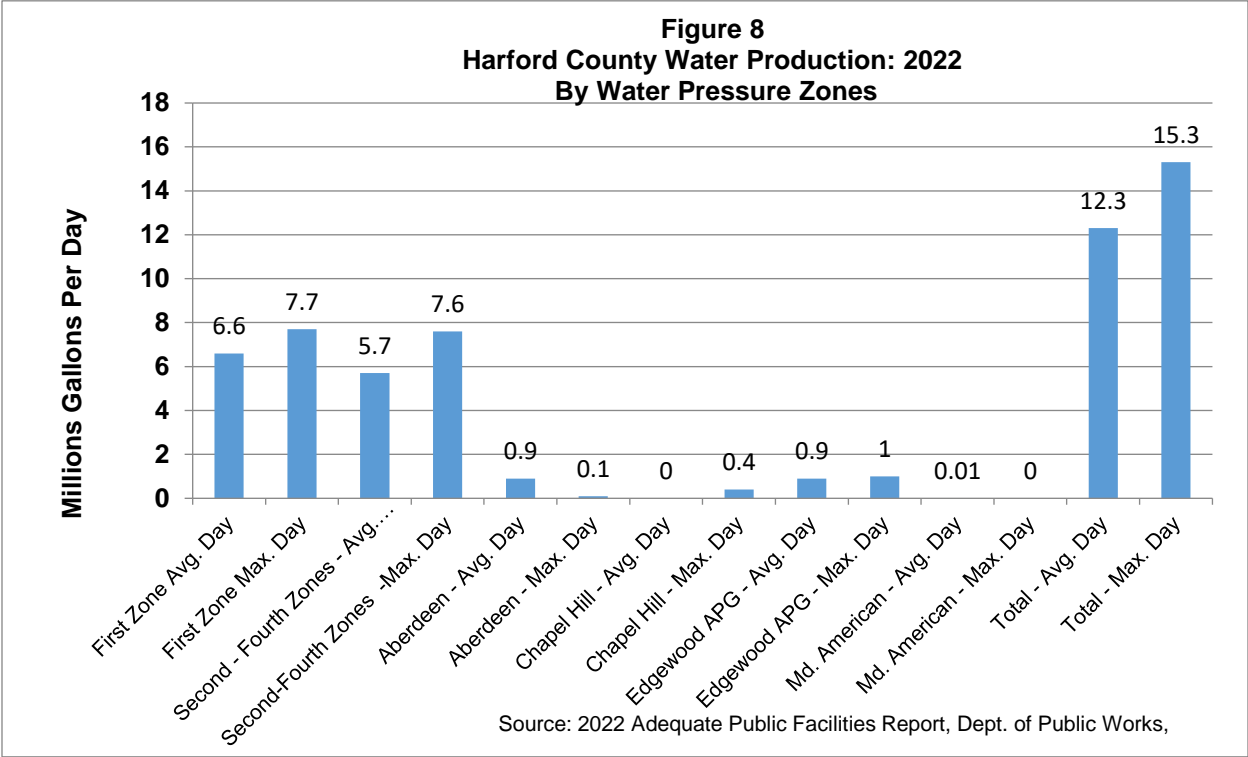
Under current law, preliminary plans for subdivisions of greater than five lots cannot be approved in school districts where the full-time enrollment currently exceeds, or is projected to exceed, 110 percent of the capacity within three years. Currently, 30 of 33 elementary schools meet adequacy standards. All middle and high schools meet adequacy standards. Given the projected capacity utilization for 2022 – 2025, major subdivisions in the Homestead/Wakefield, Havre de Grace and Bel Air Elementary School attendance areas will not be approved but may be reviewed and placed on a waiting list until capacity is available.

## **Water and Sewerage**

The data included in this section for the water and sewerage systems are aggregated by the water and sewer service areas, which generally coincides with the Development Envelope, as defined in the 2016 Harford County Master Plan, HarfordNEXT. Additional information is included in this report on water/sewerage usage for residential and non-residential uses, an inventory of existing water consumption/sewerage flows, demand projections (including the basis for their computation), and a list of capital projects is contained in the County's Capital Improvement Program (CIP) for expanding facilities, including project status (*Tables 18C - 21C in Appendix C*). This information is derived from the "2022 Water and Sewer Adequate Public Facilities Report," and is consistent with the County's Water Resources Element Plan.

## **Water**

The County water system's average daily usage in 2022 was 12.29 MGD (Million Gallons Per Day), with a peak day demand of 15.28 MGD. The total countywide permitted maximum daily water treatment capacity is approximately 27.8 MGD. The County has a maximum day drought demand of 19.75 MGD. With the further expansion of the AWTP to 23.75 MGD the County's water service area is adequately planned. To keep pace with the projected growth, staged construction programs are established that distribute required capital costs for improvements and/or additions to the County's system over a period of years. Figure 8 illustrates water production by water pressure zones during 2022.



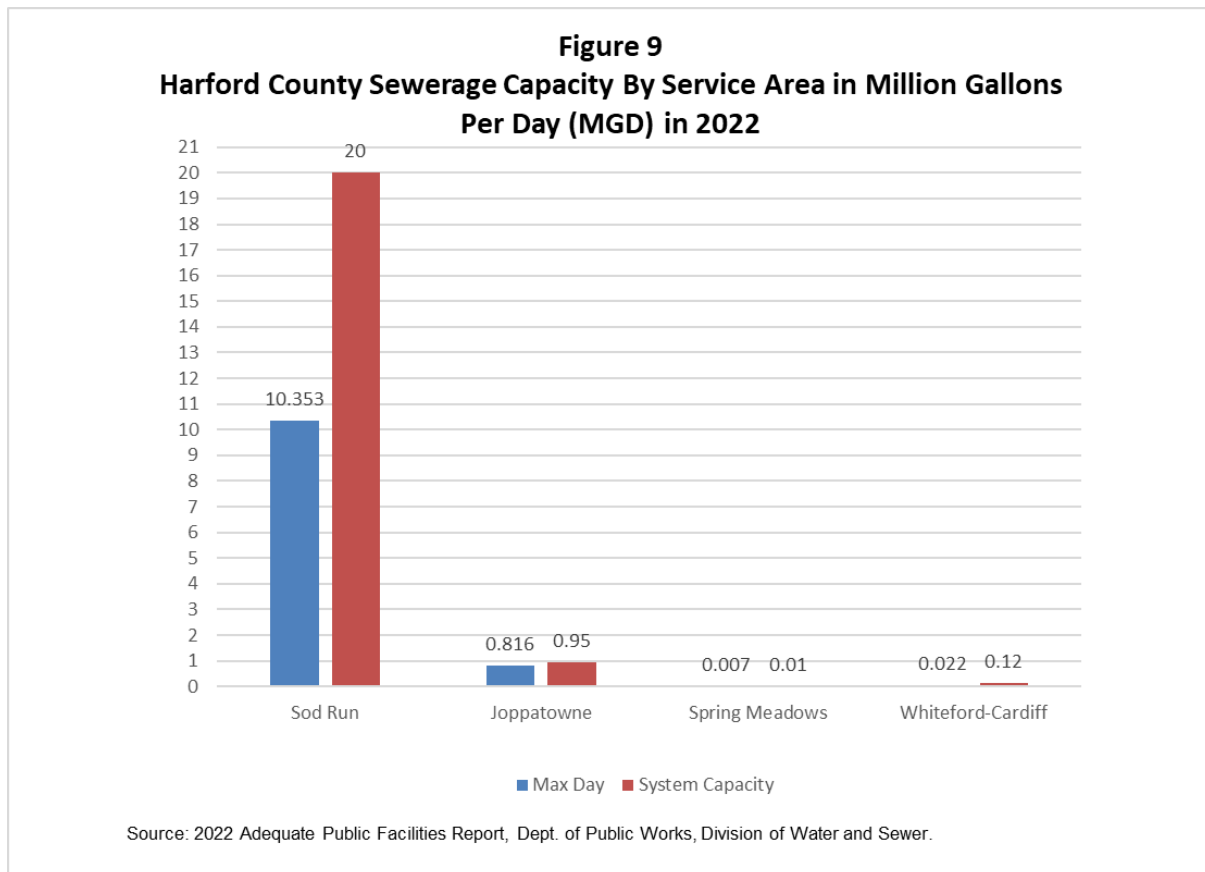
There are 16 community water systems that are not maintained or operated by Harford County but are subject to the APF provision of the County Code. These private systems, which are monitored and evaluated by the Maryland Department of the Environment, are as follows:

- Maryland-American Water Co.
- Campus Hills Water Works Inc.
- Clear View Court Mobile Home Park
- Conowingo Power Plant
- Darlington
- Darlington Mobile Estates
- Fountain Green Mobile Home Park
- Greenridge Utilities Inc.
- Harford Community College
- Hart Heritage
- Lakeside Vista
- Queens Castle Mobile Home Park
- R & R Estates Mobile Home Park
- Susquehanna State Park
- Swan Harbor Mobile Home Park
- Williams Mobile Home Park



## Sewerage

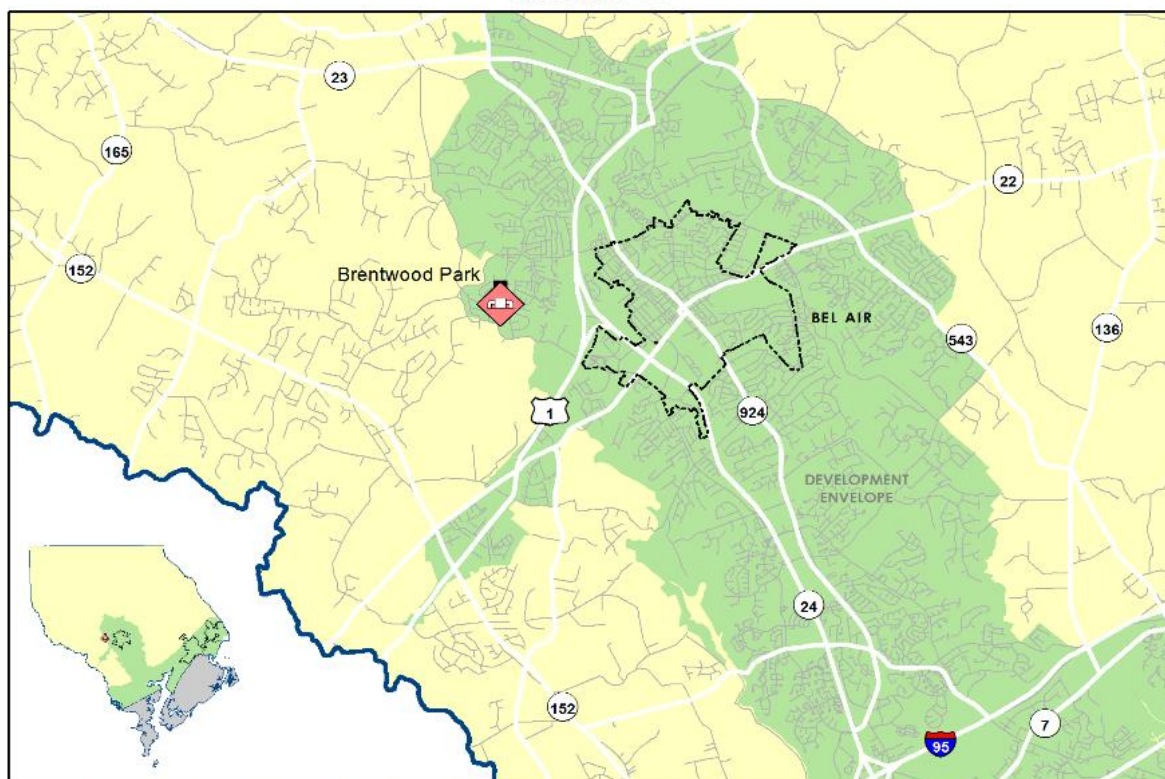
The average daily effluent flow to the Sod Run WWTP in 2022 was approximately 10.35 MGD, exclusive of recycle flows and septage. The average daily effluent flow to the Joppatowne WWTP in 2022 was approximately 0.82 MGD. The average daily effluent flows for Spring Meadows and Whiteford-Cardiff in 2022 respectively were 0.007 MGD and 0.022 MGD's (*Figure 9*).



Since 1972, the County has prohibited any additional privately owned community or multi-use treatment plants with a peak capacity larger than 10,000 gallons per day (GPD) outside the Development Envelope. This encourages growth to remain within the growth corridor, maintains financial stability, and protects the environment.

The Division of Water and Sewer has identified the Brentwood Park Sewage Pumping Station (S.P.S.) (*Figure 10*) as being over capacity. Replacement of the station is included in the CIP and the project is currently under construction and is expected to be completed in early 2024.

FIGURE 10



SEWAGE PUMPING STATION WITHOUT RESERVE CAPACITY

In March 2019, the final report for the Fallston Sewer Capacity Study was completed. The study examined both the existing and build-out conditions for the Fallston service area and identified the sewer improvements required. The improvements are included in the CIP for the portion to be funded by the County. The study identified the need for an increase in capacity for the Record Road Sewer Pumping Station. In July 2019, the Reckord Road Sewer Policy (18.62-1) was established to create a surcharge for new connections to fund the required improvements as a county capital project. The study also performed a preliminary downstream analysis of the Plumtree Run drainage basin, which will require further study to identify the future required capital improvements.

In August 2018, the Hickory Collector Policy was approved which identified the future sewer improvements necessary for buildout of the Hickory drainage area and it established a funding mechanism by a surcharge for future connections. The capital improvements are planned to be implemented as necessary depending on how and when development progresses.

## Road System

The intent of the Adequate Public Facilities Roads provisions of the County Code is to create a mechanism that requires proposed development to make appropriate and reasonable road improvements, based on the proposed development's impact to the road system. Due to the Covid-19 pandemic there are still some delays to the transportation factors for 2022 report. Traffic counts during the pandemic were not representative of typically expected counts. Traffic studies were required to apply a growth factor to the previous year's data to account for the unanticipated temporary decrease in counts due to COVID-19

The information for the APF Road System contained in this section includes the following: signalized and unsignalized intersection capacity analysis results (*Tables 22D and 23D*), average daily count locations (*Table 24D*), a list of approved County capital projects funded for construction in Fiscal Year 2022 (*Table 25D*), and a list of State Consolidated Transportation Program (CTP) projects funded for construction in Fiscal Year 2022 (*Table 26D*). This information will help identify existing deficiencies in the road system and guide both County and State capital project funding to the most critical road projects (*Tables 22D – 26D in Appendix D*).

Proposed developments which are anticipated to generate 1,500 or more trips per day based on the use of the property may be required to expand the study area. The determination of existing and projected Level-Of-Service (LOS) is calculated in the Traffic Impact Analysis (TIA), which is completed by the developer and reviewed by the Departments of Planning and Zoning, Public Works and the State Highway Administration (SHA). LOS is a qualitative measure describing operational conditions within a traffic stream, based on service measures such as speed and travel time, freedom to maneuver, traffic interruptions, comfort, and convenience.

There are six established LOS – A through F – that measure the operational efficiency of a transportation facility. The following is a general definition of each level of service and Delay in Seconds:

**LOS A** ( $\leq 10$ ) – free flow of traffic with no restriction of significant delay

**LOS B** ( $> 10$  &  $\leq 20$ ) – stable flow of traffic with very little restriction or delay

**LOS C** ( $\geq 20$  &  $\leq 35$ ) – stable flow of traffic with low to moderate restriction or delay.

**LOS D** ( $> 35$  &  $\leq 55$ ) – approaching unstable flow of traffic with moderate to heavy restriction / delay.

**LOS E** ( $> 55$  &  $\leq 80$ ) – unstable flow of traffic with significant restriction and delay.

**LOS F** ( $> 80$ ) – forced flow or cases of “grid lock”. The flow rate drops significantly.

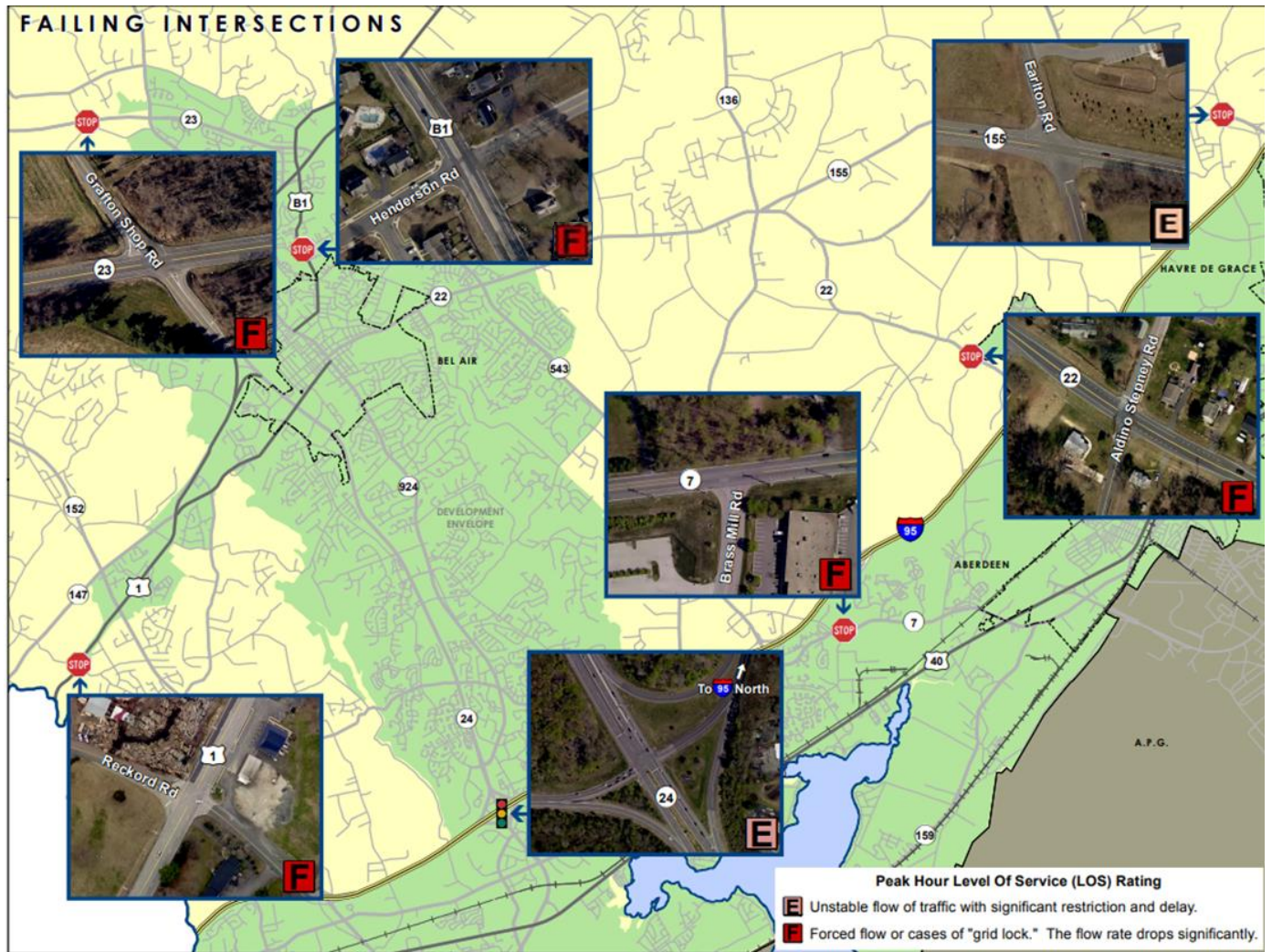
The standard for intersections within the Development Envelope is a LOS D. If the existing LOS is E or F at an intersection within the Development Envelope, then the developer must mitigate the impact of the development's new trips. The standard for intersections outside the Development Envelope is a LOS C. If the existing LOS is a D or lower, then the developer must mitigate the impact of the development's new trips.

In addition to the review of individual TIAs, the Departments of Planning and Zoning and Public Works have studied several major roads and intersections to identify existing conditions. This list represents a cross section of key intersections located inside, outside, and on the fringes of the Development Envelope that have been identified as failing or on the verge of failing based on the adopted LOS standards.

There is one signalized intersection and six unsignalized intersections with one or more movements operating at a LOS E (LOS D outside the Development Envelope) or lower during peak hours. The evaluation of the LOS is determined by performance of the intersection during one-hour peak traffic periods in the a.m. and/or p.m. Figure 11 identifies intersections that contain one or more movements that **operate at an unacceptable LOS**. Developments that impact these intersections will be required to mitigate their impacts to the intersections.

FIGURE 11

### FAILING INTERSECTIONS MAP



## **GOVERNMENT FACILITIES**

The Harford County Code requires an analysis of the need for additional fire, library and public safety services based upon the county's population and a list of approved capital

### **Fire/EMS Services**

The Harford County Fire and EMS Services Master Plan that was completed in 2009 analyzed the need for Fire and EMS services based upon the county population. The plan identified the need for four additional Fire Station Facilities. One of these facilities, the Patterson Mill Road Station, has been completed and turned over to Bel Air Volunteer Fire Company (VFC) (2012). The plan called for three additional Fire/Emergency Medical Service facilities which are listed below:

- Riverside area on MD Route 543 just north of US Route 40. The design and construction of this station is in progress.
- On MD 543 (Fountain Green Road between Hickory and Fountain Green) There is no further information regarding a facility for this location.
- Churchville near the intersection of MD Routes 22 and 136. There is no further information regarding a facility for this location.

The approved FY 2021 Capital Budget and CIP included funding for an EMS station in North Harford (project completed in 2023); and renovation of the existing VFD stations in Aberdeen (project was completed in 2021) and Whiteford (project is underway). The approved FY2022 Capital Budget and CIP included funding for the replacement of Susquehanna Hose Company-House 1 in Havre de Grace (project is underway). Additionally, the capital program funds communications, safety equipment, and multi-agency mobile command as well as other repairs to existing stations. The Multi-Agency Mobile Command Vehicle project is being overseen by the Harford County Sheriff's Office. The project is currently underway with an anticipated completion date of late 2023/early 2024.

### **Library Services**

The Maryland Department of Budget and Management requires that libraries refer to "Maryland's Planning Guidelines for Libraries" to determine if the level of service is consistent with the population and justify the need for expansion. The planning guidelines rate the area of library space per capita in a scale with three ranges:

- Essential = 1.0 square feet per capita (nationally accepted minimum facility size)
- Enhanced = 1.1 square feet per capita
- Exemplary = 1.2 square feet per capita

The total gross square footage of all Harford County Public Library branches increased from 229,917 to 232,644. The increase is largely due to the completion of the new Darlington Library, now located at 3535 Conowingo Road. Originally constructed as a

Wawa in 1996 and later home to several different banks, this repurposed, upcycled building retains the original building's footprint, as requested by the community when planning started. The new facility was completed in fall 2022 and this agriculturally themed branch has unique services and resources including a 24/7 exterior locker pickup system; a tablet tower for reading periodicals; an exterior patio with fireplace for community gatherings; and more. Additionally, expansion projects for Darlington and Havre de Grace remain open with prior appropriations.

## **Law Enforcement**

Harford County sworn officers per capita are compared using state and federal reports. The most recent federal report is from 2019. The 2020 Maryland Uniform Crime Report shows Harford County had 447 sworn officers. This represents a rate of 1.87 sworn officers per 1,000 residents. The County total of sworn officers breaks down to 312 in the Harford County Sheriff's Office, 32 in the Maryland State Police, as well as 41 in Aberdeen, 31 in Bel Air, and 36 in Havre de Grace. This is the most recent information provided by both the state of Maryland and the Federal Bureau of Investigation.

## **PLANNING CONSISTENCY REVIEW**

Harford County must submit an annual report that addresses specific smart growth measures and indicators that support the statewide land use goal of targeting development within designated Priority Funding Areas and minimizing development outside of these areas. Changes in development patterns occurring in 2022 that impact land use, transportation, community facilities patterns, zoning map amendments, and subdivision plats must be reported. Local jurisdictions, as part of their annual reporting, must determine if all changes in development patterns in 2022 reported are consistent with the following criteria:

- All changes must be consistent with each other;
- The recommendations of the last annual report;
- The adopted plans of the local jurisdictions;
- The adopted plans of all adjoining local jurisdictions; and
- The adopted plans of State and local jurisdictions that have responsibility for financing or constructing public improvements necessary to implement the local jurisdiction's plan.

No changes to land use were approved in 2022.

## **Development Patterns / Consistency of Plans**

All of the developments noted in this report have been determined to be consistent with

the surrounding land uses. A review of consistency is part of the plan approval process. As recommended in previous reports, the County continues to direct the majority of new residential development and redevelopment (98 in 2020) to the Development Envelope. During 2022, all subdivisions approved were consistent with the intent and policies of the 2016 Master Plan, the Water and Sewer Master Plan, and Adequate Public Facilities regulations. All roadway improvements were consistent with the State Consolidated Transportation Plan, and the Transportation Improvement Plan. Changes in development patterns, ordinances, and regulations were found to be consistent with the adopted plans of Harford County, as well as those of the state and all adjoining local jurisdictions. These changes furthered the Twelve Visions established in § 1-201 of the Land Use Article of the Annotated Code of Maryland.

### **Municipal Plan Coordination**

Harford County coordinates with the Town of Bel Air and the cities of Aberdeen and Havre de Grace on the creation of their growth plans. State law requires municipal jurisdictions to develop a Municipal Growth Element (MGE) as part of their Comprehensive Plan. The MGE must identify future municipal growth areas outside of the existing corporate limits and be submitted to the County for review and comment. Proposed annexations must be consistent with those outlined in the Municipal Growth Element Plans and permitted development on the annexed lands shall be in accordance with the County's zoning classification that is in place at the time of the annexation.

### **Implementation**

Harford County uses many tools to achieve the Visions, including Adequate Public Facilities (APF) legislation to manage growth by tying development to the capacity of existing government services such as water and sewer, roads, and schools. The County has developed implementation strategies, policies, programs, and funding for growth and development, resource conservation, infrastructure, and transportation are integrated across the local, regional, State, and interstate levels to achieve these visions.

The Department of Planning and Zoning tracks approved subdivisions located in the Priority Preservation Area Designation (Tier IV) under the Maryland Sustainable Growth and Preservation Act of 2012 (SB 236) that were approved prior to the enactment of the regulations and therefore grandfathered. In 2018, the Department tracked three grandfathered preliminary plans comprised of 71 lots. These grandfathered plans shall remain valid through the tenure of their approval.

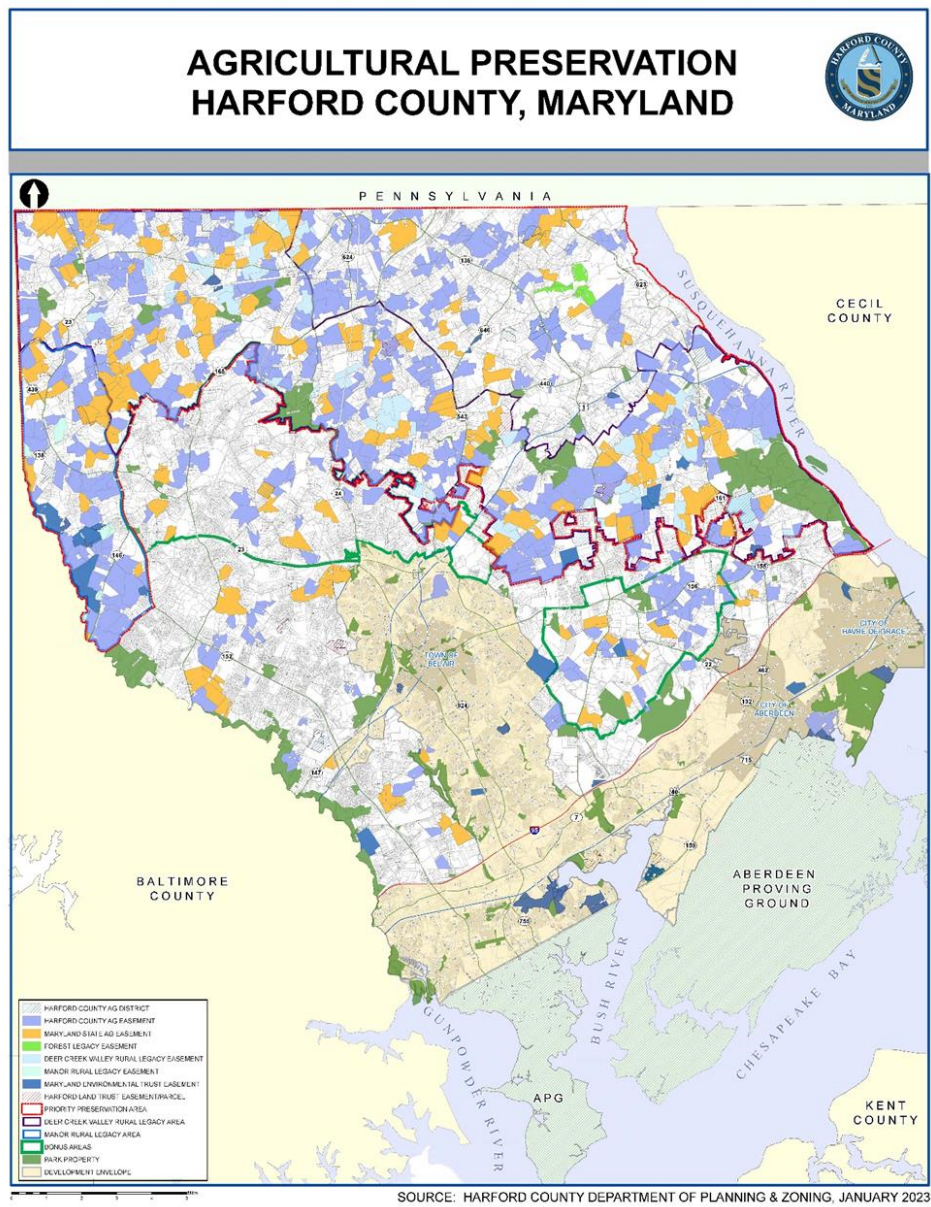
### **Agricultural Preservation**

Preservation efforts were continued through a variety of state and local programs. Currently participation in agricultural preservation programs is available to all property owners with agriculturally zoned land, and the County's primary focus has been on protecting the Priority Preservation Area (PPA) (Figure 13). HarfordNEXT expanded the PPA boundary to include all lands north of the 2009 boundary and the Harford County

portion of the Manor Rural Legacy Area. Based on feedback from citizens, recent efforts have focused on expanding eligibility for the County’s own preservation program to include all developable land in the County, regardless of zoning category. Those efforts are expected to continue in 2023.

During 2022, 2,002 acres were preserved countywide, bringing the total protected land in the County to 61,791 acres at the end of 2022. Over 25% of the county (excluding municipalities) is in some form of permanent preservation. Of the acreage protected in 2022, approximately 1,301 acres were located in the County’s PPA, bringing the total amount of protected land in the PPA to 49,113 acres.

**Figure 13**





## **PROCESS IMPROVEMENTS**

As part of the annual report, local jurisdictions must identify any changes that will improve the planning and development review process, in addition to zoning ordinances or regulations that have been adopted during the reporting period that specifically address the planning visions of the Land Use Article.

In 2015, the Harford County Department of Planning and Zoning developed the web-based “Track-It” application which allows citizens to track property development plans and proposals in their communities.

Using interactive maps to show properties that are subject to a public meeting during the development process, Track-It allows online access to documents, plans, and general information about the proposal and the development review process.

The Track-It web application has proven to be very popular, generating thousands of constituents visits each year. In 2016 the department was presented with an Efficiency in Government award by the National Association of Counties for the Track-It application.

In 2023, the department was pleased to introduce a substantial enhancement to the Track-It application with the addition of “Track-It Advanced” which allows constituents the option to subscribe for weekly email summaries of all Development Advisory Committee (DAC) projects, DAC meeting schedules and minutes, and DAC document updates and revisions.

By monitoring the county’s digital document archive system, Track-It Advanced records each addition, update or revision to DAC project plans and documents and shares summary reports allowing the user direct hyperlinked access to the archives at the same time they are available to department staff.

The Track-It Advanced application was developed in-house by department staff using existing computer hardware and software resources.

Track-It Advanced is the most recent example of Harford County’s ongoing effort to maximize government transparency and engage constituents in the planning and development process.

## **ORDINANCES AND/OR REGULATIONS THAT IMPLEMENT THE STATE PLANNING VISIONS**

Harford County’s Master Plan, HarfordNEXT, was adopted in June 2016 and is consistent with the 12 State Planning Visions. The various element plans, including the Land Use Element Plan, Natural Resources and Water Resources Element Plan, Historic Preservation Element Plan, and Transportation Element Plan have been incorporated into the 2016 Master Plan. The Land Preservation, Parks, and Recreation Element Plan is also

consistent with the planning visions contained in the Land Use Article of the Maryland Code. The plans also include strategies that address these visions. The County's Chesapeake Bay Critical Area Program and its Bicycle and Pedestrian Master Plan are also consistent with the visions.

## **METHODOLOGY**

### **Population Projection Methodology**

Yearly estimates of population and households in Harford County for the Annual Growth Report are determined from the 2020 Census. This data is adjusted to reflect a number of variables including building permits, average household size, and household vacancy rates. The five and ten year projections are based on these estimates, with a growth factor applied to determine the rate and quantity of growth in the County. This growth factor is based on the number of building permits anticipated to be issued each year. It is important to note that projections are based on past trends and land availability. A component of the residential land inventory is the number of nets planned units remaining. The total planned units remaining is calculated by subtracting the total new residential building permits issued from the total preliminary plan approved units. Subdivision plans with six or more units remaining and approved municipality plans are included.

The 2020 Census information at the census block level is utilized for specific analysis of each facility regarding area maps and demographic information. Building permits are identified by facility areas and by subdivision name and/or address for each year. This provides the needed information on growth trends by facility service area. The population projections for the five other jurisdictions in the Baltimore Region are based on an interpolation of the Baltimore Metropolitan Council's Round 10 population forecast.

### **School Enrollment Projection Methodology**

The methodology for projecting students utilizes historical data for live births and the number of children enrolled in public schools. Using these data, a series of ratios that reflect grade cohort survival are developed. These ratios include consideration of a number of factors:

- Births in a given year which affect subsequent kindergarten and first grade enrollments.
- Net migration of school age children.
- Net transfer of children between public and private schools.
- Non-promotion of children to the next grade level.
- Dropouts in the later years of secondary school.
- Shifts between regular grade and upgraded groups other than special education.

This technique of establishing a ratio is used for each successive grade. For example, a ratio is developed between the number of children actually in first grade in a given year and the number in second grade the following year. The ratio, therefore, represents the

number of first graders who advance to second grade. If significant variations exist, such as a rapid increase in home building, then factors such as pupil yields for subdivision activity and development trends must be measured.

Development monitoring is a key activity to ensure accurate projections since housing expansion periods have a direct impact on school enrollments. A primary means of calculating projected student enrollment due to a housing expansion period is by using pupil yield factors for new developments.

Pupil yield is a term which describes the number of pupils generated per dwelling. The pupil yield factor is used to assist in identifying the impact of residential development on the Harford County Public Schools (HCPS) system. The former method only looked at selected subdivisions. The data were tabulated by unit type, and the specific pupil yields were calculated for each subdivision in the elementary, middle, and high schools. Table 1 below provides a summary of the pupil yield factors by grade level.

**Table 1 - Pupil Yield Factors**

Unit Type	Grade Level		
	K – 5	6 - 8	9 - 12
Single-Family	0.17	0.09	0.12
Townhome	0.22	0.10	0.13
Apartments	0.15	0.06	0.06
Condominiums	0.07	0.04	0.04
Mobile Home	0.14	0.09	0.07

Source: Harford County Department of Planning and Zoning, 2018 Harford County Pupil Yield Study

The following example is included to illustrate how pupil yield factors are used to estimate new students generated by proposed residential development. In this example, it is estimated that 55 new students would be generated by a proposed 100-unit Single-Family detached (SFD) subdivision.

**Table 2 - Estimating New Students Using Pupil Yield Factors (Proposed 100 SFD Subdivision)**

Grade Level	Yield Factor	X	# of Dwelling Units (Single-family)	=	New Students
K- 5	0.17	X	100	=	23
6 - 8	0.09	X	100	=	9
9 - 12	0.12	X	100	=	12
<b>TOTAL</b>	<b>0.44</b>	<b>X</b>	<b>100</b>	<b>=</b>	<b>44</b>

### Modified School Enrollment Methodology

Utilizing our regional cooperative Round 9 forecast, a projection of housing units was determined for each school district. The number and type of units were based on the existing zoning. After the number and type of units were determined and projected by year, a pupil yield factor was applied to determine the total number of new pupils by school district.

The methodology for determining a growth factor included a multi-step process. The process included utilization of the existing grade cohort succession methodology and the pupil yield factor. A factor was applied to the existing grade cohort succession ratio per school if the pupil yield factor identified an increase in the average number of students. In order to maintain a consistent application, all calculations were based on the Harford County Public School system's definition of "unadjusted" enrollment projections. No assumptions were made in terms of school capacities or utilization of existing facilities.

The actual enrollment of Harford County Public Schools (HCPS) is retained as base enrollment for the modified enrollment projections. HCPS first-year projected enrollment figures are also retained as they have been shown to be historically accurate.

## **Water and Sewer Facility Projection Methodology**

### *Water:*

The Harford County water service area is divided into four pressure zones due to varying topography within the Development Envelope. To provide an adequate supply of water, the transmission lines, and pumping and storage facilities for all zones must be sized for estimated future demands.

The water system is evaluated for adequacy for providing flows during the maximum day demand, while maintaining system pressures required to deliver fire flows. Water booster stations and/or transmission lines, service mains, storage tanks, and water treatment plants are evaluated. Areas within the Harford County Development Envelope that exist at the highest elevations of the water pressure zones are evaluated for adequacy on a case-by-case basis. The anticipated growth within the County is accommodated through a combination of developer funded projects and the CIP.

### *Sewerage:*

The sewerage system is similarly evaluated for adequacy to accommodate expected peak flows through collectors, interceptors, pump stations, force mains, and wastewater treatment plants. Should a capacity problem exist in a collector sewer, it is the developer's responsibility to resolve the inadequacy. Inadequacies at major pumping stations and wastewater treatment plants are resolved by programmed capital projects or by projects cooperatively supported by a group of developers.

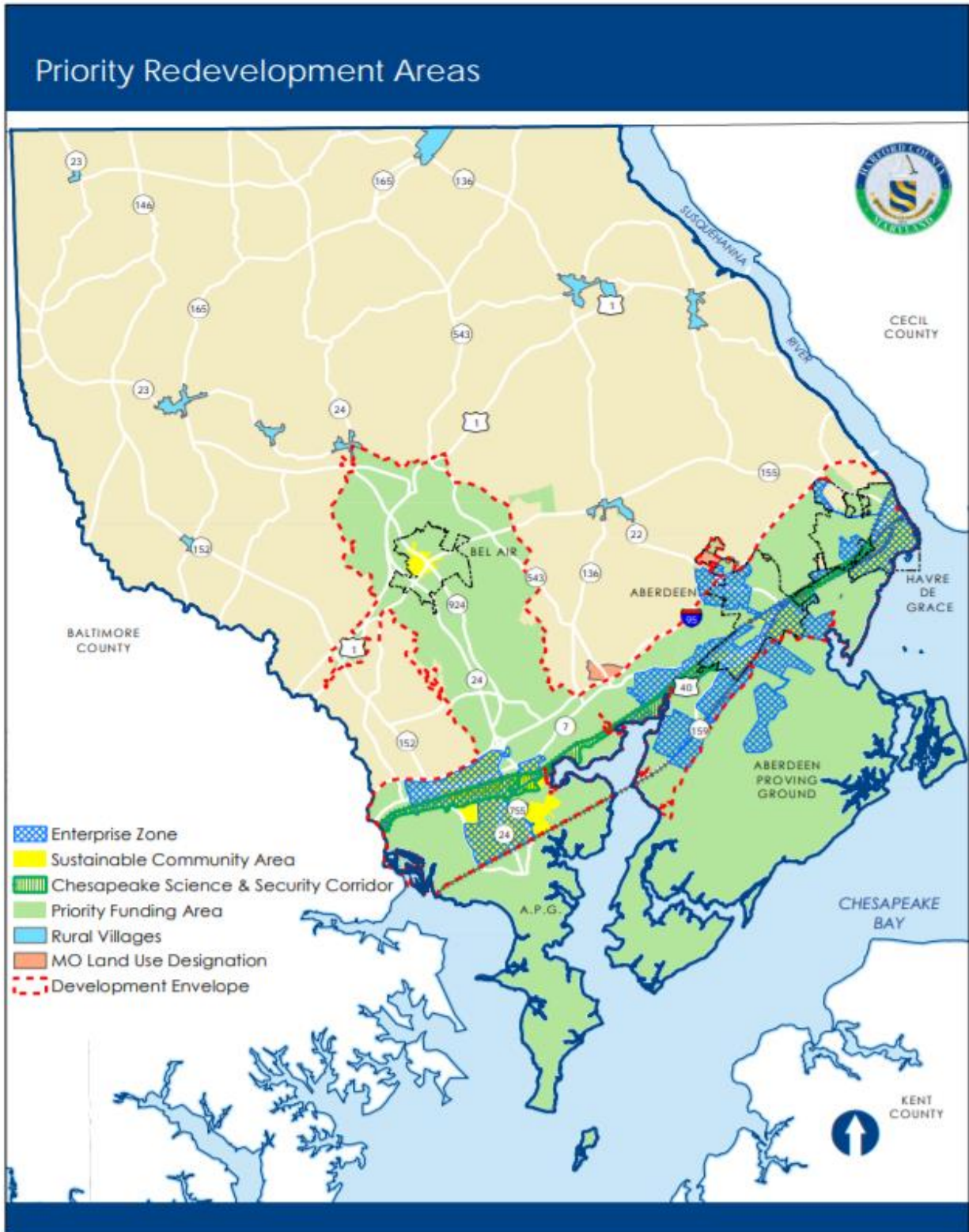
The sewage flows to Harford County's existing Sod Run and Joppatowne Wastewater

Treatment Plants (WWTP) originate from a portion of the Development Envelope. The area between the municipalities of Aberdeen and Havre de Grace, as well as the cities themselves, are within the Development Envelope and are served by the municipal sewerage facilities. A complete "Sewer System Capacity Analysis" is included in the "2019 Water and Sewer Adequate Public Facilities Report."

The determination of future wastewater flows to wastewater treatment plants is made by using population and household projections developed by the Harford County Department of Planning and Zoning for the years 2000 through 2035. The projections were distributed by transportation analysis zones (TAZs) by aggregating the ultimate development in terms of equivalent dwelling units into sewerage drainage areas. In an effort to keep pace with projected growth, the County completed the expansion of the Sod Run Wastewater Treatment Plant from 12 MGD in 1995 to 20 MGD in 2000. A sanitary sewer collection system has also been established in Whiteford-Cardiff, which serves the properties within an established sanitary subdistrict. This system was made operational in 2001 with 172 mandatory hook-ups completed in 2002. Treatment for this subdistrict is provided by Delta Borough, Pennsylvania, with a current permitted average flow of 0.12 MGD.

In addition to the major publicly owned wastewater treatment plants, there are multiple private wastewater treatment systems, including mobile home parks and other commercial/community establishments, plus a larger population on private individual septic systems outside the Development Envelope. In addition, many of the schools outside the public sewerage service area are on publicly owned multi-use wastewater treatment systems.

Figure 14



### **Inside the Development Envelope:**

The TIA shall include all existing County and state roads in all directions, from each point of entrance of site through the intersection with the first arterial roadway to the next intersecting collector or higher functional classification road. Developments which generate 1,500 or more trips per day may be required to expand the study area.

### **Outside the Development Envelope:**

The TIA study area shall include all existing County and state roads in all directions from each point of entrance of the site to the first intersection of a major collector or higher projected to generate more than 249 trips per day. Proposed development located within the Chesapeake Science and Security Corridor (CSSC) (Figure 14) will not be required to submit a TIA unless the proposed use is expected to generate 1,500 trips per day. The TIA provides information regarding the impact of generated trips from proposed land uses

### **Road Intersection Analysis Methodology**

A key feature of the APF Road Intersection regulations is the requirement for preparation of a Traffic Impact Analysis (TIA) for residential and non-residential uses that are on traffic safety and traffic operation within a designated area and recommends solutions to mitigate the impact. The method of conducting a TIA is outlined in the "Harford County Traffic Impact Analysis Guidelines." Functional classification road as defined by the Harford County Transportation Plan.

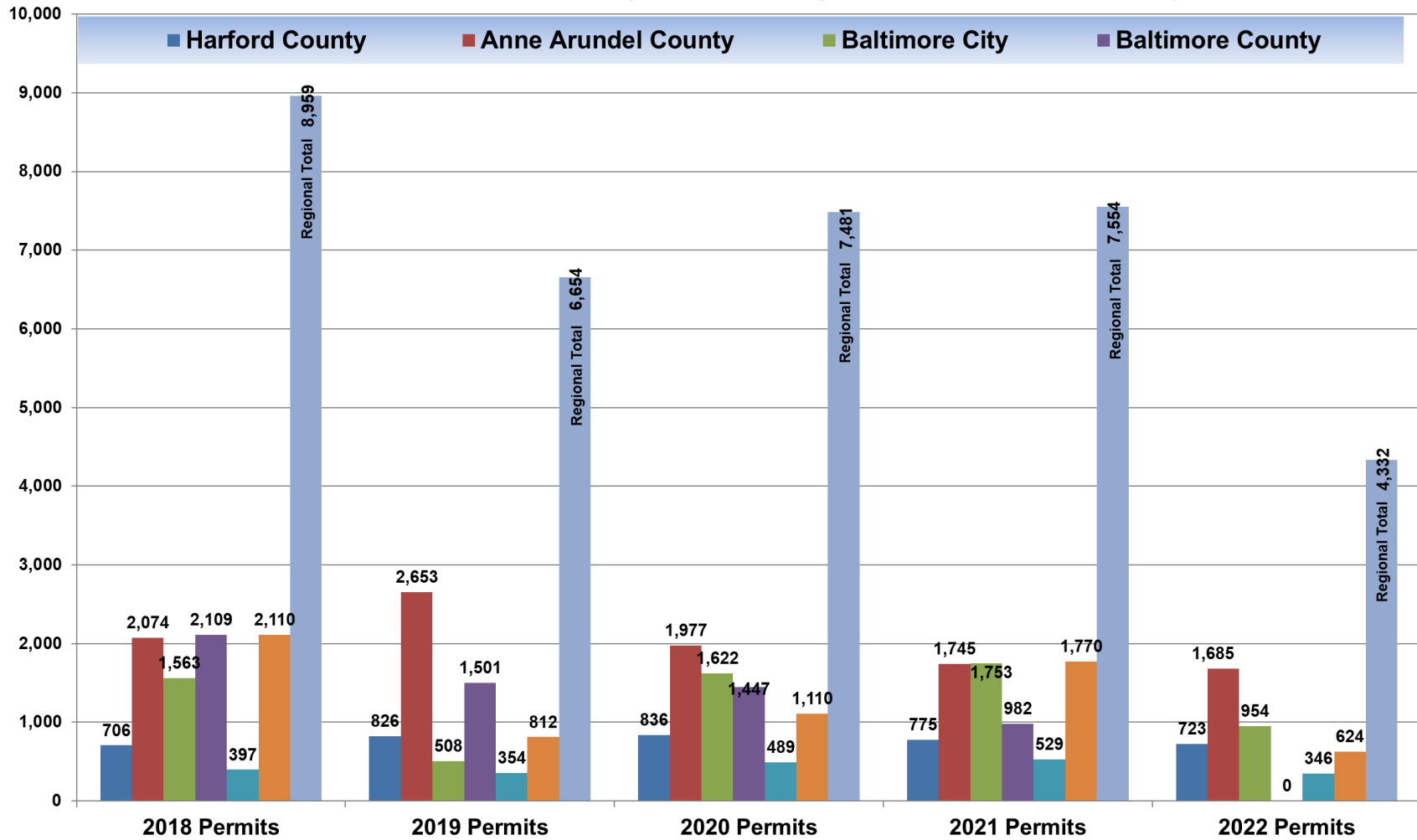
All TIA's shall include:

- An analysis of existing conditions including traffic counts, lane configuration, and signal timings.
- An analysis of background conditions without site development, including growth in background traffic, future traffic generated by nearby proposed developments and the determination of Level-of-Service (LOS) with any approved/funded State and County Capital projects.
- An analysis of the projected conditions with site development, including the traffic being generated by the proposed development and background traffic.
- An explanation of the results with recommended improvements, as necessary.

# APPENDIX A

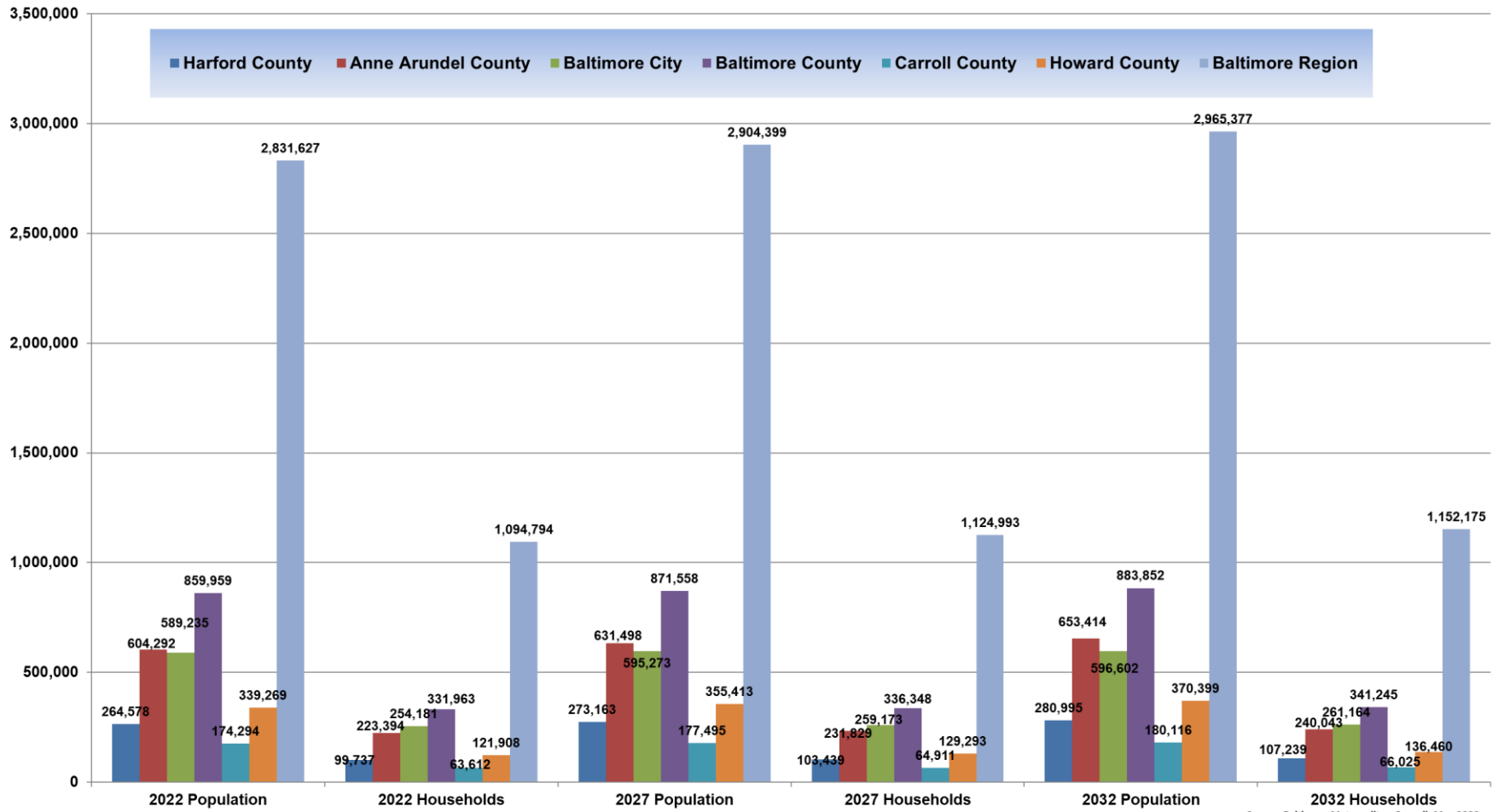


**Table 1A Harford County - Baltimore Region Residential Permit Activity: 2018 - 2022**

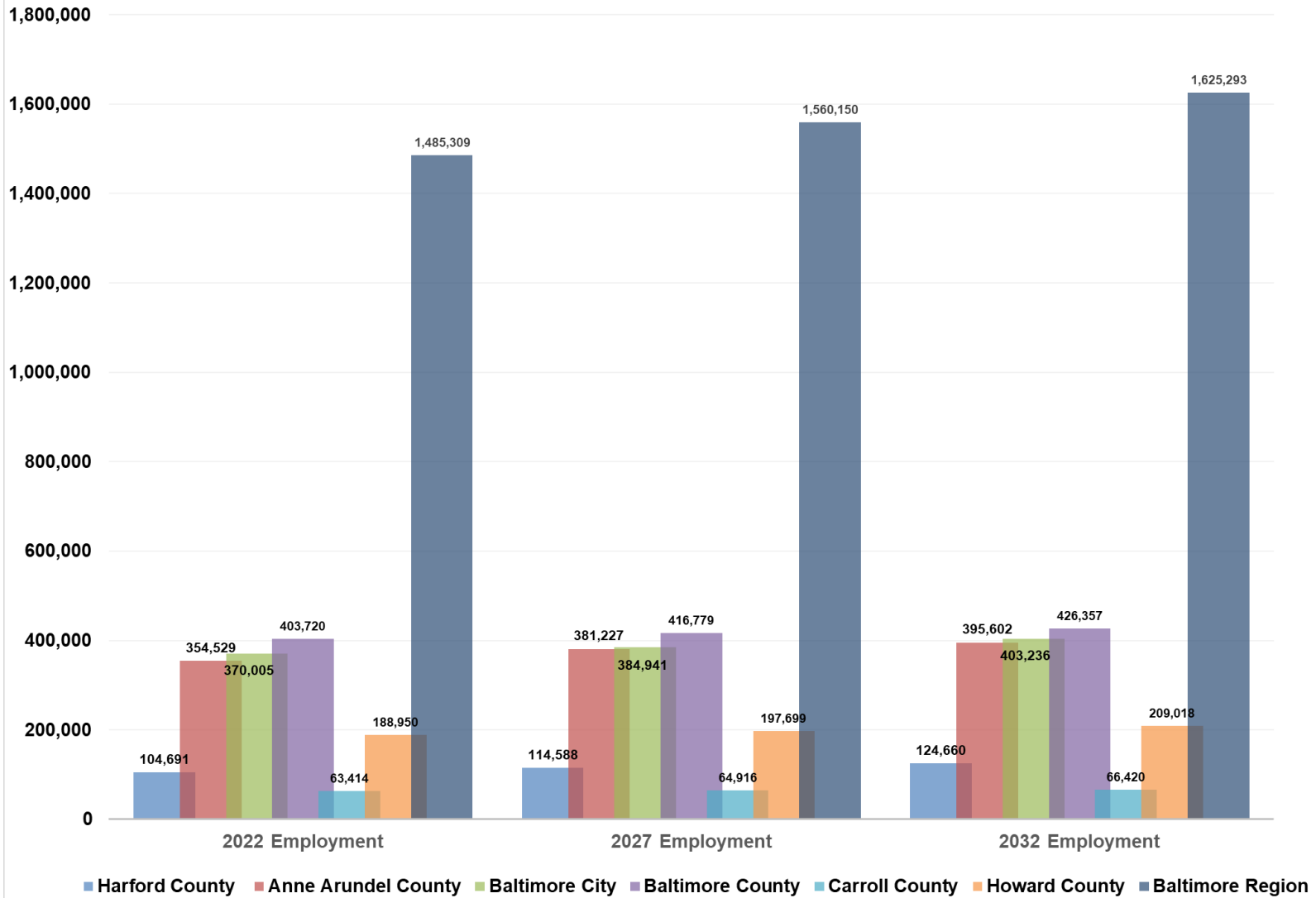


Source: Baltimore Metropolitan Council, May 2022

**Table 2A Harford County - Baltimore Region Population and Household Projections: 2022- 2032**



**Table 3A Harford County - Baltimore Region Employment Projections: 2022 - 2032**



Source: Baltimore Metropolitan Council, May 2022

**Table 4A**  
**Harford County Non-Residential Permit Activity**  
**New Permits Valued \$50,000 and Over**

Permit Type	2018		2019		2020		2021		2022	
	# of Permits	Square Footage	# of Permits	Square Footage	# of Permits	Square Footage	# of Permits	Square Footage	# of Permits	Square Footage
Commercial	5	46,824	10	221,274	3	16,400	3	10,739	3	7,904
Industrial	4	865,212	4	24,986	0	0	3	88,060	1	100,025
Institutional	1	250,111	6	60,680	3	96,215	0	0	2	25,576
Utilities	0	0	0	0	0	0	2	7657	0	0
Other	0	0	0	0	3	7312	2	11180	5	101431
<b>Total</b>	<b>10</b>	<b>1,162,147</b>	<b>20</b>	<b>306,940</b>	<b>9</b>	<b>119,927</b>	<b>10</b>	<b>117,636</b>	<b>11</b>	<b>234,936</b>

Source: Baltimore Metropolitan Council, May 2022

**Table 5A**  
**Harford County Non-Residential Permit Activity**  
**Additions, Alterations, and Repairs Valued \$50,000 and Over**

Permit Type	2018		2019		2020		2021		2022	
	# of Permits	Square Footage	# of Permits	Square Footage	# of Permits	Square Footage	# of Permits	Square Footage	# of Permits	Square Footage
Commercial	23	N/A	8	N/A	6	N/A	9	N/A	10	N/A
Industrial	5	N/A	6	N/A	1	N/A	2	N/A	3	N/A
Institutional	5	N/A	2	N/A	5	N/A	5	N/A	12	N/A
Utilities	6	N/A	0	N/A	0	N/A	0	N/A	0	N/A
<b>Total</b>	<b>39</b>	<b>N/A</b>	<b>16</b>	<b>N/A</b>	<b>12</b>	<b>N/A</b>	<b>16</b>	<b>N/A</b>	<b>25</b>	<b>N/A</b>

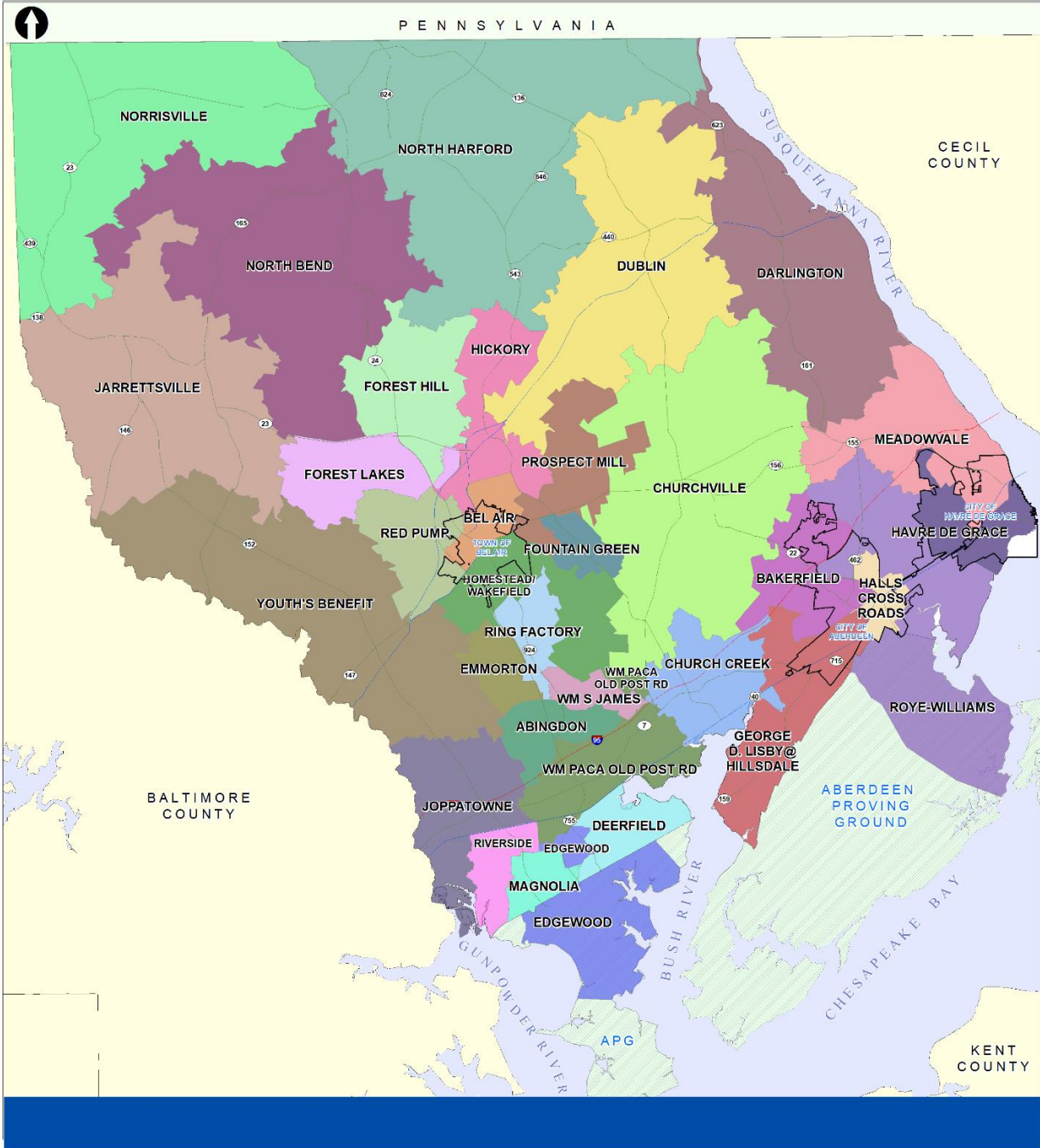
**NA: Data Not Available**

Source: Baltimore Metropolitan Council, May 2022

# APPENDIX B

**FIGURE 1B**

# Elementary School Districts



**Table 6B**

<b>Harford County Elementary Schools 2022 Utilization Chart</b>									
<b>ELEMENTARY SCHOOLS</b>		<b>ACTUAL</b>		<b>PROJECTIONS</b>					
<b>SCHOOL NAME</b>	<b>CAP</b>	<b>ENROLLMENT 2022</b>		<b>2023/2024</b>		<b>2024/2025</b>		<b>2025/2026</b>	
		<b>ENR</b>	<b>% CAP</b>	<b>PROJ</b>	<b>% CAP</b>	<b>PROJ</b>	<b>% CAP</b>	<b>PROJ</b>	<b>% CAP</b>
Abingdon <sup>2</sup>	863	658	76%	663	77%	669	78%	660	76%
Bakerfield <sup>1</sup>	500	463	93%	466	93%	468	94%	471	94%
Bel Air <sup>2</sup>	486	532	109%	541	111%	545	112.14%	550	113.17%
Church Creek <sup>2</sup>	819	725	89%	727	89%	732	89%	737	90%
Churchville	411	374	91%	376	91%	378	92%	380	92%
Darlington	157	101	64%	101	64%	101	64%	101	64%
Deerfield <sup>1</sup>	788	728	92%	732	93%	748	95%	735	93%
Dublin <sup>2</sup>	294	212	72%	205	70%	204	69%	204	69%
Edgewood <sup>2</sup>	461	399	87%	405	88%	409	89%	409	89%
Emmorton	570	548	96%	547	96%	559	98%	551	97%
Forest Hill	530	471	89%	487	92%	488	92%	499	94%
Forest Lakes	569	428	75%	443	78%	463	81%	435	76%
Fountain Green <sup>1</sup>	548	477	87%	486	89%	496	91%	510	93%
G. Lisby at Hillsdale <sup>1</sup>	473	503	106%	506	107%	508	107%	510	108%
Hall's Cross Roads <sup>1</sup>	552	454	82%	452	82%	457	83%	456	83%
Havre de Grace <sup>2</sup>	542	566	104%	574	106%	584	108%	598	110.33%
Hickory	668	657	98%	665	100%	684	102%	679	102%
Homestead/Wakefield <sup>2</sup>	920	1,057	115%	1,066	116%	1,076	117%	1,080	117%
Jarrettsville	525	488	93%	485	92%	481	92%	490	93%
Joppatowne <sup>1</sup>	663	500	75%	494	75%	513	77%	522	79%
Magnolia <sup>1</sup>	561	500	89%	519	93%	527	94%	530	94%
Meadowvale <sup>2</sup>	568	541	95%	548	96%	556	98%	564	99%
Norrisville	274	212	77%	212	77%	224	82%	226	82%
North Bend <sup>2</sup>	498	428	86%	442	89%	456	92%	433	87%
North Harford <sup>1</sup>	500	386	77%	391	78%	392	78%	396	79%
Prospect Mill <sup>2</sup>	611	587	96%	589	96%	591	97%	592	97%
Red Pump	737	754	102%	762	103%	770	104%	775	105%
Ring Factory	548	534	97%	541	99%	548	100%	555	101%
Riverside <sup>1</sup>	588	440	75%	462	79%	474	81%	484	82%
Roye-Williams <sup>1</sup>	703	443	63%	450	64%	442	63%	448	64%
Old Post <sup>1</sup>	984	844	86%	852	87%	856	87%	844	86%
Wm S. James	526	497	94%	507	96%	517	98%	525	100%
Youth's Benefit	1,120	1,123	100%	1,130	101%	1,154	103%	1,160	104%
<b>TOTALS<sup>3</sup>:</b>	<b>19,557</b>	<b>17,630</b>	<b>90%</b>	<b>17,826</b>	<b>91%</b>	<b>18,070</b>	<b>92%</b>	<b>18,109</b>	<b>93%</b>

<sup>3</sup>Note: preliminary subdivisions and residential site plans of greater than five lots/units will not be approved in attendance areas that are highlighted.

Source: Harford County Public Schools & Dept. of Planning and Zoning, December 2022.

<sup>1</sup> Full-day Prekindergarten

<sup>2</sup> Half-day Prekindergarten

<sup>3</sup> TOTAL % Capacity = (Total Projection/Total Capacity)\*100.

**Table 7B**

<b>Harford County Modified Elementary School Enrollment Projections</b>								
<b>School Name</b>	<b>2022</b>	<b>2023</b>	<b>2024</b>	<b>2025</b>	<b>2026</b>	<b>2027</b>	<b>2028</b>	<b>2029</b>
Abingdon	658	663	669	660	663	660	663	661
Bakerfield	463	466	468	471	473	476	478	480
Bel Air	532	541	545	550	536	532	536	535
Church Creek	725	727	732	737	742	747	752	757
Churchville	374	376	378	380	382	385	387	389
Darlington	101	101	101	101	101	101	101	101
Deerfield	728	732	748	735	732	742	738	739
Dublin	212	205	204	204	205	205	205	205
Edgewood	399	405	409	409	406	403	400	399
Emmorton	548	547	559	551	560	569	558	560
Forest Hill	471	487	488	499	493	480	489	487
Forest Lakes	428	443	463	435	434	430	449	446
Fountain Green	477	486	496	510	501	500	498	497
G. Lisby at Hillsdale	503	506	508	510	512	514	515	516
Hall's Cross Roads	454	452	457	456	460	451	455	454
Havre de Grace	566	574	584	598	599	573	591	589
Hickory	657	665	684	679	672	674	663	665
Homestead/Wakefield	1,057	1,066	1,076	1,080	1,082	1,084	1,086	1,088
Jarrettsville	488	485	481	490	481	480	470	473
Joppatowne	500	494	513	522	528	536	529	530
Magnolia	500	519	527	530	531	534	534	534
Meadowvale	541	548	556	564	572	580	588	594
Norrisville	212	212	224	226	229	223	223	223
North Bend	428	442	456	433	442	410	426	425
North Harford	386	391	392	396	394	387	386	387
Prospect Mill	587	589	591	592	593	594	595	596
Red Pump	754	762	770	775	776	779	782	785
Ring Factory	534	541	548	555	563	571	579	586
Riverside	440	462	474	484	494	502	508	514
Roye-Williams	443	450	442	448	442	451	447	446
Old Post	844	852	856	844	846	848	850	852
Wm S. James	497	507	517	525	530	533	534	535
Youth's Benefit	1,123	1,130	1,154	1,160	1,161	1,166	1,169	1,171
<b>TOTAL</b>	<b>17,630</b>	<b>17,826</b>	<b>18,070</b>	<b>18,109</b>	<b>18,135</b>	<b>18,120</b>	<b>18,184</b>	<b>18,219</b>

Source: HCPS, December 2022.



**Table 8B**

Harford County Residential Building Permit Activity By Elementary School District: 2018 - 2022																									
ELEMENTARY SCHOOL	2018					2019					2020					2021					2022				
	BUILDING PERMITS ISSUED BY DWELLING TYPE					BUILDING PERMITS ISSUED BY DWELLING TYPE					BUILDING PERMITS ISSUED BY DWELLING TYPE					BUILDING PERMITS ISSUED BY DWELLING TYPE					BUILDING PERMITS ISSUED BY DWELLING TYPE				
	SF	TH	APT/CO	MH	TOTAL	SF	TH	APT/CO	MH	TOTAL	SF	TH	APT/CO	MH	TOTAL	SF	TH	APT/CO	MH	TOTAL	SF	TH	APT/CO	MH	TOTAL
Abingdon	9	0	0	0	9	1	0	57	0	58	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1
Bakerfield	2	0	0	0	2	3	0	0	0	3	73	0	0	0	73	23	0	0	0	23	1	0	288	0	289
Bel Air	1	0	0	0	1	0	12	8	0	20	4	0	0	0	4	4	0	0	0	4	1	0	0	0	1
Church Creek	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	61	0	0	61	2	84	12	0	98
Churchville	3	0	0	0	3	9	0	0	0	9	7	0	0	0	7	2	0	0	0	2	3	0	0	0	3
Darlington	2	0	0	0	2	3	0	0	0	3	2	0	0	0	2	2	0	0	0	2	1	0	0	0	1
Deerfield	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0
Dublin	5	0	0	0	5	5	0	0	0	5	7	0	0	1	8	5	0	0	0	5	4	0	0	0	4
Edgewood	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1
Emmorton	39	0	0	0	39	32	0	0	0	32	13	0	0	0	13	0	0	0	0	0	0	0	0	0	0
Forest Hill	18	0	0	0	18	14	0	0	0	14	9	0	0	0	9	0	0	0	0	0	1	0	0	0	1
Forest Lakes	3	0	0	0	3	1	0	0	0	1	2	0	0	0	2	3	0	0	0	3	3	0	0	0	3
Fountain Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
G. Lisby at Hillsdale	33	6	0	0	39	124	139	0	0	263	152	89	0	0	241	43	0	0	0	43	0	0	0	0	0
Hall's Cross Roads	0	0	0	0	0	3	0	0	0	3	1	0	0	0	1	2	0	5	0	7	1	0	0	0	1
Havre de Grace	81	40	0	0	121	36	13	0	0	49	16	21	0	0	37	53	2	52	0	107	9	0	25	0	34
Hickory	22	0	0	0	22	0	0	0	0	0	1	0	72	0	73	1	0	0	0	1	2	0	68	0	70
Homestead/Wakefield	29	51	0	0	80	47	40	39	0	126	77	27	0	0	104	5	22	0	0	27	2	0	0	0	2
Jarrettsville	11	0	0	0	11	16	0	0	0	16	11	0	0	0	11	7	0	0	0	7	9	0	0	0	9
Joppatowne	3	0	0	0	3	1	0	0	0	1	2	0	0	0	2	2	0	0	0	2	7	0	0	0	7
Magnolia	10	48	0	0	58	0	0	0	0	0	0	20	0	0	20	0	24	0	0	24	0	0	0	0	0
Meadowdale	0	0	0	0	0	2	37	0	0	39	0	0	0	0	0	3	2	0	0	5	1	0	0	1	2
Norrisville	10	0	0	0	10	4	0	0	1	5	9	0	0	0	9	7	0	0	0	7	5	0	0	1	6
North Bend	14	0	0	1	15	8	0	0	0	8	10	0	0	0	10	21	0	0	0	21	19	0	0	0	19
North Harford	18	0	0	0	18	6	0	0	0	6	19	0	0	0	19	26	0	0	0	26	11	0	0	0	11
Prospect Mill	9	58	0	0	67	32	55	0	0	87	32	17	0	0	49	24	0	10	0	34	20	0	0	0	20
Red Pump	17	0	37	0	54	6	0	0	0	6	3	0	0	0	3	9	0	0	0	9	13	0	0	0	13
Ring Factory	1	0	0	0	1	1	0	0	0	1	0	0	0	0	0	4	0	0	0	4	1	0	0	0	1
Riverside	1	0	0	0	1	1	0	0	0	1	4	9	0	0	13	1	25	0	0	26	1	0	0	0	1
Roye-Williams	4	3	0	0	7	3	0	0	0	3	1	0	0	1	2	3	0	237	0	240	1	0	51	0	52
Wm. Paca/Old Post Rd	12	22	0	0	34	11	0	0	0	11	0	0	0	0	0	3	0	0	0	3	1	0	0	0	1
Wm. S. James	23	8	0	0	31	25	0	0	0	25	33	0	0	0	33	5	3	0	0	8	0	18	0	0	18
Youth's Benefit	48	0	0	0	48	28	0	0	0	28	36	0	56	0	92	16	40	0	0	56	26	22	1	0	49
<b>TOTAL</b>	<b>430</b>	<b>236</b>	<b>37</b>	<b>1</b>	<b>704</b>	<b>422</b>	<b>296</b>	<b>104</b>	<b>1</b>	<b>823</b>	<b>524</b>	<b>183</b>	<b>128</b>	<b>2</b>	<b>837</b>	<b>276</b>	<b>179</b>	<b>304</b>	<b>0</b>	<b>759</b>	<b>147</b>	<b>124</b>	<b>445</b>	<b>2</b>	<b>718</b>

\* Note: Permit totals revised to reflect cancelled permits.

Source: Harford County Dept. of Planning & Zoning, May 2023.

KEY: SF = Single Family Dwelling; TH = Townhouse; APT/CO = Apartment/Condominium; MH = Mobile Home

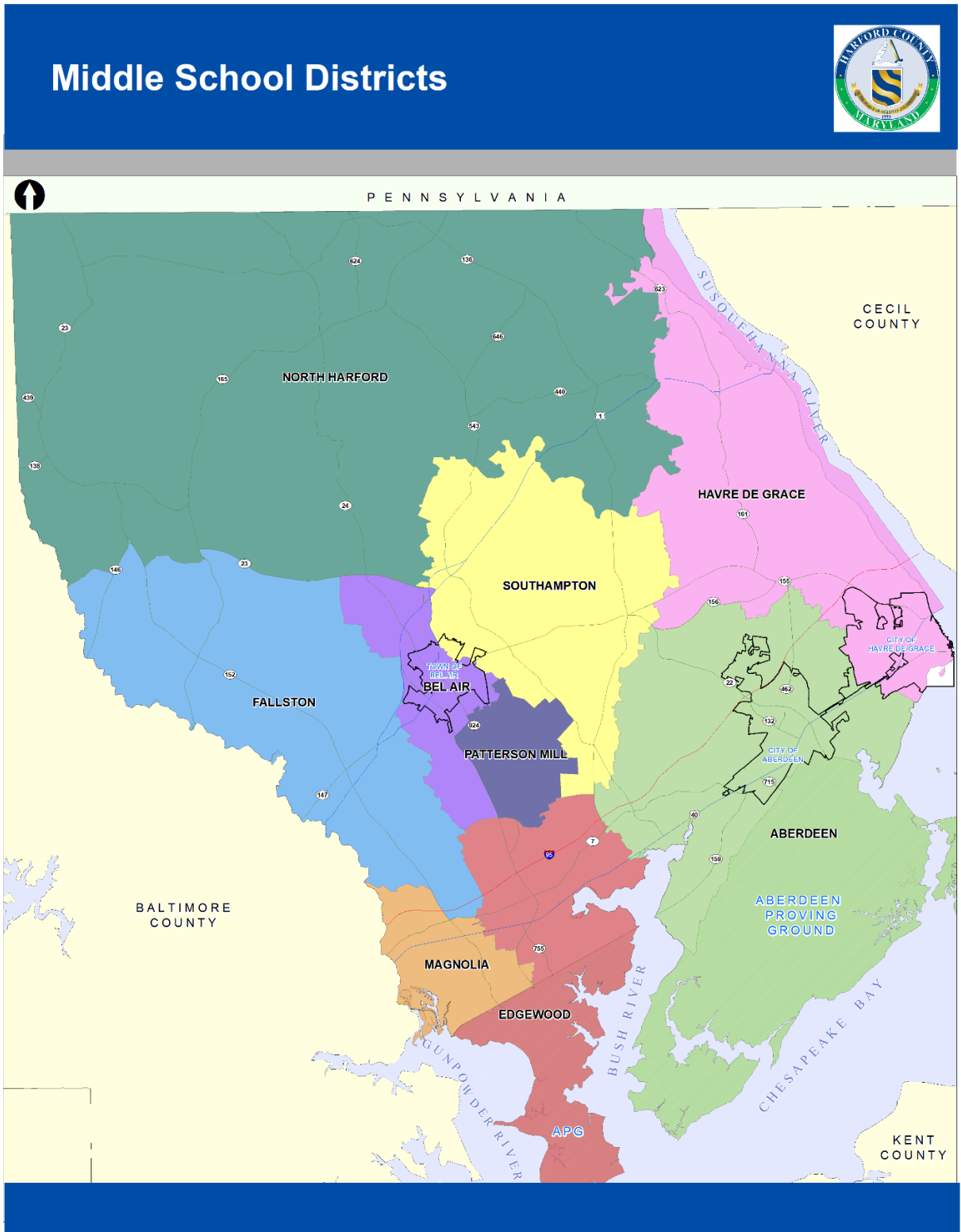
## Table 9B

<b>Harford County Population and Households By Elementary School District: 2018 - 2022</b>										
<b>Elementary School</b>	<b>2018*</b>		<b>2019*</b>		<b>2020*</b>		<b>2021*</b>		<b>2022*</b>	
	Households	Population	Households	Population	Households	Population	Households	Population	Households	Population
Abingdon	5,250	13,961	5,259	13,984	5,314	14,130	5,314	14,130	5,314	14,130
Bakerfield	2,585	6,873	2,586	6,878	2,589	6,886	2,659	7,070	2,680	7,128
Bel Air	3,060	8,137	3,061	8,139	3,080	8,190	3,083	8,200	3,087	8,210
Church Creek	4,058	10,791	4,059	10,794	4,059	10,794	4,059	10,794	4,117	10,948
Churchville	2,497	6,641	2,500	6,649	2,509	6,671	2,515	6,689	2,517	6,694
Darlington	1,017	2,706	1,019	2,711	1,022	2,718	1,024	2,723	1,026	2,728
Deerfield	3,268	8,690	3,269	8,692	3,269	8,692	3,269	8,692	3,271	8,697
Dublin	1,712	4,554	1,717	4,566	1,722	4,579	1,729	4,599	1,734	4,612
Edgewood	1,256	3,339	1,256	3,339	1,256	3,339	1,256	3,339	1,256	3,339
Emmorton	2,761	7,342	2,798	7,440	2,828	7,521	2,841	7,554	2,841	7,554
Forest Hill	2,467	6,560	2,484	6,606	2,497	6,641	2,506	6,664	2,506	6,664
Forest Lakes	2,858	7,600	2,861	7,608	2,862	7,610	2,864	7,615	2,867	7,623
Fountain Green	1,899	5,049	1,899	5,049	1,899	5,049	1,899	5,049	1,899	5,049
G. Lisby at Hillsdale	2,528	6,724	2,565	6,822	2,815	7,486	3,044	8,094	3,085	8,203
Hall's Cross Roads	2,008	5,341	2,008	5,341	2,011	5,348	2,012	5,351	2,019	5,368
Havre de Grace	3,921	10,427	4,036	10,732	4,082	10,856	4,117	10,949	4,219	11,219
Hickory	3,035	8,071	3,056	8,127	3,056	8,127	3,125	8,311	3,126	8,313
Homestead/Wakefield	5,644	15,009	5,720	15,211	5,839	15,529	5,938	15,791	5,964	15,859
Jarrettsville	2,801	7,449	2,811	7,476	2,827	7,517	2,837	7,545	2,844	7,562
Joppatowne	3,860	10,265	3,863	10,273	3,864	10,276	3,866	10,281	3,868	10,286
Magnolia	1,850	4,919	1,905	5,066	1,905	5,066	1,924	5,116	1,947	5,177
Meadowdale	2,639	7,018	2,639	7,018	2,676	7,117	2,676	7,117	2,681	7,129
Norrisville	1,301	3,460	1,310	3,485	1,315	3,497	1,324	3,520	1,330	3,538
North Bend	2,330	6,196	2,344	6,234	2,352	6,254	2,361	6,279	2,381	6,332
North Harford	2,400	6,382	2,417	6,427	2,423	6,443	2,441	6,490	2,465	6,556
Prospect Mill	2,878	7,653	2,942	7,822	3,024	8,042	3,071	8,166	3,103	8,251
Red Pump	4,289	11,407	4,341	11,543	4,346	11,558	4,349	11,566	4,358	11,588
Ring Factory	2,732	7,265	2,733	7,268	2,734	7,270	2,734	7,270	2,738	7,280
Riverside	2,517	6,693	2,518	6,696	2,519	6,698	2,531	6,731	2,556	6,797
Roye-Williams	2,125	5,652	2,132	5,669	2,135	5,677	2,137	5,682	2,364	6,288
Wm. Paca/Old Post Rd	4,641	12,341	4,673	12,427	4,683	12,454	4,683	12,454	4,686	12,462
Wm. S. James	2,052	5,456	2,081	5,534	2,105	5,597	2,136	5,681	2,144	5,701
Youth's Benefit	5,482	14,579	5,528	14,700	5,555	14,771	5,642	15,003	5,695	15,145
<b>TOTAL</b>	<b>95,721</b>	<b>254,549</b>	<b>96,389</b>	<b>256,326</b>	<b>97,170</b>	<b>258,403</b>	<b>97,964</b>	<b>260,515</b>	<b>98,685</b>	<b>262,431</b>

\* Note: Population and household figures have been revised to reflect 2020 Census data (April 1 of each year).

Source: Harford County Dept. of Planning & Zoning, May 2023.

FIGURE 2B



**Table 10B**

**Harford County Middle Schools 2022 Utilization Chart**

MIDDLE SCHOOLS		ACTUAL ENROLLMENT 2022		PROJECTIONS					
SCHOOL NAME	CAP			2023/ 2024		2024/2025		2025/2026	
		ENR	% CAP	PROJ	% CAP	PROJ	% CAP	PROJ	% CAP
Aberdeen	1,624	1,086	67%	1,077	66%	1,100	68%	1,106	68%
Bel Air	1,243	1,138	92%	1,072	86%	1,160	93%	1,200	97%
Edgewood	1,295	1,000	77%	955	74%	984	76%	1,002	77%
Fallston	1,104	1,007	91%	1,037	94%	1,067	97%	1,072	97%
Magnolia	1,028	731	71%	717	70%	718	70%	736	72%
North Harford	1,210	848	70%	859	71%	854	71%	882	73%
Southampton	1,444	1,175	81%	1,238	86%	1,239	86%	1,270	88%
<b>Total</b>	<b>8,948</b>	<b>6,985</b>	<b>78%</b>	<b>6,955</b>	<b>78%</b>	<b>7,122</b>	<b>80%</b>	<b>7,268</b>	<b>81%</b>

COMBINATION MIDDLE / HIGH SCHOOLS		ACTUAL ENROLLMENT 2022		PROJECTIONS					
SCHOOL NAME	CAP			2023/ 2024		2024/2025		2025/2026	
		ENR	% CAP	PROJ	% CAP	PROJ	% CAP	PROJ	% CAP
Havre de Grace	1,597	1,444	90%	1,498	94%	1,506	94%	1,506	94%
Patterson Mill	1,723	1,579	92%	1,616	94%	1,635	95%	1,655	96%
<b>TOTAL</b>	<b>3,320</b>	<b>3,023</b>	<b>91%</b>	<b>3,114</b>	<b>94%</b>	<b>3,141</b>	<b>95%</b>	<b>3,161</b>	<b>95%</b>

Source: Harford County Public Schools & Dept. of Planning and Zoning, December 2022.

**Table 11B**

<b>Harford County Modified Middle School Enrollment Projections</b>								
<b>School Name</b>	<b>2022</b>	<b>2023</b>	<b>2024</b>	<b>2025</b>	<b>2026</b>	<b>2027</b>	<b>2028</b>	<b>2029</b>
Aberdeen	1,086	1,077	1,100	1,106	1,112	1,118	1,124	1,130
Bel Air	1,138	1,072	1,160	1,200	1,274	1,259	1,235	1,218
Edgewood	1,000	955	984	1,002	1,042	1,032	1,019	1,009
Fallston	1,007	1,037	1,067	1,072	1,077	1,082	1,087	1,092
Magnolia	731	717	718	736	751	753	747	740
North Harford	848	859	854	882	882	883	880	876
Southampton	1,175	1,238	1,239	1,270	1,228	1,232	1,228	1,230
<b>Total</b>	<b>6,985</b>	<b>6,955</b>	<b>7,122</b>	<b>7,268</b>	<b>7,366</b>	<b>7,359</b>	<b>7,320</b>	<b>7,295</b>

<b>Harford County Modified Combination Middle/ High School Enrollment Projections</b>								
<b>School Name</b>	<b>2022</b>	<b>2023</b>	<b>2024</b>	<b>2025</b>	<b>2026</b>	<b>2027</b>	<b>2028</b>	<b>2029</b>
Havre De Grace	1,444	1,498	1,506	1,506	1,482	1,487	1,512	1,526
Patterson Mill	1,579	1,616	1,635	1,655	1,671	1,683	1,691	1,695
<b>Total</b>	<b>3,023</b>	<b>3,114</b>	<b>3,141</b>	<b>3,161</b>	<b>3,153</b>	<b>3,170</b>	<b>3,203</b>	<b>3,221</b>

Source: Harford County Dept. of Planning and Zoning, December 2022.

**Table 12B**

**Harford County Residential Building Permit Activity By Middle School District: 2018 - 2022**

MIDDLE SCHOOL	2018					2019					2020					2021					2022				
	BUILDING PERMITS ISSUED BY DWELLING TYPE					BUILDING PERMITS ISSUED BY DWELLING TYPE					BUILDING PERMITS ISSUED BY DWELLING TYPE					BUILDING PERMITS ISSUED BY DWELLING TYPE					BUILDING PERMITS ISSUED BY DWELLING TYPE				
	SF	TH	APT/CO	MH	TOTAL	SF	TH	APT/CO	MH	TOTAL	SF	TH	APT/CO	MH	TOTAL	SF	TH	APT/CO	MH	TOTAL	SF	TH	APT/CO	MH	TOTAL
Aberdeen	39	6	0	0	45	134	139	0	0	273	227	89	0	1	317	72	61	242	0	375	7	84	351	0	442
Bel Air	70	49	37	0	156	59	49	47	0	155	44	0	0	0	44	10	0	0	0	10	11	0	0	0	11
Edgewood	21	22	0	0	43	15	0	57	0	72	2	0	0	0	2	5	0	0	0	5	3	0	0	0	3
Fallston	64	0	0	0	64	36	0	0	0	36	48	0	56	0	104	21	40	0	0	61	37	22	1	0	60
Havre de Grace*	83	43	0	0	126	43	50	0	0	93	19	21	0	0	40	57	4	52	0	113	11	0	25	1	37
Magnolia	13	48	0	0	61	1	0	0	0	1	5	29	0	0	34	3	49	0	0	52	7	0	0	0	7
North Harford	69	0	0	1	70	46	0	0	1	47	58	0	0	1	59	62	0	0	0	62	43	0	0	1	44
Patterson Mill*	35	10	0	0	45	48	3	0	0	51	78	27	0	0	105	14	25	0	0	39	3	18	0	0	21
Southampton	36	58	0	0	94	40	55	0	0	95	43	17	72	0	132	32	0	10	0	42	25	0	68	0	93
<b>TOTAL</b>	<b>430</b>	<b>236</b>	<b>37</b>	<b>1</b>	<b>704</b>	<b>422</b>	<b>296</b>	<b>104</b>	<b>1</b>	<b>823</b>	<b>524</b>	<b>183</b>	<b>128</b>	<b>2</b>	<b>837</b>	<b>276</b>	<b>179</b>	<b>304</b>	<b>0</b>	<b>759</b>	<b>147</b>	<b>124</b>	<b>445</b>	<b>2</b>	<b>718</b>

\*Combination Middle/High School

Note: Permits totals revised for cancelled permits.

Source: Harford County Dept. of Planning & Zoning, May 2023.

KEY: SF = Single Family Dwelling; TH = Townhouse; APT/CO = Apartment/Condominium; MH = Mobile Home

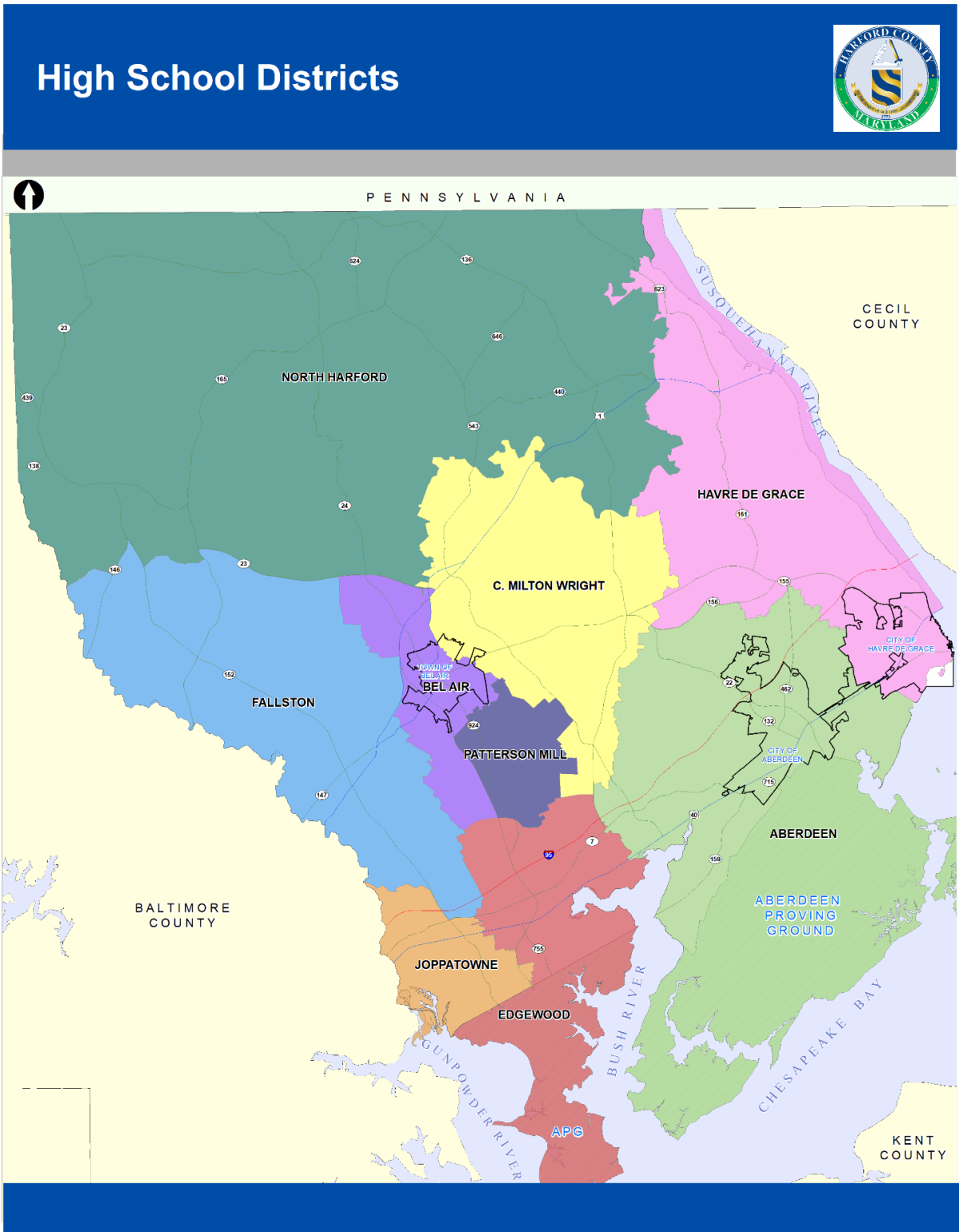
### Table 13B

<b>Harford County Population and Households By Middle School District: 2018 - 2022</b>										
<b>SCHOOL</b>	<b>2018*</b>		<b>2019*</b>		<b>2020*</b>		<b>2021*</b>		<b>2022*</b>	
	Households	Population	Households	Population	Households	Population	Households	Population	Households	Population
Aberdeen	13,941	37,073	13,984	37,186	14,243	37,875	14,543	38,675	14,899	39,622
Bel Air	14,640	38,932	14,788	39,326	14,935	39,717	14,977	39,828	14,986	39,853
Edgewood	14,401	38,295	14,441	38,404	14,510	38,586	14,512	38,591	14,516	38,603
Fallston	9,504	25,274	9,565	25,436	9,599	25,526	9,698	25,789	9,756	25,943
Havre de Grace	7,789	20,712	7,908	21,030	7,997	21,265	8,034	21,366	8,142	21,651
Magnolia	8,110	21,568	8,168	21,722	8,169	21,725	8,202	21,810	8,251	21,942
North Harford	10,684	28,412	10,750	28,589	10,795	28,707	10,851	28,856	10,910	29,013
Patterson Mill	6,491	17,261	6,534	17,374	6,582	17,503	6,682	17,768	6,719	17,867
Southampton	10,161	27,022	10,250	27,259	10,341	27,499	10,466	27,832	10,506	27,938
<b>TOTAL</b>	<b>95,721</b>	<b>254,549</b>	<b>96,389</b>	<b>256,326</b>	<b>97,170</b>	<b>258,403</b>	<b>97,965</b>	<b>260,515</b>	<b>98,685</b>	<b>262,432</b>

\* Note: Population and household figures have been revised to reflect 2020 Census data (April 1 of each year).

Source: Harford County Dept. of Planning and Zoning, May 2023.

FIGURE 3B





**Table 14B**

<b>Harford County High Schools 2022 Utilization Chart</b>									
<b>HIGH SCHOOLS</b>		<b>ACTUAL ENROLLMENT 2022</b>		<b>PROJECTIONS</b>					
<b>SCHOOL NAME</b>	<b>CAP</b>			<b>2023/2024</b>		<b>2024/2025</b>		<b>2025/2026</b>	
		<b>ENR</b>	<b>% CAP</b>	<b>PROJ</b>	<b>% CAP</b>	<b>PROJ</b>	<b>% CAP</b>	<b>PROJ</b>	<b>% CAP</b>
Aberdeen	1,720	1,499	87%	1,536	89%	1,539	89%	1,529	89%
Bel Air	1,768	1,489	84%	1,479	84%	1,471	83%	1,487	84%
C. Milton Wright	1,613	1,269	79%	1,293	80%	1,333	83%	1,349	84%
Edgewood	1,716	1,418	83%	1,383	81%	1,443	84%	1,422	83%
Fallston	1,573	1,045	66%	1,067	68%	1,048	67%	1,038	66%
Harford Technical	1,135	979	86%	979	86%	984	87%	980	86%
Joppatowne	1,056	834	79%	840	80%	851	81%	836	79%
North Harford	1,538	1,222	79%	1,186	77%	1,217	79%	1,204	78%
<b>TOTAL</b>	<b>12,119</b>	<b>9,755</b>	<b>80%</b>	<b>9,763</b>	<b>81%</b>	<b>9,886</b>	<b>82%</b>	<b>9,845</b>	<b>81%</b>

Source: Harford County Public Schools & Dept. of Planning and Zoning, December, 2022.

## Table 15B

<b>Harford County Modified High School Enrollment Projections</b>								
<b>School District</b>	<b>2022</b>	<b>2023</b>	<b>2024</b>	<b>2025</b>	<b>2026</b>	<b>2027</b>	<b>2028</b>	<b>2029</b>
Aberdeen	1499	1536	1539	1529	1523	1535	1543	1545
Bel Air	1489	1479	1471	1487	1495	1511	1508	1503
C. Milton Wright	1269	1293	1333	1349	1348	1356	1353	1354
Edgewood	1418	1383	1443	1422	1412	1440	1446	1445
Fallston	1045	1067	1048	1038	1039	1038	1040	1041
Harford Technical	979	979	984	980	982	980	979	979
Joppatowne	834	840	851	836	822	839	848	849
North Harford	1222	1186	1217	1204	1200	1219	1219	1216
<b>Total</b>	<b>9,755</b>	<b>9,763</b>	<b>9,886</b>	<b>9,845</b>	<b>9,821</b>	<b>9,918</b>	<b>9,936</b>	<b>9,932</b>

Source: Harford County Public Schools & Dept. of Planning and Zoning, December, 2022.

**Table 16B**

<b>Harford County Residential Building Permit Activity By High School District: 2018 -2022</b>																									
<b>HIGH SCHOOL</b>	<b>2018</b>					<b>2019</b>					<b>2020</b>					<b>2021</b>					<b>2022</b>				
	<b>BUILDING PERMITS ISSUED BY DWELLING TYPE</b>					<b>BUILDING PERMITS ISSUED BY DWELLING TYPE</b>					<b>BUILDING PERMITS ISSUED BY DWELLING TYPE</b>					<b>BUILDING PERMITS ISSUED BY DWELLING TYPE</b>					<b>BUILDING PERMITS ISSUED BY DWELLING TYPE</b>				
	<b>SF</b>	<b>TH</b>	<b>APT/CO</b>	<b>MH</b>	<b>TOTAL</b>	<b>SF</b>	<b>TH</b>	<b>APT/CO</b>	<b>MH</b>	<b>TOTAL</b>	<b>SF</b>	<b>TH</b>	<b>APT/CO</b>	<b>MH</b>	<b>TOTAL</b>	<b>SF</b>	<b>TH</b>	<b>APT/CO</b>	<b>MH</b>	<b>TOTAL</b>	<b>SF</b>	<b>TH</b>	<b>APT/CO</b>	<b>MH</b>	<b>TOTAL</b>
Aberdeen	39	6	0	0	45	134	139	0	0	273	227	89	0	1	317	72	61	242	0	375	7	84	351	0	442
Bel Air	70	49	37	0	156	59	49	47	0	155	44	0	0	0	44	10	0	0	0	10	11	0	0	0	11
C.M. Wright	36	58	0	0	94	40	55	0	0	95	43	17	72	0	132	32	0	10	0	42	25	0	68	0	93
Edgewood	21	22	0	0	43	15	0	57	0	72	2	0	0	0	2	5	0	0	0	5	3	0	0	0	3
Fallston	64	0	0	0	64	36	0	0	0	36	48	0	56	0	104	21	40	0	0	61	37	22	1	0	60
Havre de Grace*	83	43	0	0	126	43	50	0	0	93	19	21	0	0	40	57	4	52	0	113	11	0	25	1	37
Joppatowne	13	48	0	0	61	1	0	0	0	1	5	29	0	0	34	3	49	0	0	52	7	0	0	0	7
North Harford	69	0	0	1	70	46	0	0	1	47	58	0	0	1	59	62	0	0	0	62	43	0	0	1	44
Patterson Mill*	35	10	0	0	45	48	3	0	0	51	78	27	0	0	105	14	25	0	0	39	3	18	0	0	21
<b>TOTAL</b>	<b>430</b>	<b>236</b>	<b>37</b>	<b>1</b>	<b>704</b>	<b>422</b>	<b>296</b>	<b>104</b>	<b>1</b>	<b>823</b>	<b>524</b>	<b>183</b>	<b>128</b>	<b>2</b>	<b>837</b>	<b>276</b>	<b>179</b>	<b>304</b>	<b>0</b>	<b>759</b>	<b>147</b>	<b>124</b>	<b>445</b>	<b>2</b>	<b>718</b>

\*Combination Middle/High School

Note: Permits totals revised for cancelled permits.

Source: Harford County Dept. of Planning & Zoning, May 2023.

KEY: SF = Single Family Dwelling; TH = Townhouse; APT/CO = Apartment/Condominium; MH = Mobile Home

## Table 17B

<b>Harford County Population and Households By High School District: 2018 - 2022</b>										
<b>SCHOOL</b>	<b>2018*</b>		<b>2019*</b>		<b>2020*</b>		<b>2021*</b>		<b>2022*</b>	
	Households	Population	Households	Population	Households	Population	Households	Population	Households	Population
Aberdeen	13,941	37,073	13,984	37,186	14,243	37,875	14,543	38,675	14,899	39,622
Bel Air	14,640	38,932	14,788	39,326	14,935	39,717	14,977	39,828	14,986	39,853
C. Milton Wright	10,161	27,021	10,250	27,258	10,341	27,498	10,466	27,831	10,506	27,938
Edgewood	14,401	38,295	14,441	38,404	14,510	38,586	14,512	38,591	14,516	38,603
Fallston	9,504	25,274	9,565	25,436	9,599	25,526	9,698	25,789	9,756	25,943
Havre de Grace	7,789	20,712	7,908	21,030	7,997	21,265	8,034	21,366	8,142	21,651
Joppatowne	8,110	21,568	8,168	21,722	8,169	21,725	8,202	21,810	8,251	21,942
North Harford	10,684	28,412	10,750	28,589	10,795	28,707	10,851	28,856	10,910	29,013
Patterson Mill	6,495	17,272	6,538	17,386	6,586	17,515	6,686	17,780	6,723	17,878
<b>TOTAL</b>	<b>95,725</b>	<b>254,560</b>	<b>96,393</b>	<b>256,337</b>	<b>97,174</b>	<b>258,414</b>	<b>97,969</b>	<b>260,526</b>	<b>98,689</b>	<b>262,442</b>

\* Note: Population and household figures have been revised to reflect 2020 Census data (April 1 of each year).

Source: Harford County Dept. of Planning and Zoning, May 2023.

# APPENDIX C

**Table 18C**

<b>JANUARY - DECEMBER 2022</b>			
<b>WATER CONSUMPTION &amp; SEWAGE GENERATION</b>			
Total Number of Accounts	Retail	Water and Sewer	41,658
		Water Only	1,558
		Sewer Only	3,185
	Wholesale	Water Only	14
		Sewer Only	3
	Total	Water and Sewer	46,418
<b>WATER</b>			
Total Number of Water Accounts (VBA)	Retail	Water	43,216
	Wholesale	Water	14
Average Daily Water Production Total Retail and Wholesale Customers	12.29 MGD		
Maximum Day Water Production Total Retail and Wholesale Customers	15.28 MGD		
Average Water Usage per Account – All Retail Accounts	187 MGD		
Average Residential Water Usage per Account – Retail Accounts	154 MGD		
Average Commercial / Industrial Water Usage per Account – Retail Accounts	1,415 MGD		
<b>SEWAGE</b>			
<b>Total Number of Sewer Accounts</b>	Retail	Sewer	44,843
	Wholesale	Sewer	3
Average Treated Sewage Flow – Total Retail and Wholesale Customers	11.18 MGD		
Maximum Day Treated Sewage Flow – Total Retail and Wholesale Customers	19.26 MGD		
Average Sewage Generation per Account – All Retail Accounts	194 MGD		
Average Residential Sewage Generation per Account – Retail Accounts	160 MGD		
Average Commercial / Industrial Sewage Generation per Account – Retail Accounts	1,468 MGD		

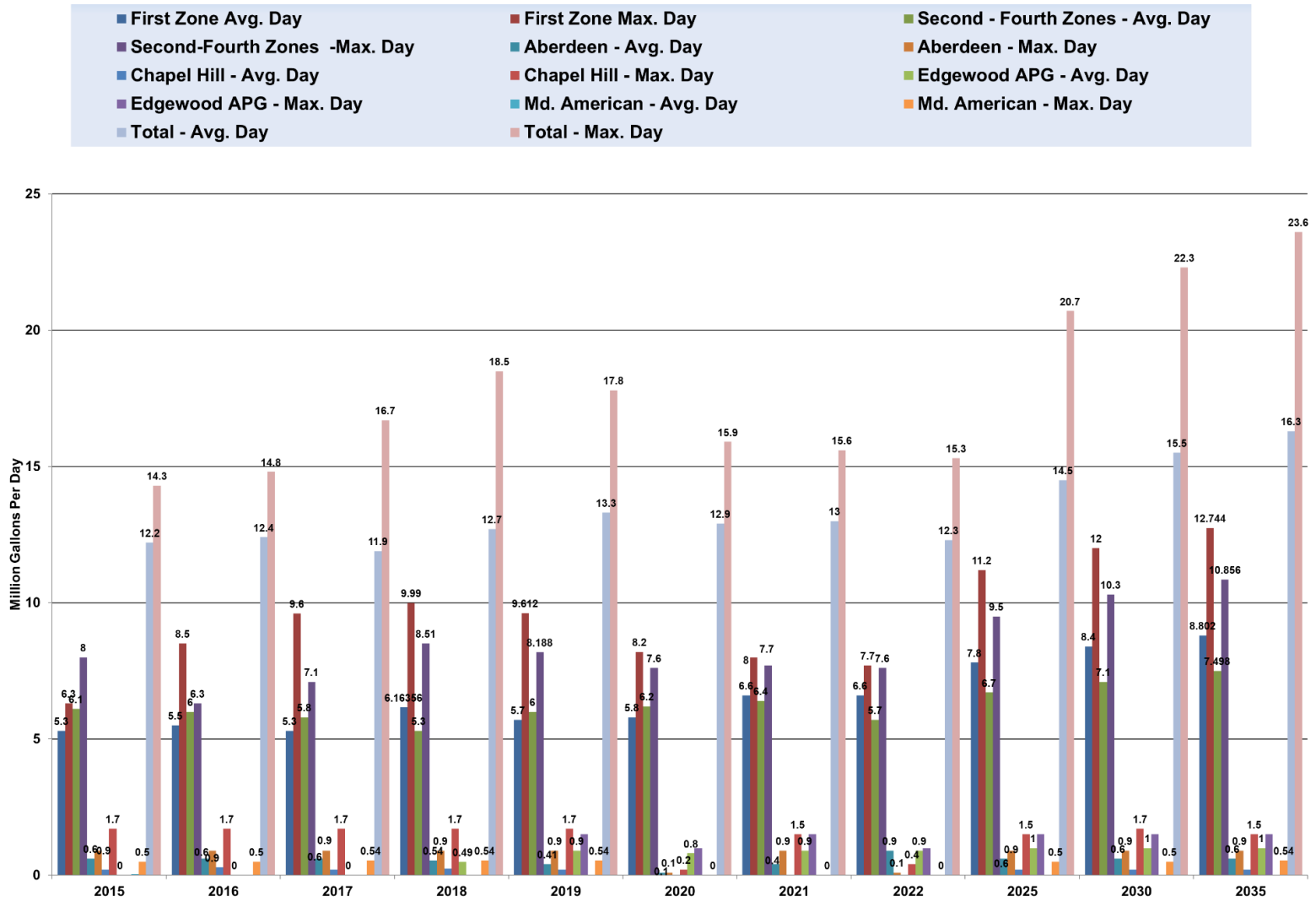
Note: MGD = Million Gallons per Day, GPD = Gallons per Day

Valued Billing Accounts (VBA) - Includes all active valid billing accounts during the selected calendar year.

Valid Consumption Records (VCR) - Includes all valid active billing accounts (VBA) with consumption during the selected calendar year.

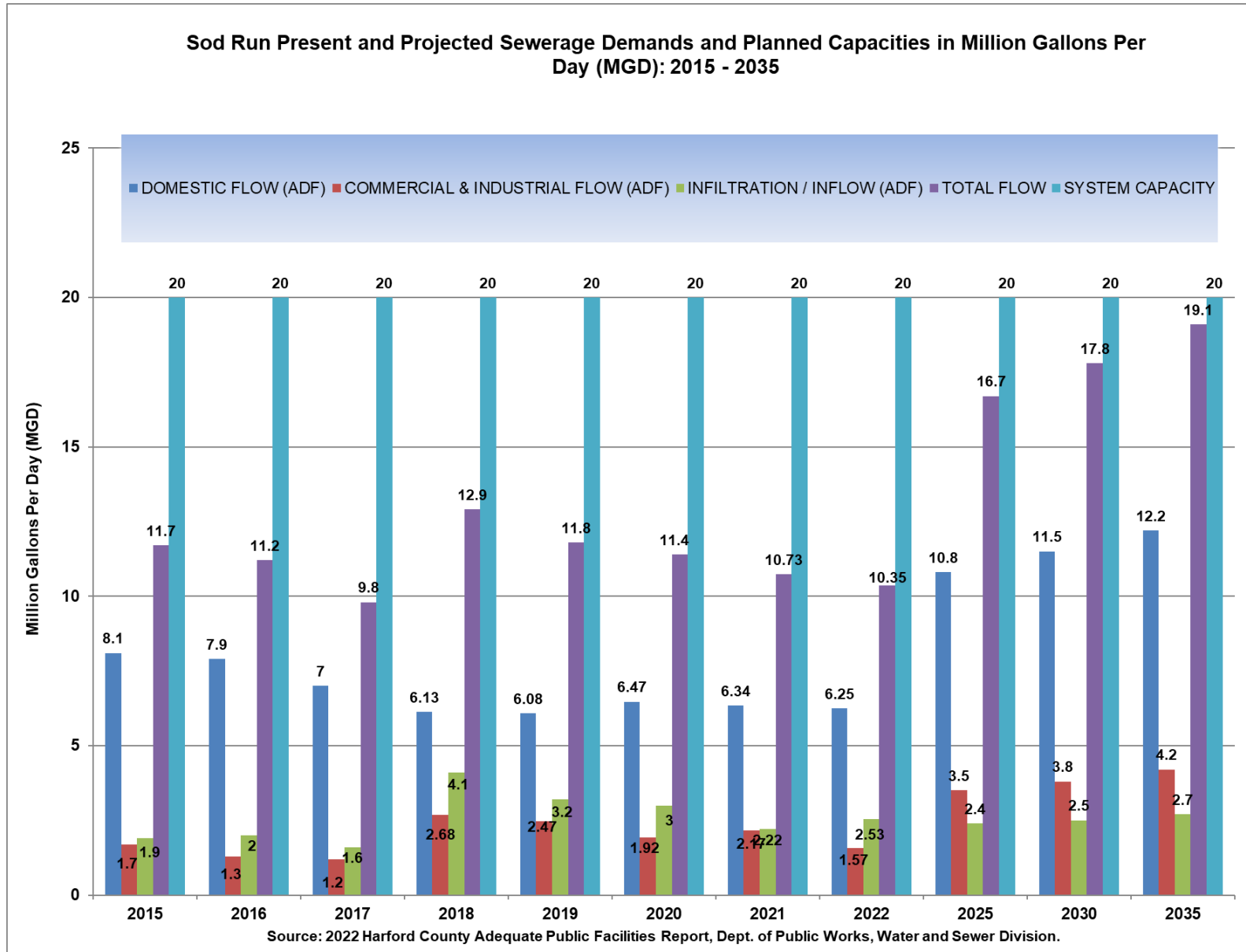
Source: 2022 Adequate Public Facilities Report, Dept. of Public Works, Division of Water and Sewer

**Table 19C**  
**Harford County Water Production Projections: 2015 - 2035 (in Million Gallons Per Day (MGD))**



Source: 2022 Harford County Adequate Public Facilities Report, Dept. of Public Works, Water and Sewer Division.

**Table 20C**





**Table 21C**

**2022-2023 EXISTING WATER & SEWER CAPITAL PROJECTS**

The Capital Improvement Program establishes projects for expanding and improving water and sewer facilities. This list of 2022-2023 Capital Projects includes the project status.

<u>PROJECT NO.</u>	<u>PROJECT NAME</u>	<u>PROJECT STATUS</u>
	WATER	
5401	MDTA Projects	60%-100% Design Complete
5424	Abingdon WTP Generator & Switchgear Upgrade	Preliminary Design Complete
5426	Ridgely's Reserve WBS	Under Construction
5425	Central Laboratory Study	100% Study Complete
6130	Abingdon WTP pH Control System	95% Design Complete
6141	Havre de Grace WTP Solids Handling	Under Construction
6152	Comprehensive Water System Study	Study Complete
6152	Water Tank Design and Construction	Future Project
6492	Replacement of Water Booster SCADA	Under Construction
6660	Water Zone Improvements	On-going
6687	Abingdon Road Water Main	60% Design Complete
6718	Baltimore City Deer Creek P.S. Improvements	Preliminary Engineering
6723	Conowingo Road Water Main Replacement	Preliminary Engineering
	SEWER	
5401	MDTA Projects	30%-60% Design Complete
5402	Joppatowne WWTP Improvements	Preliminary Design Phase
5428	Magnolia Road Sewer Petition	80% Design Complete
5429	Woodridge Manor Area Sewer Petition	60% Design Complete
6019	Sod Run Bio-solids Facility Enhancements	Preliminary Engineering
6057	Brentwood Park P.S. Upgrade	Under Construction
6104	Storage/Inventory Study	100% Study Complete
6112	Pump Station Improvements	Preliminary Design Phase
6113	Sod Run Ultraviolet Disinfection System	95% Design Complete
6190	Frey's Road Sewer Petition	90% Design Complete
6692	Bush Creek P.S. Improvements	30% Design Complete
6703	Bynum Run Parallel Phase 6 & 7	Phase 7 - Construction Complete Phase 6 - Design is a Future Project
6712	Edgewood Interceptor Parallel	Project on Hold, Awaiting Modeling
6714	Infiltration/Inflow	On-going
6714	Sewer Flow Monitoring & Model Calibration	15% Study Complete
6724	Sod Run WWTP Facility Improvements	95% Design Complete
6726	Sewer System Model Study	100% Study Complete
6726	West MacPhail Road Sewer Replacement	Under Construction
6726	Sewer Flow Monitoring & Model Calibration	5% Study Complete
6730	Bill Bass P.S. Force Main Parallel Replacement	50% Design Complete
FY 21 Submitted	Plum Tree Collector Sewer and Pumping Station	Future Project

# APPENDIX D

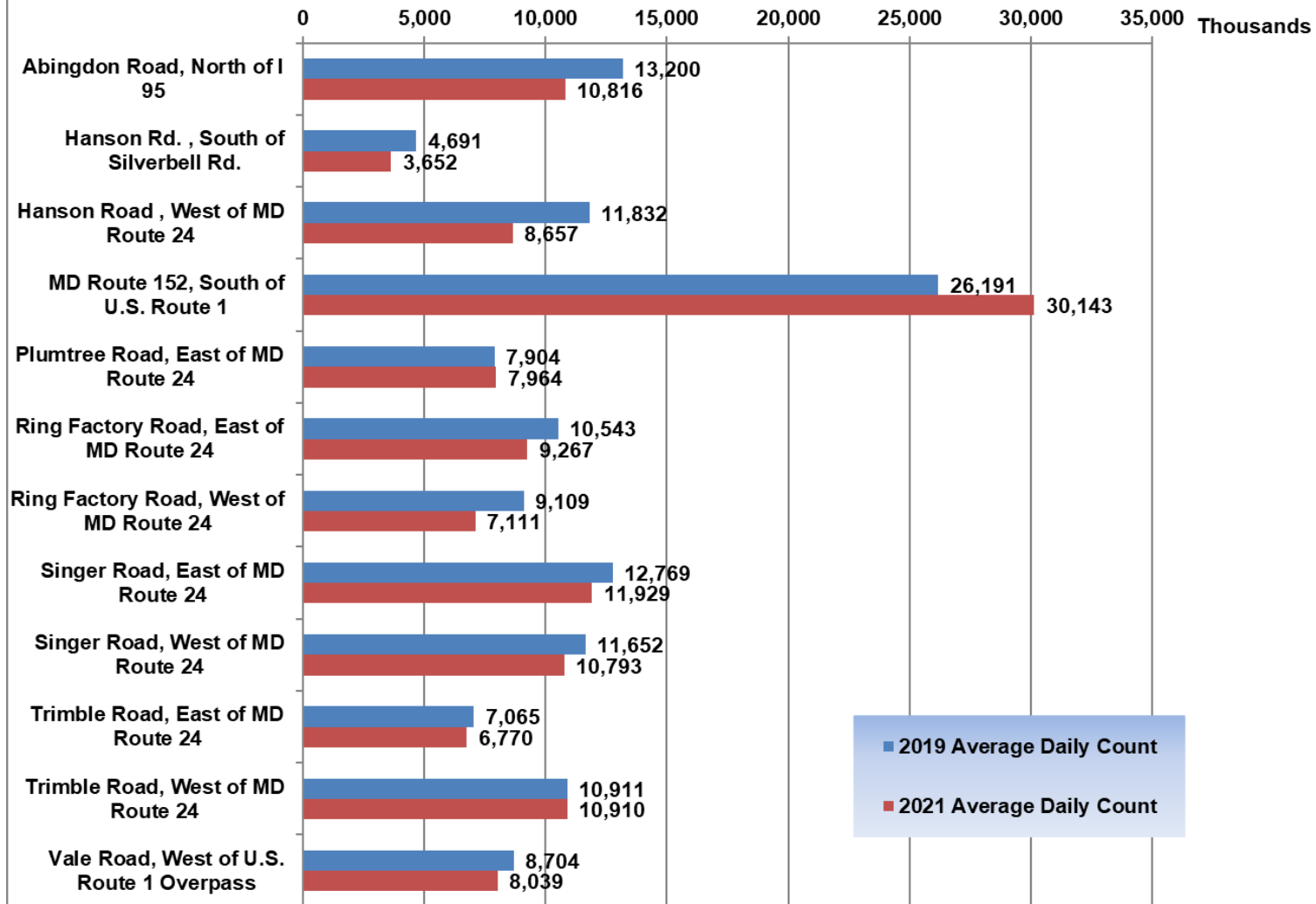
**Table 22D**  
**Signalized Intersection Capacity Analyses**  
**Level Of Service And Delay In Seconds: 2019 - 2022**

Intersection	Peak Hour Level Of Service (LOS) Rating					
	A	B	C	D	E	F
Maryland Route 24 @ I-95 Northbound On/Off Ramp	2021			2021		
Maryland Route 24 @ I-95 Southbound Off Ramp	2021					
Maryland Route 7 and U.S. Route 40*	2021		2021			
Maryland Route 924 and Moores Mill Road	2022					
Maryland Route 24 and Trimble Road	2022		2022			
Maryland Route 152 and U.S. Route 1	2019		2019			
Maryland Route 24 and U.S. Route 1	2022		2022			
Maryland Route 152 and Trimble Road	2022		2022			
Maryland Route 24 and Jarrettsville Road	2022		2022			
Maryland 147 and Connolly Road	2020	2020				
Maryland Route 152 and Hanson Road	2022	2022				
Maryland Route 152 and Singer Road	2022	2022				
Maryland 22 and Thomas Run Road/Schucks Road	2018		2018			
Maryland 715 and Old Philadelphia Road	2022		2022			
Maryland Route 22 and Brier Hill Road	2022	2022				
Maryland Route 22 and Maryland Route 136	2021	2021				
Maryland Route 24 and Bel Air South Parkway	2019		2019			
Maryland Route 24 and Forest Valley Drive	2021	2021				
Maryland Route 24 and Plumtree Road	2019		2019			
Maryland Route 24 and Ring Factory Road	2019		2019			
MD 924 @ MD 24 North Bound Ramp	2021		2021			
Tollgate Rd @ MD 24 Southbound Ramp	2022	2022				
Maryland Route 543 and U.S. Route 1	2022		2022			
Maryland Route 543 and Maryland Route 22	2022		2022			
Maryland Route 924 and Abingdon Road **	2019		2019			
<b>General Definition of Level Of Service Ratings</b>						
LOS A – free flow of traffic with no restriction of significant delay (<= 10 seconds).						
LOS B – stable flow of traffic with very little restriction or delay (> 10 & <= 20 seconds).						
LOS C – stable flow of traffic with low to moderate restriction or delay (>=20 & <= 35 seconds).						
LOS D – approaching unstable flow of traffic with moderate to heavy restriction and delay (> 35 & <= 55 seconds).						
LOS E – unstable flow of traffic with significant restriction and delay (>55 & <= 80 seconds).						
LOS F – forced flow or cases of "grid lock". The flow rate drops significantly (> 80 seconds).						
* SHA improvement at this intersection						
** Improvement funded by developer at this intersection						
Source: Harford County Dept. of Planning and Zoning, May 2022.						

**Table 23D  
Unsignalized Intersection Capacity Analyses  
Level Of Service And Delay In Seconds: 2019 - 2022**

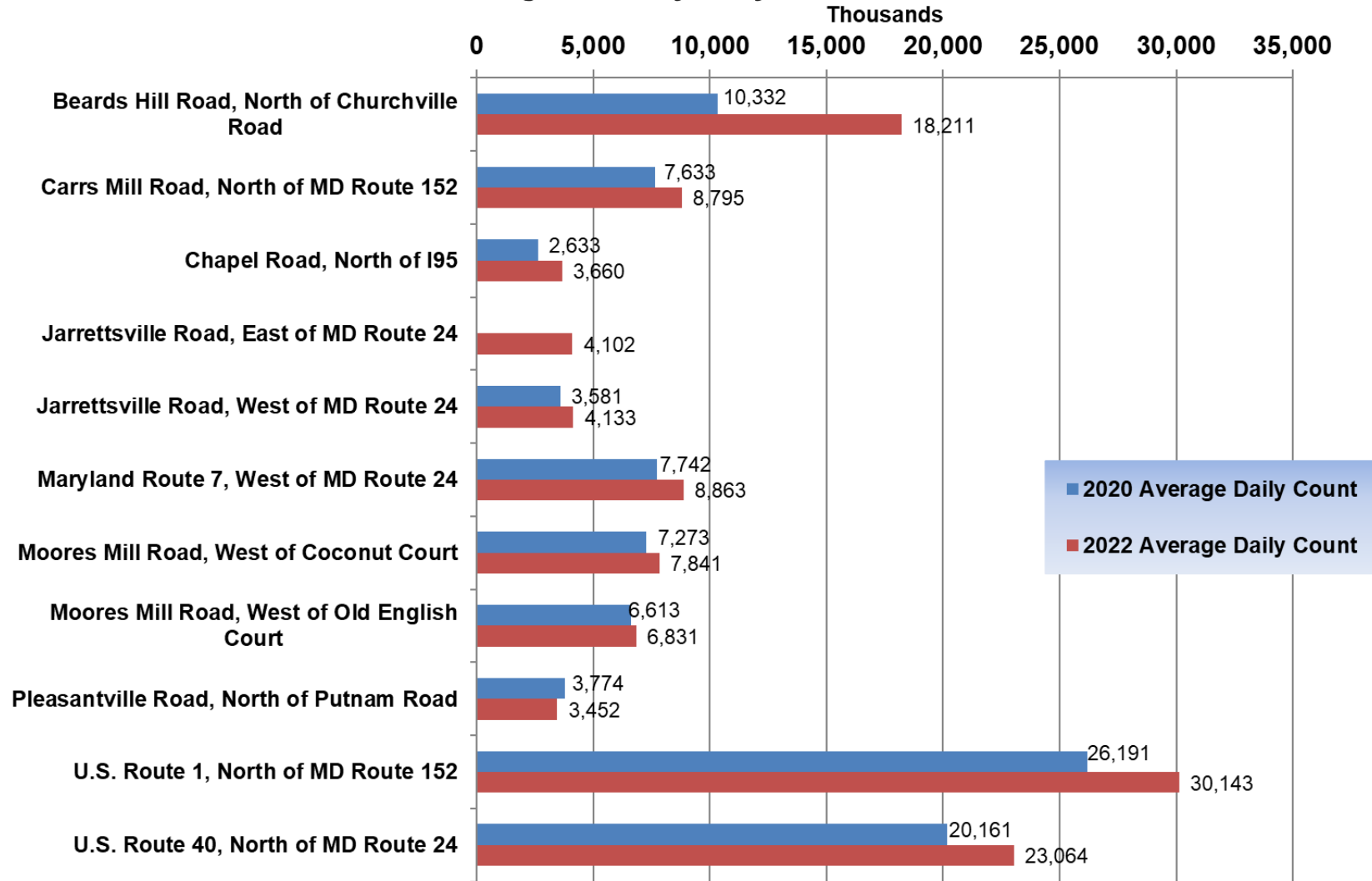
Intersection	Peak Hour Level Of Service (LOS) Rating					
	A	B	C	D	E	F
Business US 1 and Henderson Road	2022					
	2022					
Maryland 23 and Grafton Shop Road	2022					
	2022					
Tollgate Road and MacPhail Road	2022					
	2022					
US 1 and Reckord Road***	2021					
	2021					
Maryland 7 and Brass Mill Road ***	2021					
	2021					
Woodsdale Road and Box Hill Corporate Center Drive	2021					
	2021					
Maryland Route 7 and Maryland Route 159	2022					
	2022					
Maryland Route 7 and Joppa Farm Road	2021					
	2021					
Maryland Route 159 and Spesutia Road	2022					
	2022					
Maryland 155 and Earlton Road	2021					
	2021					
Maryland 543 and Henderson Road	2022					
	2022					
Tollgate Road and Ring Factory Road	2021					
	2021					
Maryland 22 and Aldino-Stepney Road	2021					
	2021					
Macphail and Ring Factory Road	2022					
	2022					
<b>General Definition of Level Of Service Ratings</b>						
LOS A – free flow of traffic with no restriction of significant delay (<= 10 seconds).						
LOS B – stable flow of traffic with very little restriction or delay (> 10 & <= 20 seconds).						
LOS C – stable flow of traffic with low to moderate restriction or delay (>=20 & <= 35 seconds).						
LOS D – approaching unstable flow of traffic with moderate to heavy restriction and delay (> 35 & <= 55 seconds).						
LOS E – unstable flow of traffic with significant restriction and delay (>55 & <= 80 seconds).						
LOS F – forced flow or cases of "grid lock". The flow rate drops significantly (> 80 seconds).						
** State Highway Administration funded improvement.						
*** Improvement funded by developer						
Source: Harford County Dept. of Planning and Zoning, May 2022.						

**Table 24D.1  
48 Hour Average Weekday Daily Traffic Volume: 2019 and 2021**



Source: Harford County Dept. of Planning and Zoning, May, 2021.

**Table 24D.2**  
**48 Hour Average Weekday Daily Traffic Volume: 2020 and 2022**



Source: Harford County Dept. of Planning and Zoning, May, 2022

**Table 25D****List of Approved County Capital Projects Funded for Construction in Fiscal Year 2022**

<b>Project Name</b>	<b>Project Type</b>
Abingdon Road Bridge #169 over CSX	Bridge Replacement
Glen Cove Road Bridge #155	Bridge Replacement
Bridge and Culvert Rehabilitation	Repairs
Bridge and Road Scour Repairs - Rock Station Road	Repairs
Bridge Painting (Estimated 7 - 10 bridges in FY 22)	Repairs
Drainage Improvements	Repairs
Guardrails	Repairs
Stormdrain Rehabilitation	Repairs
Traffic Signals	Construct Pedestrian Signals
Sidewalks and Handicapped Ramps	Construction
New Roads and Stormdrains	Construction
Washington Court Access Road	Construction
Woodley Road Extension to MD 715	Construction
Highways Infrastructure Investment Project - Convert tar and chip roads to asphalt	Resurfacing
Resurfacing Roadways	Resurfacing
Traffic Calming, Bicycle and Road Safety Improvements	Safety Improvements
Intersection Improvements - Bel Air S Pkwy & Tollgate Roundabout	Safety/Capacity Improvements
Spesutia Road Reconstruction/Upgrade	Upgrade Capacity
Norrisville Highways Facility	High Maintenance Facility

\*Note: These are ongoing county-wide project activities that include repairs, upgrades, and resurfacing of roads and bridges selected each spring dependent upon severity of roadway

**Table 26D****List of State Consolidated Transportation Program Funded for Construction in Fiscal Year 2022**

<b>Project Name</b>	<b>Project Type</b>
Ma & Pa Trail, Segments 2 & 3	Construction
MD 924 Resurfacing - Business US 1 to Kenmore Avenue	Resurface/Rehabilitate
MD 924 Resurfacing - Plumtree Road to Ring Factory Road	Resurface/Rehabilitate
US 1 Bel Air Road-Conowingo Truck Weigh and Inspection Station Facility	Safety/Spot Improvement - Rehabilitate Weigh Station
Aberdeen Station Connectivity Enhancements	Transportation Alternatives Program

Source: Harford County Dept. of Planning and Zoning, May 2022.

# APPENDIX E



**2022 RESIDENTIAL PRELIMINARY PLANS**

PLAN ID	PLAN NAME	ACREAGE	LOT ACREAGE	TAX MAP 1	PARCEL 1	TOTAL UNITS	SF UNITS	TH UNITS	APT UNITS	ENVELOPE	COMMENTS	PLAT 1	ZONING 1	ZONING 2	TYPE OF USE	DATE APPROVED
86/2021	2113 NUTTAL AVENUE	2	2	0066	0311	4	4	0	0	YES	REVISE PLAT 200/78 BY CREATING (4) SINGLE FAMILY RESIDENTIAL LOTS FROM EXISTING LOT 2		R3		RESIDENTIAL	10/31/2022
176/2022	AUMAR VILLAGE RESIDENTIAL - LOT 87	35.73	35.73	0055	0076	1	1	0	0	YES	REVISE PREVIOUSLY APPROVED PLAN BY ADDING (1) ADDITIONAL LOT AS LOT 87	215/61	B3	R2	RESIDENTIAL	9/19/2022
462/2021	CARDINAL'S CHOICE - LOTS 9-12	42.37	42.37	0032	0037	4	4	0	0	NO	SUBDIVIDE REMAINING LANDS TO CREATE LOTS 9-12	215/07	VR	AG	RESIDENTIAL	2/23/2022
287/2021	EDGEWATER STATION SENIOR HOUSING	5.47	0	0065	0838	68	0	0	68	YES	CREATE HOUSING FOR THE ELDERLY WITH 68 DWELLING UNITS	206/24	R3		RESIDENTIAL	1/21/2022
435/2022	ENSOR, LDS OF RICHARD & LISA (LOTS 1-4)	8.95	8.95	0034	0070	4	4	0	0	NO	SUBDIVIDE EXISTING PARCEL TO CREATE (4) SINGLE FAMILY RESIDENTIAL LOTS	217/45	AG		RESIDENTIAL	12/14/2022
030/2022	FOREST HILL ESTATES	35.17	35.17	0033	0429	70	70	0	0	YES	REVISE AND RECONFIGURE PREVIOUSLY RECORDED LOTS AND CREATE (70) RESIDENTIAL LOTS		R1/COS		RESIDENTIAL	7/18/2022
390/2022	FORTI, LAND OF MICHAEL, ET.AL.- LOT 3	5.3933	5.3933	0017	0059	1	1	0	0	NO	SUBDIVIDE LOT 3 FROM LOT 2 IN THE B2 ZONING DISTRICT	217/66	AG/B2		RESIDENTIAL	9/7/2022
134/2022	FRADEL, LDS OF - LOT 1	2.717	2.717	0035	0006	1	1	0	0	NO	REVISE PLAT 36-53 BY CREATING LOT 1 FROM THE REMAINING LANDS	215/87	AG		RESIDENTIAL	9/12/2022
336/2022	HEAPS, ANN P. RESIDENCE TRUST - LOT 2	2	2	0019	0003	1	1	0	0	NO	CREATE ONE SINGLE FAMILY RESIDENTIAL LOT AROUND AN EXISTING DWELLING AS AN AG PRES CHILD LOT	215/47	AG		RESIDENTIAL	8/29/2022
625/2021	HEMLING, LANDS OF	11.708	11.708	0015	0142	2	2	0	0	NO	REVISE PARCEL LINES BETWEEN PARCELS 142 AND 151 BY CREATING LOT 1 & LOT 2	214/31	AG		RESIDENTIAL	2/24/2022
125/2022	HOLLYWOODS - LOT 2	20.75		0058	0572	140	0	140	0	YES	RECONFIGURE RECORDED LOT 2 AND CREATE 140 TOWNHOUSE UNITS (SEE PLAN 066/2001 AND BOA CASE NO. 5946)		R3/CDP		RESIDENTIAL	5/25/2022
261/2022	MARTIN BROTHERS LLC - LOT 1	2	2	0010	0044	1	1	0	0	NO	CREATE (1) SINGLE FAMILY RESIDENTIAL LOT AROUND AN EXISTING DWELLING AS AN AG PRES OWNER'S LOT	215/58	AG		RESIDENTIAL	8/25/2022
539/2021	MARTIN MEADOWS - LOT 47	22.977	2.292	0054	0027	1	1	0	0	NO	CREATE (1) SINGLE FAMILY RESIDENTIAL LOT BY SUBDIVIDING LOT 32 TO CREATE LOT 47	214/65	AG		RESIDENTIAL	1/20/2022
485/2021	PALITTI, LDS OF SLOAN J. AND CAROL L.	3.78	3.78	0056	0097	2	2	0	0	YES	CREATE LOTS 1 & 2 FROM AN EXISTING PARCEL		R1		RESIDENTIAL	3/15/2022
271/2022	PANORAMA FARMS - LOTS 22 & 23	39.164	39.164	0033	0005	2	2	0	0	NO	UTILIZE THE (2) ADDITIONAL DEVELOPMENT RIGHTS REMAINING ON LOT 13 AND CREATE LOTS 22 & 23		AG		RESIDENTIAL	12/6/2022
530/2020	PENNINGTON ESTATES (FORMERLY LDS OF PENNINGTON)	2	2	0042	0302	1	1	0	0	NO	CREATE (1) SINGLE FAMILY RESIDENTIAL LOT AS AN AG PRES CHILD LOT AROUND AN EXISTING DWELLING		AG		RESIDENTIAL	12/12/2022
446/2022	FULLEN, LANDS OF LOTS 1 & 2	3.219	3.219	0032	0142	2	2	0	0	NO	RECONFIGURE LOT LINES BETWEEN PARCELS 142 AND 161 AND PROVIDE ROAD FRONTAGE FOR PARCEL 142. PARCELS WILL THEN BECOME LOTS 1 & 2		AG		RESIDENTIAL	11/28/2022
412/2021	SEWELL ROAD	4.29	4.29	0062	0627	5	5	0	0	YES	CREATE FIVE SINGLE FAMILY RESIDENTIAL LOTS FROM AN EXISTING VACANT PARCEL		R1		RESIDENTIAL	2/15/2022
285/2022	SMITH, LDS OF JAMES C. JR. - LOT 2	2	2	0057	0253	1	1	0	0	NO	CREATE (1) SINGLE FAMILY RESIDENTIAL LOT FROM AN EXISTING PARCEL AS AN AG PRES OWNER'S LOT		AG		RESIDENTIAL	8/9/2022
135/2022	SNODGRASS, LANDS OF - LOT 5	3.29	3.29	0018	0057	1	1	0	0	NO	SUBDIVIDE AN EXISTING PARCEL TO CREATE ONE RESIDENTIAL LOT AROUND AN EXISTING DWELLING	215/54	AG		RESIDENTIAL	9/29/2022
		<b>254.9783</b>	<b>208.0733</b>			<b>312</b>	<b>104</b>	<b>140</b>	<b>68</b>							

**2022 NON RESIDENTIAL PRELIMINARY PLANS**

PLAN ID	PLAN NAME	ACREAGE	LOT ACREAGE	TAX MAP 1	PARCEL 1	TOTAL UNITS	SF UNITS	TH UNITS	APT UNITS	ENVELOPE	COMMENTS	PLAT 1	ZONING 1	ZONING 2	TYPE OF USE	DATE APPROVED
195/2021	1703 EMMORTON ROAD	7.69		0056	0298	0	0	0	0	YES	RECONFIGURE EXISTING LOT 1 AND PARCEL 377 TO DEVELOP A MEDICAL CLINIC		RO	R1	NON RESIDENTIAL	7/6/2022
471/2021	HEAT CENTER - LOTS 1,4,5	98.13		0051	0116	0	0	0	0	NO	RECONFIGURE EXISTING LOTS OF RECORD AND LAND DESCRIBED ON RECORDED PLATS TO DEVELOP (3) WAREHOUSES ON LOTS 1,4 & 5	215/82	LI		NON RESIDENTIAL	4/28/2022
632/2021	WASH X OF FALLSTON	1.054		0055	0176	0	0	0	0	YES	COMBINE TWO PARCELS INTO ONE LOT		CI		NON RESIDENTIAL	3/7/2022
		<b>106.874</b>														

