



Concept Plan for

# Bicycle AND Pedestrian

Improvements along US 40 (Aberdeen to Havre de Grace)

BMC Project No. 22T02

Technical Memorandum #2 - Final Recommended Plan

April 2023

**AECOM**

FINAL

## Table of Contents

Introduction.....	1
Technical Memorandum #1.....	3
Concepts Overview .....	3
Public Meeting #1 .....	10
Preferred Concepts.....	11
Preliminary Property Impacts and Costs.....	12
Public Meeting #2 .....	15
Next Steps – Recommendations for Future Study.....	15
Implementation Plan.....	16

## List of Figures

Figure 1: Study Area .....	2
Figure 2: Concepts Overview .....	5
Figure 3: Proposed Westbound US 40 Open Section, Looking East .....	6
Figure 4: Proposed Westbound US 40 Closed Section with Reduced Shoulder, Looking East..	7
Figure 5: Proposed Westbound US 40 Closed Section with Shoulder, Looking East.....	8
Figure 6: Potential City of Aberdeen Impact Area .....	13
Figure 7: Potential City of Havre de Grace Impact Area.....	14
Figure 8: Potential Residential Impact Area.....	14
Figure 9: Examples of Potential US 40 Wayfinding Signage .....	24
Figure 10: MUTCD-Compliant East Coast Greenway Guide Sign .....	24
Figure 11: Example Branding/Signage Programs .....	25

## Appendices

Appendix A: Comments Received – Public Comment Period #1
Appendix B: Concept Plan – Westbound US 40 Shared-Use Path
Appendix C: Concept Plan – Combined US 40 Shared-Use Path
Appendix D: Cost Estimate – Westbound US 40 Shared-Use Path
Appendix E: Cost Estimate – Combined US 40 Shared-Use Path
Appendix F: Comments Received – Public Comment Period #2

## Introduction

Baltimore Metropolitan Council (BMC), on behalf of the Baltimore Regional Transportation Board (BRTB) and Harford County, is developing a Concept Plan for Bicycle and Pedestrian Improvements along US 40 from the City of Aberdeen to the City of Havre de Grace.

The project corridor is located within the Cities of Aberdeen and Havre de Grace. Currently, there are sporadic sidewalks, as well as shoulders, that are used by pedestrians. Along US 40 in the study area, shoulders are signed for bicycle use.

This technical memorandum is the Final Recommended Plan, which provides information on refining the concept alternatives previously presented, forms the study recommendations, and includes an Implementation Plan.

### *Project Location*

This project is located in Harford County, approximately 30 miles north of Baltimore and 20 miles south of Elkton, MD. US 40 is a four-lane principal arterial that carries over 30,000 vehicles per day. The corridor serves a diverse traffic mix including local traffic in the Aberdeen/Havre de Grace area, long-distance commuter traffic destined for downtown Baltimore and regional traffic destined for Elkton.

The study area being investigated includes US 40 (Pulaski Highway) between the train station in the City of Aberdeen and Erie Street in the City of Havre de Grace, just west of the Thomas Hatem Bridge over the Susquehanna River. The section of US 40 in the study area is approximately 5.1 miles long with posted speed limits ranging from 30 MPH to 55 MPH and is functionally classified as a Principal Urban Arterial under the County Functional Classification System (2018)<sup>1</sup>. The study area boundary is shown in Figure 1.

### *Project Purpose*

The concept plan will include planning-level design of a comfortable, convenient, and safe shared-use path along US 40 that connects to transit and neighborhoods and provide a foundation for the future development, implementation, and maintenance of a shared-use path serving bicyclists and pedestrians along the corridor.

Shared-use paths are dedicated facilities for pedestrians and bicyclists that are physically separated from motorized vehicular traffic by an open space or barrier. Shared-use paths are intended for two-way non-motorized traffic and are typically a minimum of 10 feet wide.

---

<sup>1</sup> Harford County Planning and Zoning. 2018. Functional Classification. Available at: <https://planning-harfordgis.opendata.arcgis.com/documents/27d659df764d4def90d32187605a6c0c/explore>. Accessed July 20, 2022.

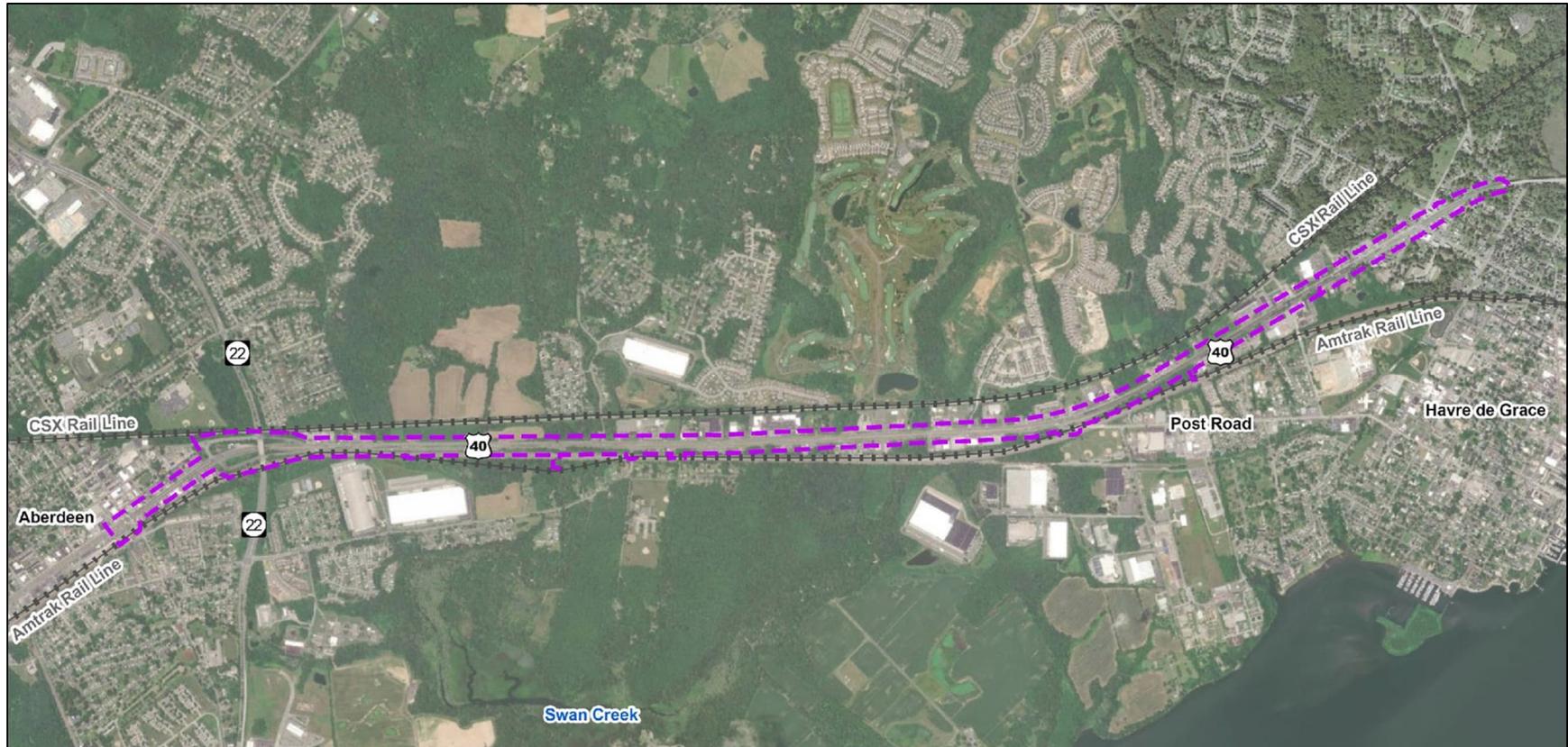


Figure 1: Study Area

## Technical Memorandum #1

*Technical Memorandum #1 – Concept Alternatives* (December 2022) provides a documentation of existing conditions, including information such as environmental inventory, land use, cultural resources, natural resources, review of area plans, transit routes, crash data analysis, shared-use path design parameters and criteria, alternatives analysis, and drainage and stormwater management. Additional discussion of these topics, as well as other information, can be found in the document.

### Concepts Overview

This section provides a brief summary of all concepts considered for this study – see *Technical Memorandum #1 – Concept Alternatives* (December 2022) for additional information.

#### *No-Build Scenario*

As part of the Concept Plan for Bicycle and Pedestrian Improvements Along US 40 (Pulaski Highway), a No-Build Scenario was considered. If the No-Build Scenario is pursued, undesirable and inadequate conditions for pedestrians and bicyclists would continue to exist along US 40 in the study area due to the lack of dedicated bicycle and pedestrian infrastructure.

#### *Design Parameters and Criteria*

Design parameters and criteria for the development of a potential shared-use path along either side of US 40 were established using County requirements and project team feedback, along with design policies from the National Association of City Transportation Officials (NACTO), the American Association of State Highway and Transportation Officials (AASHTO), the Maryland Department of Transportation State Highway Administration (MDOT SHA), and the Federal Highway Administration (FHWA). It should also be noted that available GIS data collected as part of the base mapping process was used as a concept-level screening tool and no detailed survey information was obtained for this study. In further stages of design, survey information will need to be obtained to refine the alignment.

The following list summarizes the information used to guide the concept design for the shared-use path alternatives:

- Asphalt is planned for shared-use path construction, the existing concrete sidewalk along US 40 would be removed. The use of pervious pavement may be considered in later stages of design to address stormwater management needs.
- MDOT SHA District 4 indicated that utilizing/reducing some of the shoulder width along US 40 for the shared-use path can be considered.
- All curb ramps would be concrete and constructed to meet Americans with Disabilities Act (ADA) standards, including detectable warning surfaces
- Adjustments to parking lots along US 40 may be required; if necessary, these will be evaluated during final design

- At this planning-level stage, assume proposed shared-use path would be offset 4' from existing right-of-way and utility poles would not be impacted when designing the shared-use alternatives. Utility pole locations were determined using aerial photographs. No GIS information was available. Once actual survey information is obtained, the alignment can be refined in a future design phase.
- Preferable for a grass buffer to be provided along the entire corridor to physically separate all shared-use path users from US 40 and reduce conflicts between non-motorized and motorized traffic while providing additional user safety and comfort
- Bioswales – vegetated shallow depressions/ditches designed to collect, treat, and infiltrate stormwater runoff – may be used in the green zone between the US 40 roadway and the shared-use path. Roadway safety clear zone issues may limit tree planting in this area and details will be determined in later stages of design.
- NACTO and AASHTO guidelines (*AASHTO Bicycle Facilities Guide*) were consulted regarding width requirements for shared-use paths; 10' width is recommended, and 8' width is acceptable for low usage and in areas where maintenance vehicles are not anticipated. After discussion with BMC and Harford County, it was determined that a 10' shared-use path width would be proposed along the corridor, along with grass buffers and swales. Where a 10' shared-use path width is not possible, an 8' minimum design width will be considered and will require a design waiver.
- Per NACTO and ADA shared use path guidelines, a maximum 2% cross slope is proposed for the shared-use path
- 10' wide painted crosswalks would be proposed at all signed roadway crossings; per approved MDOT SHA standards, the continental crosswalk style (without the traditional two white lines along the length of the crosswalk) would be used. 6' offset from the edge of travel lane to shared-use path crossing will be maintained and 4' offset from the edge of shared-use path to stop bar.
- It is assumed that all pedestrian signals would be upgraded with Accessible Pedestrian Signal (APS) units with audible signals and countdown displays at all crossing locations for consistency and safety along the corridor; in general, pedestrian signals are required at all crossings without a STOP condition.
- All intersections and driveway crossings will be outfitted with ADA compliant ramps and include detectable warning surfaces.
- Existing gravel driveways will be enhanced to meet ADA standards
- The proposed shared-use path would not preclude providing ADA connectivity to existing pedestrian/bicycle infrastructure or to side streets or specific properties along US 40
- For maintenance, including snow operations – the proposed shared-use path concept is an off-road facility that is wide enough to be serviced by small equipment. Conceptual pavement design will not be designed for truck loading.

## Concepts Overview

As shown in Figure 2, three concepts were analyzed along US 40 from the Aberdeen Train Station to Erie Street in Havre de Grace:

- Option 1: Westbound, northern side of US 40
- Option 2: Eastbound, southern side of US 40
- Option 3: Combined (partially Westbound Option/Eastbound Option)



Figure 2: Concepts Overview

### Concept Overview – Westbound

On westbound US 40, existing sidewalk is present from APG Road to the MD 22 ramp at the southern end of the study area, as well as between Lewis Lane and Erie Street at the northern end of the study area. The proposed shared-use path would replace the existing sidewalk at these locations.

Recognizing that pedestrians are prohibited, and bicycles have limited access across the Hatem Bridge, the concept plan includes the recommendation to connect with the existing on-street East Coast Greenway route at Erie Street, as well as continuing along Park Drive to Superior Street to provide a direct route to residential neighborhoods in Havre de Grace. Additionally, it should be noted that if potential future Transportation Alternatives (TA) Program funding would be considered, the Hatem Bridge is not a logical terminus. The concept plan does not preclude continuing to a crossing at the Hatem Bridge, but the team recognizes that it is not a safe option for inexperienced or casual riders and would require additional design to tie a two-way shared-use path directly into the bridge travel lanes.

As shown in Figure 3 – Figure 5 below, three different proposed roadway typical sections were developed for the westbound US 40 shared-use path option based on the guidelines discussed above, depending on the section of the study corridor. In terms of separation between the shared-use path and US 40, FHWA guidance indicates that when two-way shared-use paths are located

adjacent to a roadway, wide separation between a shared use path and the adjacent highway is desirable to demonstrate to both the bicyclist and the motorist that the path functions as an independent facility for bicyclists and others. Additionally, the *AASHTO Guide for the Planning, Design, and Operation of Bicycle Facilities* states that the minimum recommended distance between a path and the roadway curb or edge of traveled way (where there is no curb) is five feet.

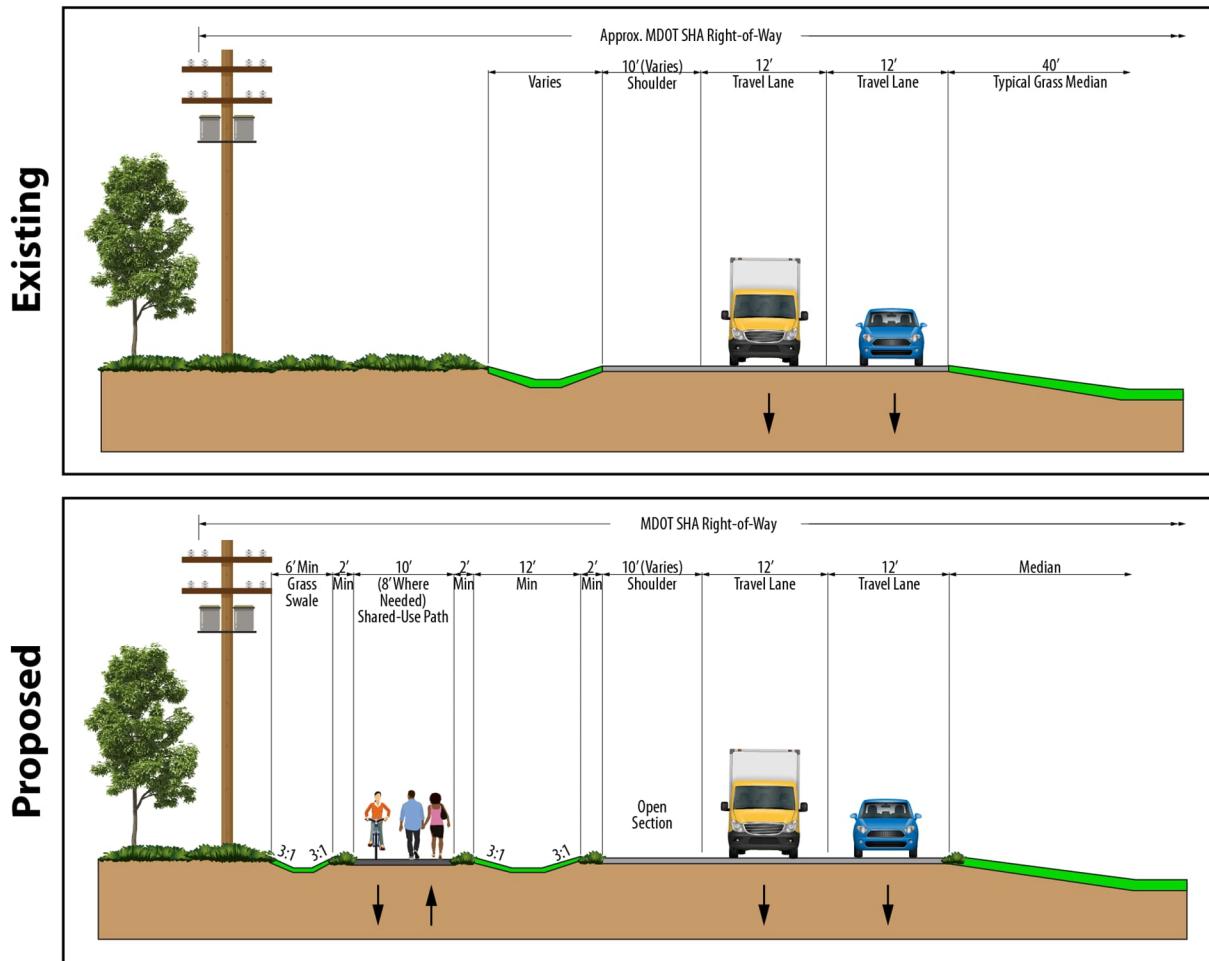


Figure 3: Proposed Westbound US 40 Open Section, Looking East

The open section shown in Figure 3 has no curb and gutter. This typical section shows a 10' paved shoulder and 16' grass buffer and is generally located in the section of US 40 with a speed limit of 55 mph.

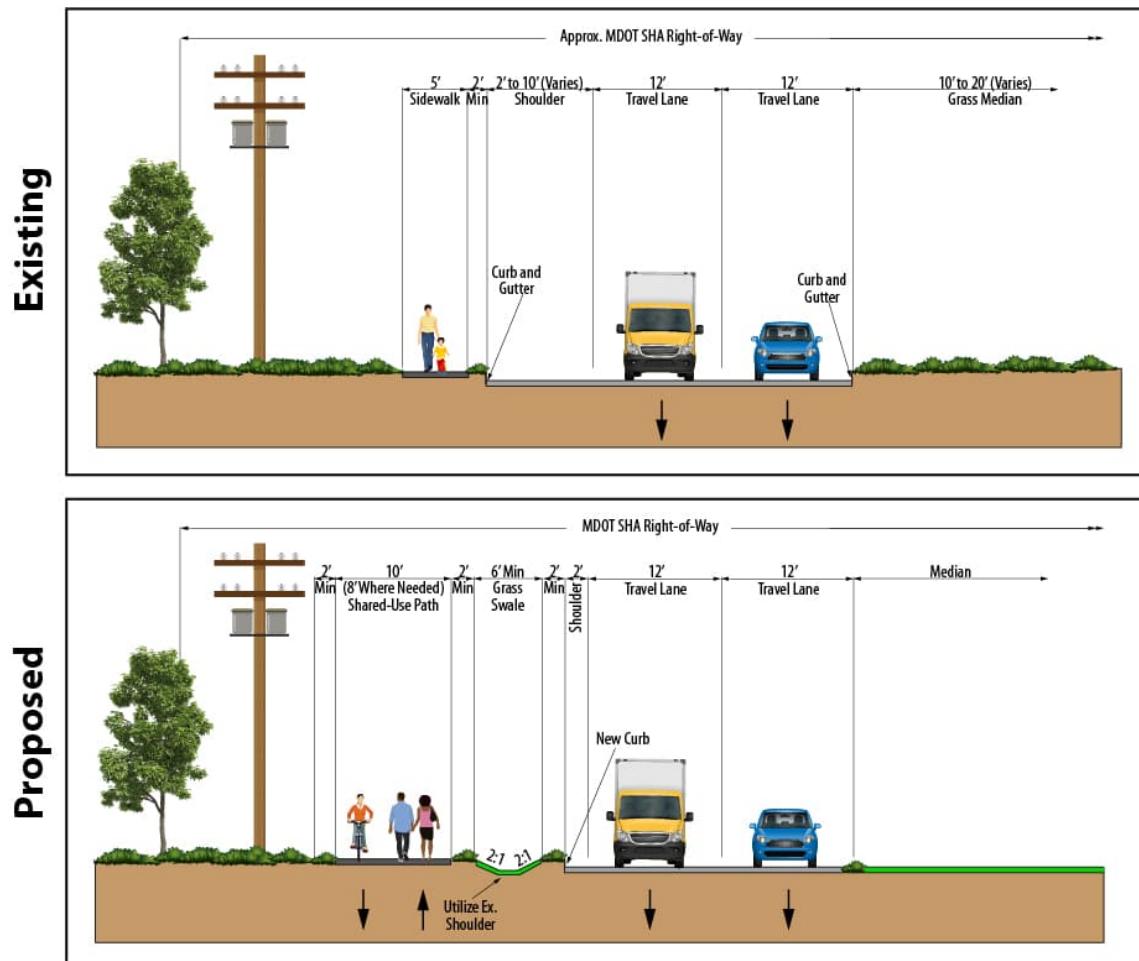


Figure 4: Proposed Westbound US 40 Closed Section with Reduced Shoulder, Looking East

The closed section shown in Figure 4 has curb and gutter. This typical section utilizes/reduces some of the shoulder width along US 40 for the shared-use path in order to minimize or avoid impacts and has a minimum 10' buffer between the edge of roadway and the shared-use path. This typical section is generally located in areas with a speed limit of 30-45 mph.

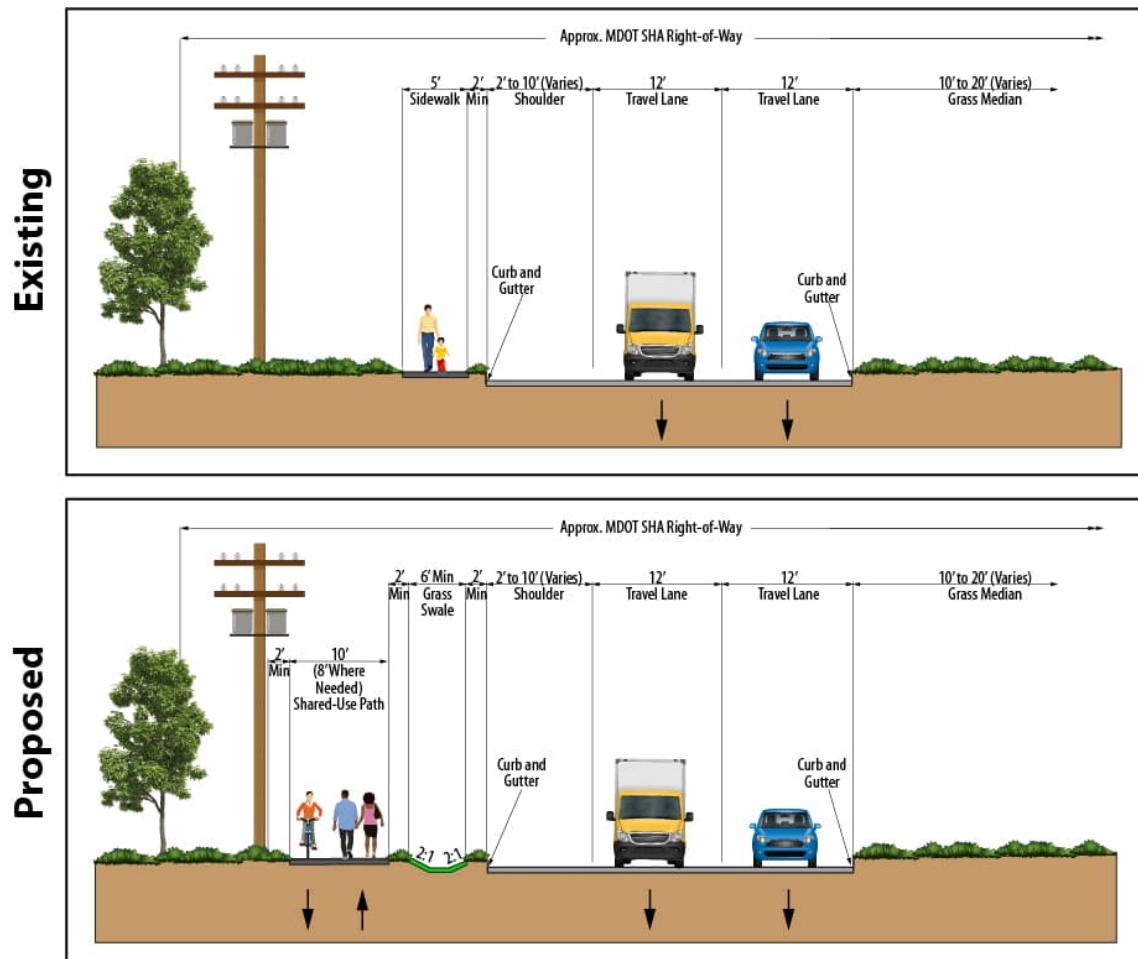


Figure 5: Proposed Westbound US 40 Closed Section with Shoulder, Looking East

The closed section shown in Figure 5 has curb and gutter. The full roadway shoulder width remains in-place with this typical section, which has a minimum 10' buffer between the edge of roadway and the shared-use path. This typical section is generally located in areas with a speed limit of 45 mph.

## Concept Overview – Eastbound

On eastbound US 40, existing sidewalk is present between APG Road and the MD 22 ramp at the southern end of the study area, and just south of Ohio Street to Erie Street at the northern end of the study area. The proposed shared-use path would replace the existing sidewalk. As discussed with the westbound shared-use path, the proposed terminus is located at Erie Street to connect the shared-use path to the East Coast Greenway on-street bicycle route, as well as residential neighborhoods in Havre de Grace. The three proposed roadway typical sections shown in Figure 3 – Figure 5 are also applicable to the eastbound concept, though they are flipped, with the shared-use path located to the right of the eastbound travel lanes.

## Concept Overview – Combined (Partially Westbound/Eastbound)

The third concept to add bicycle and pedestrian access to the corridor is to create a combined option which includes sections of the westbound and eastbound options described above. In the combined option, the shared-use path would incorporate the westbound option from the City of Aberdeen to Lewis Lane, cross US 40 at Lewis Lane, and continue with the eastbound option from Lewis Lane to Erie Street. The proposed typical sections for the combined option are the same as those for the westbound and eastbound options.

### *Opportunities and Constraints*

Opportunities and constraints were considered for each of the three concepts under consideration.

#### Option 1: Westbound, northern side of US 40

- Opportunities
  - Wide shoulder available to use for trail
  - Less environmental impacts
  - Requires less potential property easements or acquisition
  - Located on north side of US 40 with larger nearby residential population
- Constraints
  - Multiple stream crossings / at least one pedestrian bridge required
  - Existing utilities
  - Low retaining walls may be required

#### Option 2: Eastbound, southern side of US 40

- Opportunities
  - Improved access to residents on south side of US 40 and downtown Havre de Grace
  - Access to Havre de Grace Activity Center and the middle / high school
  - Same side as train station

- Constraints
  - Environmental impacts to streams and forest
  - Amtrak property impacts which could delay project implementation
  - Higher construction costs because of multiple retaining walls and stream crossings; at least one pedestrian bridge required
  - Stressful and potentially unsafe crossing of MD 22 off-ramp to eastbound US 40
  - Significant portion of eastbound/south side segment east of Lewis Lane is complex design and construction due to guardrail, signing, steep slopes and forest impacts

#### Option 3: Combined (partially Westbound Option/Eastbound Option)

- Opportunities
  - Westbound/north side segment serves larger nearby residential population
  - Eastbound/south side segment provides improved access to Havre de Grace
  - Access to Havre de Grace Activity Center and the middle / high school
- Constraints
  - No existing sidewalk from Lewis Lane to south of Ohio Street due to significant environmental constraints
  - Significant portion of eastbound/south side segment is complex design and construction due to guardrail, signing, steep slopes and forest impacts
  - Higher construction costs for eastbound/south side segment due to retaining walls to reduce impacts

#### Public Meeting #1

A virtual public meeting for the project was held on November 2, 2022, with Public Comment Period #1 open from October 19 through November 27, 2022. The comments received during Public Comment Period #1 are included in Appendix A.

Feedback received from Public Meeting #1 included:

- 73% of respondents would be likely to use a shared-use path along US 40
- 30% of respondents preferred the Westbound Option and 26% preferred the Combined Option
- Users should be safely separated from US 40 traffic
- Important to provide safe pedestrian and bicycle crossings of US 40 at major intersections

Additionally, some frequently asked questions and responses were developed as a result of public feedback:

- *Will the Otsego Street/Ohio Street/US 40 intersection be reconfigured as a part of this concept plan?*
  - The concept plan currently under development will not include reconfiguration of the Otsego Street/Ohio Street/US 40 intersection. The intersection is included in the 2022 Harford County Priority Letter and has been included in the yearly priority letter since 2010.
- *Is funding available for this project? Will this project increase my taxes?*
  - The project is currently funded for completion of the concept plan. Funding has not yet been identified for future phases of design and construction. The project will be eligible to apply for a variety of state and federal funding programs that could fund future phases of the project. The project will not increase taxes in Harford County.
- *Why doesn't the project include crossing the Susquehanna River on the Thomas J. Hatem Memorial Bridge?*
  - The scope of this concept plan is limited to the five-mile segment from the City of Aberdeen to the City of Havre de Grace. Exploration of a bicycle and pedestrian connection across the Susquehanna River, potentially along the Thomas J. Hatem Memorial Bridge will require a separate study due to the complexity of design and coordination.

### Preferred Concepts

Based on community feedback during Public Comment Period #1, the opportunities and constraints previously discussed, and design considerations, the Westbound Option and Combined Option are recommended for further study. The potential westbound US 40 shared-use path concept plan is shown in Appendix B and the potential combined shared-use path concept plan for US 40 is shown in Appendix C. With either option, a shared-use path along US 40 could act as a spine to make other connections throughout the area.

Prior to the public meeting, the proposed typical sections showed the shared-use path adjacent to US 40 with a two-foot buffer. As a result of feedback suggesting additional separation between the roadway and the shared-use path, the placement of the grass swale area was revised to be adjacent to US 40 as shown in Figure 3 – Figure 5. All dimensions and details shown in the typical sections will be refined in future design phases.

ADA-compliant ramps (including detectable warning surfaces) are proposed at all commercial, residential, and signed street crossings along westbound US 40. Marked 10' wide crosswalks are proposed at all signed street crossings to coincide with the proposed shared-use path in order to provide a safe, continuously marked path along US 40 between APG Road and Erie Street.

It should be noted that the team recognizes that the Otsego Street intersection is particularly complex, especially with the westbound option having two roadway legs to cross. However, the crossing would be made ADA-compatible and safe with pedestrian refuge areas, as determined in future design phases.

There are 10 potential stream crossings along the alignment that will require a structure or culvert extension. There are six locations where a culvert extension will be required. Potential bridge/culvert extensions are shown on the concept plans. For this proposed shared-use path concept, a potential bridge structure or culvert extension is shown adjacent to the existing guardrail, separated from US 40, that provides a wider crossing at these stream crossing locations. To accommodate a potential 10' wide shared-use path with 1' buffer on either side, the bridge structure would be 12' wide, with 2' wide parapets on either side of the bridge (total of 16' wide). Where necessary due to site topography, potential retaining walls are shown on the concept plan.

#### *Bicycle Level of Traffic Stress*

Existing Bicycle Level of Traffic Stress (LTS) information was presented in *Technical Memorandum #1 – Concept Alternatives* (December 2022). LTS was identified using the MDOT Level of Traffic Stress Methodology and varies from 0 to 5 with 0 being no stress from traffic and 5 being locations where bicycles are prohibited. Existing Bicycle LTS scores for segments along US 40 were 3 or 4, due to the 40 MPH to 55 MPH speed limit, shoulder widths of less than 10 feet, and existing traffic volumes. However, with both preferred concepts, the Bicycle LTS is scored as 1 since it is a separated shared-use path. For reference, a score of 0 (no stress from traffic) would apply to trails/paths that are located in dedicated right-of-way that do not intersect other roads or driveways.

#### *Pedestrian Level of Comfort*

Existing Pedestrian Level of Comfort (PLOC) information was also presented in *Technical Memorandum #1 – Concept Alternatives* (December 2022). Existing PLOC was identified using the *Montgomery County, MD Pedestrian Level of Comfort Methodology* and varies from 1 to 4, with 1 being very comfortable and 4 being undesirable. Because there is no sidewalk along most of US 40, the PLOC is 4. Sidewalks are present in Aberdeen and Havre de Grace, but the speed limits and lack of buffer between sidewalks and road result in a high PLOC.

In general, the greater the buffer/separation between pedestrians and the adjacent roadway, the lower the PLOC score:

- PLOC 1: Greater than 8' buffer
- PLOC 2: Between 5' and 8' buffer
- PLOC 3: Between 2' and 5' buffer
- PLOC 4: 0' to 2' buffer

With both preferred concepts, the minimum distance between the shared-use path and the shoulder/curb of US 40 is 10' based on the reduced shoulder typical section (not including the shoulder as separation). This meets the criteria for the lowest PLOC score of 1, which is obtained with 8' separation.

#### Preliminary Property Impacts and Costs

Existing parcel lines shown on the concept plans are based on readily available statewide GIS mapping; therefore, impacts identified in this study are approximate and subject to change during future stages of design. In future stages of design, the shared-use path alignment(s) may be modified and refined once topographic surveys are available and features such as retaining walls may be used to minimize or avoid property impacts. For both of the preferred concepts, the

proposed right-of-way line was assumed to be set one foot behind the proposed shared-use path in areas where right-of-way impacts are anticipated. Specific, quantified impacts to fences, trees, driveways, and other property features will be determined after topographic surveys and final design are complete.

The following is a summary of approximate property right-of-way impacts based on the two proposed concept plans.

Westbound shared-use path:

- County impacts: none
- City of Aberdeen impacts: 149 square feet (1 parcel)
- City of Havre de Grace impacts: 219 square feet (1 parcel)
- MDOT SHA impacts: none
- Amtrak impacts: none
- Residential property impacts: 980 square feet (1 parcel)
- Commercial property impacts: 52,981 square feet (47 parcels)
- Industrial property impacts: 1,188 square feet (1 parcel)

Combined shared-use path:

- County impacts: none
- City of Aberdeen impacts: 149 square feet (1 parcel)
- City of Havre de Grace impacts: none
- MDOT SHA impacts: none
- Amtrak impacts: none
- Residential property impacts: 980 square feet (1 parcel)
- Commercial property impacts: 55,338 square feet (51 parcels)
- Industrial property impacts: 1,188 square feet (1 parcel)

The potential City of Aberdeen impact (149 square feet) is located on the City-owned parcel at 2225-A Pulaski Highway near the pump station, shown in Figure 6.



Figure 6: Potential City of Aberdeen Impact Area

The potential City of Havre de Grace impact (219 square feet) is located on the City-owned parcel on the northwest quadrant of US 40 at Lewis Lane, shown in Figure 7.



Figure 7: Potential City of Havre de Grace Impact Area

The potential residential impact (980 square feet) is on property owned by the Greenway Farm Phase 1 Community Association at the US 40/Martha Lewis Boulevard intersection, shown in Figure 8.



Figure 8: Potential Residential Impact Area

The remaining potential impacts are to commercial and industrial properties along US 40.

Cost estimates were calculated for each of the preferred concepts and are summarized below. For additional information regarding cost estimating details, methodology, and assumptions, see *Technical Memorandum #1 – Concept Alternatives* (December 2022).

#### Westbound Concept

The estimated construction cost for the potential future shared-use path along westbound US 40 as shown on the concept plan is \$8.90 million with a cost per mile of \$1.78 million (not including right-of-way). The cost estimate is provided in Appendix D.

### Combined Concept

The estimated construction cost for the potential future combined shared-use path along westbound and eastbound US 40 as shown on the concept plan is \$9.75 million with a cost per mile of \$1.95 million (not including right-of-way). The cost estimate is provided in Appendix E.

### Public Meeting #2

A public open house for the project was held on February 9, 2023, at the Havre de Grace Activity Center. Public Comment Period #2 was open from January 25 through February 22, 2023. The comments received during Public Comment Period #2 are included in Appendix F.

Based on feedback received from the public open house and Public Comment Period #2, 69% of commentors who preferred a specific alignment chose the Combined Option

### Next Steps – Recommendations for Future Study

Moving forward from the concept phase, the following is a non-exhaustive list of considerations and recommendations for future study:

- The two preferred options are recommended to be carried forward into the next phase of design; additional information will be needed to fully consider the options
- Future phases of design will consider topographic survey, additional engineering details, and public comments regarding specific shared-use path alignments, impacts avoidance, maximizing the distance/offset from US 40, and connections to other facilities
- Conduct a bicycle/pedestrian roadway safety audit for the corridor
- Potential for creating/establishing design guidelines in the next phase of study, including driveway crossing treatments, bus stops, etc.
- Evaluate adding signage to US 40 to indicate that it is possible to take public transit (Harford Transit LINK) across the Hatem Bridge to Cecil County, including loading bikes
- Per City of Aberdeen code, bicycles are not allowed to be ridden on sidewalks; additional consideration and a determination can be made in the next phase of design regarding the use of existing sidewalks on US 40 near the train station
- Future Otsego Street intersection design should be considered when evaluating the alignment options
- Equity analysis (criteria to be determined) may be used to evaluate the alignment options
- If the westbound option is chosen in future design phases, sidewalk construction projects could be evaluated for the areas where sidewalk does not currently exist
- Various permits and agency approvals may be required before project construction - see *Technical Memorandum #1 – Concept Alternatives* (December 2022) for more information on potential permits

- To help phase the design and construction, Harford County, Aberdeen, and Havre de Grace could identify "priority" segments for the shared-use path
- Recommendation for future studies to explore bicycle and pedestrian crossing opportunities across the Susquehanna River to improve regional connectivity and for connectivity of other area bicycle and pedestrian routes (i.e. the East Coast Greenway, U.S. Bicycle Route (USBR) 201, Lower Susquehanna Heritage Greenway Trail, North Park Loop (Joe K Trail), Mason Dixon Trail System, and Lafayette Trail)

## Implementation Plan

As part of the Final Recommended Plan, this section presents the Implementation Plan. The following components are included:

- Potential Grant Funding Opportunities
- Potential Wayfinding and Facility Branding Strategies
- Opportunities to Guide the Development of the Facility
- Long-Term Maintenance Strategy

### *Potential Grant Funding Opportunities*

While Harford County, the City of Aberdeen, and the City of Havre de Grace can provide construction funding for the US 40 shared-use path, the project may also be eligible for various grant funding opportunities. This section provides a brief overview of a non-exhaustive list of potential grant funding opportunities, as well as current application requirements. It should be noted that the project may not end up qualifying for all opportunities listed and requirements will need to be verified as the project progresses.

Harford County should continue to coordinate with MDOT SHA during the design process, as well as hold conversations with the state about funding for paths along urban highways as outlined in § 8-630 of the Maryland Code. Within the study area, sections of US 40 are within a Sustainable Community as defined by the Sustainable Community Act of 2010 and within a Priority Funding Area as defined by the 1997 Planning Legislation. These designations, as discussed in the Maryland Code, may be relevant to the funding conversation with MDOT SHA.

### Federal Grant Opportunities

Safe Streets and Roads for All (SS4A) – U.S. Department of Transportation (USDOT)  
<https://www.transportation.gov/grants/SS4A>

- Background information
  - 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. The program provides funding to develop the tools to strengthen a community's approach to safety and saving lives.

- The SS4A program provides funding for two types of grants:
  - Planning and Demonstration Grants provide Federal funds to develop or complete an Action Plan, conduct supplemental planning, and/or conduct demonstration activities that will inform the development of an Action Plan.
  - Implementation Grants provide Federal funds to implement projects and strategies identified in an Action Plan to address a roadway safety problem.
- There are no statutory minimum or maximum grant amounts. However, Planning and Demonstration Grants have an expected minimum of \$100,000 and an expected maximum of \$10 million and Implementation Grants have an expected minimum award of \$2.5 million and maximum award of \$25 million.
- Eligible grantees
  - A Metropolitan Planning Organization (MPO)
  - A political subdivision of a State (i.e. cities, towns, counties, special districts, and similar units of local government)
- Eligible projects:
  - Develop or update a comprehensive safety action plan (Action Plan)
  - Conduct planning, design, and development activities (infrastructure, behavioral, operational safety, etc.) in support of an Action Plan.
  - Carry out projects and strategies identified in an Action Plan.
- Requirements:
  - Project must comply with all applicable state and federal regulations
  - A local match of no less than 20 percent of total eligible project costs is required. Local match may include both cash as well as in-kind contributions.

### State Grant Opportunities

Transportation Alternatives Program (TAP) – MDOT SHA

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

- Background information
  - The Transportation Alternatives Program (TAP) is part of the Federal Highway Administration Surface Transportation Program, a reimbursable federal aid funding program for transportation-related community projects. MDOT SHA administers TAP for all Maryland projects.
  - Under the 2021 Infrastructure Investment and Jobs Act, approximately 40% of funds apportioned to Maryland's TAP are sub-allocated to the following three Maryland

MPOs: Baltimore Regional Transportation Board (BRTB), National Capitol Region Transportation Planning Board (TPB), and Wilmington Area Planning Council (WILMAPCO). The remaining TAP funds are available to any area of Maryland.

- Eligible grantees
  - MPOs
  - Local/County Jurisdictions
  - Transit Agencies
  - Federal Public Land Agencies
  - Local/County School Districts
- Eligible projects:
  - Projects that enhance the cultural, aesthetic, historic, and environmental aspects of the intermodal transportation system.
- Requirements:
  - A local match of 20 percent of total eligible project costs is required as a cash match. A TAP award can cover up to 80 percent of the design and construction costs.
  - Projects in Maryland must:
    - Benefit all potential users and allow free use by a broad segment of the public
    - Maintain a reasonable duration of the intended public use, as determined by MDOT SHA
    - Be located on publicly owned right-of-way or on right-of-way encumbered with a permanent easement held by a state agency or the government agency sponsoring or co-sponsoring the project
    - Comply with ADA, NEPA, and all other applicable state and federal regulations (i.e. pedestrian and bicycle facilities must meet state and federal standards for width, grade, signing, and materials).

#### Kim Lamphier Bikeways Network Program – MDOT

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

- Background information
  - The Kim Lamphier Bikeways Network Program is a State-funded reimbursable grant program administered by MDOT, with funding for the program allocated on an annual basis.
  - The program supports projects that maximize bicycle access and fill 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.

- Eligible grantees
  - Maryland local governments
  - Maryland State Agencies
  - MPOs
  - Transit entities operating in Maryland
  - Non-profit organizations
  - Federal public lands agencies
- Eligible projects:
  - Bicycle facility feasibility assessments, design, engineering, and construction
- Requirements:
  - A minimum 20% local match of total project cost is required. The matching fund contribution can be in the form of cash, an in-kind contribution, or a third party contribution.
  - To be eligible for funding, a project must meet at least one of the following:
    - Access to Transit: Project is located within three miles of a rail transit station (or major bus transit hub)
    - Missing Links: Project provides or enhances bicycle access along missing trail links
    - County Priority: Project is identified as a transportation priority in a County's most recent annual priority letter submitted to MDOT
    - Sustainable Community: Project enhances bicycle circulation within, or access to, a Maryland Sustainable Community Area
    - Main Streets: Project enhances bicycle circulation within, or access to, a designated Maryland Main Street
    - Access to Low Income Area: Project enhances bicycle circulation within, or access to, a Census Tract within which 50% or more of householders have incomes below 60% of area median income
    - Access to Points of Interest: Project enhances bicyclist access to a major institution or to an important tourist or heritage attraction or to a central business district (as evidenced by land uses)

#### Recreational Trails Program (RTP) – MDOT SHA

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

- Background information
  - 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, cross-country skiing, snowmobiling, off-road motorcycling, off-highway vehicle riding, paddle sports, personal watercraft, and motorized boats.

- Eligible grantees
  - State Agencies
  - Local/County Jurisdictions
  - Non-profits
- Eligible projects:
  - 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
- Requirements:
  - Project must comply with all applicable state and federal regulations
  - A local match of 20% of the total project cost is required. The matching fund contribution can be in the form of cash or an in-kind contribution.
  - All RTP projects must be legally and physically accessible to the public
  - Shovel-ready projects with a complete scope of work and 30% design plans will be more competitive than those that are still in the conceptual phase

#### Safe Routes to Schools (MDOT SHA)

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

- Background information
  - 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.
  - SRTS projects must be requested through the larger Transportation Alternatives Program (TAP).
- Eligible grantees
  - Local/County Jurisdictions
  - Local/County School District
  - Transportation Safety Non-Profits (if applying for safety education projects)

- Eligible projects:
  - On- and off-street bicycle/pedestrian improvements
  - Bicycle/pedestrian crossing improvements
  - Sidewalk improvements (within two miles of a school)
  - Public awareness campaigns for press and community leaders
- Requirements:
  - Project must comply with all applicable state and federal regulations
  - A local cash match of 20% of the total project cost is required
  - Funds allocated to this program must benefit elementary and middle school children in grades K-8

Community Legacy Program – Department of Housing and Community Development (DHCD)

<https://dhcd.maryland.gov/Communities/Pages/programs/CL.aspx>

- Background information
  - 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.
- Eligible grantees
  - Local governments
  - Community development organizations
- Eligible projects:
  - Streetscape improvements
  - Business retention, expansion, and attraction initiatives
  - Residential and commercial façade improvement programs
- Requirements:
  - Projects must be located within an approved Sustainable Community to be eligible for funding. The City of Aberdeen and City of Havre de Grace are both on the approved Sustainable Community list.

## State Funding Programs

### Bicycle and Pedestrian Accessibility Funds – MDOT SHA

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

- Background information
  - 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.
  - Fund 33 addresses sidewalk reconstruction for pedestrian access, Fund 79 addresses new sidewalk construction for pedestrian access, and Fund 88 addresses bicycle retrofit (upgrading Maryland highway facilities to accommodate bicycles) and may include on-road facilities or off-road facilities such as shared-use paths.
- Fund 79 (New Sidewalk Construction for Pedestrian Access) Requirements:
  - Projects must be at locations where no other roadway project is currently planned.
  - Projects must be along an urban highway.
  - Projects must be requested by the local jurisdiction where the sidewalk would be located.
  - The local jurisdiction must agree to the following:
    - To fund or secure all right-of-way outside of SHA right-of-way.
    - To provide opportunities for public involvement prior to construction.
    - To maintain the sidewalk after construction is complete.
  - Construction of projects not located within a Priority Funding Area shall be funded equally between SHA and the local jurisdiction.
  - Construction of projects located within a Priority Funding Area shall be 75% funded by MDOT SHA and 25% funded by the local jurisdiction.
  - If a sidewalk is located in a “Sustainable Community”, construction may be funded entirely by SHA. The City of Aberdeen and City of Havre de Grace are both on the approved Sustainable Community list.
- Fund 88 (Bicycle Retrofit) Requirements:
  - Considered where no other project is planned
  - Projects for on-road improvements do not require any funding participation from the local jurisdiction.
  - Projects for off-road improvements are subject to the same requirements as the New Sidewalk Construction for Pedestrian Access program (Fund 79)

## Public and Private Grant Opportunities

In addition to federal and state grants, there may be other public and private grant opportunities available to fund bicycle and pedestrian construction projects. A few examples of such programs are listed below and requirements will need to be verified as the project progresses:

- The PeopleForBikes Community Grant Program (<https://www.peopleforbikes.org/grants>) supports bicycle infrastructure projects, such as bike paths, lanes, trails, and bridges. Funding is available for engineering and design work and construction costs. Applications are accepted from non-profit organizations (with a focus on bicycling, active transportation, or community development), city or county agencies/departments, and from state or federal agencies working locally.
- The Robert Wood Johnson Foundation (<http://www.rwjf.org>) is working to improve the health of all Americans and has previously awarded grants for trail projects.
- Local businesses, corporate foundations, and non-profit organizations may offer grants and partnerships through corporate/community foundations, collaborators, and other programs.

## *Potential Wayfinding and Facility Branding Strategies*

Cohesive wayfinding signage and an advertising program that provides consistent and informative updates to potential pedestrians and bicyclists could be implemented for the future shared-use path along US 40.

In terms of wayfinding signage, the *MDOT SHA Bicycle Policy and Design Guidelines* (2015) were consulted since US 40 is a MDOT SHA owned roadway and coordination would be necessary. Signs are required to be offset a minimum of 3' from the shared-use path and have a 4'-5' sign height clearance. Additionally, compliance with the Federal Highway Administration *Manual on Uniform Traffic Control Devices* (MUTCD) would be required. Figure 9 below shows an example of potential wayfinding signage that could be used along the US 40 shared-use path. It should be noted that no official name for the shared-use path has been determined and the below graphic uses "Chesapeake and Susquehanna Trail" as a potential example of branding.

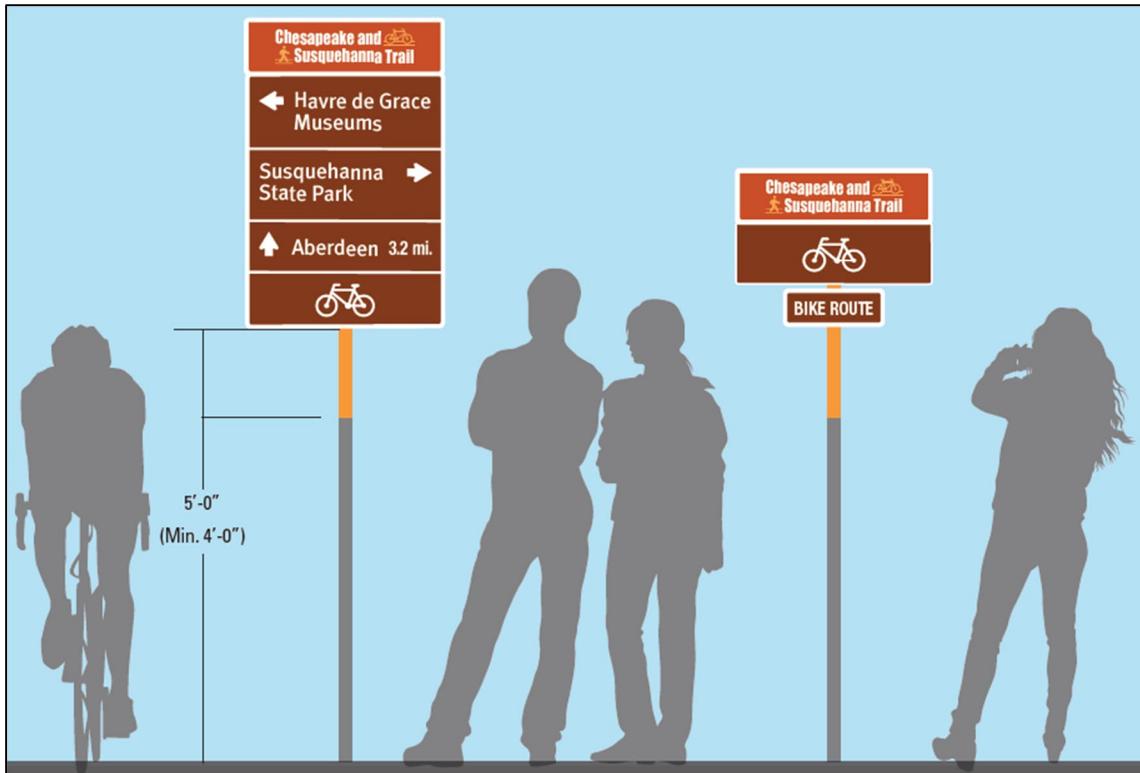


Figure 9: Examples of Potential US 40 Wayfinding Signage

The shared-use path could also potentially be signed as the East Coast Greenway route in the future. If this is the case, the below example (Figure 10) of a MUTCD-compliant guide sign taken from the *East Coast Greenway Alliance Trail Signage Manual* (2016) may be applicable to mark/brand the shared-use path as the East Coast Greenway bicycle and pedestrian route.

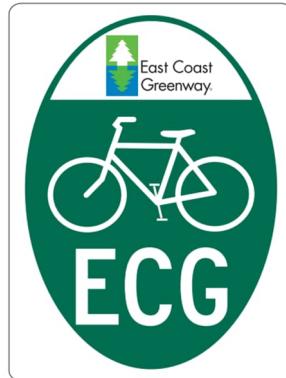


Figure 10: MUTCD-Compliant East Coast Greenway Guide Sign

Facility branding and an advertising program that provides clear information to potential users could be a key step in enhancing public support for the shared-use path. Figure 9 uses "Chesapeake and Susquehanna Trail" as a potential example of branding and Figure 11 shows some other examples of branding/signage programs across different types of facilities

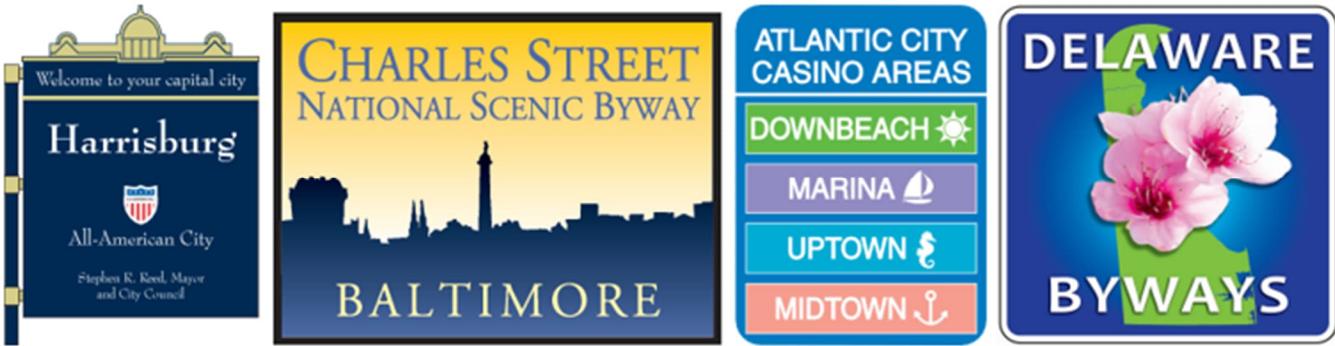


Figure 11: Example Branding/Signage Programs

#### *Opportunities to Guide the Development of the Facility*

A shared-use path project of this size (approximately five miles) can be developed as one project or incrementally constructed as separate phases and/or through access improvements and roadway overlay projects. If the project is developed incrementally, individual segments should follow the cohesive design of the overall project and should not preclude the construction of other segments. Logical termini for each segment could be determined at the outset (whether that is intersection-to-intersection or otherwise) and the total construction project could be broken down into more manageable projects from a budgeting perspective.

In some situations, funding for shared-use paths can be leveraged from private developers and not-for-profit organizations and local businesses, as shared-use paths enhance and promote commerce within communities and are economic drivers.

Additionally, as mentioned in the recommendations for future study, to help phase the design and construction, Harford County, Aberdeen, and Havre de Grace could identify "priority" segments for the shared-use path in order to help guide the development of the facility.

#### *Long-Term Maintenance Strategy*

The local jurisdiction is typically responsible for maintenance of a shared-use path along a state roadway. A memorandum of understanding (MOU) is developed between the local jurisdiction and MDOT SHA which assigns maintenance responsibilities to the local jurisdiction. The TA Program administered by MDOT SHA specifically requires local maintenance of projects funded by the program and Maryland Code § 8-630 states that the local jurisdiction is responsible for maintenance of any facility constructed.

Harford County should hold internal conversations to determine the county department that will be responsible for maintenance of the shared-use path in the project area. These conversations may also be helpful in determining maintenance responsibilities of future shared-use paths in the county.

Department responsibility for maintenance varies across jurisdictions. In some jurisdictions, the Department of Public Works (DPW) or Department of Transportation (DOT) maintains all shared-use paths except those located in a park, which Recreation and Parks maintains. In other locations, DPW, DOT, or Recreation and Parks is responsible for the maintenance of most or all of the shared-use paths in a jurisdiction.

It is recommended that maintenance funding be programmed in the county operating budget to ensure adequate resources are provided to the department(s) conducting maintenance. Inadequate resources can cause budget strain on the department(s) responsible for maintenance and result in poorly maintained facilities which would impact the user experience and the lifespan of the facility. Shared-use paths should also be added to the county maintenance plan and/or a shared-use path maintenance plan should be developed.

Trail maintenance and management is important for both user safety and trail preservation and is cost-effective in the long-term. The community will also expect comparable level of service to other public amenities. A "Trail Inspection Template" should be developed to list categories and items to be included once design plans are completed.

A trail maintenance program will assist in the development of a prioritized listing of needs and a process for how the project will be maintained and contracted for corrective actions, when needed. The purpose of a maintenance program is to provide a state of good repair for the trail by providing planned funding each year for trail maintenance and is also based on annual inspections similar to the County's Road Resurfacing Program. Incorporating the trail into the County's Asset Management/GIS system inventory is recommended and may include the following:

- Trail length
- Trail width
- Pavement/surface condition
- Date of construction
- Constructed pavement/surface structure (from original plans and specifications)
- Plans and specifications to be saved in digital format
- A windshield survey for other potential maintenance needs (i.e., fences, signing and marking, etc.)

It is understood that normal, regular trail maintenance is contractually obligated to the County; however, there are times where a trail requires more intensive maintenance items. This program will help avoid deferred maintenance issues. The most common concern for pedestrians and cyclists, for the usability of the trail, is the surface condition. Repairing the surface of paved trails is also the costliest component of trail maintenance. Therefore, the County will need to ensure proper serviceability of the trail and also inventory, assess, prioritize, and correct surface-related maintenance issues. The surface of the paved trail should be maintained/preserved in the same manner as the surface of a paved road. Performing routine and corrective maintenance can significantly extend pavement life, thereby delaying the need for more costly replacement of pavement that has completely failed. Ultimate items for pavement maintenance include, but are not limited to, the following:

**Asphalt:**

- Sweeping/blowing – twice a year or as needed
- Crack sealing – once every five to seven years, if necessary
- Pothole repair/patching – when needed
- Full pavement sealcoat application – every three to five years
- Pavement rehabilitation – only when needed and where needed
- Overlay – not expected for at least 20 years
- Drainage issues
- Stormwater management facility maintenance
- ADA compliance issues and maintenance (i.e., ramps, signals, etc.)
- Coordination with the East Coast Greenway

**Vegetation (maintenance will include the following to be performed and scheduled):**

- Mowing
- Tree branch pruning to maintain clearances and sightlines
- Stormwater management facility maintenance of plantings
- Overseeding and fertilization
- Tree root pruning
- Erosion repair
- Trash/litter removal
- Encroachments from neighbors may be identified as this work is performed

**Amenities that may be installed with the design or over time will also require inspection and maintenance, such as:**

- Rest stops, benches, and trash receptacles
- Bike racks
- Wayfinding signing
- Pet waste bag dispensers

## Maintenance Costs

Asphalt trail maintenance costs are generally estimated as follows:

- Maintenance of asphalt – periodic maintenance of the asphalt as described above will depend on annual inspection reports and type of treatment needed. Some sample costs for the 5.1 mile long and 10' wide trail could be expected as follows:
  - Sweeping/blowing with towed vacuum or blower – \$1,500 per visit; two visits per year is \$3,000
  - Crack Sealer, once every five to seven years – \$5,000 to \$10,000
  - Potholes – three per year at \$700 is \$2,100 per year
- Vegetation maintenance (mowing, weeding, and tree pruning) - \$2,000 per visit; four visits per year is \$8,000
- Snow removal costs are not included, and it is not anticipated that the trail will be plowed or treated. Adjacent landowners would not be required to clear snow.

Funding, maintenance needs, and staff levels may vary annually, so the above estimates do not remain the same year-to-year. A maintenance plan and budget should be created for implementation in the future.

## Appendix A:

### Comments Received – Public Comment Period #1

Public Comment Period #1		
COMMENT #	COMMENT	ZIP
Do you have any general comments?		
1	I think this is great idea. Love an avenue to make MD more bike friendly. So we don't have to ride in the roads!	21014
2	I love this idea! Please make it happen! It would be so much safer (for both pedestrians and drivers) with the frequent walkers along Rt 40, provide opportunities for fitness and connection between communities, and help out local businesses which would now be more accessible without a car.	21078
3	This is a great project concept, providing a much needed safe bicycle connection between two small town population centers. Of the 3 options presented, the combined option likely makes the most sense for local residents. However, I can't help but think that the 3 options are overly constrained to the existing US 40 corridor and thus constrained by the existing highway and 2 rail lines. I believe that BMC should consider other options such as using the MD Rt 22 bridge to cross the Amtrak tracks to provide a shared use trail to Havre de Grace that isn't directly next to a high-speed / highly traveled highway. Secondly, the team should study an alternate alignment that would take Post Rd to Revolution St into Havre de Grace, using Union Street to safely cross the tracks again before returning to the Erie St/US 40 terminus. Such an alignment would add some distance but would be immeasurably more pleasant than cycling next to a busy highway, would be more direct for residents of Havre de Grace, and could bring more tourism/economic impact to Havre de Grace.	21093
4	<p>Thank you for putting together this concept plan. The Baltimore region needs more of these efforts to facilitate non-automobile travel.</p> <p>I do not travel along the stretch of US-40 in question frequently, so I'll refrain from commenting on specific alignments. However, the following statement caught my eye: "The proposed shared-use path for all options would be asphalt, 10 feet in width (8 foot minimum where necessary due to constraints), and include 2 foot minimum grass buffer between the shared-use path and edge of the roadway shoulder."</p> <p>This is your description of the roadway:</p> <p>"The roadway is a divided four-lane principal urban arterial with speed limits varying between 30 and 55 miles per hour and carries over 30,000 vehicles a day."</p> <p>This is included as a goal:</p> <p>"Develop a concept level design of an asphalt shared-use path along US 40 that is comfortable, convenient, and safe to create a low-stress multi-modal connector..."</p> <p>I frequently bike along York Road through Timonium and Cockeysville. I am well-acquainted to having heavy truck and tractor trailer traffic pass me. That said, a "2 foot minimum grass buffer" is not enough to create a "low-stress multi-modal connector", especially when you consider that US-40 is a freight corridor (I believe). That proximity puts the path within the roadway's clear zone and subjects users of the path to strong gusts of air turbulence from passing trucks.</p> <p>At the points where space constraints force the grass buffer to approach only 2 feet in width, the buffer needs to be augmented with a guard rail, jersey wall, or some other substantial barrier.</p> <p>Thank you for the opportunity to comment.</p>	21030
5	use that route many times during the year	21078
6	This is a great idea ☺ Awesome 🎉 Please make it happen.	27587
7	Making safer options for walking/bike riding is something that promotes health and lowers our dependence on cars. I hope to see one of these projects in place.	21001
8	As a mother for four, this would be a wonderful addition to make it safer for those to travel via bicycle and help connect the businesses along Route 40 to the residential areas of Havre de Grace and Aberdeen.	21117

### Public Comment Period #1

COMMENT #	COMMENT	ZIP
9	So many places around the country have wonder multi use lanes located 50-200 feet off the road. It would be fantastic if Harford County could do the same. Lots of opportunity for bikers and runners to make use of it.	21001
10	Much needed improvements.	21001
11	As a resident of HdG, employe at APG, and Vice President of the Harford County Running Club I guarantee this route will see lots of use by many people. Great plan!	21217
12	I'm a visitor to the area who rides bicycle on this route occasionally. The improved safety would be great. Creating connections for work and to other communities, businesses and attractions will help the economy and we'll being in Hartford County.	21040
13	Great Idea. It will increase the safety of many walkers and the few bicycle riders. It may increase the bicycle traffic. The biggest safety improvement will be the dark or dawn // night/ early morning pedestrians who have to walk to or from work/apartments on both sides of the street.	
14	This is a great project. I'd love to see a safe walking/bike path between HdG & Aberdeen. Reading the summary; the Westbound option (first presented) sounds like the best option.	21001
15	I live in Havre de Grace and work at APG. I commute by bike 80-to 90 days a year. I have to use rt. 40 for 2.5 miles. The most needed improvement is to widen the culverts that go over streams. Shoulder goes from 8' down to less than 2'. Very dangerous and poorly maintained. I personally had to trim the vegetation on the Westbound Gashey Run culvert last year. Total lack of maintenance by the state. Last year it was the never ending paving job, this year it's the pipeline under the shoulder. Nobody at SHA has a clue about what cyclists need to safely use the roads. Contractors could care less. They just had the narrow shoulder over a culvert blocked with orange barrels a couple weeks ago. It is dangerous enough without the incompetence of contractors and total lack of oversight by the state. You don't need to spend millions on a separate path, just widen the current shoulder and maintain it.	21244
16	Protected bike lanes are needed. Additional lighting along the corridor. Outreach to communities with limited means who frequently use this corridor now and do so by taking their lives into their own hands. Providing visibility gear to local users, such as bike lights and reflective-wear.	27707
17	Providing safe ped and bike crossings of US 40 at major intersections including Robinhood, Lewis Lane and Ontario St in HdG are also vitally important.	21078
18	Need to solve the Hatem Bridge crossing to make this project worthwhile. That failure has created an almost impassable barrier for bicycle transportation from Cecil to Harford Counties and has made the East Coast Greenway initiative a myth. Until that is fixed with a safe, reliable crossing bike/ped investments on either side of the bridge will be only partially successful.	21014
19	Thank you...	25403
20	Just make MD safer for cyclists and commuters to take alternative to driving.	21014
21	Dear Friends: I prefer using the eastbound or south side of Route 40 as this would be safer and offer more access to residential communities that tend to be more numerous on that side of the highway.	
22	I think a combination of the two options would be ideal, otherwise the option utilizing eastbound option would be best.	21001
23	the most beneficial part of the proposed bike lane on US40 will be between Post Rd (in HdG) and Robin Hood road (Oakington). There are no other alternatives to this. For HdG users, access, most would use Post Rd if going to Downtown HdG or Lewis Lane if accessing the residential area West of US40.  crossing US40 is not a major concern: most users will have to cross US40 no matter where they originate or go to.  the West side of the MD 22 interchange seems much safer to me than the East side.  When I bicycle (Aberdeen) I have used Old Post Rd to go between Oakington (Robinhood Rd) and MD22	21040
24	The lack of safe bicycle and pedestrian paths in and between our various communities is disappointing and dangerous with the increased traffic.	21078
25	Thank you this project will be wonderful for us in HdG and Aberdeen!	21228
26	Thank you all for bringing this forward.	21228
27	it would help if the administration put this project to the top of the list	21228

### Public Comment Period #1

COMMENT #	COMMENT	ZIP
28	Are you available to come to a public event within the community? Maybe even present at a City Council meeting?	21228
29	Is there existing wide shoulder on the east side of 40, east of Lewis Lane, available for safe ped / hike trail without dealing with environmental issues?	21228
30	If the eastbound is selected how would you deal with the junkyard?	21228
31	It should also be noted the only grocery store in Havre de Grace is on the north side of Rt 40.	21228
32	The Lewis Lane crossing is very important under all options to make it ped / bike friendly and safe, including timing of the traffic light.	21228
33	I don't understand the "Access to the HdG Activity Center and High School" Anyone living on the South side of 40 would be going to the school from another direction. The crossing at Lewis is the important connection for folks from the developments on the North side.	21228
34	Is funding available for this project?	21228
35	Does this take into account the new waterline between HdG and Aberdeen?	21228
36	The Ontario / Ostego / 40 situation needs to be completely refigured for safe bike and ped crossing.	21228
37	We need this dovetail into a larger solution for the crazy intersection (40/Ohio/Ostego) in HdG.	21228
38	By observation lots of assisting device scooters are used on Rt 40 in Aberdeen	21228
39	Agree about the scooters. Mainly our older population. Lots of crossing at Lewis	21228
40	In addition to my comment related to the 3 options being overly tied to the corridor immediately adjacent to the highway (see above), I find that the path is considered only as a point-to-point path without community tie-in. For example, the Aberdeen terminus at the train station is within 1 mile of Aberdeen High School and Middle School. More attention needs to be paid to build short (1 mile or less) connectors to the trail as part of the initial project, not as after thoughts after the trail is built and these gaps are highlighted by a tragedy.	21093
41	I think any plan may need to consider more than a "grassy strip" or a "guard rail" to protect users. The amount of fast truck traffic in that corridor is horrendous. If the Perryman plot is developed as planned, that will greatly increase the number of tractor trailers on that corridor. The current suggestions are a welcome improvement, but insufficient considering all the tractor trailers.	21009
42	How many cyclists, scooters and walkers use this corridor presently? Is it worth the return on investment?	21078
43	Please make it happen	27587
44	Additional access to Swan Harbor Farm should be considered as it near route. Most people want this for recreation. Route needs to be separated from the road or it will not significantly improve use	21001
45	We also need to look at improving bicycle transit of the Hatem Bridge.	21001
46	This is needed for the evening and morning walkers who tend to walk without a light and without reflective garments. Many don't own a car, and walk between the towns of Aberdeen and Havre de Grace. Traffic (Pedestrian) safety will improve with either of the options of this plan (but the combined will help the most because people won't have to cross the street to get to the cleared path.).	
47	Latest personal experiences. Speeds are 55 to 75. Even construction area were posted 50. People doing 65-75. This is not a highway to be riding a bike on. Check motorcycle accidents on this road. NOTE: You are in North Carolina. Why are you messing in our community.	
48	In my opinion, this is not only completely unnecessary but is dangerous to both the bicyclists and to drivers. It is also an expense that Harford County does not need. I have lived in HC for 15 years and seldom see a bicycle on route 40 and since you finished the bicycle accommodations for the Hatem Bridge, I have seen one person riding a bike on that bridge. Once again, you are catering to a small minority, not considering the impact on the majority of drivers on route 40. Hartford County has plenty of less busy roads for bicycle riders to enjoy.	
49	I truly appreciate the focus on this wonderful project. There are lots of great things happening in HdG including several housing developments. The one that I want to make sure you are aware of, is located next to Swan Creek Village Shopping Center. It will be for low income residents. Providing them a walkable option would be fabulous.	21224
For what purpose would you utilize a shared-use path along US 40?		
50	Bikers don't want to ride in the road. I'm sure we can all agree a multi purpose path is good for all.	21014

### Public Comment Period #1

COMMENT #	COMMENT	ZIP
51	I would be using my car	21078
52	if I have to share it, I would be using my car.	21078
53	Great Please make it happen	27587
54	a separate user path from the road for these users (bikes, scooters, etc)	21078

Select the ways you think a shared-use path along US 40 may impact you:

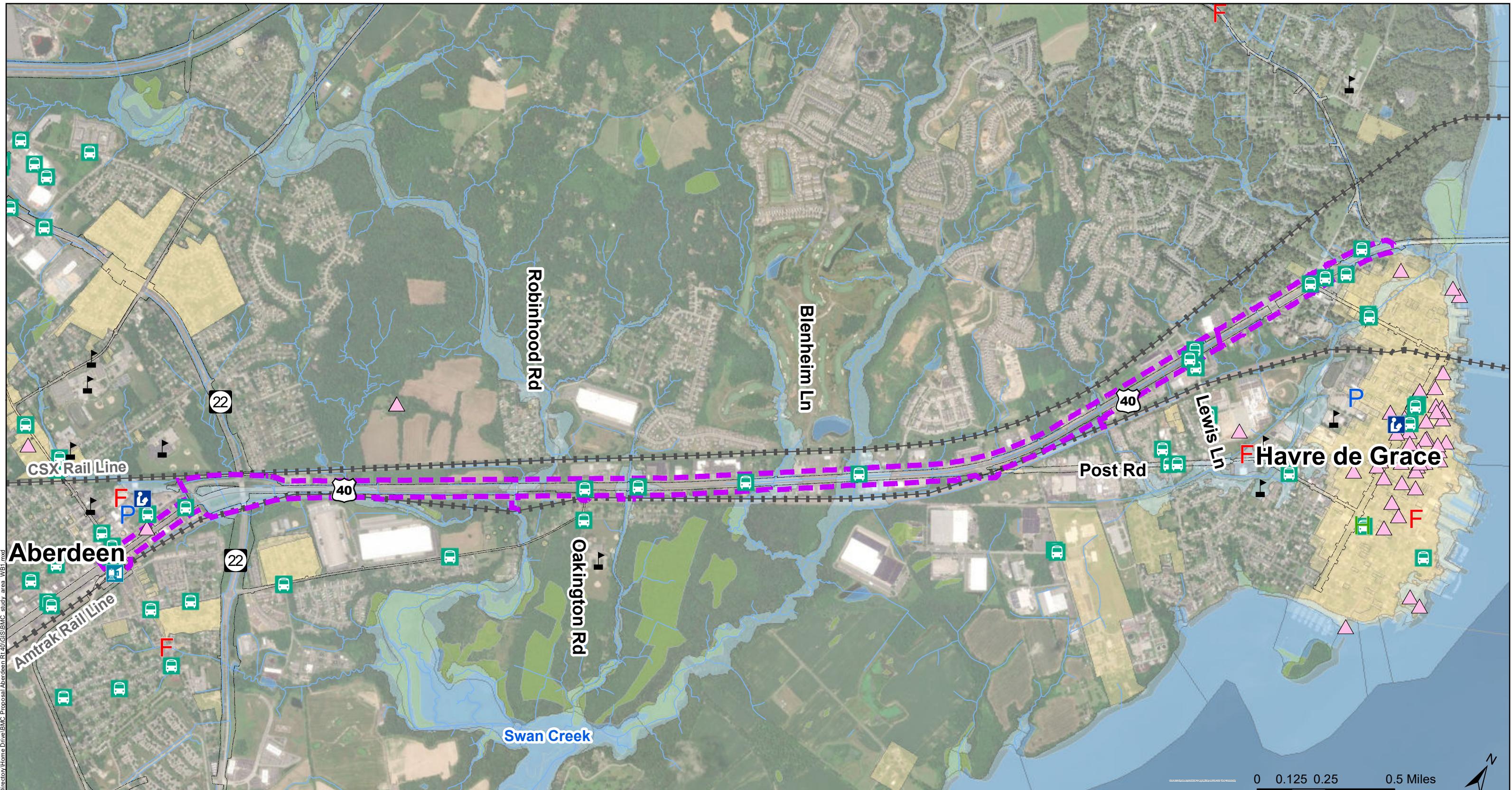
55	slower traffic	21078
----	----------------	-------

What do you value most in a shared-use path/connection between Aberdeen and Havre de Grace?

56	Are you planning a barrier of some sort between Route 40 and the riders/walkers? Lots of fast traffic along this route.	21215
57	Make MD more bike friendly and make more routes for folks.	21014
58	bike lanes that don't go between line of traffic and turning lanes	21078
59	Please make it happen.	27587
60	safety for the walkers from the cars and trucks during low light hours.	
61	It's not needed	21001

## Appendix B:

### Concept Plan – Westbound US 40 Shared-Use Path

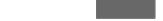
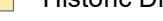


Concept Plan for  
**Bicycle**  **AND** **Pedestrian**   
 Improvements along US 40 (Aberdeen to Havre de Grace)

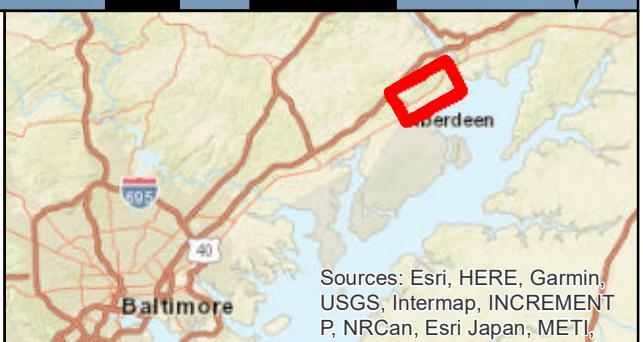
Westbound  
 Shared-Use Path

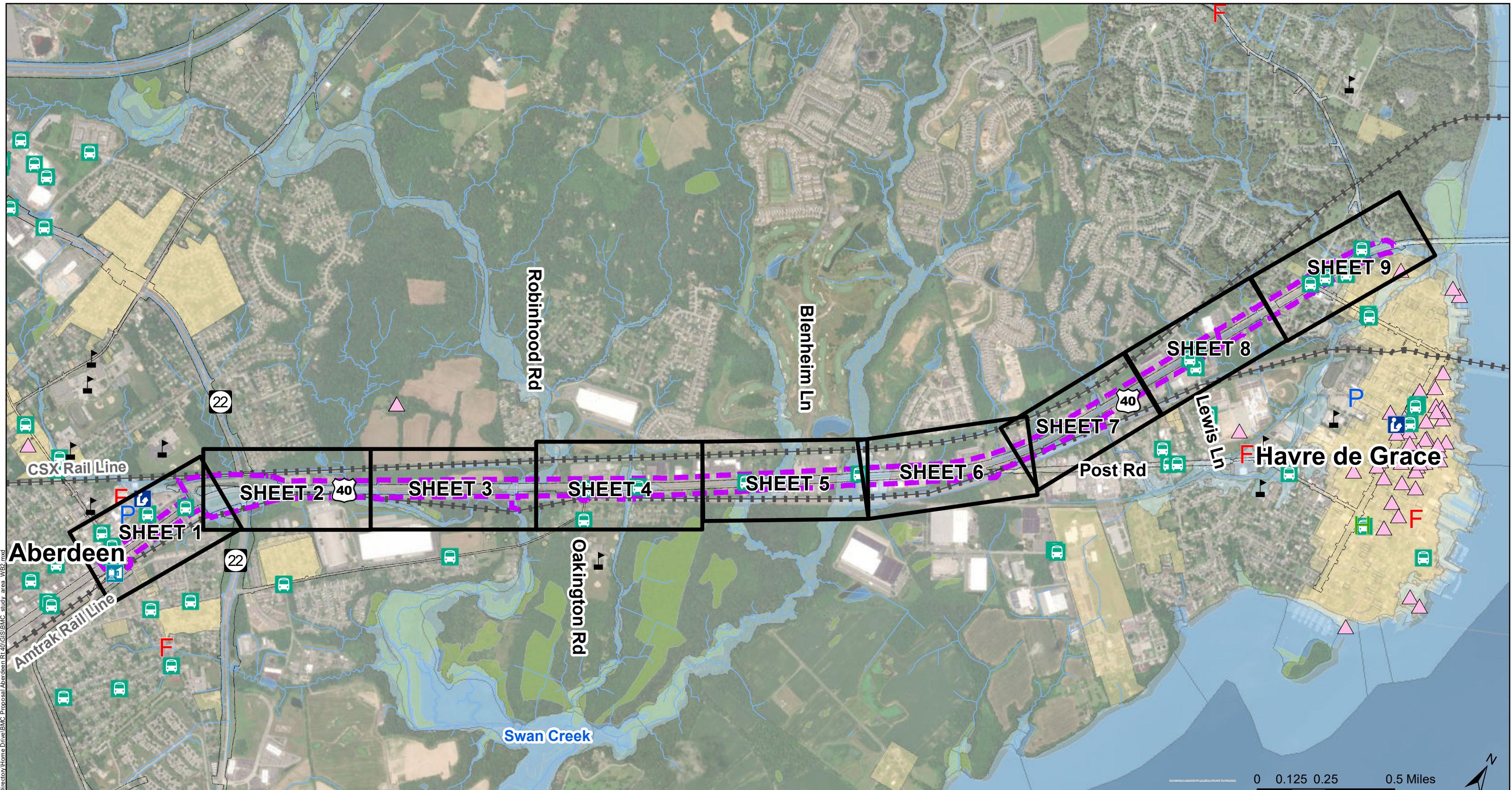
**BALTIMORE**  
**METROPOLITAN**  
**COUNCIL**

**AECOM**

 US 40 Study Area  
  MDOT SHA Right-of-Way  
  Train Stop  
  Bus Stop  
  Railroad  
 Sidewalks  
  School  
  Library  
  Police Station  
  Fire Station  
  Hospital  
 Historic Districts  
  Historic Landmark  
  Wetland  
  Streams/Rivers  
  100 Year Floodplain

All data is from Harford County GIS Map Server & Maryland GIS Map Server





Concept Plan for  
**Bicycle**  **AND** **Pedestrian**   
Improvements along US 40 (Aberdeen to Havre de Grace)

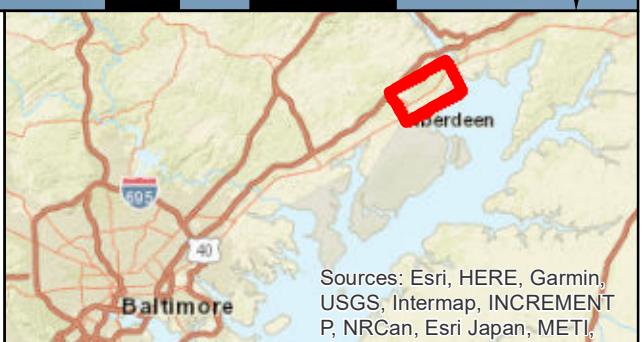
Westbound  
Shared-Use Path

**BALTIMORE**  
**METROPOLITAN**  
**COUNCIL**

**AECOM**

— US 40 Study Area  
- - - MDOT SHA Right-of-Way  
— Railroad  
— Sidewalks  
— School  
— Library  
P Police Station  
F Fire Station  
H Hospital  
Historic Districts  
Historic Landmark  
Wetland  
Streams/Rivers  
100 Year Floodplain

All data is from Harford County GIS Map Server & Maryland GIS Map Server





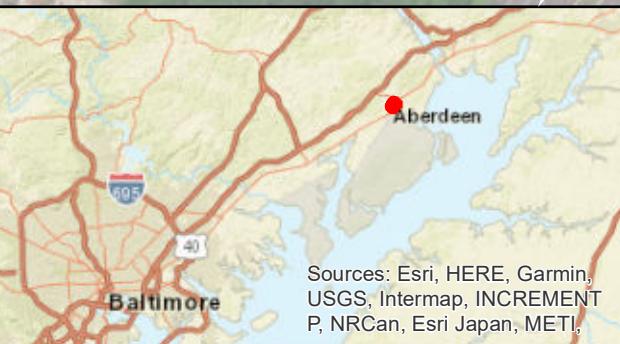
## Westbound

Westbound Shared-Use Path Sheet 1 of 9  
 BALTIMORE METROPOLITAN COUNCIL 

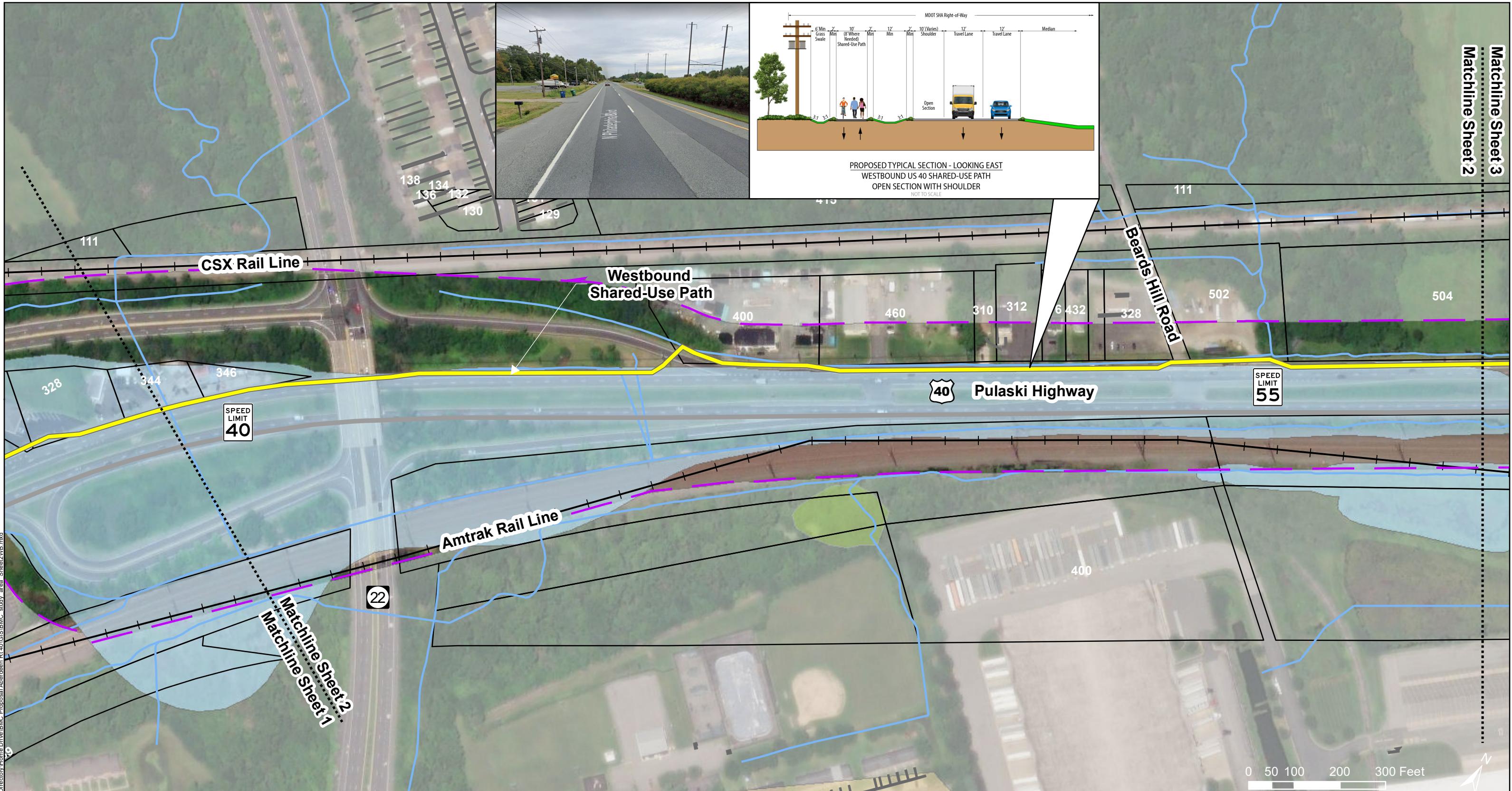
Legend for the US 40 Study Area map:

- US 40 Study Area (purple dashed line)
- Parcels (grey line)
- Train Stop (train icon)
- Bus Stop (bus icon)
- Railroad (double line with cross-tie icon)
- Sidewalks (grey square)
- School (flag icon)
- Library (book icon)
- Police Station (blue P icon)
- Fire Station (red F icon)
- Hospital (green H icon)
- Signalized Intersection (traffic light icon)
- Historic Districts (yellow square)
- Historic Landmark (pink triangle icon)
- Wetland (green square)
- Streams/Rivers (blue square)
- 100 Year Floodplain (light blue square)
- Shared-Use Path (yellow square)
- Use of Existing Sidewalk (yellow and grey striped square)

Note: Each driveway and entrance crossing will require upgrades to be compliant with the Americans with Disabilities Act (ADA).  
All data is from Harford County GIS Map Server & Maryland GIS Map Server.



Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCAN, Esri Japan, METI



Concept Plan for  
**Bicycle**  **AND** **Pedestrian**   
Improvements along US 40 (Aberdeen to Havre de Grace)

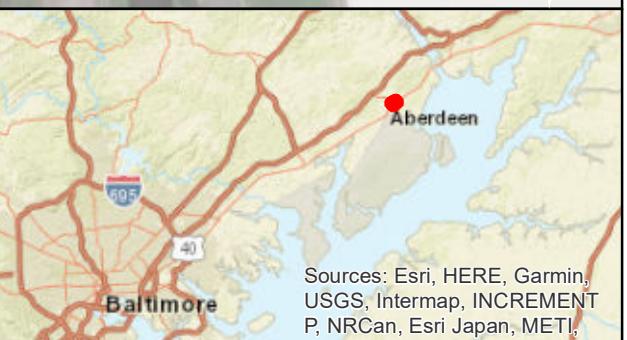
Westbound Shared-Use Path Sheet 2 of 9

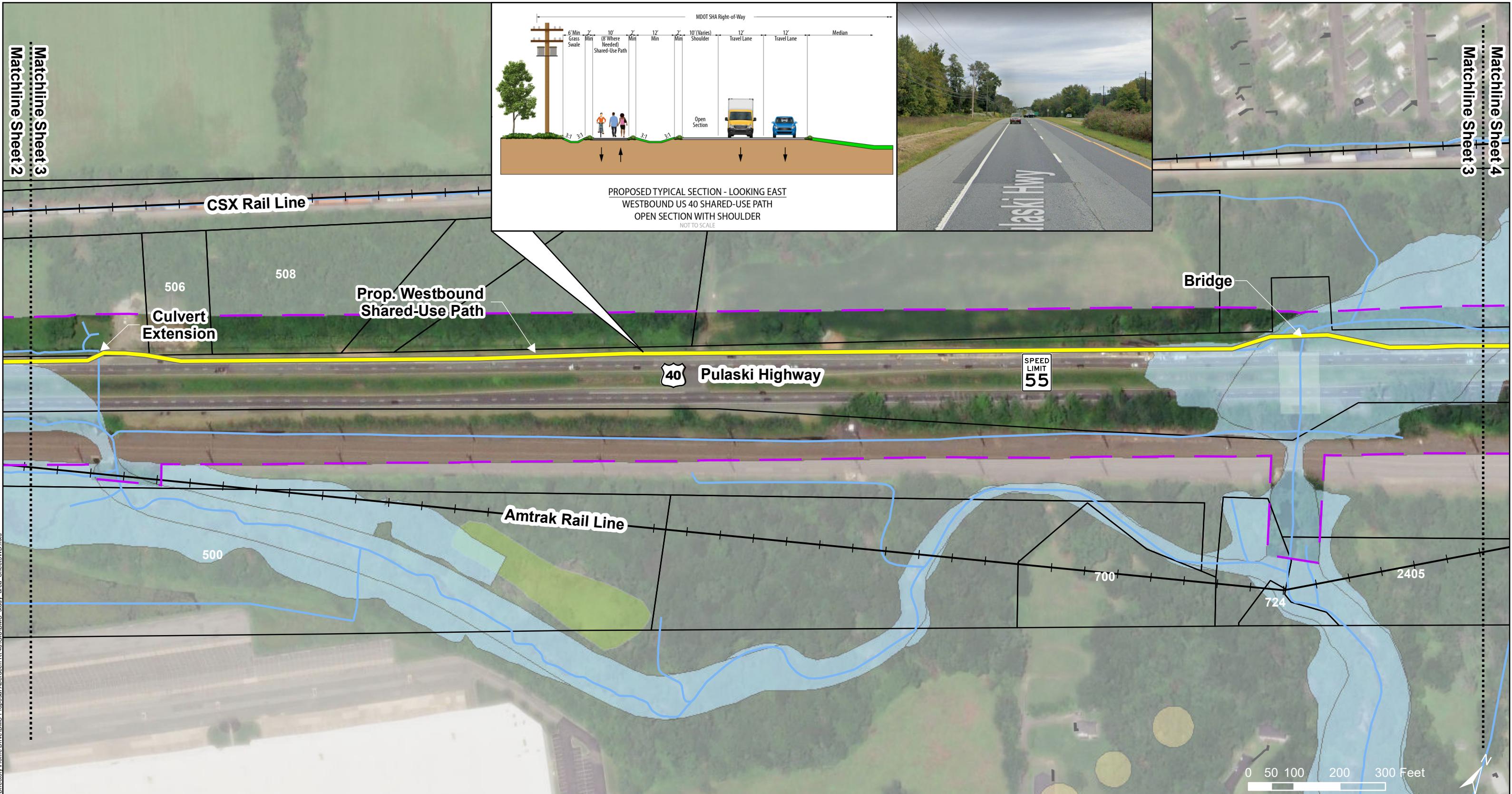
BALTIMORE METROPOLITAN COUNCIL

**AECOM**

- US 40 Study Area
- Parcels
- Railroad
- Sidewalks
- School
- Library
- Police Station
- Bus Stop
- Train Stop
- Historic Districts
- Historic Landmark
- Wetland
- Streams/Rivers
- 100 Year Floodplain
- Shared-Use Path
- Use of Existing Sidewalk

Note: Each driveway and entrance crossing will require upgrades to be compliant with the Americans with Disabilities Act (ADA).  
All data is from Harford County GIS Map Server & Maryland GIS Map Server





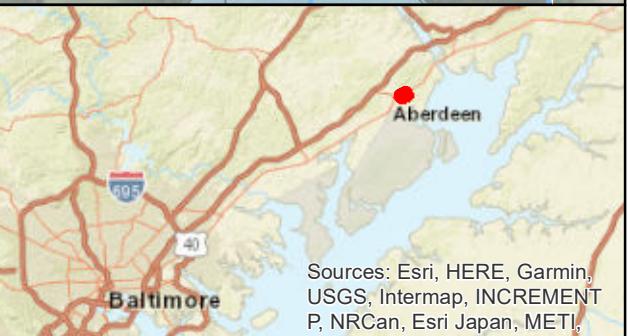
Concept Plan for  
**Bicycle**  **Pedestrian**   
Improvements along US 40 (Aberdeen to Havre de Grace)

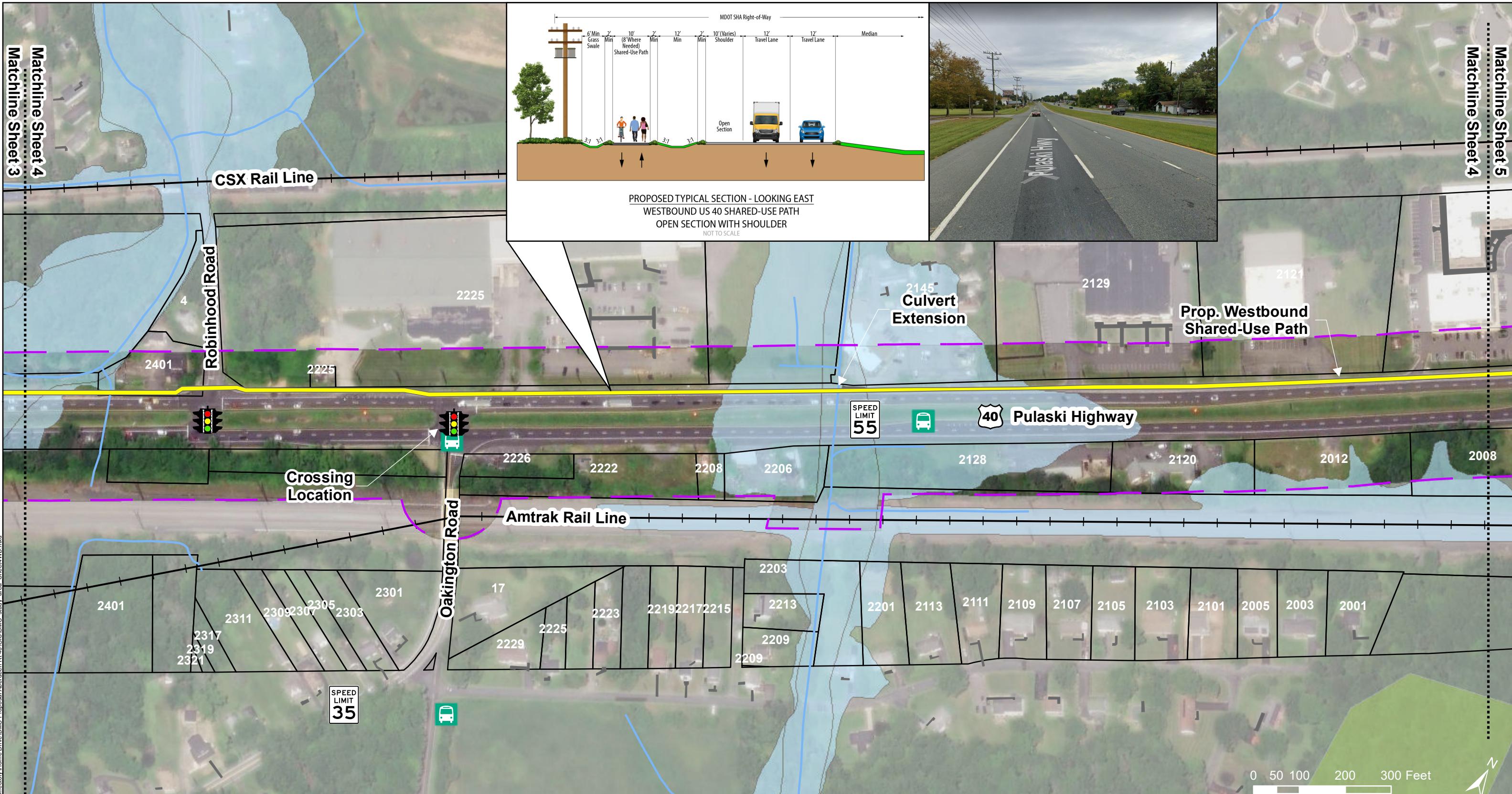
Westbound Shared-Use Path Sheet 3 of 9

BALTIMORE METROPOLITAN COUNCIL **AECOM**

- US 40 Study Area
- Parcels
- Train Stop
- Bus Stop
- ++ Railroad
- Sidewalks
- School
- Library
- P Police Station
- F Fire Station
- H Hospital
- Signalized Intersection
- Historic Districts
- Historic Landmark
- Wetland
- Streams/Rivers
- 100 Year Floodplain
- Shared-Use Path
- Use of Existing Sidewalk

Note: Each driveway and entrance crossing will require upgrades to be compliant with the Americans with Disabilities Act (ADA).  
All data is from Harford County GIS Map Server & Maryland GIS Map Server





Concept Plan for  
**Bicycle**  **AND** **Pedestrian**   
Improvements along US 40 (Aberdeen to Havre de Grace)

Westbound Shared-Use Path Sheet 4 of 9

**BALTIMORE METROPOLITAN COUNCIL** **AECOM**

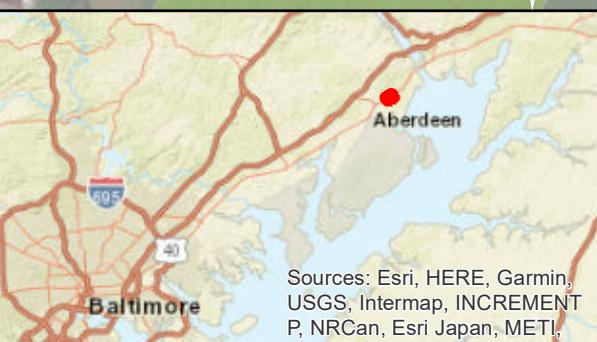
— US 40 Study Area — Parcels  Train Stop  Bus Stop — Railroad

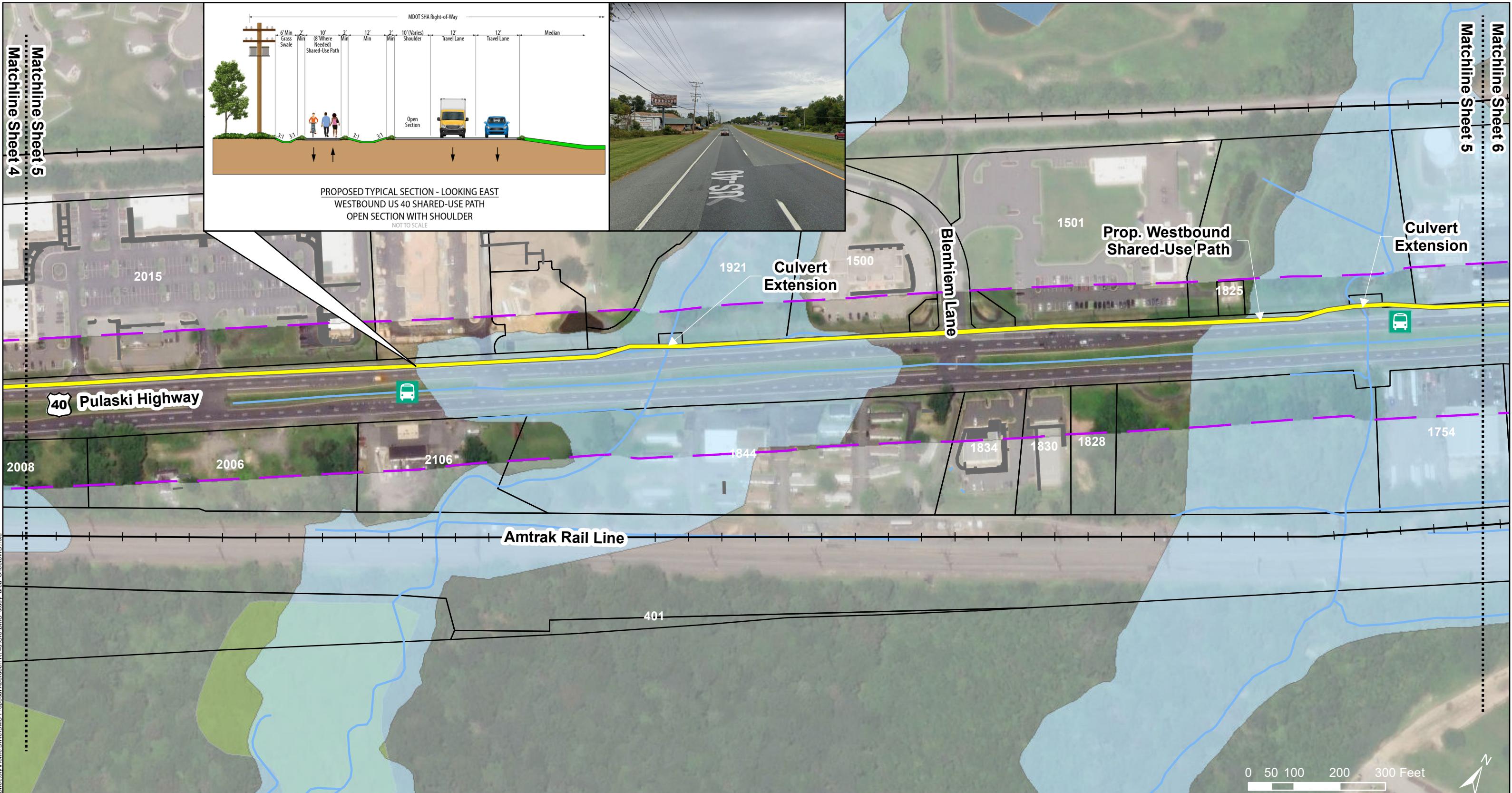
— Sidewalks  School  Library  Police Station  Fire Station  Hospital  Signalized Intersection

— Historic Districts  Historic Landmark  Wetland  Streams/Rivers  100 Year Floodplain

— Shared-Use Path  Use of Existing Sidewalk

Note: Each driveway and entrance crossing will require upgrades to be compliant with the Americans with Disabilities Act (ADA).  
All data is from Harford County GIS Map Server & Maryland GIS Map Server





Concept Plan for  
**Bicycle**  **AND** **Pedestrian**   
Improvements along US 40 (Aberdeen to Havre de Grace)

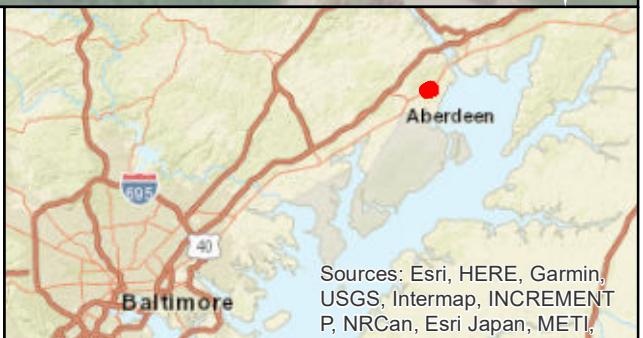
Westbound Shared-Use Path Sheet 5 of 9

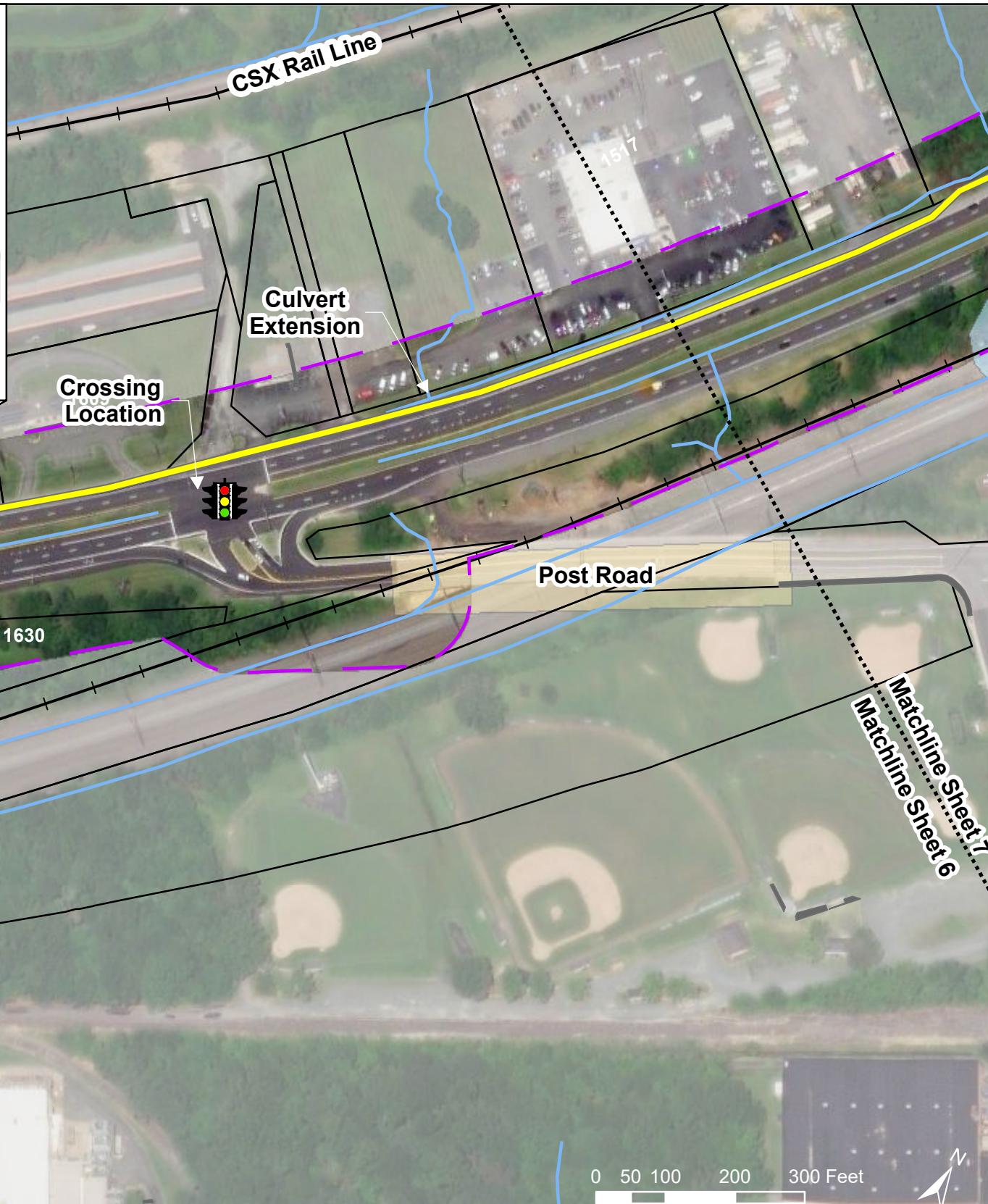
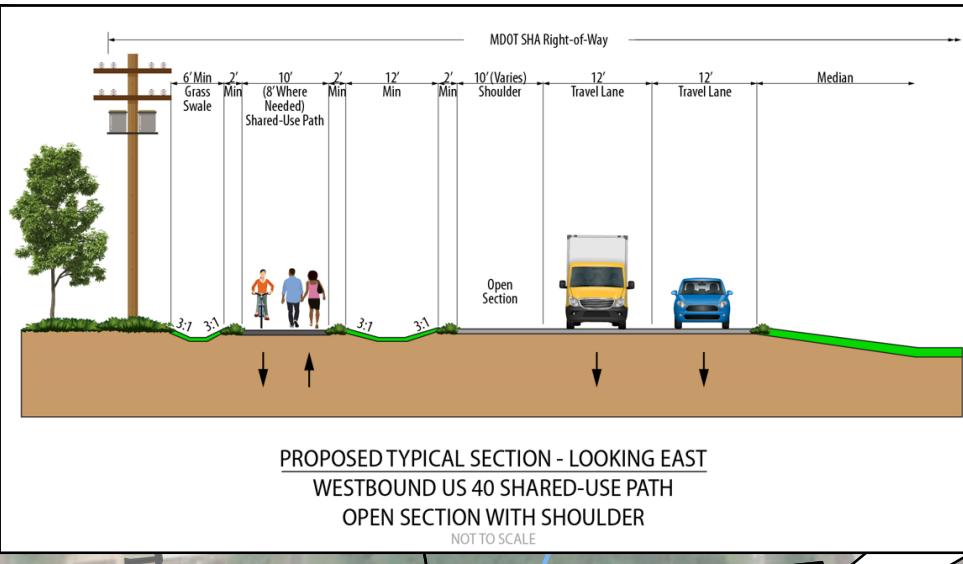
BALTIMORE METROPOLITAN COUNCIL

**AECOM**

US 40 Study Area Parcels Train Stop Bus Stop Railroad  
Sidewalks School Library Police Station Fire Station Hospital Signalized Intersection  
Historic Districts Historic Landmark Wetland Streams/Rivers 100 Year Floodplain  
Shared-Use Path Use of Existing Sidewalk

Note: Each driveway and entrance crossing will require upgrades to be compliant with the Americans with Disabilities Act (ADA).  
All data is from Harford County GIS Map Server & Maryland GIS Map Server





Concept Plan for  
**Bicycle** **AND** **Pedestrian**   
Improvements along US 40 (Aberdeen to Havre de Grace)

Westbound Shared-Use Path Sheet 6 of 9

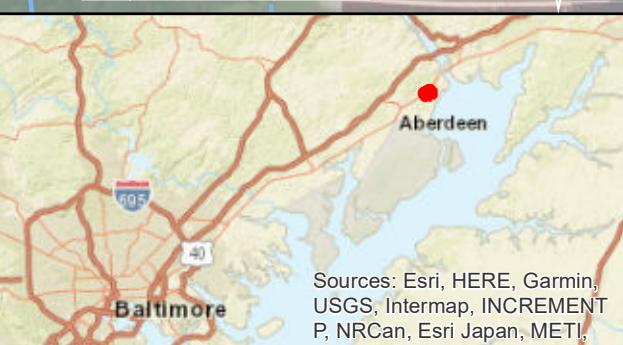
BALTIMORE METROPOLITAN COUNCIL **AECOM**

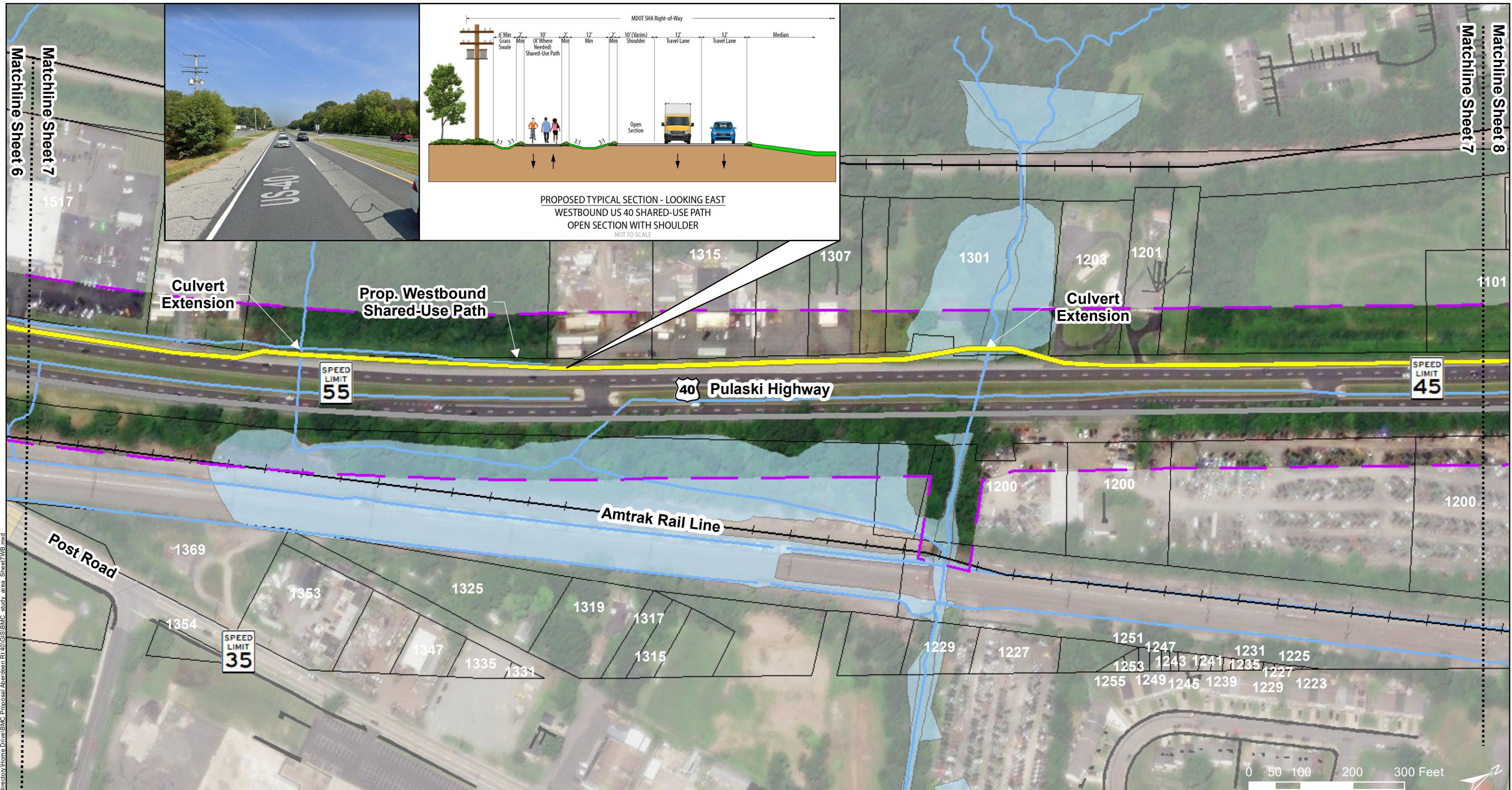
Legend and notes for the map:

- US 40 Study Area (dashed purple line)
- Parcels (black lines)
- Train Stop (train icon)
- Bus Stop (bus icon)
- Railroad (double line with cross-hatch)
- Sidewalks (grey line)
- School (black square)
- Library (blue square)
- Police Station (blue square with 'P')
- Fire Station (red square with 'F')
- Hospital (green square with 'H')
- Historic Districts (yellow area)
- Historic Landmark (pink triangle)
- Wetland (green area)
- Streams/Rivers (blue lines)
- 100 Year Floodplain (light blue area)
- Shared-Use Path (yellow line)
- Use of Existing Sidewalk (yellow line with blue cross-hatch)
- Signalized Intersection (red and green traffic lights)

Note: Each driveway and entrance crossing will require upgrades to be compliant with the Americans with Disabilities Act (ADA). All data is from Harford County GIS Map Server & Maryland GIS Map Server.

Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI,





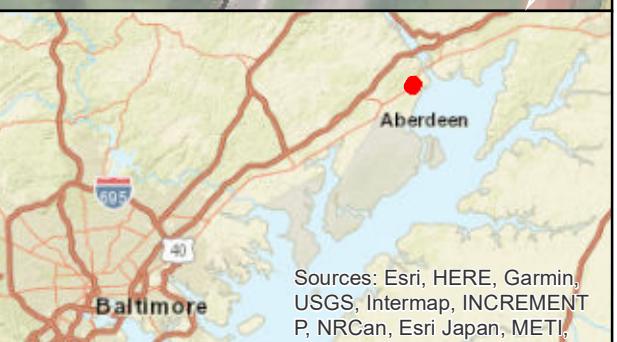
Westbound  
Shared-Use Path

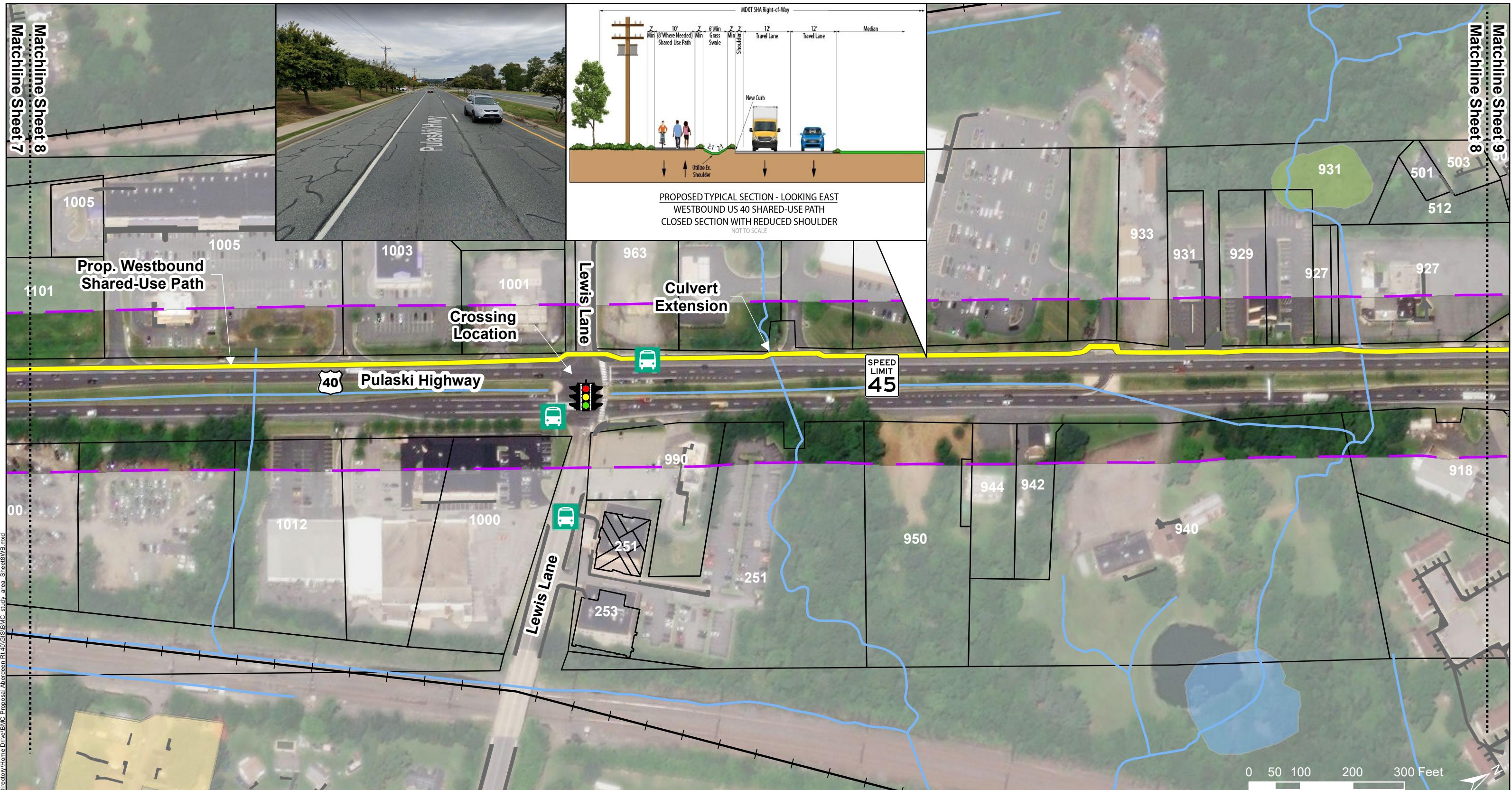


Legend for the US 40 Study Area map:

- US 40 Study Area (purple dashed line)
- Parcels (grey line)
- Train Stop (train icon)
- Bus Stop (bus icon)
- Railroad (double line)
- Sidewalks (grey square)
- School (flag icon)
- Library (book icon)
- Police Station (blue P)
- Fire Station (red F)
- Hospital (green H)
- Signalized Intersection (traffic light icon)
- Historic Districts (yellow square)
- Historic Landmark (pink triangle)
- Wetland (green square)
- Streams/Rivers (blue square)
- 100 Year Floodplain (light blue square)
- Shared-Use Path (yellow square)
- Use of Existing Sidewalk (yellow and blue striped square)

Note: Each driveway and entrance crossing will require upgrades to be compliant with the Americans with Disabilities Act (ADA). All data is from Harford County GIS Map Server & Maryland GIS Map Server.





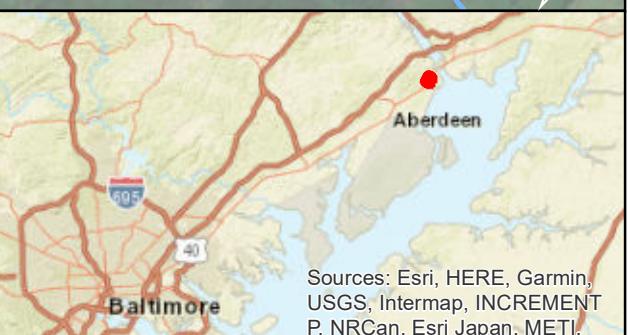
Concept Plan for  
**Bicycle**  **AND** **Pedestrian**   
Improvements along US 40 (Aberdeen to Havre de Grace)

Westbound Shared-Use Path Sheet 8 of 9

BALTIMORE METROPOLITAN COUNCIL **AECOM**

US 40 Study Area Parcels Train Stop Bus Stop Railroad  
 Sidewalks School Library Police Station Fire Station Hospital Signalized Intersection  
 Historic Districts Historic Landmark Wetland Streams/Rivers 100 Year Floodplain  
 Shared-Use Path Use of Existing Sidewalk

Note: Each driveway and entrance crossing will require upgrades to be compliant with the Americans with Disabilities Act (ADA).  
 All data is from Harford County GIS Map Server & Maryland GIS Map Server





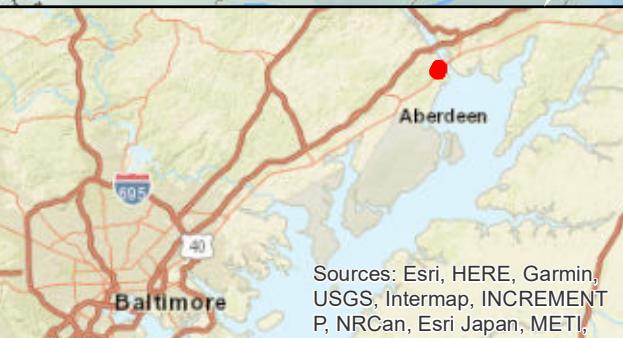
Concept Plan for  
**Bicycle**  **AND** **Pedestrian**   
Improvements along US 40 (Aberdeen to Havre de Grace)

Westbound Shared-Use Path  
Sheet 9 of 9

**BALTIMORE METROPOLITAN COUNCIL** **AECOM**

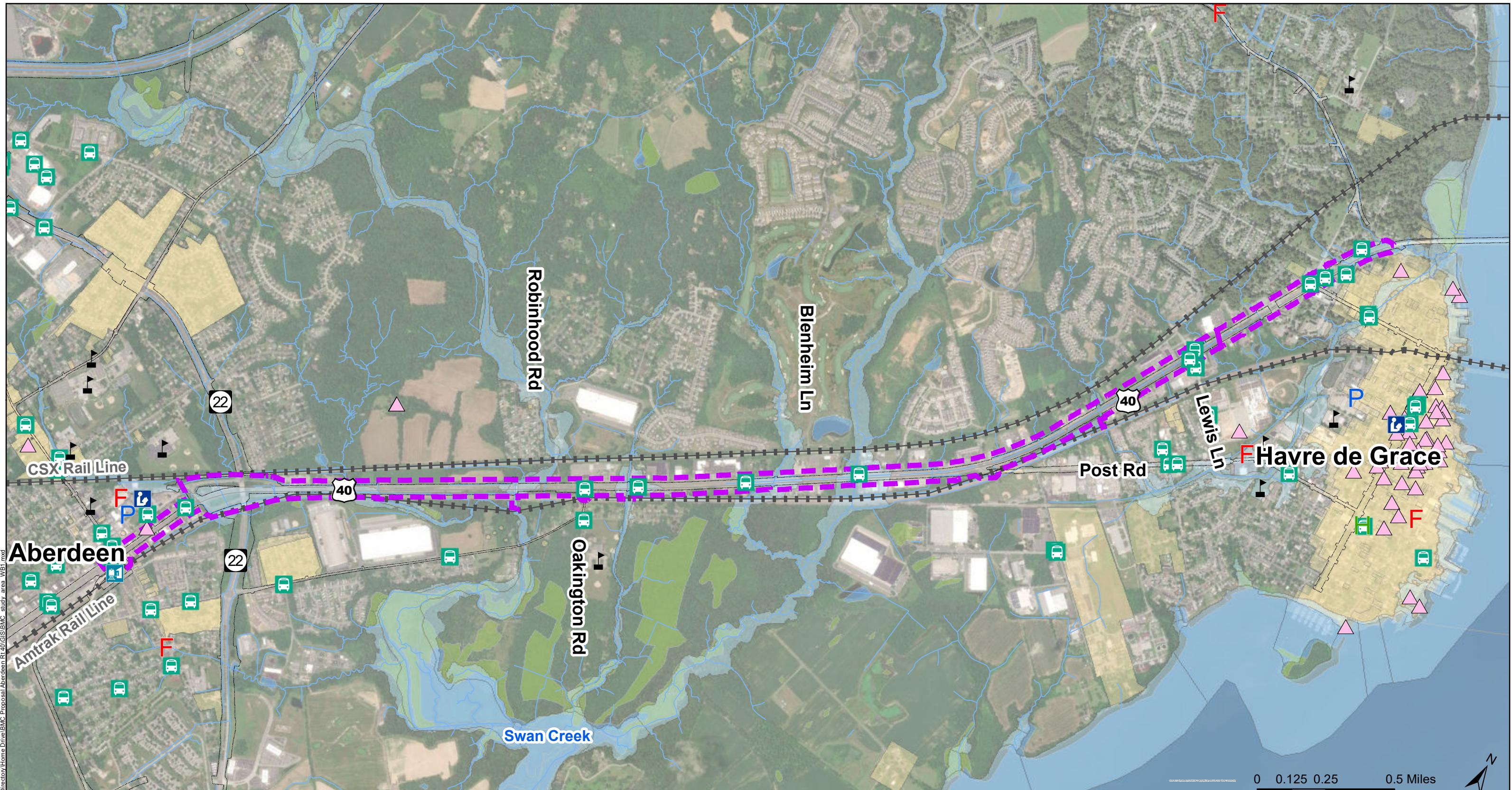
US 40 Study Area  
Parcels  
Train Stop  
Bus Stop  
Railroad  
Sidewalks  
School  
Library  
Police Station  
Fire Station  
Hospital  
Signalized Intersection  
Historic Districts  
Historic Landmark  
Wetland  
Streams/Rivers  
100 Year Floodplain  
Shared-Use Path  
Use of Existing Sidewalk

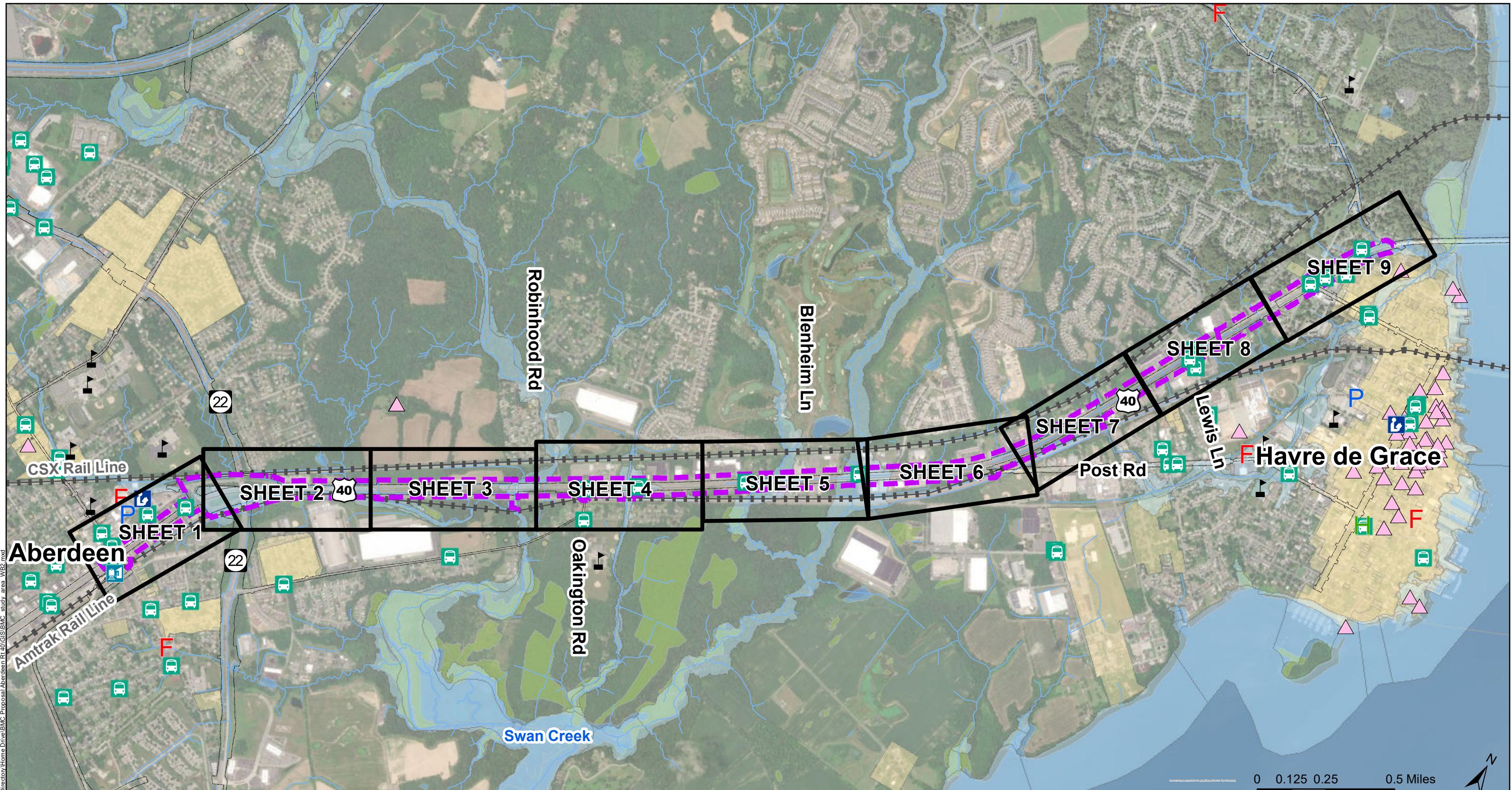
Note: Each driveway and entrance crossing will require upgrades to be compliant with the Americans with Disabilities Act (ADA).  
All data is from Harford County GIS Map Server & Maryland GIS Map Server



## Appendix C:

### Concept Plan – Combined US 40 Shared-Use Path





Concept Plan for  
**Bicycle**  **AND** **Pedestrian**   
Improvements along US 40 (Aberdeen to Havre de Grace)

Combined  
Shared-Use Path

**BALTIMORE**  
**METROPOLITAN**  
**COUNCIL**

**AECOM**

US 40 Study Area  
MDOT SHA Right-of-Way  
Sidewalks  
Historic Districts  
Historic Landmark  
Wetland  
Streams/Rivers  
100 Year Floodplain

All data is from Harford County GIS Map Server & Maryland GIS Map Server





# Concept Plan for **Bicycle** **AND** **Pedestrian**

## Improvements along US 40 (Aberdeen to Havre de Grace)

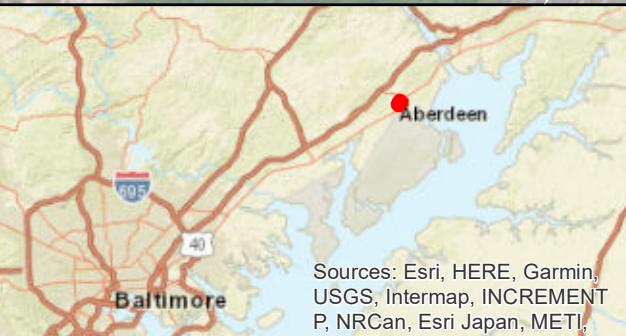
## Combined Shared-Use Path

BALTIMORE METROPOLITAN COUNCIL AECOM

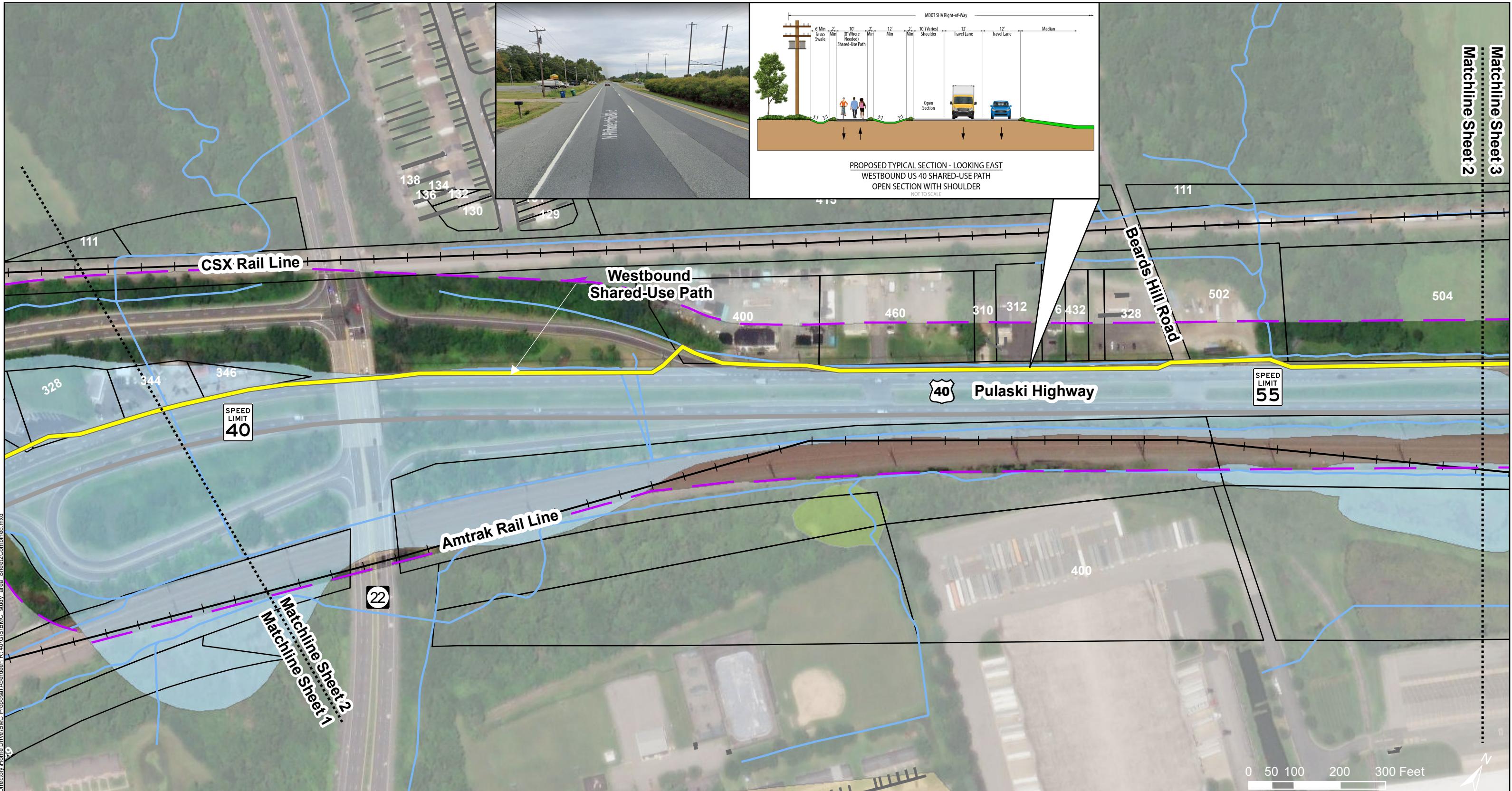
Legend for the US 40 Study Area map:

- US 40 Study Area (Pink dashed line)
- Parcels (Black line)
- Train Stop (Blue train icon)
- Bus Stop (Blue bus icon)
- Railroad (Black double line)
- Sidewalks (Grey rectangle)
- School (Black flag icon)
- Library (Blue person icon)
- Police Station (Blue P icon)
- Fire Station (Red F icon)
- Hospital (Green H icon)
- Signalized Intersection (Traffic light icon)
- Historic Districts (Yellow rectangle)
- Historic Landmark (Pink triangle)
- Wetland (Green rectangle)
- Streams/Rivers (Blue rectangle)
- 100 Year Floodplain (Light blue rectangle)
- Shared-Use Path (Yellow rectangle)
- Use of Existing Sidewalk (Yellow and black striped rectangle)

Note: Each driveway and entrance crossing will require upgrades to be compliant with the Americans with Disabilities Act (ADA).  
All data is from Harford County GIS Map Server & Maryland GIS Map Server.



Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCAN, Esri Japan, METI



Concept Plan for  
**Bicycle**  **AND** **Pedestrian**   
Improvements along US 40 (Aberdeen to Havre de Grace)

Combined Shared-Use Path Sheet 2 of 9

BALTIMORE METROPOLITAN COUNCIL **AECOM**

US 40 Study Area

Parcels

Train Stop

Bus Stop

Railroad

Sidewalks

School

Library

Police Station

Fire Station

Hospital

Signalized Intersection

Historic Districts

Historic Landmark

Wetland

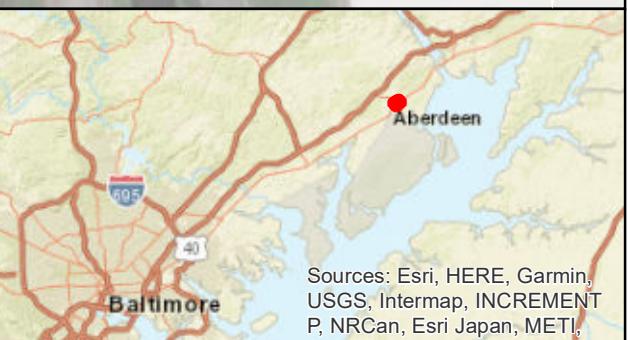
Streams/Rivers

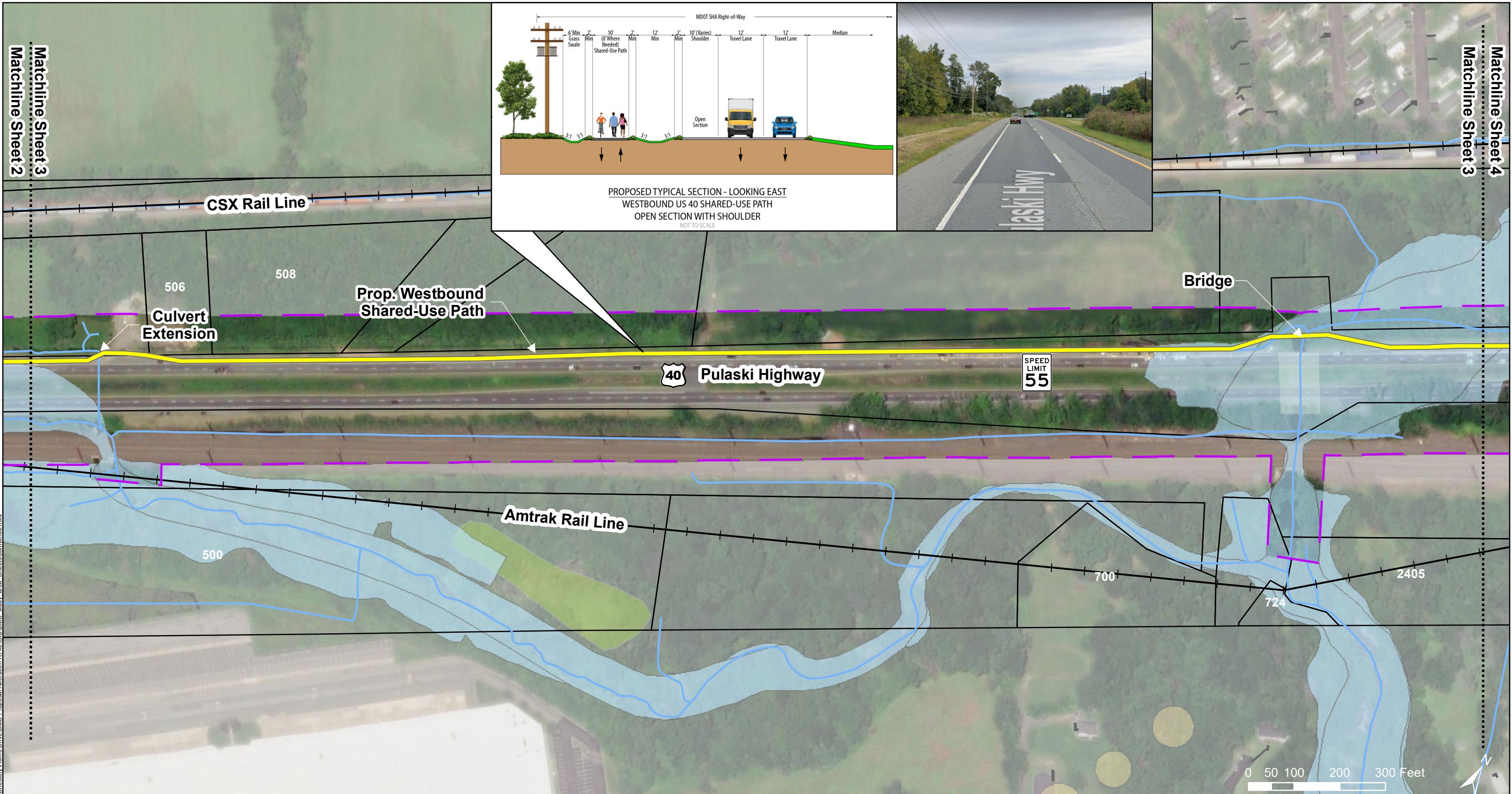
100 Year Floodplain

Shared-Use Path

Use of Existing Sidewalk

Note: Each driveway and entrance crossing will require upgrades to be compliant with the Americans with Disabilities Act (ADA).  
All data is from Harford County GIS Map Server & Maryland GIS Map Server





Concept Plan for  
**Bicycle**  **AND** **Pedestrian**   
Improvements along US 40 (Aberdeen to Havre de Grace)

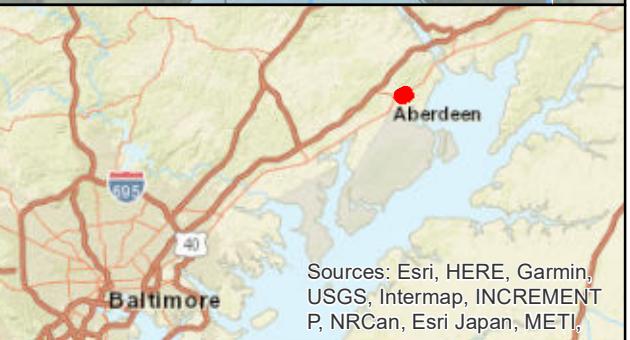
Combined Shared-Use Path Sheet 3 of 9

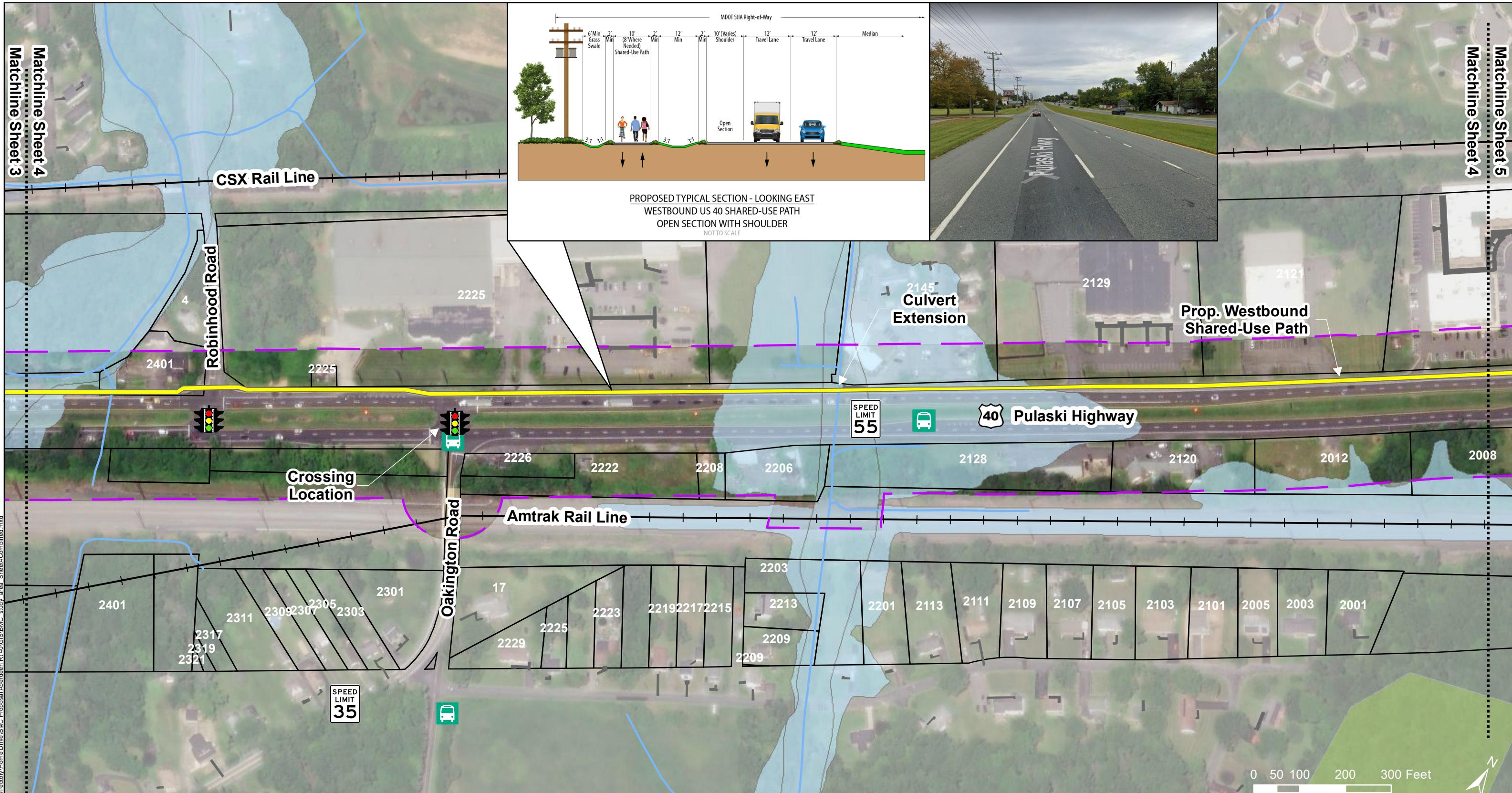
BALTIMORE METROPOLITAN COUNCIL

**AECOM**

US 40 Study Area Parcels Train Stop Bus Stop Railroad  
Sidewalks School Library Police Station Fire Station Hospital Signalized Intersection  
Historic Districts Historic Landmark Wetland Streams/Rivers 100 Year Floodplain  
Shared-Use Path Use of Existing Sidewalk

Note: Each driveway and entrance crossing will require upgrades to be compliant with the Americans with Disabilities Act (ADA).  
All data is from Harford County GIS Map Server & Maryland GIS Map Server





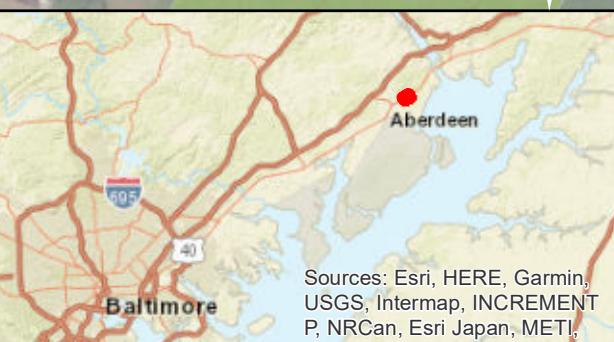
Concept Plan for  
**Bicycle**  **Pedestrian**   
Improvements along US 40 (Aberdeen to Havre de Grace)

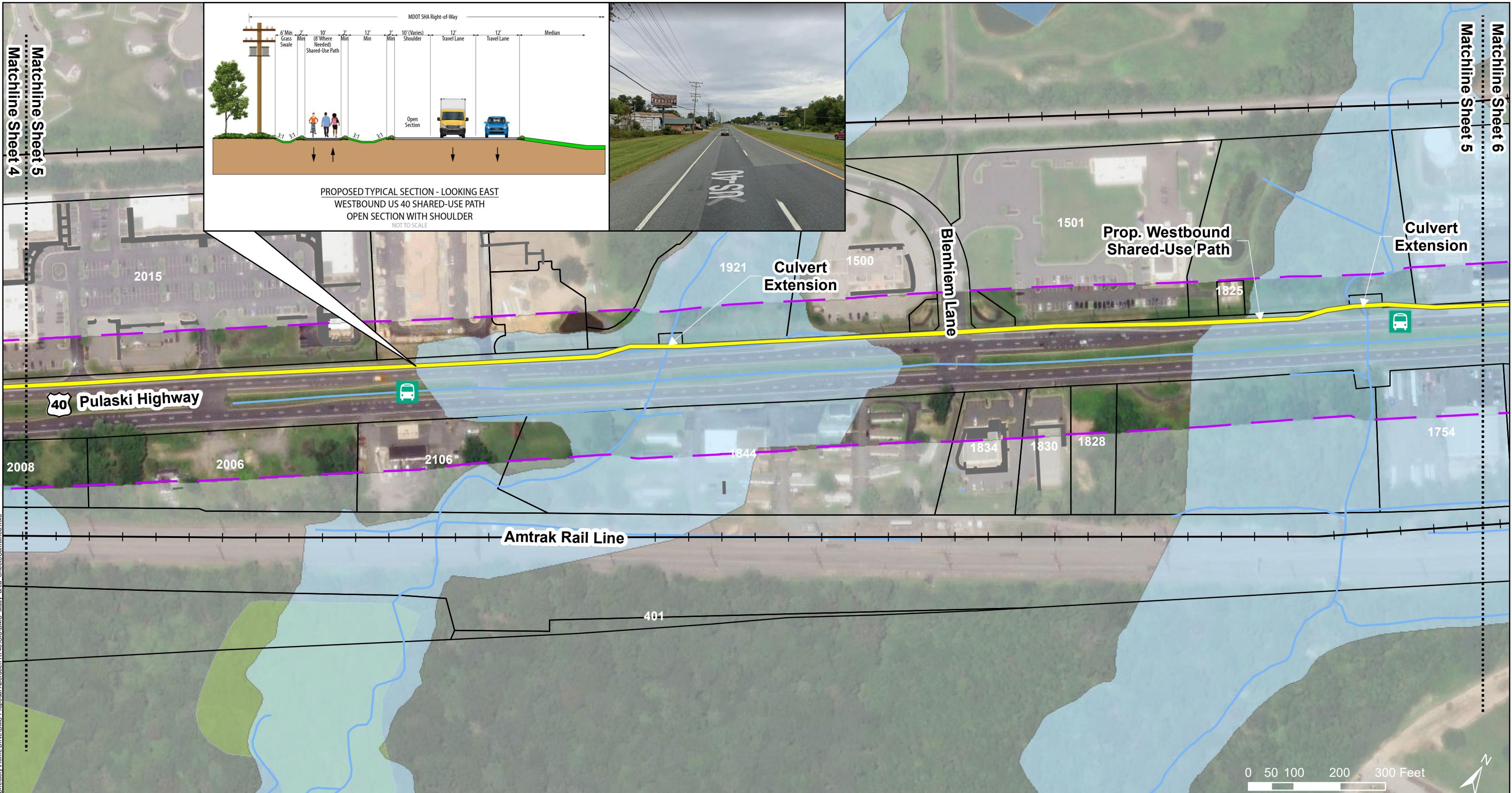
Combined Shared-Use Path Sheet 4 of 9

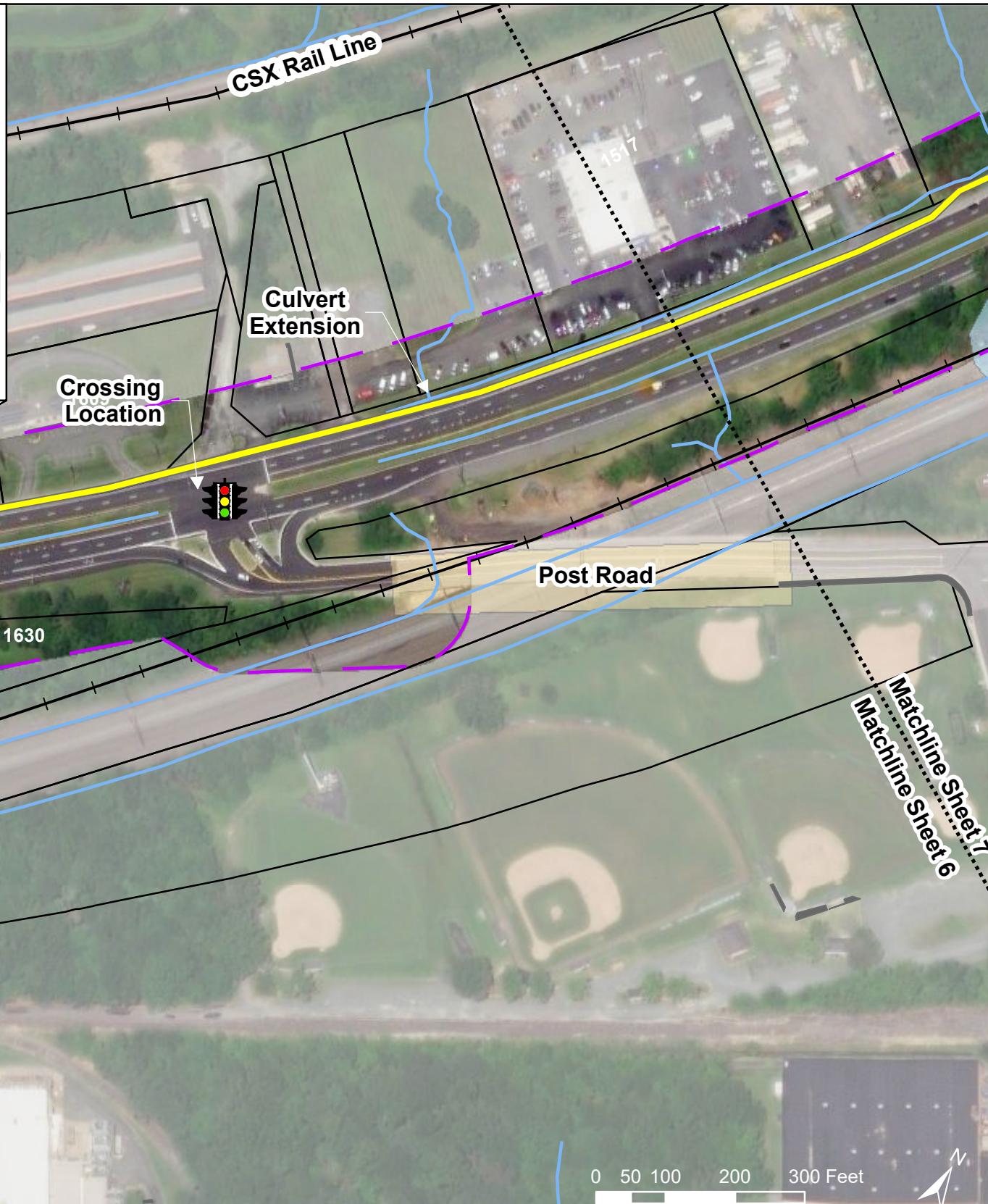
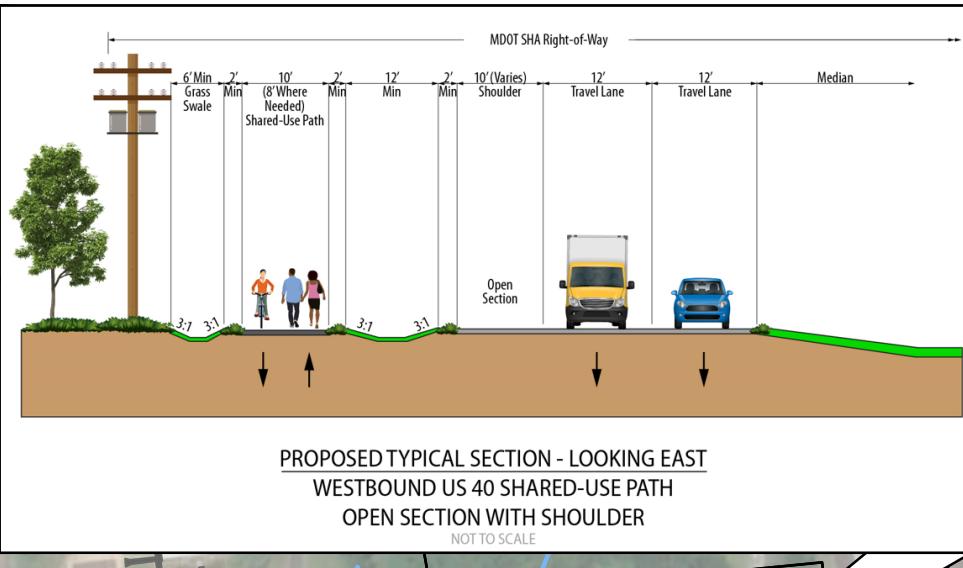
**BALTIMORE METROPOLITAN COUNCIL** **AECOM**

- US 40 Study Area
- Parcels
- Train Stop
- Bus Stop
- Railroad
- Sidewalks
- School
- Library
- Police Station
- Fire Station
- Hospital
- Signalized Intersection
- Historic Districts
- Historic Landmark
- Wetland
- Streams/Rivers
- 100 Year Floodplain
- Shared-Use Path
- Use of Existing Sidewalk

Note: Each driveway and entrance crossing will require upgrades to be compliant with the Americans with Disabilities Act (ADA).  
All data is from Harford County GIS Map Server & Maryland GIS Map Server







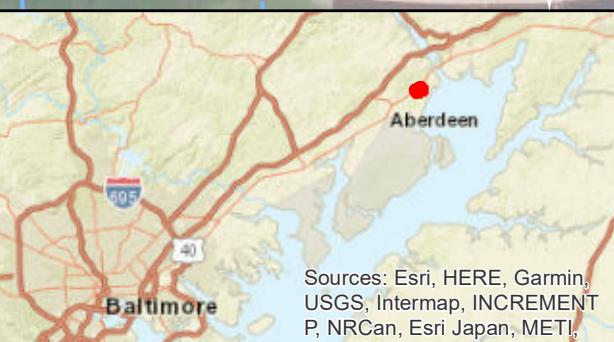
Concept Plan for  
**Bicycle**  **AND** **Pedestrian**   
Improvements along US 40 (Aberdeen to Havre de Grace)

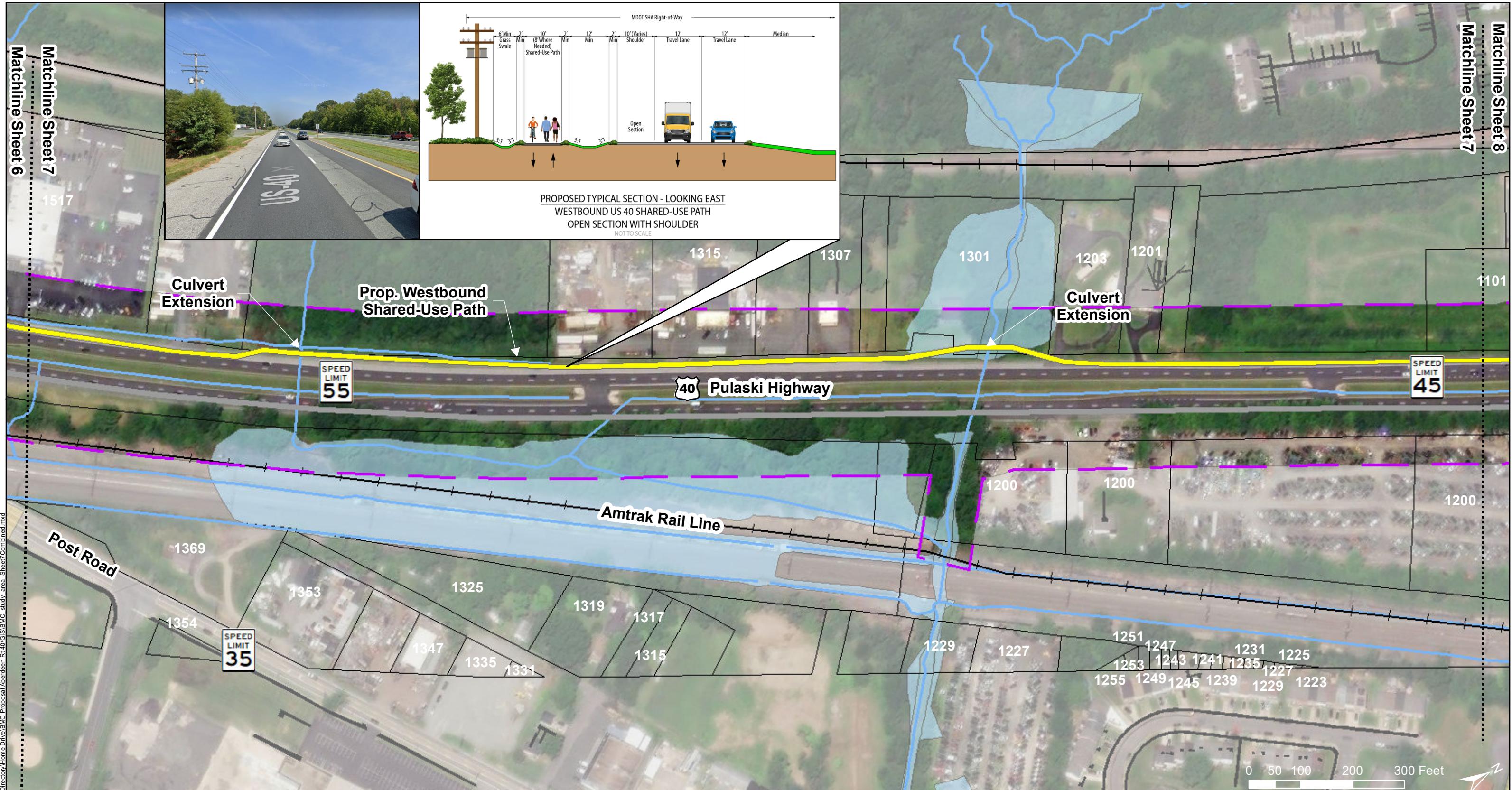
Combined Shared-Use Path Sheet 6 of 9

BALTIMORE METROPOLITAN COUNCIL **AECOM**

US 40 Study Area Parcels Train Stop Bus Stop Railroad  
Sidewalks School Library Police Station Fire Station Hospital Signalized Intersection  
Historic Districts Historic Landmark Wetland Streams/Rivers 100 Year Floodplain  
Shared-Use Path Use of Existing Sidewalk

Note: Each driveway and entrance crossing will require upgrades to be compliant with the Americans with Disabilities Act (ADA).  
All data is from Harford County GIS Map Server & Maryland GIS Map Server





Concept Plan for  
**Bicycle**  **AND** **Pedestrian**   
Improvements along US 40 (Aberdeen to Havre de Grace)

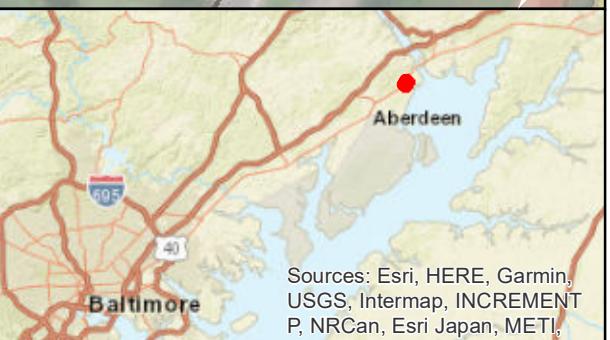
Combined Shared-Use Path Sheet 7 of 9

BALTIMORE METROPOLITAN COUNCIL

**AECOM**

US 40 Study Area Parcels Train Stop Bus Stop Railroad  
 Sidewalks School Library Police Station Fire Station Hospital Signalized Intersection  
 Historic Districts Historic Landmark Wetland Streams/Rivers 100 Year Floodplain  
 Shared-Use Path Use of Existing Sidewalk

Note: Each driveway and entrance crossing will require upgrades to be compliant with the Americans with Disabilities Act (ADA).  
 All data is from Harford County GIS Map Server & Maryland GIS Map Server





Concept Plan for  
**Bicycle**  **AND** **Pedestrian**   
Improvements along US 40 (Aberdeen to Havre de Grace)

Combined Shared-Use Path Sheet 8 of 9

BALTIMORE METROPOLITAN COUNCIL **AECOM**

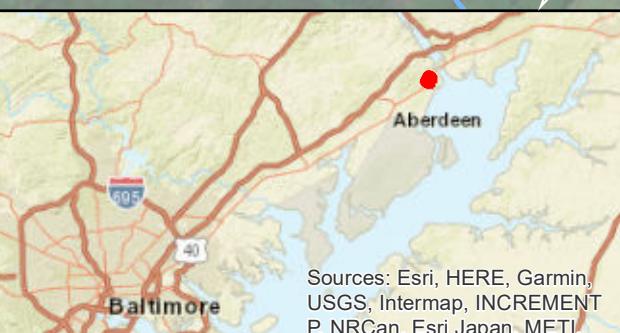
US 40 Study Area Parcels Train Stop Bus Stop Railroad

Sidewalks School Library Police Station Fire Station Hospital Signalized Intersection

Historic Districts Historic Landmark Wetland Streams/Rivers 100 Year Floodplain

Shared-Use Path Use of Existing Sidewalk

Note: Each driveway and entrance crossing will require upgrades to be compliant with the Americans with Disabilities Act (ADA).  
All data is from Harford County GIS Map Server & Maryland GIS Map Server





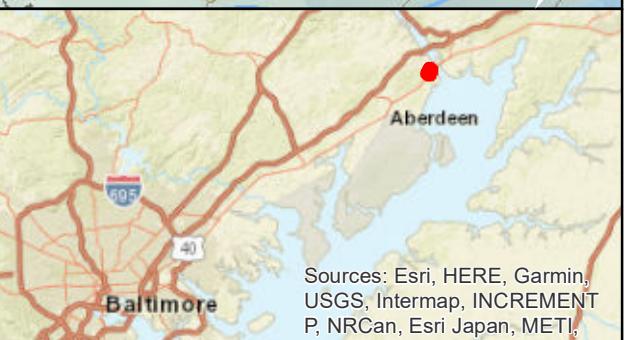
## Combined

Shared-Use Path Sheet 9 of 9

Legend for the US 40 Study Area map:

- US 40 Study Area (purple line)
- Parcels (grey line)
- Train Stop (blue train icon)
- Bus Stop (blue bus icon)
- Railroad (black line with cross-ticks)
- Sidewalks (grey rectangle)
- School (black flag icon)
- Library (blue book icon)
- Police Station (blue P icon)
- Fire Station (red F icon)
- Hospital (green H icon)
- Signalized Intersection (red traffic light icon)
- Historic Districts (yellow rectangle)
- Historic Landmark (pink triangle icon)
- Wetland (green rectangle)
- Streams/Rivers (blue rectangle)
- 100 Year Floodplain (light blue rectangle)
- Shared-Use Path (yellow rectangle)
- Use of Existing Sidewalk (yellow and blue diagonal stripes)

Note: Each driveway and entrance crossing will require upgrades to be compliant with the Americans with Disabilities Act (ADA). All data is from Harford County GIS Map Server & Maryland GIS Map Server.



Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCAN, Esri Japan, METI

Appendix D:  
Cost Estimate – Westbound US 40 Shared-Use Path

DATE:	December 2022	PREPARED BY:	AECOM	
PROJECT LIMITS	US 40 Westbound / Northern Side - APG Road to Superior Street Shared-Use Path	PRJ LENGTH:	5.00 mi.	
JOB DESCRP:	Concept Plan for Bicycle and Pedestrian Improvements along US 40 (Aberdeen to Havre de Grace)	BMC PROJECT NO.:	22T02	
<b>ITEM NO. CAT. 1 (PRELIMINARY) - DESCRIPTION QUANTITY UNIT UNIT COST TOTAL</b>				
1001 50% Categories 2, 5, and 6 INCLUDES MAINTENANCE OF TRAFFIC, MOBILIZATION, ETC.	1	LS \$	740,051.19	\$740,051
CONTINGENCY at 30% BASED ON CONCEPT-LEVEL DESIGN PHASE & SIZE OF PROJECT	30%			\$222,016
<b>SUBTOTAL CATEGORY 1 COST</b>				<b>\$962,067</b>
<b>ITEM NO. CAT. 2 (GRADING) - DESCRIPTION QUANTITY UNIT UNIT COST TOTAL</b>				
2001 CLASS II EXCAVATION (ASSUMED 3,000 CY PER MILE)	14,245	CY \$	48.00	\$683,759
CONTINGENCY at 30% BASED ON CONCEPT-LEVEL DESIGN PHASE & SIZE OF PROJECT	30%			\$205,128
<b>SUBTOTAL CATEGORY 2 COST</b>				<b>\$888,887</b>
<b>ITEM NO. CAT. 3 (DRAINAGE) - DESCRIPTION QUANTITY UNIT UNIT COST TOTAL</b>				
3001 STORMWATER MANAGEMENT FACILITIES	1	LS \$	400,000.00	\$400,000
CONTINGENCY at 30% BASED ON CONCEPT-LEVEL DESIGN PHASE & SIZE OF PROJECT	30%			\$120,000
<b>SUBTOTAL CATEGORY 3 COST</b>				<b>\$520,000</b>
<b>ITEM NO. CAT. 4 (STRUCTURES) - DESCRIPTION QUANTITY UNIT UNIT COST TOTAL</b>				
4001 12'x100' PRE-ENGINEERED BRIDGE	1	EA \$	285,000.00	\$285,000
4002 CULVERT EXTENSION	9	EA \$	200,000.00	\$1,800,000
4003 RETAINING WALL	0	LF \$	400.00	\$0
CONTINGENCY at 30% BASED ON CONCEPT-LEVEL DESIGN PHASE & SIZE OF PROJECT	30%			\$625,500
<b>SUBTOTAL CATEGORY 4 COST</b>				<b>\$2,710,500</b>
<b>ITEM NO. CAT. 5 (PAVING) - DESCRIPTION QUANTITY UNIT UNIT COST TOTAL</b>				
5001 SUPERPAVE ASPHALT MIX 9.5MM FOR SURFACE, PG 64S-22, LEVEL 2	3,044	TON \$	125.00	\$380,558
5002 4 INCH GRADED AGGREGATE BASE COURSE	3,058	SY \$	10.00	\$30,585
CONTINGENCY at 30% BASED ON CONCEPT-LEVEL DESIGN PHASE & SIZE OF PROJECT	30%			\$9,176
<b>SUBTOTAL CATEGORY 5 COST</b>				<b>\$420,319</b>
<b>ITEM NO. CAT. 6 (SHOULDERS) - DESCRIPTION QUANTITY UNIT UNIT COST TOTAL</b>				
6001 CONCRETE RAMP WITH DETECTABLE WARNING	214	EA \$	1,800.00	\$385,200
CONTINGENCY at 30% BASED ON CONCEPT-LEVEL DESIGN PHASE & SIZE OF PROJECT	30%			\$115,560
<b>SUBTOTAL CATEGORY 6 COST</b>				<b>\$500,760</b>
<b>ITEM NO. CAT. 7 (LANDSCAPING) - DESCRIPTION QUANTITY UNIT UNIT COST TOTAL</b>				
12% Categories 2, 5, and 6	1	LS \$	177,612.28	\$177,612
CONTINGENCY	30%			\$53,284
<b>SUBTOTAL CATEGORY 7 COST</b>				<b>\$230,896</b>
<b>ITEM NO. CAT. 8 (TRAFFIC) - DESCRIPTION QUANTITY UNIT UNIT COST TOTAL</b>				
8001 PEDESTRIAN SIGNAL CROSSING	6	EA \$	125,000.00	\$750,000
CONTINGENCY at 30% BASED ON CONCEPT-LEVEL DESIGN PHASE & SIZE OF PROJECT	30%			\$225,000
<b>SUBTOTAL CATEGORY 8 COST</b>				<b>\$975,000</b>
<b>ITEM NO. CAT. 9 (UTILITIES) - DESCRIPTION QUANTITY UNIT UNIT COST TOTAL</b>				
8% TOTAL COST	1	LS \$	1,303,158.40	\$1,303,158
CONTINGENCY at 30% BASED ON CONCEPT-LEVEL DESIGN PHASE & SIZE OF PROJECT	30%			\$390,948
<b>SUBTOTAL CATEGORY 9 COST</b>				<b>\$1,694,106</b>
<b>CATEGORY DESCRIPTION TOTAL</b>				
1 PRELIMINARY				\$962,067
2 GRADING				\$888,887
3 DRAINAGE				\$520,000
4 STRUCTURES				\$2,710,500
5 PAVING				\$420,319
6 SHOULDERS				\$500,760
7 LANDSCAPING				\$230,896
8 TRAFFIC				\$975,000
9 UTILITIES				\$1,694,106
<b>TOTAL CONSTRUCTION PROJECT COST</b>				<b>\$8,902,536</b>

**CONSTRUCTION COST PER MILE** **\$1,780,507**  
(EXCLUDES RIGHT-OF-WAY AND ENGINEERING COSTS)

Appendix E:  
Cost Estimate – Combined US 40 Shared-Use Path

**CONSTRUCTION COST PER MILE**

## Appendix F:

### Comments Received – Public Comment Period #2

## Public Comment Period #2

COMMENT #	COMMENT	ZIP
General Comments - Project Website		
1	I absolutely love this! I am a HdG resident and I would love to have this available. Right now there are no safe options, and I believe there have even been some fatalities. I would love something entirely safe that people would feel comfortable jogging, using strollers, and biking with their families.	21078
	Thank you for this. We need it so badly.	
2	As a resident of downtown Havre de Grace I love the idea of having a bicycle and pedestrian path along Route 40. I can see my family using the path, and it would also make me feel more comfortable when driving on Route 40 as I wouldn't have to worry about bicyclists and pedestrians on the shoulder. I prefer the Combined option as I live on the eastbound side of Route 40 in Havre de Grace.	21078
3	Better spent uses for taxpayer dollars. This affects only a very small percentage of citizens.	21217
4	Yes, let's remove all the roads to really save money!	21229
5	I love this concept! Either the Westbound or the Combined options sound good to me, whichever one will help the most people and will be the most feasible to complete. This project would GREATLY benefit residents, visitors, and businesses in Havre de Grace and Aberdeen!	21078
6	I am an HdG resident, and as a parent of young children, I love this plan! I think anything that will help connect our two communities is needed! I also think that having more options for walking/strollers and biking is a fantastic idea!!!	21001
7	Bicycles don't pay registration fees or highway taxes. Keep them off the State Roads.	21213
8	Those fees and taxes pay for roughly 70 of the road budget. I guess pedestrians and cyclists and other non-car residents are entitled to 30% of the roads then??	75046
9	Careful, your ignorance is showing.	21229
10	The majority of road maintenance, repair, and construction comes from property taxes. Are you suggesting I deserve a discount on my property tax for riding my bike?	21229
11	This is so needed and a lane to cross hatem bridge for bikes and pedestrians as well	21001
12	pls. we need it. I will literally change lanes into the left lane when going west on 40 at night because it gets too narrow for bikers or pedestrians in this exact described area (between Aberdeen and HdG). and as much as I just want to get home from work, I *really* don't want to hit anyone, especially when there is limited visibility. yes, some of that is construction. but it is still walked. it is still biked. protect them. protect *me* when I become one of them.  protected lanes, separated from the road. lighting. islands as they cross intersections. No sharrows. 55 mph is *far* too fast for either form of transportation to safely coexist with cars.  p.s. I would take either, but I would use the westbound option more.	21001
13	p.p.s. signage is not infrastructure. if all y'all do is cheap paint and signs, I will cry. do more; do better.	21001
14	I am a Havre de Grace resident and I love the idea of creating safer routes for everyone within our community. This includes bikes, strollers, wheelchairs, skateboards and pedestrians. I personally think the Westbound option is the best. It will connect our neighborhoods to services and each other. Personally, it makes the prospect of biking to work on APG more doable and appealing. I would love to be able to do this.	21224
15	Improvements are necessary as the County continues to grow. Pedestrian improvements help to remove the stigma from residents who don't have reliable transportation so they can get to their destination safely. These improvements will also encourage exercise.	21001
16	Definitely support the westbound option over the combined, seems to be the safest, most efficient option.	21921
17	I love the idea of a bike/pedestrian path!	10118
18	I fully support creating safer routes for everyone within the community - including people on bikes, people with strollers, people in wheelchairs, people walking, etc.	20723

Public Comment Period #2		
COMMENT #	COMMENT	ZIP
19	<p>Any "combined use" path that has to deal with major traffic intersections won't get used until police start enforcing current traffic laws and ALL the intersections are made safe. Would it not be much easier and safer to build a path parallel to the CSX line? You also need to extend the line all the way from Philly to Baltimore, and need to improve EVERY access road in Harford county.</p>	21229
20	<p>Overall recommendation - Combined Option.</p> <p>The Combined Alignment seems to be a safer approach to Havre de Grace as it avoids the more complicated side of the Ostego St/Ohio St/US 40 intersection. That intersection looks very unsafe for attempting to run a shared use path through parallel to US 40, with the slip lane from US-40 to Ohio St there would be very poor visibility and likely crashes and injuries or fatalities. Even on the Combined Alignment, this section has a number of street crossing, the design should consider closing slip lanes to increase path user safety. The design should also consider eliminating the intersection between Ohio, Morrison, and US 40 to reduce path/street conflict.</p> <p>Segment 6 on the Interactive Map does not show a safe Bike/Ped crossing at the Post Rd intersection. Post Rd has sidewalks across the bridge over the CSX tracks and provides a continuous and more direct pedestrian route to downtown Havre de Grace. Please add a safe pedestrian (and bike) crossing opportunity and extend the shared use path to the existing sidewalk on this road.</p> <p>Segment 1 - The section marked "Use Existing Sidewalk" is unacceptable from a cyclist safety point of view. This is a thin sidewalk that extends directly to the curb with no buffer. In this section pedestrians would be at risk of being struck by cyclists and cyclists would be at risk of being "doored" by a parked car. The existing parking lane should be removed to allow for a properly buffered shared use path.</p> <p>Segment 1 - The non-signalized intersection between US 40 and the MD 22 access road has two slip lanes that are likely used at high speed, consider aligning the trail to cross at the mid-point of the MD-22 access road with a pedestrian crossing beacon (consider a constant yellow flash that could be triggered to full red by pedestrian/cyclist request button).</p> <p>Segment 1 - The shared use path should be extended across the intersection to end at the train station.</p>	21093
21	<p>1. At a near zero cost, regularly have a road sweeper clean both the westbound and eastbound lanes. Cleaning from Routes 715 to 755 would also improve area for bicyclists.</p> <p>2. What not to do (when insufficient funds becomes the issue) is to paint and sign the area, such as was done on Maryland Route 22 between I-95 and Old Post Road. Almost every significant intersection was handled with a different scheme, making it difficult for both motorists and bicyclist to know what to expect. Most amusing (NOT) was to end the bicycle route before the intersection, rather than think through a reasonable engineering solution. Doing "nothing" is better than poorly planned stripe painting.</p>	27707
22	I highly support the idea of a bike/pedestrian path here and would support the combined option. Any stretches that share the road (on the shoulder) must be protected by a barrier that separates cyclists and pedestrians from car traffic. Otherwise, it is unlikely to get much use.	21224
23	The shoulder from Aberdeen to HdG is relatively wide and safe compared to EVERY OTHER ROAD in the county. No one is going to load their bike on a car, drive it to a safe point to ride from, ride to their destination, which also is well off the safe path and they have no means of now reaching without the car they already left....and then return to the car. Creating safe walking and cycling routes STARTS with creating safe roads and trails in EVERY residential and commercial area. Only after all that work is done do you start a project like this. Doing this project now provides no means for someone to use it and just further (falsely) proves no one will use it. If your goal is to prevent our community from having safe walking and riding paths, this is a great plan.	21229

## Public Comment Period #2

COMMENT #	COMMENT	ZIP
24	This segment of Rt. 40 is congested with auto/truck traffic; not bicycles and pedestrians. Fix the auto/truck congestion problem FIRST. The congestion in this area increased markedly when the tolls were last adjusted on I-95 and Rt. 40. I-95 traffic was pushed to Rt. 40 when everyone saw they could avoid the higher I-95 tolls by going to Rt. 40. The bike/pedestrian path is a attempted solution to a non-existent problem. Fix the toll roads/auto/truck congestion. That's a priority problem.	21911
General Comments - Public Open House		
25	The whole path should stay West Bound side. Forcing those who go to the end (Erie) to cross US 40 makes no sense.	
26	Recommend combined option. If logical termini is an issue, consider connecting to Joe K trail, which ends near Superior St.	
27	E bikes are illegal in shared pedestrian space for good reason! I go faster than a 40 & have more mass than Herschel Walker. A harder hit than possible in the NFL! I ride on median strips, shoulders but never on shared pedestrian. There are about zero trails for all terrain e-bikes. Consider median strips & grass area. Joe K Trail, sidewalks, most of the proposed path are not good due to pedestrian travel.	21028
28	Need to widen culvert #1 on map 5, #2 on map 4 and bridge #3 on map 3. Both sides of Rt 40. Dangerous Bottlenecks. <i>NOTE: culvert labeled #1 is located approximately 875' east of Blenheim Lane, culvert labeled #2 is located approximately 1,350' east of Robinhood Road, and bridge labeled #3 is located approximately 785' west of Robinhood Road</i>  I commute on this road 80-100 days a year. These culverts/bridge need to be widened no matter what plan you go with Don't ned a separate trail - Just a wide safe shoulder!! Please find some money to make these culvert/shoulder improvements. I risk my life every day riding to work on this road that goes from 6'-8' down to 18" in 3 places on Rt 40 shoulder. The shoulder needs to be widened even if this plan never happens. DANGER DANGER DANGER	21028
29	Preferred combined option for ease of use on side of 40 closes to downtown HdG.	
30	This is fantastic! I like the combined option. It's more friendly to the recreational user of the path that would like more convenient better access to school, activity center, town, parks. It will be great if it can eventually go all the way down 40.	21078
31	Like the combined option - it retains existing sidewalks on west side and seems easier to expedite. Adds facilities where there are non.	21078
32	1. speed limit of 15 to encourage multi use ped/bike 2. Combined option preferred.	21078
33	I prefer combined option due to more people wanting to be on the side of downtown HdG. Thank you.	21001
34	I like the combined option w/crossover at Lewis St best.	21001
35	Post it comment: Westbound Option - Sheet 1 of 9 <i>(Western Terminus)</i> Connect shared-use path to Amtrak/MARC station!	
36	Post it comment: Westbound Option - Sheet 1 of 9 <i>(Western Terminus)</i> Potential Problems - 1. On-street parking for lot 132 to lot 12 on US 40. Loss of this parking that supports businesses; right-of-way and property will have to be acquired 2. On ramp to MD 22; higher speed traffic 3. Explore transportation alternative program funding, MDOT SHA	
37	Post it comment: Westbound Option - Sheet 1 of 9 <i>(MD 22 Ramp)</i> High traffic area for APG workers	
38	Post it comment: Westbound Option - Sheet 9 of 9 <i>(Eastern Terminus)</i> Westbound all the way is best - Crossing US 40 to the east at Lewis Lane would slow	

Public Comment Period #2		
COMMENT #	COMMENT	ZIP
39	Post it comment: Westbound Option - Sheet 9 of 9 <i>(Eastern Terminus)</i> Aberdeen supports Westbound option 9 of 9 eastern terminus Superior Street	
40	Post it comment: Combined Option - Sheet 1 of 2 <i>(Crossing Location - Lewis Lane)</i> This is a busy intersection - creating a crossover invites more pedestrians in the roadway.	
41	Post it comment: Combined Option - Sheet 1 of 2 <i>(Crossing Location - Lewis Lane)</i> No benefit	