11. TRANSPORTATION: A FOCUS ON MULTIMODAL OPTIONS



Image source based on Design Consultant: Moody Graham, 2023

A community is defined by its transportation networks, whether its close-knit streets and alley ways, major interstate routes, or port access and rail lines. Havre de Grace has all of these and they have shaped its place historically and as it has grown over time. Its early traditional grid street network was interrupted by the construction of US 40 as America's Main Street after the advent of automobiles. Water access made it one of the earliest points of settlement with a ferry system between eastern and western shores of Maryland and contributed greatly to its 19th century canalera growth. Two major rail lines traverse the region along the edge of the flat coastal plain and I-95 demarcates the City's outer boundary, establishing Harford County's development envelope for limiting urban growth.

All of these transportation methods have shaped Havre de Grace, and the City's geography and resulting transportation network will continue to define it in the future. The railroads, but specifically Amtrak's Northeast Corridor, will play an outsized role in Havre de Grace in the next decade due to the replacement of the 1906 steel truss bridge that frames the entrance to the City's downtown Main Street and historic district. Construction for 2 new bridges is expected to take place over 10 years. In addition, the City's focus on alternative means of transportation, specifically bikeways and pedestrian connectivity, is intended to make the community more cohesive and supportive of healthy and necessary transportation options. Both of these emphasize the opportunity for true multimodalism in the Northeast Maryland region, where density along urban corridors through transit-oriented design is possible. This is all in support of smart growth principles and how communities can reduce dependency on automobiles by building in bikeways, better pedestrian connections, and other transportation alternatives.

In this chapter, types of transportation described include local and regional bus networks, development of bikeways and bicycle facilities, pedestrian sidewalk infrastructure, national rail connections, and road networks. Specific focus will be on sustainable, multimodal transportation which is becoming more prioritized in Havre de Grace, with efforts to grow pedestrian accessibility, establish bikeways, and capitalize on the City's relationship to rail, especially Amtrak's Northeast Corridor. This chapter will also touch on boat access and nearby airpark facilities, both of which are unique

assets within the local area. Other topics will be covered such as parking, electric vehicle (EV) charging options, rideshare programs, transportation funding programs, and future trends.

Transportation improvement planning and funding require a significant effort on the part of City, county, and state agencies, with various departments at all levels of government involved in the maintenance and general oversight, planning, and capital improvements of the many modalities of transportation. These are not easy tasks and require a long-view to get a project from concept to design to construction. However, taking the long-view is vitally important to shape/reshape the public realm of urban mobility, thereby improving movement for everyone and ultimately creating a more livable built environment that is an equitable and inclusive space for all.

MAIN METHODS OF TRANSPORTATION

This section outlines the current main methods of transportation that exist in the City while envisioning how the City can improve accessibility and safety of all options, enhance the pedestrian experience, and provide better

infrastructure and services. This will make Havre de Grace an accessible, connected, and safe community for all methods of transportation. Each section goes into detail about current circumstances and anticipated planned improvements. Havre de Grace is the beneficiary of attention by various local and state agencies whether it is through Harford Transit for successful and efficient local bus routing, Maryland Department of Transportation for bikeway

MAJOR MODALITIES OF THIS SECTION INCLUDE:

- 1. Local and regional bus networks
- 2. Rail service
- 3. Bikeways and bicycle facilities
- 4. Sidewalks and pedestrian infrastructure
- 5. Road network, local and state

planning, or Amtrak's decision-makers and design team for rail bridge improvements. Havre de Grace has a great deal going on with regard to transportation planning and implementation.

Local and Regional Bus Networks

Bus transit services are vital for the City since they can provide mobility options that connect to other networks such as rail, help offset congestion, and stimulate economic development. There are 3 bus services in Havre de Grace consisting of Maryland Transportation Administration (MTA), local Harford Transit LINK, and private Greyhound services for interstate travel.

MTA commuter buses (the #420) serve US 40 communities in Harford County to downtown Baltimore at Hopkins. This service begins and ends in Havre de Grace with 3 pick-up/drop-off locations and includes mid-day bus service from Baltimore to Havre de Grace for commuter needs. With a distance of approximately 33 miles to downtown Baltimore, residents of Havre de Grace are fortunate to have MTA service to this outlying area.

The Harford Transit LINK Green 1 and Teal 5 bus service is provided through Harford County Transportation Services (HCTS) throughout the county and municipalities of Aberdeen, Bel Air,

Local Bus Transit in HdG

27 Stops for Harford County LINK (Green and Teal) 3 Stops for Maryland Transit Administration (MTA)

1 for Greyhound Service to Baltimore

ROUTE	TIME	AREA SERVICED				
Green No. 1	6 am to 9 pm	Links Havre de Grace to Aberdeen and Bel Air				
Teal No. 5	6 am to 9 pm	Links Havre de Grace to Aberdeen, Perrryville, and Perryman				
MTA No. 420	5 am to 7 pm	Havre de Grace to Downtown Baltimore and Johns Hopkins Hospital				
Greyhound	24 hrs	To Baltimore				

Data Source: Harford County Transit Services (HC LINK) and Maryland Transit Administration (MTA), 2024 Havre de Grace and Perryville in Cecil County. Operating through the Department of Community Services, this local bus service offers intra-county transit between and within the major population centers and route destinations of Abingdon, Bel Air, Edgewood, Havre de Grace, Joppatowne, Perryman, as well as Perryville, with Aberdeen as its transit hub. Connections to Perryville provide the only intercounty transit offered over the Susquehanna River, connecting communities and employment centers in Cecil County with area residents. This service operates hourly during the week with 27 local pick-up/drop-off locations. HCTS also provides ADA Paratransit/Demand Response service for individuals over the age of 60 and anyone with a mobility disability.

As Harford County's transit hub, the Aberdeen train station is critical in providing a location for true multimodal transportation, including being a transfer center for various Harford Transit LINK bus routes. Connections to other communities and both MARC and Amtrak rail services are made via Aberdeen. Often, LINK buses can be seen at the end of the ramp along Aberdeen Blvd awaiting transfers, illustrating its importance as a transit hub.

Harford Transit LINK services have been expanded and made more efficient within the past 5 years, with extended hours to better serve the needs of transit-dependent residents. The Green 1 Line is one of the highest use bus routes and operates both east- and westbound, creating in essence a circulator for locals for short distances, making it more cost effective for HCTS and useful for local residents. The addition of the Teal 5 line focuses on employment centers along US 40 and traverses the Susquehanna River to Perryville and employment centers there, such as IKEA and the



Harford Transit LINK Green 1 and Teal 5 buses operate in the City.

new 700-room Great Wolf Lodge which opened in 2023 at the I-95/MD 222 interchange in Perryville.

A bus shelter program offered through HCTS is currently being pursued to meet the City's vision for transit improvements for residents. Coordination with State and County government is required to provide installation of bus shelters and passenger amenities at priority locations and ultimately throughout the whole City to serve both MTA and HCTS customers. City staff are evaluating sidewalk connections and state and City rights-of-way for accommodating bus shelters.

HCTS also provides commuter assistance for employees for carpooling and van pooling in addition to Maryland

Department of Transportation (MDOT) Guaranteed Ride Home (GHR) program, which provides up to 4 free rides home from work per year for commuters who regularly bike, walk, rideshare, or take bus transit to work. This further incentivizes alternative methods of transportation by providing assurance home from work.

Private interstate Greyhound bus service has 1 pick-up location in Havre de Grace at MD 155/Ohio and Ontario Streets. This is a part of German brand FlixBus national commercial transportation company with 2,300 destinations across the US, of which Greyhound Lines is a subsidiary. These services are intended to be a convenient and affordable way of travel with a network of stations in major US metropolitan areas.

Rail Service

Within the immediate vicinity of Havre de Grace, there is excellent access to rail service for both regional and national passenger destinations, with stations 3 miles away in Perryville and Aberdeen. Both stations are owned by Amtrak and offer MARC Commuter Rail Service to Baltimore and Washington, D.C. Amtrak regional rail offers passenger service out of the Aberdeen station with 7 day service for longer distance rail travel. This region is part of Amtrak's Northeast Corridor (NEC) which provides daily long-distance rail service throughout the US along with high-speed service from Boston to Washington, D.C. A focus on rail is key to the future of this region.

MARC Commuter Rail Service provides weekday commuter service from Perryville and Aberdeen to Baltimore's Penn Station, Baltimore/Washington International (BWI) Thurgood Marshall Airport, and Washington, D. C. The opportunity created by these connections for regional, national, and international travel cannot be overstated, and both Aberdeen and Perryville have focused efforts on transit-oriented-development, or TOD, to maximize this potential. The City of Aberdeen continues to make improvements to the station's facility and grounds, providing a major point of transfer between local Harford Transit LINK bus service as well as rider pick up/drop off. Perryville's historic 1905 station is the end of the MARC Penn line currently, however MARC service may be extended to Newark, DE in the future where it would connect with SEPTA Regional Rail¹ in Delaware and into the Philadelphia region. The MARC Growth and Transformation Plan is currently underway by MDOT MTA for developing strategic priorities for systems and the capital investments needed for the future of MARC train service.²

Serving as the primary multimodal hub for Harford County, the Aberdeen station is located along Pulaski Highway and has a total of 189 commuter parking spaces. Plans for bike connectivity via a grade-separated bike and pedestrian path between Havre de Grace and Aberdeen would greatly expand the station's non-motorized connectivity. The Baltimore Metropolitan Council (BMC) led an initial concept study on this bike path in 2022-23 and extending the design to engineering is anticipated with Harford County's support. Long-term bikeway connections between the 2 municipalities is desired for those who do not have or choose not to use cars. This is especially important for making alternate transportation easy for everyone and in consideration of climate change.

Rights-of-way and track infrastructure for Amtrak and CSX pass through Havre de Grace, both in a northeast-southwest direction, paralleling other transportation corridors of US 40 and I-95 through the region. Three railroads operate on the Amtrak line, including Amtrak and MARC passenger service and Norfolk Southern Railroad for freight. The Amtrak Penn line runs east of US 40 and has no at-



Built in 1943, the Amtrak/MARC passenger station in Aberdeen was designed by architect Lester C. Tichy.

grade crossings in the Havre de Grace planning area. A spur line off the Amtrak main line serves the Evonik 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 4 at-grade crossings within Havre de Grace, with gated crossings at Ontario Street Extended and Lewis Lane, a narrow underpass at the Bulle Rock Golf Course and an overpass/bridge at Greenway Farms. There are no spur lines with CSX.

Major rail infrastructure improvements along Amtrak are being funded through the Federal Rail Administration³ for NEC reliability and service quality, and these improvements include the replacement of the 1906 Susquehanna River steel truss rail bridge here in Havre de Grace. This project completed NEPA (National Environmental Policy Act) review in May 2017 and received a Finding of No Significant Impact (FONSI) after coordinating a robust Programmatic Agreement with local jurisdictions and the State Historic Preservation Officer (SHPO). Engineering was slowed as a

¹ Article from Delaware Business Now, April 16, 2023, https://delawarebusinessnow.com/2023/04/maryland-inks-deal-with-delaware-aimed-at-bringing-marc-trains-to-newark/

² https://www.mta.maryland.gov/marc-growth-plan

³ https://media.amtrak.com/2023/11/amtrak-awarded-federal-funds-for-12-projects-of-national-significance-totaling-nearly-10b-across-americas-busiest-rail-corridor/ and

https://www.whitehouse.gov/briefing-room/statements-releases/2023/11/06/fact-sheet-president-biden-advances-vision-for-world-class-passenger-rail-by-delivering-billions-in-new-funding/

result of the COVID pandemic but has been accelerated since with increased attention at the national level for large-scale infrastructure focus and funding. City staff are working closely with Amtrak representatives and their engineers for the Susquehanna River Rail Bridge Project (SRRBP) to ensure design compatibility within the City.



Amtrak's conceptual image of the 2 new bridges across the Susquehanna River from Havre de Grace to Perryville.

Two new fixed bridges will be constructed to replace the existing Amtrak bridge, each having 2 tracks which will relieve a major bottleneck on the NEC. Construction is anticipated to begin in 2026 after completion of engineering design, removal of 1866 remnant piers, and lead-up track construction; construction on the 2 new bridges is expected to take up to 10 years. City planning staff are working through Maryland Department of Transportation (MDOT) to explore the feasibility of a third separated span to allow bicycle and pedestrian access across the Susquehanna River between Havre de Grace and Perryville, a concept that has been supported by Amtrak and MDOT. A bicycle/pedestrian crossing in this area would allow for a non-motorized connection between multiple jurisdictions along a historic and populated transportation corridor, adding game-changing improvements for multimodalism that reduces automotive dependency. This river crossing trail initiative is identified in MDOT's Statewide Bicycle and Pedestrian Master Plan.

Beyond the construction of 2 new bridges, there are addition efforts for a long-term vision and investment program for the NEC. This initiative is called NEC Future by the Federal Rail Administration (FRA) which issued a Record of Decision in 2017, marking the completion of a Tier 1 environmental review process. The far-reaching proposals will guide investment for the NEC in the future.⁴



Image from project presentation, February 2024

⁴ Please see https://nec-commission.com/connect-nec-2035/ or https://www.fra.dot.gov/necfuture/ for information.



Bikeways and Bicycle Facilities

Havre de Grace has always been relatively bike-friendly just because of the scale and speed along its road system, especially in the historic areas where cyclists safely share the road with vehicles. There has been very limited focus on bicycle infrastructure, such as marked bike lanes. This is about to change with the City's successful grant applications for a bikeway feasibility study and a quick-build bikeway retrofit project for the downtown historic area. These grant applications were awarded in the fall, 2023 through MDOT's Kim Lamphier Bikeways Network Program.

These bike-focused grants build on past concepts of downtown bike loops and a connecting link between the old town and newer

Currently, Havre de Grace is a "somewhat bikeable" community according to a Walk Score of 65/100.

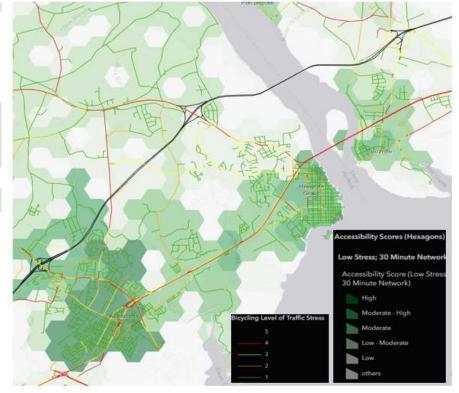
(https://www.walkscore.com/score/havre-de-grace)

According to the League of Bicycle Friendly America, Maryland ranks 14/50 for being bike friendly according to a 2022 survey-

(https://bikeleague.org/wpcontent/uploads/bfareportcards/bfs/2022/maryland.pdf).

communities as identified in prior comprehensive plans. In addition, the Baltimore Metropolitan Council (BMC) in partnership with Harford County led the development of the first stage of a Concept Plan for Bicycle and Pedestrian Improvements along US 40 between Aberdeen and Havre de Grace in 2022-23. The need for bike and pedestrian infrastructure is becoming more forefront – locally, statewide, and nationally – for creating alternative modes of transportation, especially in higher density communities. This focused attention is greatly needed to reduce vehicle miles traveled, i.e. for reduction of fossil fuel use, as a means of climate action.

Through the Departments of Planning and Public Works, the City will focus its efforts on developing bike routes through the grants that were received so that actual installation of bike route improvements occurs. Two parts to these grants include: downtown routes 1). making the identifiable with signage, stenciling, and other route makings which are to be determined through consulting services and the development of an implementation plan and 2). examining the feasibility of onand off-road improvements for bikeway beyond connections the historic downtown, to include the use of a rail spur to Clark Road and design development for successful linkages from the older portions of town to newer communities. These implementation grants are to make identified bike routes 1, 2, and 3 complete. As represented on the bikeways network map, these interconnected routes are as follows:



Data Source: MDOT Bicycle Accessibility Map Application, 2023. This interactive maps shows the Level of Stress for on-road cyclists, one tool for analyzing opportunities.

Route 1: Old Town/Downtown Loop. This on-road loop primarily traverses streets in the historic portions of the City linking the waterfront, Main Street District, and cultural attractions.

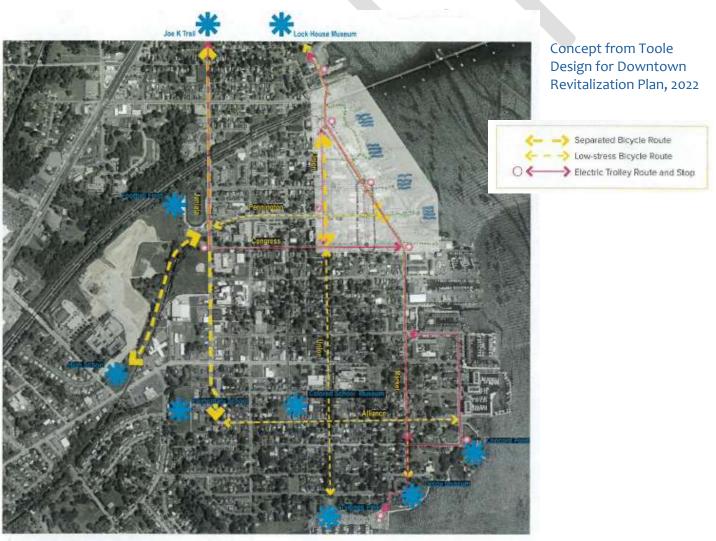
Route 2: North Park Loop. Located along the north shoreline of the City, this is a hiking/biking trail within a natural setting, incorporating the Lock House Museum and connections to the LSHG trail system to the north.

Route 3: Old Town/New Town Bikeway. This bikeway serves to connect older portions of the City with the newer neighborhoods west of US 40, linking civic activities, the waterfront, and historic commercial areas with large development areas along Chapel Road. Portions of this connection are part of the ECG.

In addition, other opportunities for bike improvements are shown on the network map, such as Pennington and Union Avenues, which will be considered within the broader implementation through the minor retrofit grant. As of 2023, staff with the Department of Planning are also coordinating with Bel Air and Aberdeen on a Safe Streets for All (SS4A) grant as a shared street safety Action Plan and with a focus on intersections requiring safety improvements.

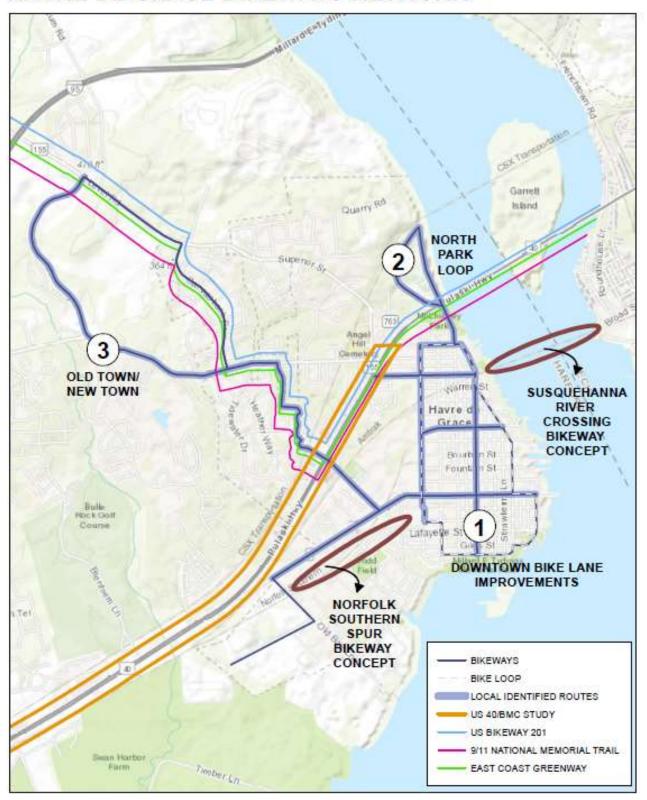
Over the past decade, inter-connectivity of the region has become forefront with regional and national trails converging, such as the ECG, September 11th National Memorial Trail, US Bike Route 201 (USBR 201), and the LSHG. The ECG in particular has been very successful in installing signage for identifying their route through this region, reaching Pennsylvania, Delaware, and Maryland communities, and one can see their route identified through Havre de Grace from the Thomas J. Hatem Memorial Bridge at US 40 to Lewis Lane, Grace Manor Drive, Chapel Road, to MD 155 and beyond.

"Envisioning life in a town where cycling and walking become the norm."
- Quote from a resident within the region

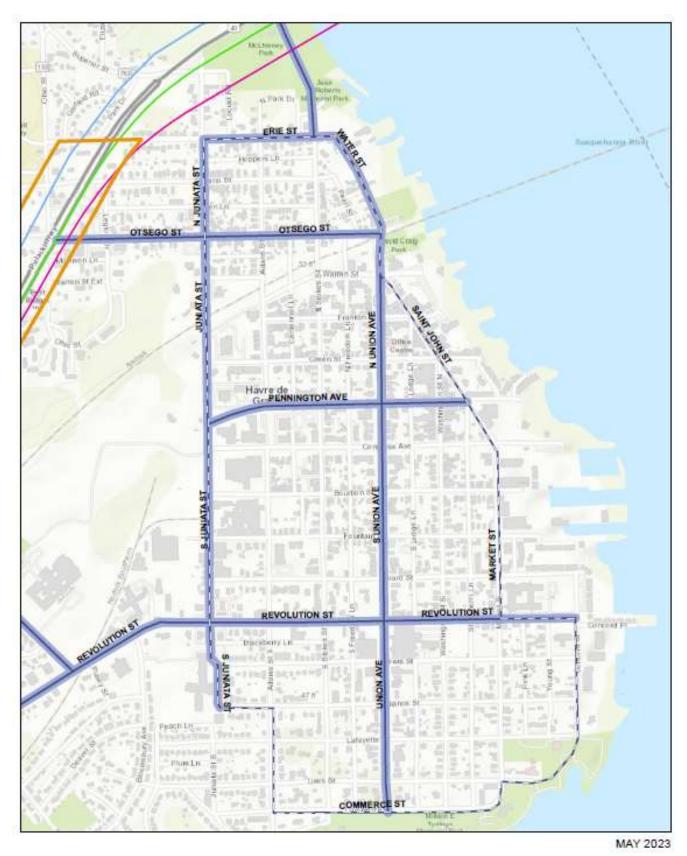


ALTERNATIVE TRANSPORTATION NETWORK RECOMMENDATIONS

HAVRE DE GRACE BIKEWAYS NETWORK



Please note multiple efforts for bikeway connections through Havre de Grace with the September 11th National Memorial Trail, East Coast Greenway, US 40 Concept Plan for Bike and Pedestrian Improvements, and Rail Spur and River Crossing studies.



These 2 bikeway maps are to be used to show broad concepts of bikeway connections throughout the City, linking the historic portions to the newer communities within Havre de Grace as well as connections to the region beyond City-limits.

As part of Maryland's statewide Bike Spine Network, US 40/Pulaski Highway is the only road that is currently identified on-road as a bikeway with share-the-road signs, pavement stenciling, and route signage. Use of the shoulder lanes for bikes is accepted and provides a level of recognition for the highway to be utilized as a bike route, however only the most seasoned cyclists or citizens with limited transportation choices brave this 4-lane highway. The BMC in partnership with Harford County initiated a Concept Plan for Bicycle and Pedestrian Improvements along US 40 between Aberdeen and Havre de Grace to explore a grade-separated bike and pedestrian path between the 2 municipalities. Continued study and design work for this pathway is greatly desired to fully realize the potential for short-trip transportation options between these 2 centers of residential and employment activity.

The 1940-era Thomas J. Hatem Memorial Bridge for US 40 has been opened to bike traffic since 2016 as a result of a public outcry for a Susquehanna River crossing during the NEPA process for the SRRBP. Though not ideal, the US 40 bridge is opened on weekends for cyclists to traverse the river between Cecil and Harford Counties, with bikes taking up a full lane and a flashing overhead light warning drivers about in-route bikes on the bridge. Ideally, this solution is temporary as it is unsafe and very limited to only the most seasoned cyclists. Exploration of the feasibility for a true Susquehanna River bicycle and pedestrian crossing that is safe for all ages and abilities is a goal, making this region a beacon of multimodal transportation success.

To support and encourage more bicycling and walking as a means of transportation, sufficient and safe facilities must be provided throughout the City. The goal is to create a bicycle and pedestrian plan for improving alternative methods of transportation within the City as a whole, applying the Complete Streets⁵ approach that integrates safe and accessible lanes separate from but in addition to sidewalks. Ideally, Havre de Grace will be designated a 'Bicycle Friendly Community' by working with Bike Maryland and Bicycle League of America to attain community certification. This goes beyond recreation to promote a bike to work, school, and shop initiative that will continue to attract people of all ages and abilities to Havre de Grace.

Concept Plan for Bicycle and Pedestrian Improvements along US 40, Baltimore Metropolitan Council

A linear corridor is being proposed by Harford County and the Baltimore Metropolitan Council parallel to US 40 in its right-of-way, connecting Aberdeen and Havre de Grace in order to provide a safe, accessible, and grade-separated

shared-use biking and pedestrian path. This would provide non-motorized transportation options between the 2 cities, linking area residents to employment, shopping centers, health facilities, and transportation hubs, such as the Aberdeen train station. This concept development project is to support a mixed-use corridor that's focused on transit oriented development for promoting connectivity.

Sidewalks and Pedestrian Infrastructure

Sidewalks are key to a vibrant City life, serving as both social and economic conduits for pedestrian traffic. Havre de Grace is a "Very Walkable" community according to Walk Score, ranking 85/1006, meaning that most errands can be accomplished on foot and that residents have access to nearby local parks. Pedestrians enjoy a nearly complete sidewalk system that connects the historic downtown along



Image from the Concept Plan for Bicycle and Pedestrian Improvements along US 40.

with connections to several art and cultural trails for hiking and biking. Safe and well-maintained sidewalks are a basic

⁵ For more information on Complete Streets, please see: https://smartgrowthamerica.org/what-are-complete-streets/

⁶ <u>https://www.walkscore.com/score/havre-de-grace</u>

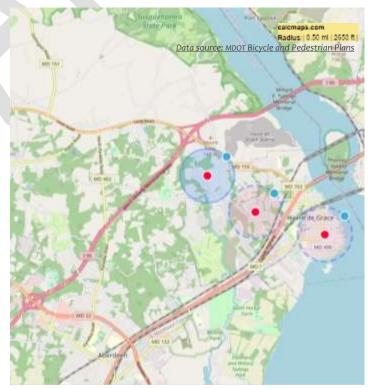
and necessary investment for cities, and thoughtful sidewalk design can encourage pedestrian traffic by making it more attractive and functional. In today's world, people are increasingly more active and seeking out places to bike, hike, and walk which, in turn, results in a more health and fitness-focused community. Pedestrian mobility goes far beyond the traditional vehicle to a more connected pedestrian network integrated with adjacent land uses.

Sidewalks are installed throughout most of the City's Old Town residential neighborhoods, Waterfront, and Main Street Districts, making these historic areas 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 Middle/High School complex do not have complete pedestrian connections, including safe crosswalks. 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.

DPW and planning staff are currently undertaking a comprehensive sidewalk inventory of all pedestrian assets within the City. This is intended to show the gaps, needs, and shortfalls of the City's current pedestrian system including, but not limited to, ADA accessibility, incomplete sidewalk connections, and crosswalks in need of visibility enhancements or signalized pedestrian crossings. A focus on safety, accessibility, and connectivity are the overriding themes for this review, which was completed in the fall of 2023 for the land area east of US 40, the City's designated Sustainable Community. Staff will continue with the sidewalk inventory west of and including US 40 for full city-wide connectivity. Integrating US 40 as Complete Streets connector will advance the City's goal of unifying the historic downtown with newer neighborhoods west of US 40. Also, as the City implements its bus shelter program in concert with HCTS, fully-accessible sidewalk connections are required to connect all transit infrastructure. This inventory will inform the capital funding program needed for pedestrian connections and address them as funds allow. The City's DPW will continue its annual sidewalk maintenance program to ensure that existing pedestrian facilities are passable.

Newer neighborhoods west of US 40 present a challenge for interconnectivity between neighborhoods and 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 those instances may not be practical.

However, there are opportunities along Chapel Road where short sidewalk links or grade-separated pathways could serve to connect large neighborhoods. As areas continue to develop, planning for interconnections is extremely important at the site plan review stage. The Bulle Rock community is one success where an integrated shared-use pathway threads throughout the neighborhood which, in turn, can be linked to other neighborhoods such as Scenic Manor where a grade-separated pathway already exists along Chapel Road. Future bike/pedestrian connections are critical when planning new neighborhoods and commercial areas closer to the I-95/MD 155 Interchange. By allowing residents to walk or bike for short trips, these interconnections serve as important links between neighborhoods, community facilities, and the LSHG as well as providing greater community cohesiveness.



This image shows a .5 mile radius as a visual reference to the range of a 15-minute walk. Data Source: https://www.calcmaps.com/.

Heritage Corridor Signature Sidewalk

Great emphasis has been placed on the development of a complete waterfront brick-ribbon signature sidewalk, which is intended to link North Park and the Lock House Museum, the downtown Main Street District, the Promenade and Concord Point Park with 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. This waterfront signature sidewalk concept was developed in 1997 with the Heritage Corridor Management Plan and has been incrementally implemented ever since. A more complete description and map can be seen in Chapter 5. Relationship to the Lower Susquehanna Heritage Greenway.

Road Network, Local and State

Havre de Grace has been subject to highway and road improvements over the course of its history that have caused it to sometimes react and the response has not always been elegant. US 40 is one example where a highway was superimposed on the landscape and acts as a division within the City, separating it into 2 distinct halves. How does the City turn that around and make it a unifying feature long-term? In addition, subsequent suburban development west of US 40 along Chapel Road has been less than optimal in terms of its cohesiveness along a formerly rural roadway. Trying to amend these roadways, their functionality and appeal, is one major theme within this comprehensive plan effort. Identifying the problems and the issues are the first part in creating solutions.

Four major roadways which serve as vital transportation corridors will be described within this section: I-95/John F. Kennedy Memorial Highway, MD 155 (i.e. Level Road, Superior Street, and Ohio Street), US 40/Pulaski Highway, and Chapel Road. In addition, Lewis Lane/Grace Manor, which serves as a main connection between the historic core of the City and the newer neighborhoods west of US 40, will also be described. The goal is to recognize the importance of these main corridors and potentially to identify strategies to enhance them going into the future. Lastly, downtown

Revolution and Juniata Streets and Pennington Avenue are in need of attention for greater corridor planning. It is not possible to outline the full strategy for each of the roads described here. However, this is the lead-in to identify the specific needs and enlist assistance in making improvements to design that make these important roadways better.

The street system in the older portions of the City is comprised of a traditional grid pattern and is relatively efficient. In general, road functionality is good, with traffic dispersed and operating at relatively slow speeds so that pedestrian and bike traffic is easily accommodated. Improvements can always be made, particularly with sidewalk connectivity and safe striped crosswalks. In some cases, greater corridor planning and refinement would be beneficial, with specific areas of focus being Juniata Street, Revolution Street, and Pennington Avenue.



Data source: image courtesy of explore Havre de Grace, 2023

The following table provides a brief outline of the major roadways in Havre de Grace and their functional classification as determined by MDOT SHA. Functional classification is defined as the role each roadway plays in moving vehicles

throughout a network of highways. The associated map illustrates these relationships in a more visible, spatial way; this list is included for detail related to traffic counts and general roadway information.

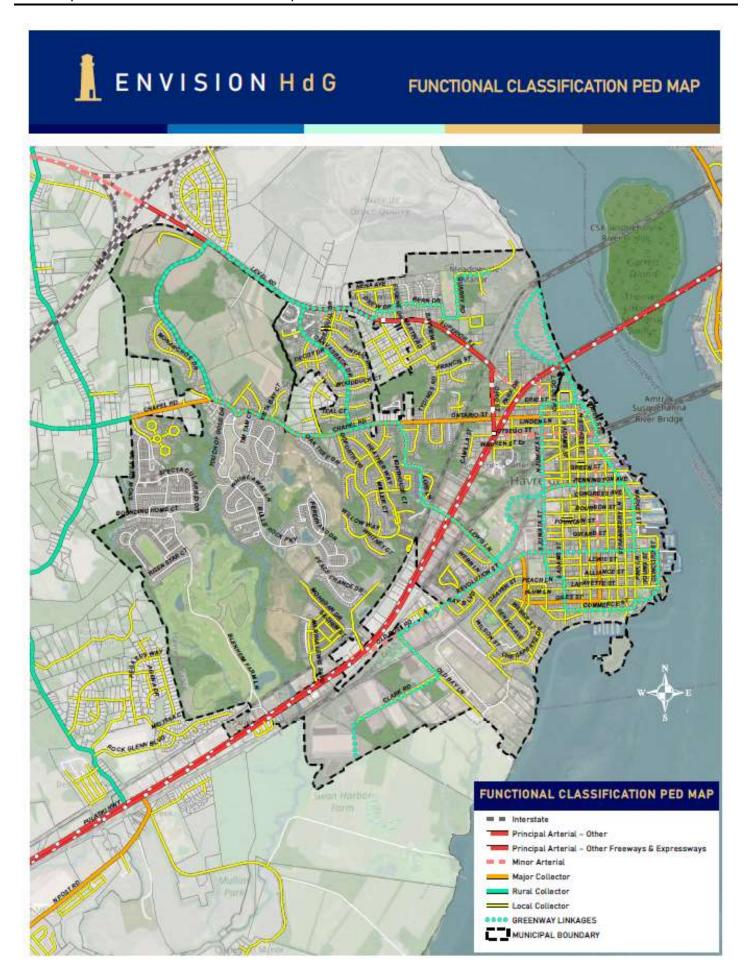
18 Major Roadways								
FUNCTIONAL CLASSIFICATION Roadway	ROUTE	AADT	ROAD DIRECTION (N-S, E-W)	# LANES	EXISTING SIDEWALK		ON STREET PARKING	RIGHT OF WAY (State, City)
INTERSTATE								
John F. Kennedy (JFK) Memorial Highway	1 - 95	82,355	N-S	6	NO	NO	NO	150 (State)
PRINCIPAL ARTERIAL								
Pulaski Highway	US 40	27,371	E-W	4	NO	YES	NO	150 (State)
Level Road	MD 155	14,954	E-W	2	NO	NO	NO	80 (State)
MINOR ARTERIAL								
Juniata Street	2,5	5,051	N-S	2	Partial	NO	YES	70 (City)
Otsego Street	MD 7A	(48)	E-W	2	Partial	NO	YES	70 (State)
Revolution Street	MD 7A	9,801	E-W	2	Partial	NO	NO	75 (State)
Superior Street	MD 763	7,091	E-W	2	Partial	NO	NO	75 (State)
Union Avenue	MD 7A	3,855	N-S	2	Partial	NO	YES	132 (State)
MAJOR COLLECTOR								
Bloomsbury Avenue	2)	1,305	N-S	2	Partial	NO	YES	40 (City)
Bulle Rock Parkway	15	2,745	N-S	2	NO	NO	NO	60 (City)
Canvasback Drive	- F	2,095	N-S	2	Partial	NO	YES	50 (City)
Chapel Road/Ontario Street	53	3,681	E-W	2	Partial	NO	NO	50 (City)
Congress Avenue	- 20	*	E-W	2	YES	NO	YES	132 (City)
Giles Street	20	421	E-W	2	NO	NO	NO	70 (City)
Grace Manor Drive	+:	130	N-S	2	Partial	NO	NO	70 (City)
Lewis Lane	4	4,461	E-W	2	Partial	NO	NO	70 (City)
Ontario Street	£3	942	E-W	2	Partial	NO	NO	70 (City)
Pennington Avenue	- 23	1,072	E-W	2	YES	NO	YES	70 (City)

AADT: Average Annual Daily Traffic

Data Source: AADT https://data.imap.maryland.gov/datasets/maryland::mdot-sha-annual-average-daily-traffic-aadt/explore?layer=0&loc

I-95/John F. Kennedy Memorial Highway

Interstate 95/John F. Kennedy Memorial Highway (I-95) is the main high-speed limited access highway located along the north and west perimeter of the City. It proceeds southwest to northeast along the edge of the City, linking large metropolitan centers such as Baltimore, Washington D.C. to Wilmington, DE, Philadelphia, PA and beyond. Through Maryland, I-95 is maintained by the Maryland Transportation Authority (MdTA) and has a functional classification of an arterial highway, allowing through-traffic movement with full control access only at grade-separated interchanges. This interstate currently acts as a boundary for the City as well as Harford County's development envelope, its urban growth boundary.



The interchange at MD 155/I-95 is the City's primary gateway. As early as 2001, the City annexed land up to but not beyond this interchange and now controls its land use in the southeastern quadrant which was zoned MOE (Mixed Office Employment) at the time. In general, the roadway functions well, however traffic turning movements due to road geometry at the MD 155/I-95 interchange are somewhat confusing, particularly on the northbound on- and offramps from I-95. Reconfiguration of the interchange was contemplated with the development of the MOE with a full service hospital and adjoining commercial uses but that project did not materialize. Approved through MDOT SHA in concert with Harford County and the City of Havre de Grace, the design concepts from the most-recent site design related to the planned hospital should be retained and/or revisited for future improvements implementation.

Fortunately, the MD 155 overpass bridge to I-95 was built with room for an additional travel lane, so some limited road reconfiguration is possible – whether it is shifting lanes slightly or adding bike lanes. This is the route of the September 11th National Memorial Trail, ECG, and USBR 201 which was adopted in 2021. Long-term improvements over 1-95 at the MD 155 interchange must include bike lanes.

MD 155/Level Road/Superior Street/Ohio Street

MD 155 is a principal arterial that connects the I-95 interchange to US 40 and is known as Level Road, Superior Street, and Ohio Street depending on the segment within the City. Traveling from west to east from the interchange to Bulle Rock Parkway, there is an important need for interchange uses, such as fuel, food, and restrooms. The opportunity here is unique in that the land is undeveloped and rural – an open canvas that should serve limited highway uses but also serve the neighboring communities. Active transportation options (i.e. biking and walking) must be built into any roadway improvements, not just to the MOE site but to Lapidum Road for connection to the LSHG.

Traveling eastbound along MD 155 are beautiful views of the Chesapeake Bay. This portion is Level Road and includes 50 acres of protected lands of Sion Hill and buffer areas of Vulcan Quarry that will keep the rural feel of MD 155 to Canvasback Drive. This area should not change from its current use however it is important to retain the viewshed to the Bay. A grade-separated bike path has been conceived as part of bikeway planning through the City by the ECG. This would allow for full bike connectivity from the City's historic areas to the LSHG and Susquehanna State Park by way of Lapidum Road and on towards Bel Air.

MD 155/Superior Street begins at the edge of City limits located on the north Meadowvale community and follows

MD-155 Level Rd Sidepath





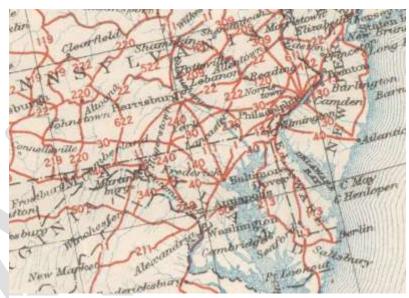


the steep grade of the Atlantic Seaboard Fall Line where the Piedmont Plateau and Atlantic Coastal Plain meet. Nowhere is the geologic escarpment more pronounced than along this section of MD 155, making the steep grade a significant limiting factor for road improvements. Here the road becomes a 4-lane road with no median and no shoulder. Land uses are relatively fixed through here with adjoining residential lots and charming views of the Chesapeake as one descends into the historic City. Here, the road diverges as Superior Street going straight (MD 763, only a quarter mile long) or sweeping right onto MD 155/Ohio Street after passing under the CSX rail line.

MD 155 becomes Ohio Street, tying directly into the old grid-patterned street system, which is complicated by its intersection with Ontario Street Extended and US 40, which is where it ends. The 5-way intersection of MD 155/Ohio Street, Otsego Street, and US 40 is the most problematic intersection in Havre de Grace and is problematic within the region. It has been identified as a failing intersection for decades, especially with the southeast bound turning movements from MD 155/Ohio Street onto US 40 to the Thomas J. Hatem Memorial Bridge. The MD 155/Ohio Street right-of-way is constricted and complicated by the Ontario Street Extended intersection, and ongoing studies have not made any conclusive design solutions. The City will continue to work with its partners at MDOT SHA to try to mitigate this difficult intersection.

US 40/Pulaski Highway

US 40/Pulaski Highway is a major 4-lane highway that passes through Havre de Grace, bisecting the historic waterfront community from newer neighborhoods west of US 40. Known as the Main Street of America, US 40 was one of the original US highways connecting cross-country east to west from Atlantic City, NJ to San Francisco, CA; its terminus today is in Utah. US 40 was ready for highway travel with the opening of the Thomas J. Hatem Memorial Bridge in August, 1940. At the time it was built, it swept the western edge of Havre de Grace, bypassing the historic downtown and its residential neighborhoods and slicing a diagonal on the City's orderly grid patterned street system. This made for a tangle of unusual intersections that have become problematic with modern traffic, especially the split at the bottom of the hill at MD 155 and MD 763/Superior Street and the complicated 5-way intersection of MD-155/Ohio Street and Otsego Street.



Maryland portion of the United States Systems of Highways Map, November 11, 1926

US 40 is a major feature within the City and it is central to the way the City functions, providing commercial uses such as gas stations, retail, convenience, and grocery stores for daily needs. Paralleling I-95 through the region, US 40 is identified as a principal arterial, traversing from southwest to northeast through the City and linking metropolitan population centers such as Baltimore and Wilmington, DE. It was the premier highway through Harford County until I-95 was built in the 1960's. In the immediate region, US 40 connects Havre de Grace with Aberdeen and the Edgewood/Joppatowne areas within Harford County and Elkton and Northeast in Cecil County.

US 40 is a divided highway with a generous green median which makes it an attractive highway. Streetscape improvements within Havre de Grace were performed over 25 years ago which added innovative stormwater management and plantings within the median, crosswalks, and a full sidewalk on the westbound lane from Lewis Lane to the MD 7/Otsego Street intersection. These improvements were instrumental in creating a more walkable and unified commercial area within city limits. Extension of these concepts with MDOT SHA through a Complete Streets approach would continue to create a level of cohesion along this divided highway through the City, linking the 2 sides of the City. This may include additional safe pedestrian crossings within the commercial area, the addition of the grade-separated bike lane, and continuation of median and shoulder tree plantings. The goal is to create a slower, identifiable commercial corridor that creates a bridge between this historic City center and the newer neighborhoods west of US 40.

Chapel Road/Ontario Street Extended

Chapel Road/Ontario Street Extended functions as a major collector within the City, linking area neighborhoods with US 40 in an east/west orientation. In the past, it was a rural road emanating from the northern edge of the riverfront town and was replete with farmland and orchards. Property-owners owned to the centerline and remnant portions of the road still reflect that. A result of piecemeal development, the current roadway is inconsistent in its design, where some lengths were constructed as open-section (i.e. no curb and gutter) while some are closed-section (curb and getter) and where intermittent sidewalks drop away at adjoining un-annexed parcels.

Chapel Road/Ontario Street Extended requires a unified design plan that identifies the disparate segments and reenvisions a cohesive corridor from MD 155/Ohio Street to and along Bulle Rock Parkway at MD 155. A traffic study completed in 2019 on behalf of the City should be used as the basis for planning and design work to inform improvements and repair inconsistencies along this important corridor⁷. The idea is to create a best-effort approach in creating a more functional roadway that works for the neighboring communities and includes active mobility, such as sidewalks, side-paths, and bike lane markings where possible and appropriate.

The Chapel Road Study focuses on 7 intersections along Bulle Rock Parkway and Chapel Road, measuring traffic counts at the time and provided traffic projections 10 years later (2029) after additional build-out of neighborhoods. At the time of the study, there were no failing conditions based on traffic counts. However, future conditions will exacerbate problem areas, such as the Grace Manor/Gracecroft Drive intersection, an area that already receives complaints. The study offers a series of improvements to include additional roundabout locations. This study should form the basis for a unified street design effort to make improvements that aid the increased volume while controlling vehicular speed and providing for alternative modes of transportation.

Lewis Lane/Grace Manor Drive

The extension of Lewis Lane to Grace Manor Drive west of US 40 is a local road that functions as a major collector due to the limited number of access points from the neighborhoods along Chapel Road to US 40. This road is a cut-through that was not intended to handle the level of traffic that occurs here. The Chapel Road Study from 2019 makes specific recommendations to locate a mini-roundabout and with a mountable center island to accommodate buses and trucks at the Chapel Road intersection with Grace Manor and Gracecroft Drive. The study notes that the roadway is constrained by the adjacent residential properties and has numerous driveway access points which limit the opportunity for improvement to the roadway itself.

Additional US 40 Connections

Additional US 40 roadway connections occur at Blenheim Farm Lane at the Bulle Rock Golf Course and at the neighborhood of Greenway Farm. Both have median crossovers at these entrances on US 40. Blenheim Farm Lane allows for residents of Bulle Rock to have 2 access points into and out of the neighborhood, connecting Chapel Road to Pulaski Highway. This is a beautifully-sited lane through the golf course that takes full opportunity of the rolling terrain and long views to the Bay. (As a private road, are bikes allowed? – they should be.)

Martha Lewis Drive provides the bridged entrance to Greenway Farm, a developing neighborhood that is somewhat isolated from the surrounding Bulle Rock community due to its lack of interconnectivity. However, emergency access is retained through the Bulle Rock community due to the nearby unimproved grade crossing at the CSX rail line. US 40 bikeway connections along westbound US 40 would create a network for non-motorized transportation that would link these residential communities in a more cohesive way, tying them back to US 40 commercial areas and the historic core of Havre de Grace.

⁷ Traffic Impact Study Chapel Road Project, February 2019 was prepared for the City of Havre de Grace by Traffic Concepts, Inc. of Hanover, Maryland with analysis of 2019 traffic movements, 10-year projections, recommendations, and conclusions.

Downtown Roadway Network

The traditional grid street system of the historic core of the City functions well, allowing for multiple pathways for reaching destinations. Over the past 5 years, there is a trend showing a reduction in annual average daily traffic (AADT) within historic Havre de Grace⁸. The initial drop in traffic naturally coincides with the COVID-19 epidemic but traffic volumes have not returned to earlier amounts. One example is MD 7A/Revolution Street which had a 2019 AADT of 11,241, 2020 (9,392), 2021 (9,740), and 2022 (9,801); this is a 13% decrease in traffic. Other roadways, such as Lewis Lane and Juniata Street, show similar decreases in traffic.

The hierarchy of roads within the historic town center are shown on the Functional Classification map. Minor arterial roads within the older portions of the City include Juniata Street, MD 7A/ Otsego Street/Union Avenue/Revolution Street, MD 763/Superior Street, whereas major collectors include Congress, Pennington, and Bloomsbury Avenues and Lewis Lane by the Middle/High School complex. These streets are differentiated from the local roads in the amount of travel and they will be considered within the scope of the bikeway grants for potential improvements.

Corridor planning for MD 7A/Revolution Street, Juniata Street, and Pennington Avenue are necessary for their functionality and attractiveness. Coming from the south from US 40, Revolution Street is a significant gateway into the historic center of the City that has many different uses along it – industrial, commercial, and residential. If there is a way to make this corridor more organized and attractive, the City should pursue it. Juniata Street is similar in the need for cohesion. It is a city-owned street that is very wide with a great deal of underutilized pavement that could be improved aesthetically and functionally, to include bike paths, traffic calming, and crosswalk enhancements, especially at the James Harris Stadium entrance. Understanding that it must accommodate truck traffic for industrial and commercial access, Juniata could be enhanced and still retain full functionality for large truck turning movements. Lastly, Pennington is a gateway to the City's downtown and recommended for enhancement through a civic spine concept (see Community Facilities chapter). It is another wide local road that needs to be re-envisioned with a creative eye with coordinated street trees, bike lanes, and pedestrian connections from the Middle/High School complex to the STAR Centre to the library, Opera House, and downtown.

Wayfinding

Navigating the City can be confusing, especially for weekend visitors, tourists, and new residents who are not familiar with the City layout and all its rich culture and history. Cohesive wayfinding signage and an advertising program that provides consistent and informative documentation for drivers, pedestrians, and bicyclists should be implemented. This includes the active transportation network of shared-use paths of the City's waterfront Heritage Corridor, the broader LSHG, the 3 National Historic Trails, and designated bike-friendly streets within the City. By directing people from the I-95 and US 40 to the Visitor's Center with a series of recognizable graphics, the City can enhance its economic development and tourism appeal while directing people to City event venues, public facilities, local parks, shopping, and public parking.

Road Maintenance

The City's DPW continues to maintain and improve streets within Havre de Grace through a regular road maintenance program. The City has an integrated Capital Improvement Program (CIP) that addresses utility infrastructure repair to include street and sidewalk improvements. This CIP process generally provides a 5-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.

⁸ Data source of AADT and AAWDT is MDOT SHA online mapping tool: https://data.imap.maryland.gov/datasets/maryland::mdot-sha-annual-average-daily-traffic-aadt/explore?layer=0&location=39.547397%2C-76.121754%2C14.45

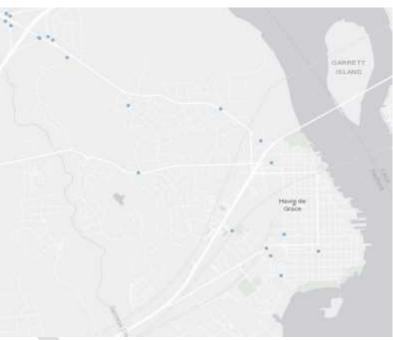
Adequate Public Facilities

In 2020, the City passed its Adequate Public Facilities (APF) ordinance governing schools, public roads, water supply and distribution, and sewage disposal for all new developments. City Code Chapter 2. Adequate Public Facilities, Section 9. Roads creates the process for determining adequacy standards for roads in relation to subdivision and site plans during development review utilizing traffic impact analysis with minimum standards to be met. Please see the Code for the specific requirements for the application of this regulation. These criteria are applied to ensure effective vehicular passage during on/off peak hours after development and largely assesses intersection adequacy. A minimum level of 'C' is required in residential areas and a level of 'D' is required for all other intersections.

Road Capacities and Traffic Volume

The capacity of a street is the maximum number of vehicles that it can carry during any given period of time. This 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. 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 the capacity of a street 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.

MDOT SHA has locations for gathering AADT and AAWDT (Annual Average Weekday Traffic) around the state, the latest data (2022) which is reflected in the table of major roadways. Locations that these data are collected are shown in the adjoining



Data source: MDOT SHA Annual Average Daily Traffic (AADT) Locations, 20

This map shows the location of MDOT SHA AADT and AAWDT data locations as referenced in the Major Roadways table.

map and give a good understanding of traffic volume at various points around the City. Ten years of data per location ae available on the MDOT SHA interactive map, so traffic trends for these roads may be analyzed and understood.

Rights-of-Way

City rights-of-way and road widths are somewhat variable within the City. Designed as the earliest principal streets, Union and Congress Avenues have 132 foot rights-of-way with a street pavement width of 40 feet. The majority of the remaining grid-patterned streets in the older sections of the City have a 70 foot rights-of-way with 30 to 35 foot pavements. Streets in the Concord Fields neighborhood are variable with anywhere from 40 to 60 foot rights-of-way with 30 to 35 foot pavements. Suburban subdivisions, starting with 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, Chapel Heights Drive, and Hebditch Streets, have unusually narrow rights-of-way. All lanes in the City have rights-of-way of 20 feet with 12 foot pavements.

⁹ Chapter 2. Adequate Public Facilities can be accessed here on eCode360: https://ecode360.com/36744289#36744289

Additional transportation-Related Opportunities

Local Trolley for Visitor Experience

In 2022, the City began operating a first-of-its-kind electric trolley shuttle service through the historic downtown during weekends of the tourist season, connecting public parking areas with waterfront parks, cultural attractions, and the Main Street District. Special permission was granted to the City for operating this service, as these were specially outfitted open-air trolleys for limited operation on roadways. The fleet began with 4 trolleys with 2 fully ADA-accessible vehicles coming in fall, 2023. In addition, a 16-passenger shuttle bus will be joining the fleet in spring, 2024. Trolley drivers serve as ambassadors for the City, providing historical and cultural information to passengers to enhance their overall experience while exploring the City's art and cultural attractions and commercial downtown.

Taxis and Shared Service Operators

Just as within many other communities, registered local cab/taxi service and shared service operators (for ridesharing, such as Uber and Lyft) for those seeking more personalized methods of transportation are active within the City. These services are accessible to individuals at their chosen pick-up and drop-off locations.

Parking

Parking can be a troublesome issue – whether there is enough or too much is often a question. The City adopted minimum off-street parking requirements for new or modified buildings in 1999, most of which require 3 parking spaces per unit for new residential development projects. In the meantime, the City has a significant parking exempt area in the commercial Main Street District where there is a fair amount of public parking lots as well as on-street parking. Special parking arrangements are currently being explored to supplement the existing parking in this district. The most popular on-street parking locations include Washington and St. John Streets and Pennington Avenue for main downtown businesses, with onstreet parallel parking also available on Union

PUBLIC PARKING IN THE CITY	LOCATION	DURATION (hours)	NUMBER OF PARKING SPACES	EV CHARGING CAPABILITIES	
David Craig Park*	599 North Union Avenue	2	27	2 EV level two charging station	
Havre de Grace Park n Ride	816 Otsego Street	2	56	3 EV level two charging station	
Lodge Lane*	W.S.Lodge Lane	2	23	No EV chargers	
Warren Street Parking	S.S. Warren Street	2	49	No EV chargers	
Frank Hutchins Park*	End of Congress Ave	2	28	No EV chargers	
STAR Centre*	Pennington Avenue	2	327	3 EV level two charging stations	
Pennington Ave	Foot of Pennington Ave	12	35	No EV chargers	
Water Street*	649 Water Street	12	60	No EV chargers	
l-95 HdG Park n Ride	2300 Level Road	48	71	No FV chargers	

In may through October on the Weekends (Fri, Sat, Sun) the City operates the TIDE Trolley which picks up near these locations in a loop to popular downtown spats.

Avenue. The City will monitor parking trends related to telework, ride-sharing, alternative modes of transportation, and autonomous vehicles as these methods become more prevalent, influencing the built environment and a community's lifestyle opportunities.

Electric Vehicle Charging Stations

As electric vehicles (EV) become more prevalent the need for charging stations will increase. Fortunately over the past 5 years, the City has installed several public EV charging stations. The EV charging stations are located at David Craig Park, along Pennington Avenue, and within the park-n-ride at the corner of Juniata and MD 7/Otsego Street. Currently, there is 1 DC fast-charging station along Pennington Avenue with 6 Level 2 charging stations (2 plugs each) at the other locations. The park-n-ride EV location is convenient for the Downtown Baltimore commuter bus provided by MTA.

Rideshare

Ridesharing reduces the impact of automobiles on our roadways and our environment very simply by having people travel in groups rather than alone. There are 2 park-n-ride locations available for carpooling at 816 Otsego Street/Juniata Street and at the I-95 Interchange at 2300 Level Road. The utilization of ridesharing – which is simply 2 or more passengers traveling together in the same vehicle – remains a favorite among smart commuters for good reason. It is one of the most convenient ways to save time and money while reducing stress. Different ridesharing options make it easy to find a solution that suits individual needs. Carpooling, van pooling, and Uber and Lyft service are among several options available that make transportation more accessible while ensuring people can get to their destination.

Boating

Recreational boating and sailing are residential and tourism draws for Havre de Grace. Many people visit the area to enjoy the water with several public access locations to launch boats, kayaks, and personal watercraft (such as jet skis) for a small launch fee, and area marinas offer slips and storage. Some of these locations also include docks, public parking, and park seating for waterfront enjoyment. The Bay acts as a magnet bringing people together.

Local Flight

Harford County Airport is located within 4 miles of Havre de Grace and has been upgraded substantially in the past 5 years. Operated by Harford Air Services, the airport and its facilities offer the only flight school in Harford County and provide local access to aviation storage. The City also has a privately-owned FAA approved Sea Plane Base located at La Banque de Fleuve, 309 St. John Street.



Sea Plane Base photo, image courtesy of website

TRANSPORTATION PROGRAMS AND RESOURCES

The City of Havre de Grace is an identified Priority Funding Area in addition to being a designated Sustainable Community and can collaborate with adjacent municipalizes to advance projects. Various federal, state, and county grant funding may be available for transportation-related projects with an emphasis on alternative modes of transportation. The City will continue to coordinate with MDOT SHA, Harford County, adjacent municipalities, and other governmental agencies to identify priority areas for capital improvement opportunities. This section provides a brief overview but not an exhaustive list of potential grant funding opportunities available:

Federal

Safe Streets and Roads for All (SS4A) – U.S.
 Department of Transportation (USDOT)

https://www.transportation.gov/grants/SS4A The purpose of the SS4A grant program is to improve roadway safety by significantly reducing or eliminating roadway fatalities and serious injuries through safety action plan development and implementation focused on all users, including pedestrians, bicyclists,

public transportation users, motorists, personal conveyance and micromobility users, and commercial vehicle operators.

- Conduct planning, design, and development activities (infrastructure, behavioral, operational safety, etc.) in support of an Action Plan.
- o Carry out projects and strategies identified in an Action Plan.

State

Transportation Alternatives Program (TAP) – MDOT SHA

https://roads.maryland.gov/mdotsha/pages/index.aspx?PageId=144

Projects that enhance the cultural, aesthetic, historic, and environmental aspects of the intermodal transportation system.

Kim Lamphier Bikeways Network Program –

https://www.mdot.maryland.gov/tso/pages/Index.aspx?PageId=28

The program supports projects that maximize bicycle access and fills missing links in the state's bicycle system, focusing on connecting shared-use paths and roads and enhancing last-mile connections to work, school, shopping, and transit.

 Bicycle facility feasibility assessments, design, engineering, and construction

Recreational Trails Program – MDOT SHA

https://roads.maryland.gov/mdotsha/pages/Index.aspx?PageId=98

The RTP provides Federal funds to States (administered by MDOT SHA) to develop and maintain land and water-based recreational trails and trail-related facilities for motorized and non-motorized recreational trail uses. Some of these uses include pedestrian, road/mountain biking, equestrian, crosscountry skiing, snowmobiling, off-road motorcycling, off-highway vehicle riding, paddle sports, personal watercraft, and motorized boats.

- Construction of new recreational trails
- Trail linkages for recreational trails
- Maintenance and restoration of existing recreational trails
- Acquisition of easements and property for recreational trails

Safe Routes to Schools -- MDOT SHA

https://roads.maryland.gov/mdotsha/pages/Index.aspx?PageId=735

Safe Routes to School (SRTS) programs are federally-funded efforts to enable and encourage children to safely access schools by various modes such as walking or bicycling. These funds are administered by MDOT SHA and are available for infrastructure and non-infrastructure projects that benefit elementary and middle school children in grades K-8.

- On- and off-street bicycle/pedestrian improvements
- Bike/ped crossing improvements
- Sidewalk improvements (within two miles of a school)
- Public awareness campaigns for press and community leaders

■ Community Legacy Program – DHCD¹⁰

https://dhcd.maryland.gov/Communities/Page s/programs/CL.aspx

This program provides local governments and community development organizations with funding for essential projects aimed at strengthening communities through activities such as business retention and attraction, encouraging homeownership, and commercial revitalization and streetscape improvements.

- Business retention, expansion, and attraction initiatives
- Residential and commercial façade improvement programs

Bicycle and Pedestrian Accessibility Funds – MDOT SHA

https://roads.maryland.gov/mdotsha/pages/Index.aspx?PageId=707

MDOT SHA administers Maryland State accessibility funds 33, 79 and 88. These funds address pedestrian and bicyclist safety, connectivity between modes of transportation and the increasing demand for sidewalks and pedestrian paths.

¹⁰ Department of Housing and Community Development

Street and Traffic Safety Advisory Board:

The City has a designated advisory board addressing citywide issues related to street safety. Areas of focus include traffic, parking, street lighting, and pedestrian issues. This enables local residents who are experiencing adverse traffic related problems to work with City officials and the Department of Public Works to identify problems, assess solutions to mitigate traffic, reduce congestion, and address safety concerns in addition to parking in affected communities.

Coordination with Harford County Government

City staff coordinate with planning staff at Harford County for an annual Priority Letter for identifying major transportation projects for state transportation agencies on a yearly basis. Transportation funding is a regional effort where competition for funding is great and jurisdictions must be aligned for what is identified and needed. In addition, City planning staff include Harford County staff in traffic impact analysis review for the benefit of their expertise and for projects of shared interest and/or impacts.

Bicycle and Pedestrian Priority Area

An advantage to communities within the City are the access to localized services such as food, recreation, and education that are in close proximity to the Main Street District and tourist centers. The City is working to encourage bicycling as a means for short distant trips by providing safe and effective bicycle infrastructure and is seeking to designate geographical areas as Bicycle and Pedestrian Priority Areas (BPPA) where cyclists and pedestrians are priority. This will enable the City to develop a BPPA Plan for improvements and make safe accommodations. Once a designation area has been achieved, a partnership with MDOT-SHA can commence. An additional designation is as a Short Trip Opportunity Area (STOA) by MDOT. The following link provides more information on these designations: https://roads.maryland.gov/mdotsha/pages/Index.aspx?PageId=693

FUTURE TRENDS

Walkable neighborhoods with access to public transit, multimodal routes and proximity to the people and places they love are the key to a happier, healthier and more sustainable lifestyle. Transit Oriented Development (TOD), "Live Near Your Work" initiative, and micromobility are gaining momentum, such as e-bikes, e-scooters, and other forms of renewable transportation that occur on a more local neighborhood scale for both work and recreation.

Employers are encouraged by the State of Maryland to offer financial incentives for employees to live near their employer and participate in the bike to work program. This reduces the dependence on traditional vehicles across Maryland as a whole and locally in the downtown area, along the waterfront, and the neighborhoods to service centers and shifts the focus to a smaller scale, easily accessible, lower carbon footprint, electric and renewable energy methods of short distant commutes, last mile trips, and curb side accessibility to better serve the needs of the community without the hassle of finding vehicle parking while being safe, fun and exciting.

These alternative forms of micromobility increase the number of people who can occupy a given space that is otherwise taken up by personal vehicles and enables more people to gather around economic centers, arts and entertainment districts, and in small neighborhood parks. With the increase in autonomous (self-driving) vehicles, and the ability to hail a vehicle to your exact location the built environments public realms, rights-of-way and curbside management services are transforming, especially in terms of meal delivery, freight, and same day shipping. All are influencing how people, goods, and services are transported into the City, with integration being key.

Digitalization has drastically influenced cities and communities and is driving societal, economic, environmental, and political changes, making the world more complex and dynamic. Reimagining public spaces to accommodate new means and methods of transportation for both physical and virtual activities will be necessary. Where people choose to live, work and play is evolving, and how people interact, order food, request services, and expect same day deliveries all have considerable influence on the built environment.

VISIONS AND ACTION ITEMS:

Vision: To develop a true multimodal transportation system that serves all peoples' needs and to expand the accessible, walkable character of downtown throughout the City to improve pedestrian, bike, and mass transit transportation options, reduce reliance on automobiles, and enhance the user experience of Havre de Grace.

Actions:

Local and Regional Bus Networks

- Continue to support Harford Transit LINK and MTA in providing bus service in providing bus systems that link critical services with people most in need of public transportation.
- Coordinate with Harford County Transit Service, MTA, and MDOT SHA for installing desired bus shelters within City and state rights-of-way that are responsive to the local architectural character.
- Advertise available bus transit resources and its efficient network within this region, specifically as related to access to Amtrak rail in Aberdeen and Perryville and employment centers in the region.

Rail Service

- Maximize the opportunity for MARC and Amtrak rail between the Aberdeen and Perryville stations and support both municipalities' efforts for transit-oriented development. The success of climate action is based on alternative modes of transportation and rail specifically is highly efficient per mile traveled with regard to fossil fuel emissions.
- Recognize the value of being located along the Northeast Corridor for Amtrak and MARC services to have access to major metropolitan regions while avoiding highway travel.
- Continue to work with Amtrak, their project team, and MDOT on the design and construction phases
 of the Susquehanna River Rail Bridge Project, with construction anticipated to begin in late 2025/2026
 timeframe and which will take 10 years to complete.
- Work with CSX freight rail for the safety of their underpasses and grade crossings within the City, specifically at Blenheim Lane and at MD 155 at Ohio and Superior Streets, to reconfigure their structures for improved vehicle safety. Work with CSX to expand/reconfigure their stone-arch bridge structure at the bottom of MD 155 to eliminate the site distance problem that creates a safety hazard at this challenging intersection.

Bikeways and Bicycle Facilities

Work with the BMC and MDOT SHA to provide safe, high comfort pedestrian and bike connections along US 40 as begun in the Concept Plan for Bicycle and Pedestrian Improvements along US 40 by the BMC in 2022. This study is currently concept-only and next phase would include the determination of a chosen alternative with locations for US 40 crossings and provide 30% design, with later phases ideally progressing design to construction.

- Successfully administer current bikeway grants through MDOT Kim Lamphier Bikeways Network Program for 1). Feasibility and design and 2). Quick-build and bike path design, both achieved in fall 2023. These grants are for limited installation for projects within the Old Town area and bike network planning between the older community east of US 40 and the newer neighborhoods west of US 40.
- Through the above-mentioned grants, develop concepts for bike and pedestrian connectivity from Bulle Rock and newer developments into the downtown/Old Town areas along Chapel Road/Ontario Street Extended and/or Lewis Lane (currently marked for the East Coast Greenway). Creating multiple bike loop options benefit the entire City by linking communities across the physical divide of US 40.
- Provide a separated bike/pedestrian bridge at the Gashey's Creek stream crossing on Chapel Road Bridge east of Bulle Rock to provide safe crossing that connects the asphalt path at Scenic Manor with future bike/pedestrian connections along Chapel Road.
- Work with Harford County and adjoining property owners for creating successful active transportation improvements in identified areas for bikeway concepts that are developed through design.
- Work with the Maryland Department of Transportation in partnership with the LSHG and adjoining municipalities for the establishment of a bicycle/pedestrian Susquehanna River crossing that not only benefits the local communities but the broader region and the nation. As per chapter 5, Relationship to the Lower Susquehanna Heritage Greenway, this is a concept that was identified as early as 2000 in the LSHG Management Plan and would provide the shortest distance and only safe active transportation linkage between the Eastern and Western shores of Maryland.
- Incorporate high comfort, public pedestrian and bikeway connections along Bulle Rock Parkway north of the traffic circle and through emerging developments to fully extend the opportunity for safe, active modes of transportation to the MOE. These identified connections are part of the Lower Susquehanna Heritage Greenway (LSHG) which is more fully described in chapter 5, Relationship to the Lower Susquehanna Heritage Greenway.
- Provide high comfort pedestrian and bike access from the downtown/Old Town areas to Swan Harbor Farm from Clark Road in the Chesapeake Industrial Park, also part of the LSHG greenway network. Work with industrial businesses along the Norfolk Southern rail spur located south of MD 7/Revolution Street to potentially make a safe side-path along this limited-use rail spur that may provide an alternative to on-road bike access on MD 7/Revolution Street.
- Recognize the opportunity for supporting bicycles as a means of transportation and recreation within the City with the identification of slow streets and the ability to retrofit safe bike infrastructure.
 Continue bikeway planning as depicted within the maps in this transportation chapter.
- Develop a consistent signage program for bikeways when improvements are completed.
- Expand the City's micromobility options through public/private partnerships by making shared e-bikes and e-scooters more publicly accessible and available for residents and tourists.

Sidewalks and Pedestrian Infrastructure

- Identify and fill sidewalk gaps throughout the City, including but not limited to connections along US
 40 and newer neighborhoods west of US 40.
- Continue to implement the signature sidewalk, trail, and pedestrian connections that are identified within the LSHG, to include a safe river crossing as stated in the bikeway actions.
- Conduct an evaluation of the physical and other barriers in the public rights-of-way and plan for removal of those barriers to ensure ADA accessibility.
- Develop a master map that catalogs existing sidewalks, trails, bike paths, and other transportation networks within the City so that planning staff and local stakeholders can identify gaps in and ways to improve pedestrian mobility and safety between parks and recreational nodes to residential communities.

Road Network, Local and State

- Coordinate with MDOT SHA and Harford County to provide seamless connectivity, consistent road design, and successful transitions as related to City, State and County roads.
- Continue to provide MDOT with transportation priority recommendations that influence the City in the Statewide Transportation Improvement Program (STIP) and Consolidated Transportation Program (CTP).
- Continue to coordinate with Harford County in the annual recommendation letter to MDOT that includes priority transportation improvements.
- Work with MDOT SHA for design improvements to the various state roads within the City with the intention of creating Complete Streets where possible, to include MD 155, MD 763/Superior Street, US 40, and MD 7A/Otsego/Union Avenue/Revolution Street.
- Work with MDOT SHA to develop a long-range concept plan for MD 155 that includes bikeway and pedestrian planning and improves visibility beyond the CSX underpass, which is currently a stone-arch tunnel. This is necessary for safety and site distance improvements for traffic at the bottom of the steep grade where Superior Street becomes MD 763 and MD 155 becomes Ohio Street. As unsafe as it is, pedestrians and bikes utilize lanes of traffic on this 8% grade, making it challenging at times for drivers to negotiate this hill.
- Work with Maryland Transportation Authority, MDOT State Highway Administration, and/or Harford County Government to ensure that necessary roadway improvements during all phases of planning, to include preparation of capital budgets, design, and construction. Specific improvements include: I-95/MD 155 interchange at Bulle Rock Parkway to accommodate major development planned in the southeast quadrant of the interchange; the US 40 Complete Streets implementation to the maximum extent possible; and the Chapel Road/Ontario Street Extended segment improvements where it joins with MD 155/Ohio Street. Through these initiatives, consider new crossover locations along US 40 and potential new alignments of Ontario Street Extended to better serve the community within the City.

- Pursue federal and state grants to design and construct necessary roadway improvements that improve safety and function, especially with regard to Chapel Road/Ontario Street Extended where a consistent road design with pedestrian and bikeway improvements would greatly benefit adjoining neighborhoods. The Traffic Impact Study Chapel Road Project which was performed in 2019 by Traffic Concepts, Inc. on behalf of the City should be the basis for roadway planning and construction design. Specific consideration is needed for the improvement of Gashey's Run culvert at Chapel Road to allow bike and pedestrian access while at the same time provide for 2-lane passing of vehicles while, at the same time, not increasing the speed of vehicles traveling along Chapel Road.
- Continue to receive public input from the City's Street and Traffic Safety Advisory Board on the needs for continuous improvement to the transportation infrastructure throughout Havre de Grace.
- Include functional and aesthetically pleasing landscaping for traffic calming measures and other amenities as part of transportation improvements while enhancing the pedestrian experience.
- Recognize the opportunity for a scenic view pull-off along MD 155 where views of the Chesapeake Bay could be maximized within the right-of-way that abuts the 50 acre conservation easement of Sion Hill.
- Explore the potential for extending MD 763/Superior Street through public lands at North Park to make an enhanced entrance to the downtown Main Street District by way of Water Street.
- Continue to utilize an integrated Capital Improvement Program (CIP) for roadway improvement and repair that includes bikeway and sidewalks for increased multimodal safety and accessibility.
- Utilizing GIS spatial software for the management of the City's rights-of-way (ROW), identify what assets are located in the City's ROW, monitor encroachments, and ensure regulatory compliance.