

Baltimore National Heritage Area (BNHA) Preliminary Transit Analysis and Partner Engagement

Final Report Presentation

Prepared for BNHA and the National Park Service Chesapeake Gateways Office

Monday, July 15, 2024

Agenda

- I. NPS CHBA Overview
- II. Project Introduction
- III. Current Conditions
- IV. Transit Shuttle Service Route Scenarios
- V. Peer Systems
- VI. BNHA Partner Coordination
- VII. Recommended Next Steps



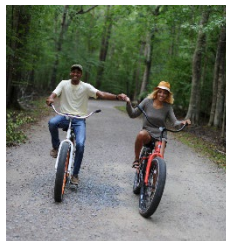
The Patterson Park Observatory

NPS Chesapeake Gateways



CHESAPEAKE GATEWAYS

- NPS Community Assistance Program for the 41 million-acre Chesapeake Watershed
 - to identify, conserve, restore, and interpret natural, recreational, historical, and cultural resources within the **Chesapeake Bay Watershed**; ...to enhance public education and access to the Chesapeake Bay.
- NPS provides support through:
 - Chesapeake Gateways Visitor Experience Network
 - Collaborative Partnerships
 - Technical Assistance, and
 - Grants



Introduction

Project Purpose

- U.S. DOT Volpe Center (Volpe) performed the analysis on behalf of BNHA and the National Park Service Chesapeake Gateways Office (NPS Chesapeake Gateways).
- Summarizes the preliminary feasibility of implementing a transit shuttle service connecting the points of interest and communities within the Baltimore National Heritage Area (BNHA) and other sites of interest in the City of Baltimore, MD.
 - Service route options provided herein are based on existing area transit services, historic visitation patterns (as available), potential interest in a dedicated BNHA shuttle service, anticipated implementation requirements, and other factors.
- **Goal:** Provide BNHA with information to support and inform future decision-making and next steps for partnering to implement any proposed service.
 - Potential concepts and proposed shuttle route scenarios serve only as an example of how transit service might be integrated into a managed access program for BNHA.
 - This is a preliminary feasibility study **not** a plan, proposal, or decision-making process.
 - Potential concepts identified in this report will need further planning, NEPA compliance, Section 106, design process and other steps prior to any implementation, for which BNHA and potential partners would be responsible for conducting.

Project Background

- BNHA comprises historic structures, landscapes, cultural traditions, parks, museums, and other resources that collectively convey the unique heritage of Baltimore.
 - Mission is to promote, preserve, and enhance Baltimore's cultural and historic legacy and natural resources for current and future generations.
- Report investigates scenarios for improving transit service to BNHA sites, either through:
 - A new partner-operated service; or,
 - Enhanced collaboration with the City of Baltimore on the existing Charm City Circulator.
- Study is informed by 2019 Baltimore Heritage Bus Tour Business Plan, developed by the John Hopkins Carey Business School.



Justice Thurgood Marshall Amenity Center

Project Background Continued

- City of Baltimore operates a public transportation service, the Charm City Circulator (CCC).
 - Provides connectivity to many of the BNHA sites.
 - However, BNHA staff indicate that current service connections do not connect visitors to these sites in an intentional and sufficient way.
- BNHA staff express a need to improve transit service to Heritage Area sites, which will help support the agency's mission by increasing visitation and equitable access.
 - Transit service route that connects BNHA sites in an intentional way could provide a new, unique visitor experience, offering visitors a cohesive story about Baltimore's heritage.



Charm City Circulator Purple Route Shuttle Operating in Baltimore
Source: U.S. DOT Volpe Center

Methodology



Conducted on-the-ground observations and received input from partners in the BNHA and the City of Baltimore.



Performed peer research to better understand the operations of similar transit systems in other regions; developed three case studies documenting similar example transit services.



Collected visitation and existing public transit service data with the assistance of partners; gathered and reviewed other sources of information (i.e., prior studies) to inform the analysis.



Developed three possible operating scenarios for a transit service route to serve BNHA based on input gathered from on-the-ground observations, the City's existing public transportation services/routes, and conversations with BNHA, NPS, and project partners.

Report Organization

- **Primary Audience:** BNHA and heritage site partners.
- **Secondary Audience:** City of Baltimore or other partners that may be interested in collaborating to implement the service.
- Report is organized into five sections:
 - Current Conditions
 - Transit Scenarios
 - Peer Systems
 - BNHA Partner Coordination
 - Next Steps

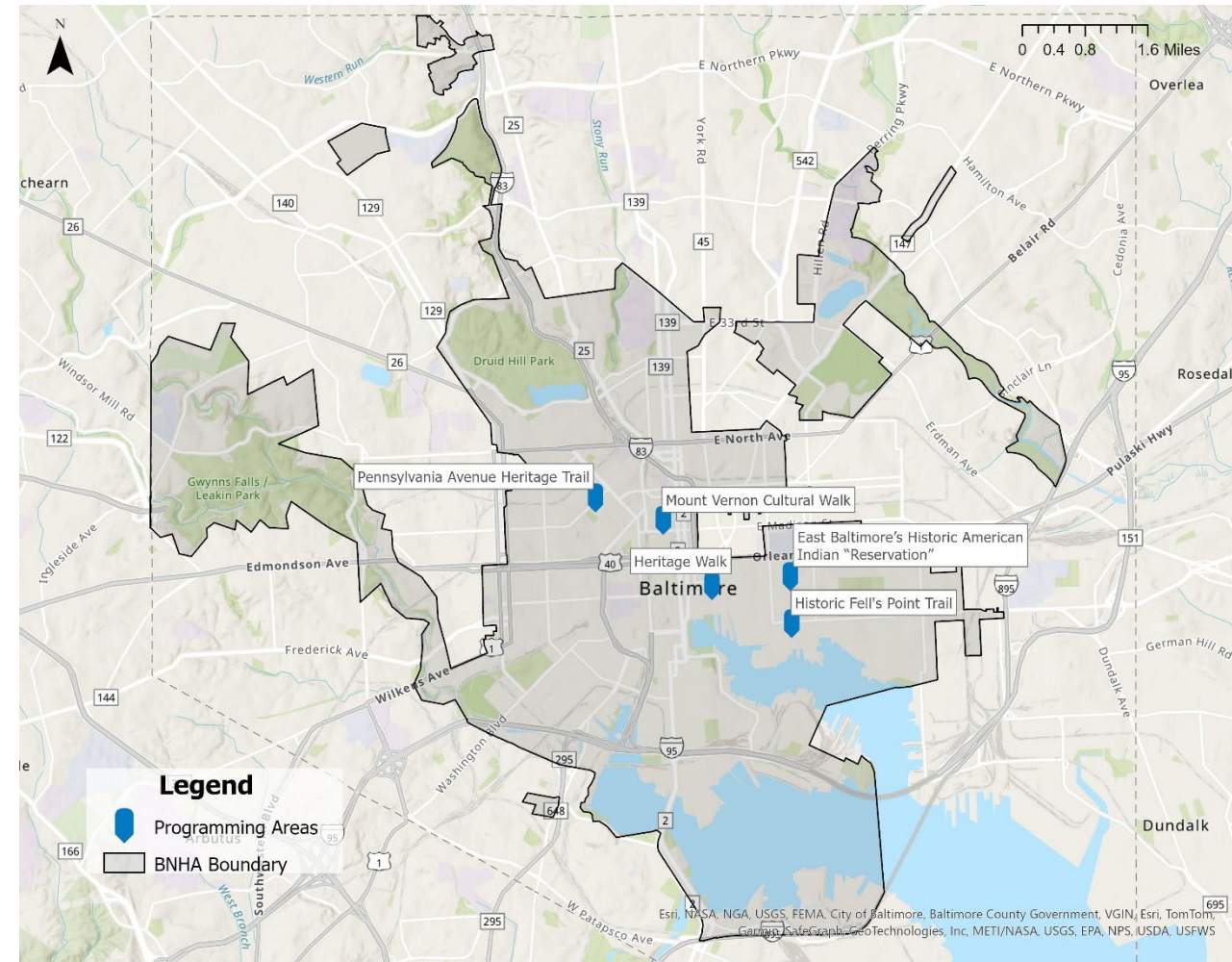


Source: U.S. DOT Volpe Center

Current Conditions

Project Area

- BNHA is one of 13 certified heritage areas in Maryland and one of 62 Congressionally designated national heritage areas across the country.
- Encompasses 26 square miles within the bounds of Baltimore.
- Contains a significantly high concentration of historic, cultural, and natural resources with the potential to attract tourists.
- 449 heritage resources located within the BNHA boundary, which spans across 176 of the 236 unique neighborhoods within Baltimore City.
- BNHA provides several programs related to historic preservation, natural resource conservation, recreation, heritage tourism, and educational programming for visitors.



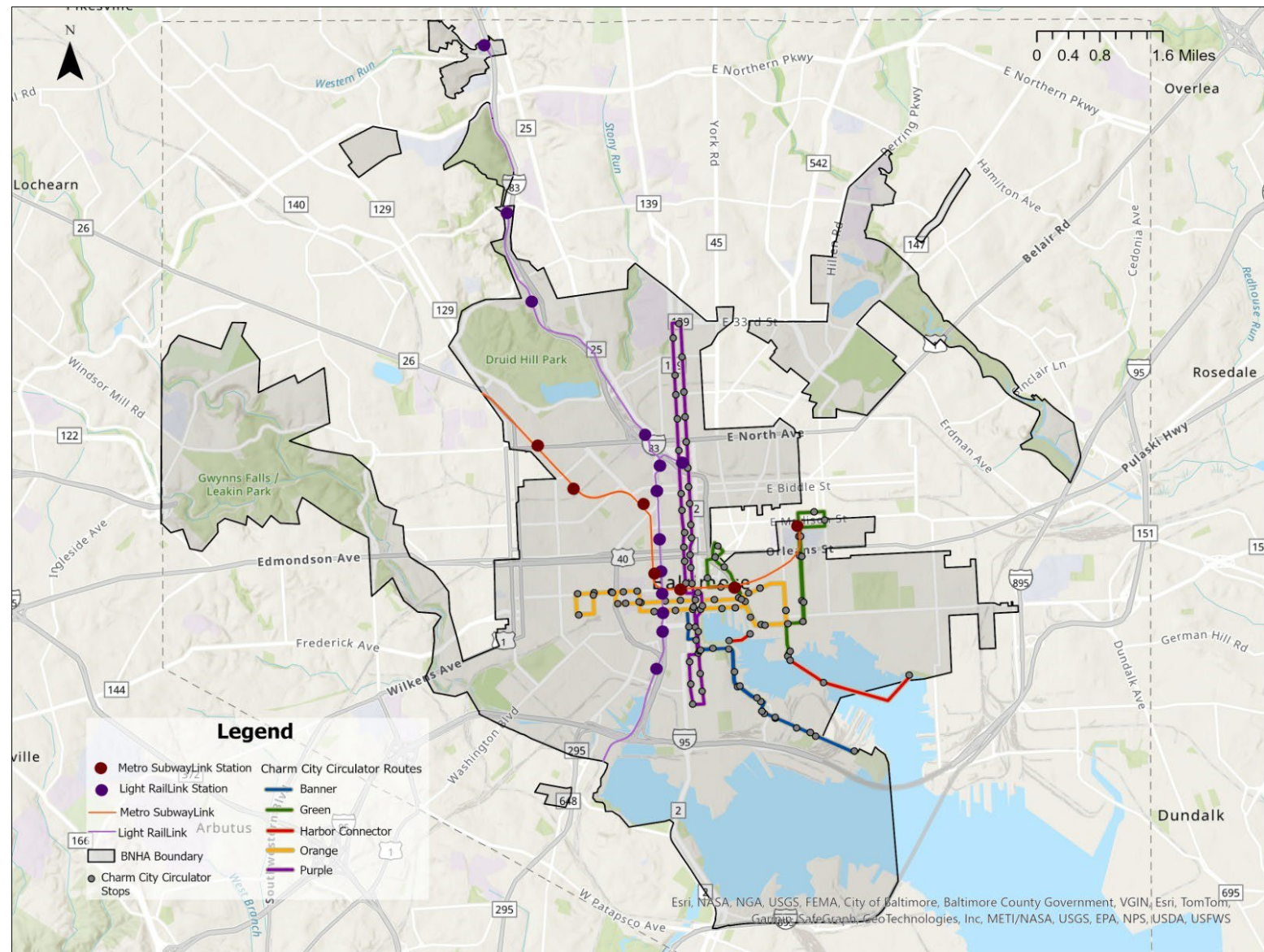
BNHA Boundaries and Existing Programming
Map Created by: U.S. DOT Volpe Center

Goals for Shuttle Service and Identified Route

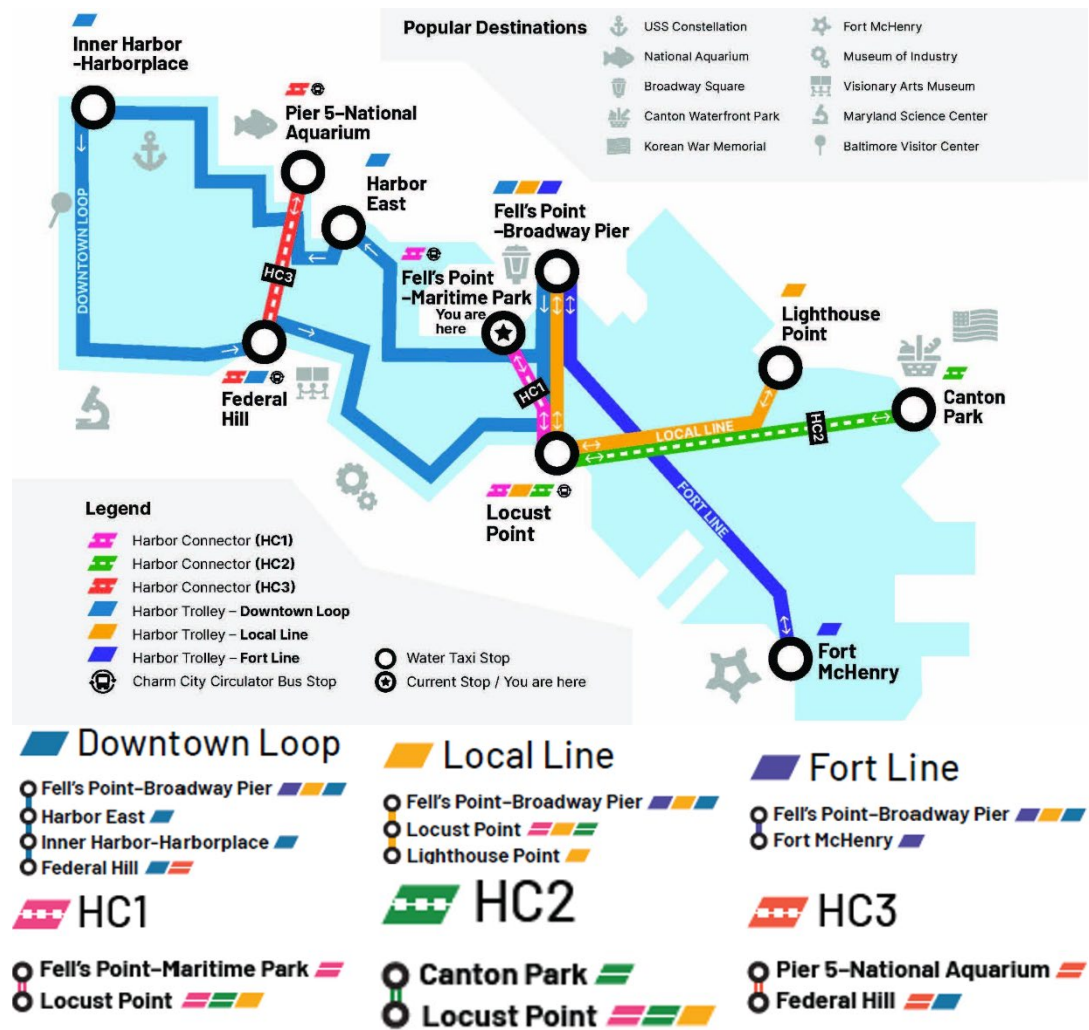
- **Primary Goal:** To improve connectivity to cultural, historical, and recreational points of interest within the BNHA for increased and equitable access.
- Analysis includes two options for models that could support this goal:
 - Partnership with the existing regional transit providers (i.e., Baltimore Charm City Circulator) to implement a BNHA-focused route; or,
 - Implementation of a separate partnership-based, seasonal, hop-on/hop-off shuttle service.
 - Goals for a BNHA-focused route on the Charm City Circulator would be developed in partnership with the City of Baltimore.
- For the separate partnership-based, seasonal, hop-on/hop-off shuttle service, BNHA envisions the system operating between approximately 10:00 AM and 5:30 PM from April – October.
- BNHA identified a preference for a “hop-on, hop-off” model without an interpretive guided component, at least during core touring hours.

Multimodal Access

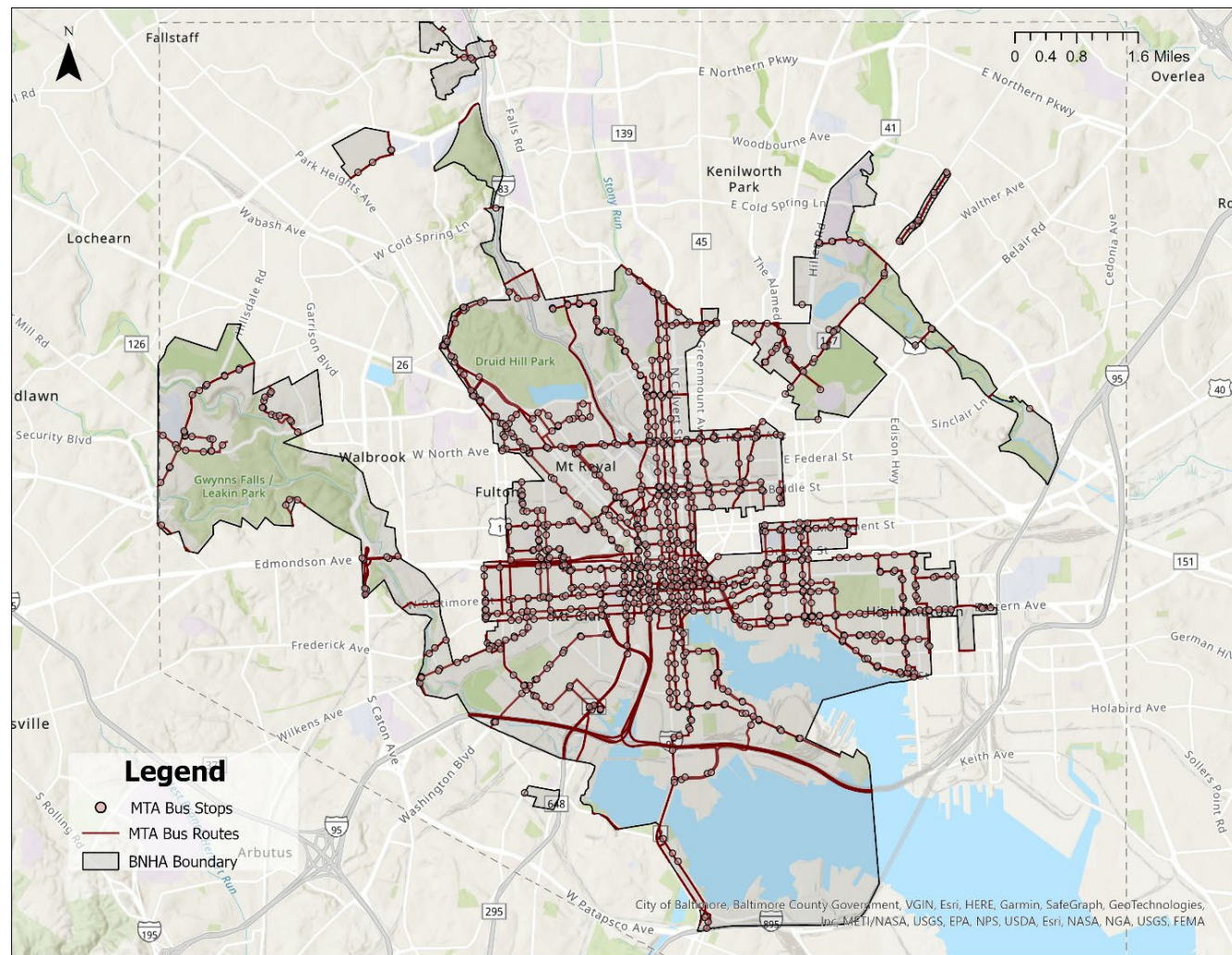
- Most visitors currently access most of the BNHA sites via personal vehicles, despite there being existing public transit stops near many sites.
- Relevant multimodal access options include:
 - Charm City Circulator Shuttle.
 - MTA MetroSubway Link.
 - MTA Buses: CityLink, LocalLink, Express BusLink.
 - MTA Light RailLink.
 - Maryland Area Commuter Rail (MARC).
 - Baltimore Water Taxi's Harbor Trolley and the City's Harbor Connector Shuttle.
 - City Trail and Bicycle Networks.



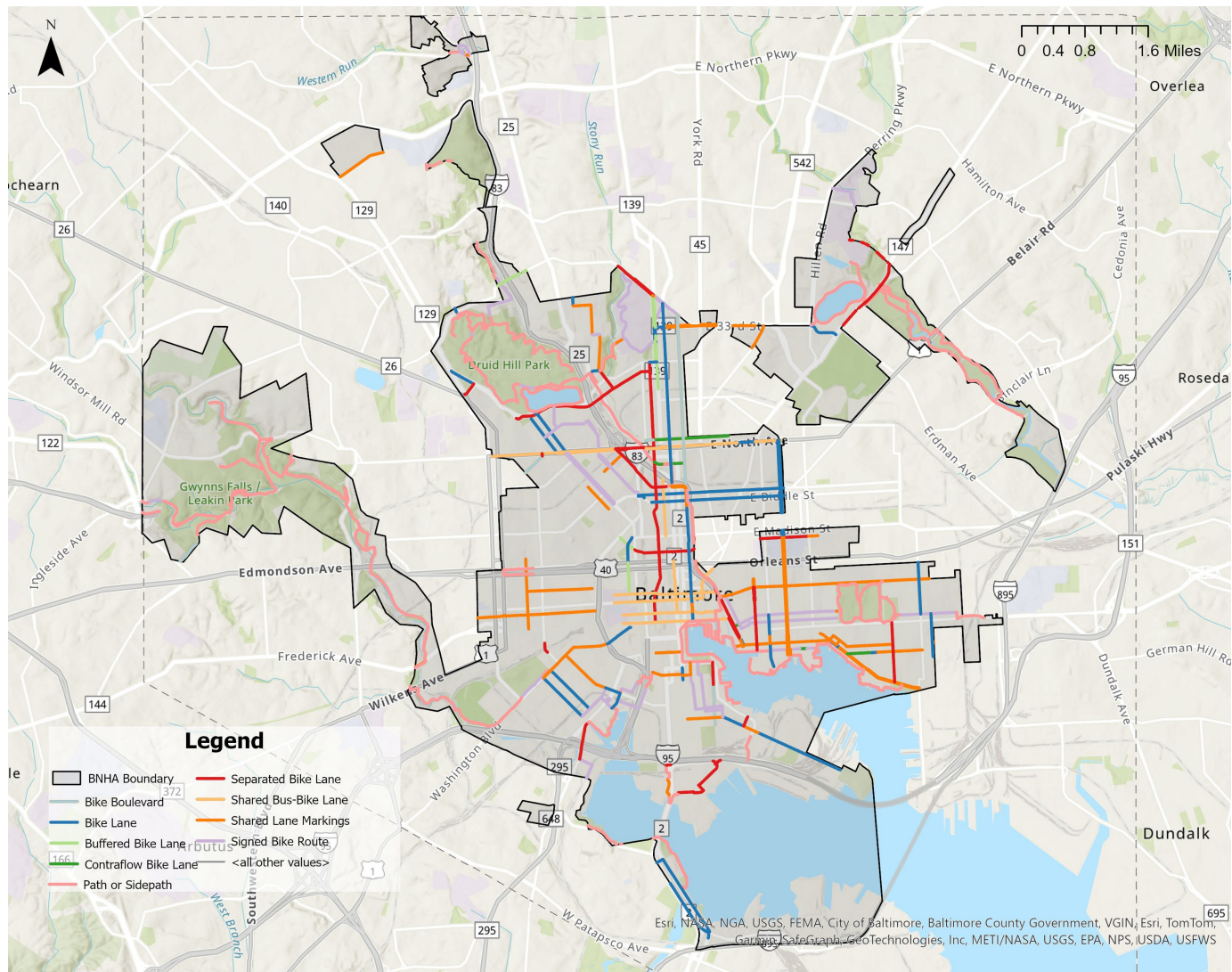
Existing CCC Shuttle, MTA MetroSubway Link & MTA Light RailLink Services within BNHA Boundaries
Map Created by U.S. DOT Volpe Center



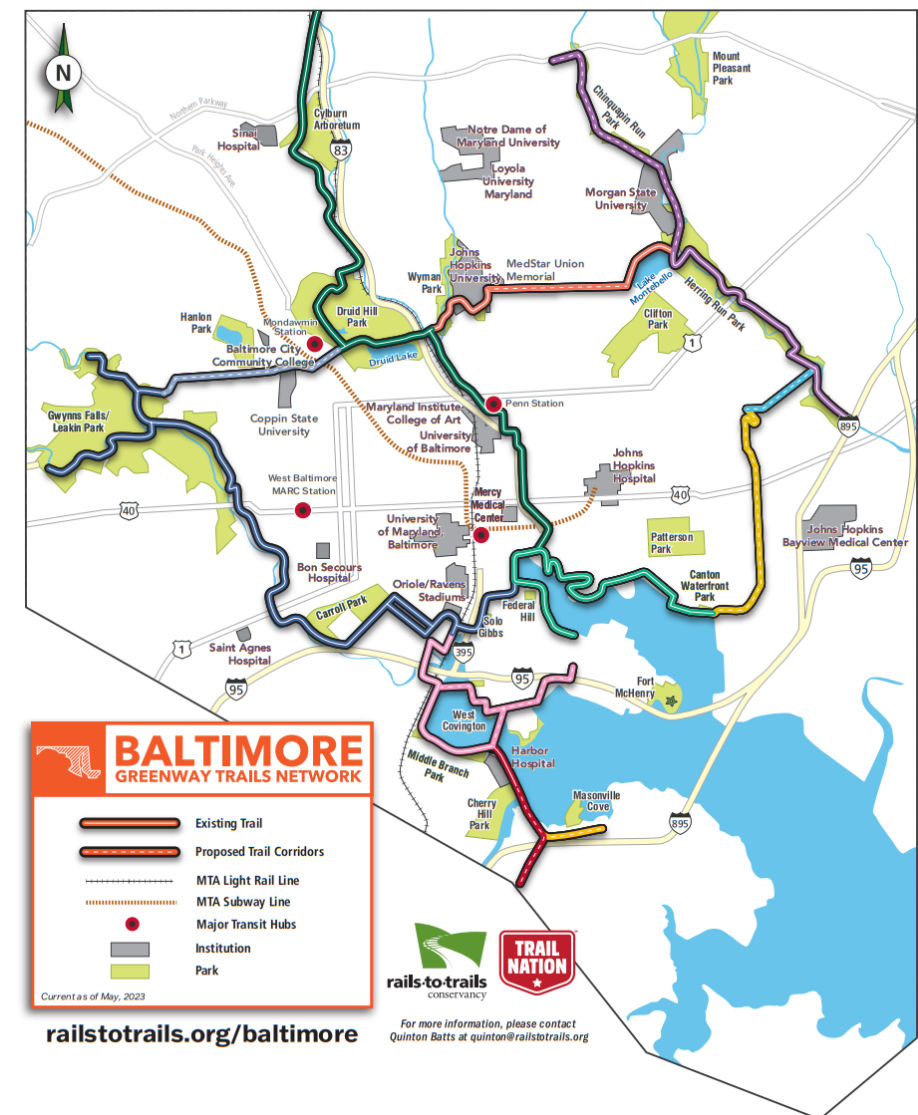
Existing Baltimore Water Taxi's Harbor Trolley and Baltimore City's Harbor Connector Routes
Source: Baltimore Water Taxi



Existing MTA Bus Service within BNHA Boundaries
Map Created by U.S. DOT Volpe Center



Existing Baltimore City Bike and Trail Facilities within BNHA Boundaries
Source: Baltimore City DOT; Map Created by U.S. DOT Volpe Center



Existing Baltimore Greenway Trails Network within BNHA Boundaries
Source: Rails to Trails Conservancy

Visitation

BNHA Point of Interest	Annual Visitation Est. 2022	Annual Visitation Est. 2023	Total Monthly Visitation During Seasonal Peak (Apr – Oct 2022)	Total Monthly Visitation During Seasonal Peak (Apr – Oct 2023)	Seasonal % of Total Annual Visitation (2022)	Seasonal % of Total Annual Visitation (2023)	Entrance Proximate to Public Transit?
Fort McHenry National Monument and Historic Shrine	223,957	429,967	181,380	326,897	81%	76%	Yes – two bus lines
National Great Blacks in Wax Museum (On-Site)	--	39,223	--	22,857	--	58%	Yes (two bus lines)
Camden Yards *Oriole Park MLB Total Season Attendance Only	1,368,367	1,936,798	--	--	--	--	Yes (four bus lines, a MARC station, and a light rail station)
Reginald F. Lewis Museum *General Admission Attendees	12,251	15,137	--	--	--	--	Yes (four bus lines)
Maryland Zoo	428,764	423,344	--	--	--	--	Yes (at least four bus lines and a metro subwaylink station)
Baltimore National Aquarium	1 M+	--	--	--	--	--	Yes (at least seven bus lines, two ferry stops, and one HC shuttle)
The Peale Museum	--	5,487	--	446	--	8%	Yes (at least 12 bus lines)
Dr. Samuel D. Harris National Museum of Dentistry	829	1,287	608	540	73%	42%	Yes (at least 10 bus lines)
Baltimore Visitor Center	--	71,655	--	44,844	--	63%	Yes (at least six bus lines, two ferry stops, and one HC shuttle)
City of Baltimore (as a whole)	26.7 M	27.5 M	--	--	--	--	Not Applicable

Note: Red highlighted sites have an annual visitation of 200k+ visitors (high), yellow highlighted sites have an annual visitation of 50k - 200k visitors (medium), and green highlighted cells have an annual visitation of 50k or less visitors (low).

Source: National Park Service, 2023 and partner communications / websites. Table created by U.S. DOT Volpe Center.

Parking Conditions

- Most BNHA visitors arrive by personal vehicle.
- About half of the BNHA points of interest offer on-site parking for visitors, while the other half of the sites do not offer on-site parking.
- Sites vary in their capacity to accommodate large vehicles, such as buses. Some sites can accept large vehicles on-site in their current condition without any changes such as:
 - Fort McHenry National Monument and Historic Shrine
 - Mount Clare Museum House
 - Baltimore Visitor Center
 - Baltimore Museum of Industry
 - Camden Yards
 - American Visionary Art Museum
 - B&O Railroad Museum
 - National Great Blacks in Wax Museum
 - Maryland Zoo
 - Maryland Center for History and Culture
 - Baltimore National Aquarium



Entrance to Fort McHenry National Monument and Historic Shrine in Baltimore
Source: U.S. DOT Volpe Center

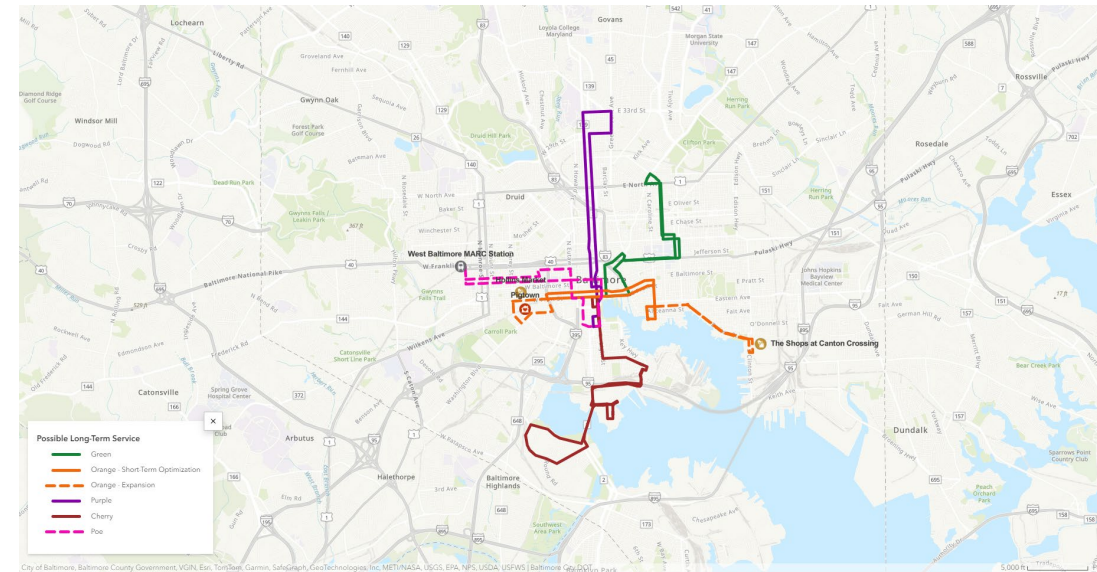
Transit Shuttle Service Route Scenarios

Overview of Scenarios

1. **Existing Current Charm City Circulator Service Scenario:** Represents how visitors can use the existing Charm City Circulator service to access sites identified as high interest (i.e., will identify ways to transfer, develop education on how to use multimodal connections for visitors, etc.).
 2. **Points of Interest as Stops Scenario:** Comprises a route loop to include stops strictly at the BNHA points of interest.
 3. **Neighborhoods/Communities as Stops Scenario:** Comprises a route loop to include stops mixed between the BNHA points of interest and neighborhoods / communities.
- Each of the above three transit shuttle service route scenario descriptions include:
 - Potential route (to include daily total route mileage, roundtrip miles, and approximate travel time).
 - Headways (amount of time between buses).
 - Potential schedule (to include daily service hours).
 - Passenger capacity for a typical busy day.

Scenario One: Existing CCC Service

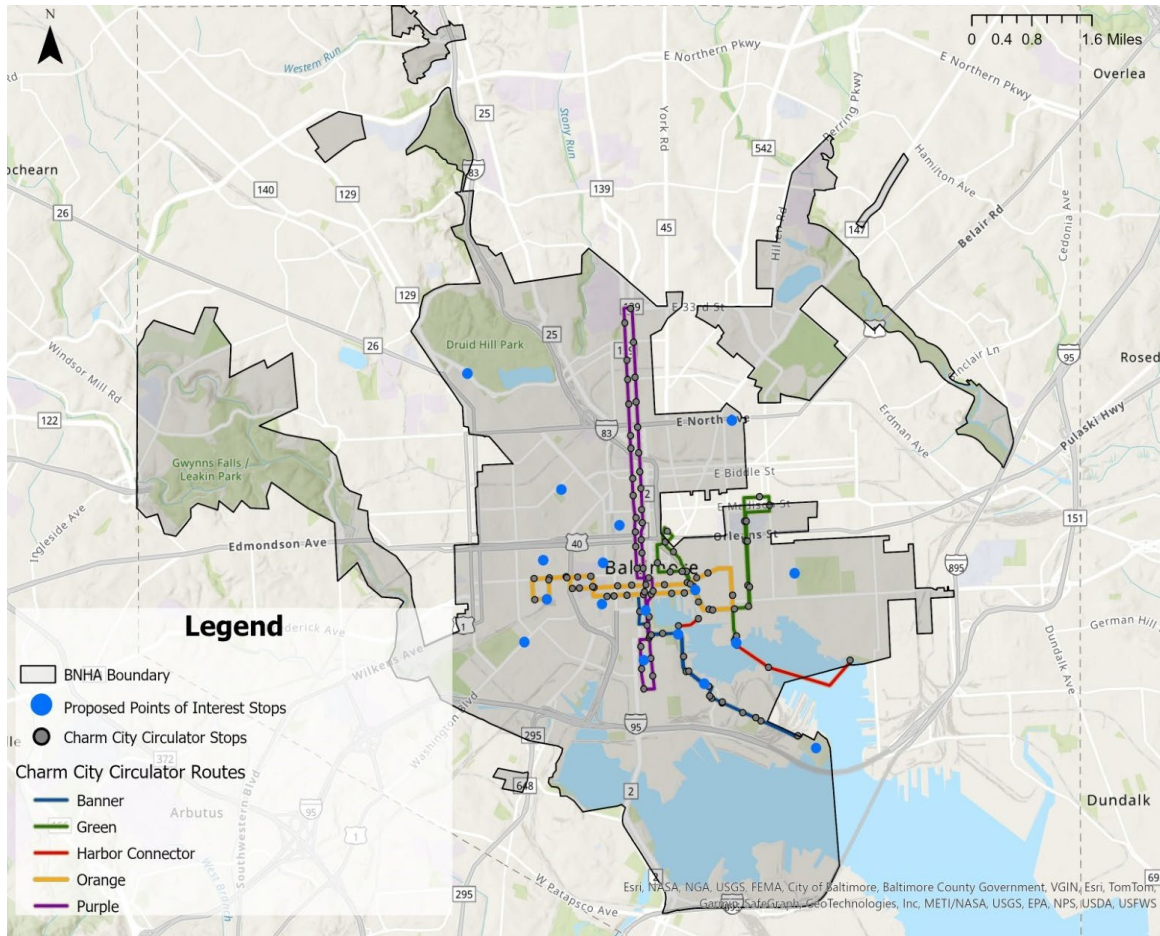
- Includes the CCC's established 111 stops, divided into four different routes:
 - Green Route: 25 Stops
 - Orange Route: 28 Stops
 - Purple Route: 38 Stops
 - Banner Route: 20 Stops
- Note: as the City implements changes to the existing CCC derived from its Transit Development Plan (TDP), the Banner Route could be replaced by the Cherry Route.
- Natural beginning point for this scenario is the Fort McHenry site, utilizing the CCC's Banner/Cherry Route.
 - Natural transfers from this route would follow from the Purple, to Orange, and then Green by way of stop transfer.
- Routing schedule set outside of site operating hours would remain intact.



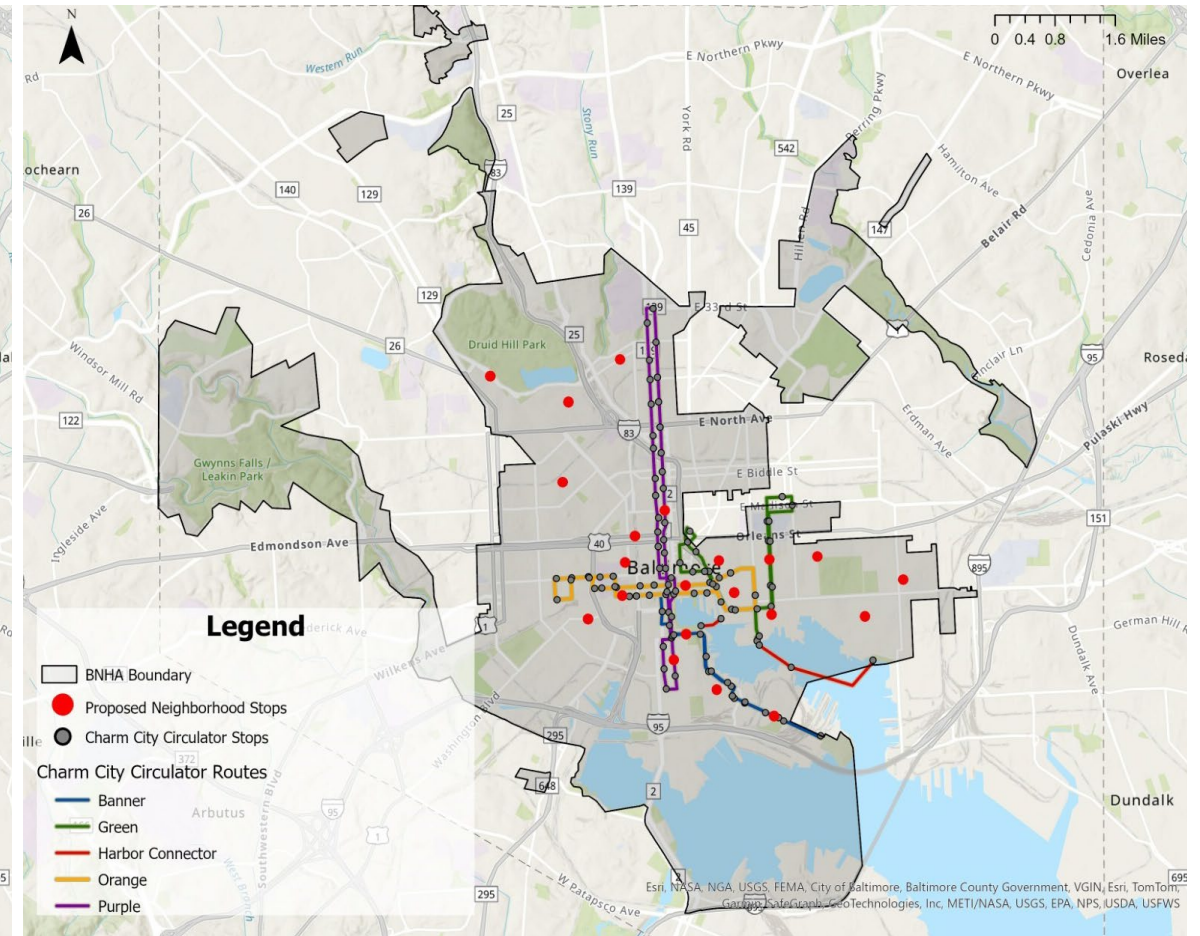
CCC Service – Possible Long-Term Service Route Changes as per the Baltimore City TDP

Note: Proposed Cherry Route is indicated by the Dark Red / Maroon Line
Source: Baltimore City DOT pulled from the [Baltimore City TDP](#)

Scenario One: Existing CCC Service (Continued)



Existing CCC Routes Proximate to the Scenario Two Points of Interest Proposed Shuttle Stops



Existing CCC Routes Proximate to the Scenario Three Neighborhood / Communities Proposed Shuttle Stops

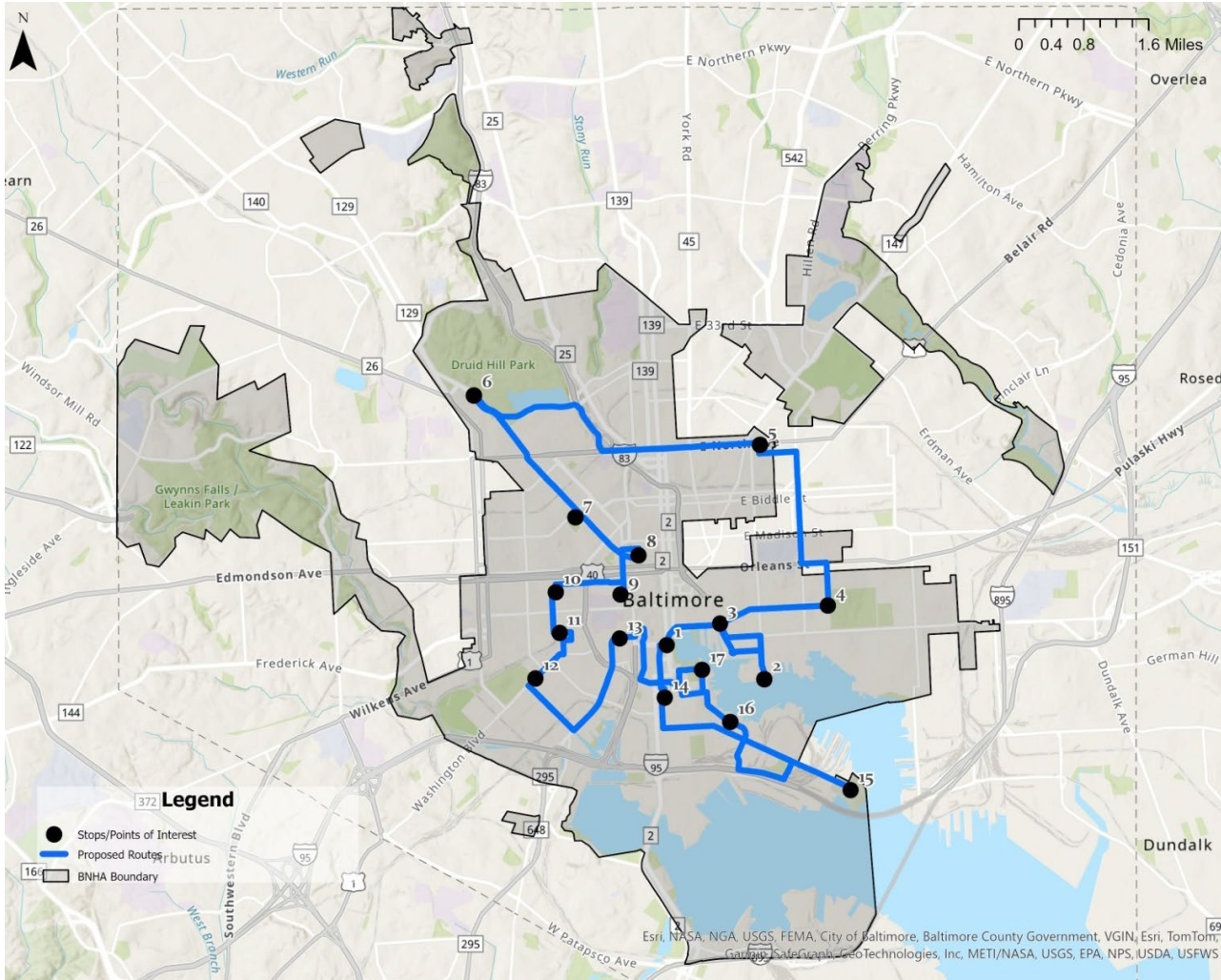
Note: Figures are not illustrative of the connectivity to the sites via other existing public transportation services, rather the CCC was used in this scenario since it is a free public transit service option (as opposed to the other paid transit service options), thereby providing more equitable access.

Scenario Two: Points of Interest (POI)

- Includes Heritage Area sites indicated by stakeholders as primary places within the BNHA.
- Proposed route would begin at the Baltimore Visitor Center, which coincides with several existing public transit services.
 - CCC's Purple and Banner Routes, MTA bus line 67, 71, and 94 and MTA's CityLink Silver Route (on Light Street).
 - CCC's Orange Route, MTA bus lines 54, 65, and 154, and MTA's CityLink Brown, CityLink Navy, and CityLink Yellow Routes (on East Pratt Street).
 - Baltimore Water Taxi's Harborplace ferry stop (north), and Federal Hill ferry stop (south), as well as the City's Harbor Connector 3 shuttle line (at the Federal Hill ferry stop).

Scenario Two: Points of Interest

Stop No.	Name	Stop No.	Name
1	Baltimore Visitor Center	10	Edgar Allan Poe House & Museum
2	Frederick Douglass-Isaac Myers Maritime Park	11	B&O Railroad Museum
3	Reginald F. Lewis Museum	12	Mount Clare Museum House
4	Patterson Park	13	Camden Yards
5	The National Great Blacks in Wax Museum	14	Cross Street Market
6	The Maryland Zoo/Druid Hill Park	15	Fort McHenry National Monument and Historic Shrine
7	PS 103 Thurgood Marshall Amenity Center	16	Baltimore Museum of Industry
8	Maryland Center for History and Culture	17	American Visionary Art Museum
9	Lexington Market		



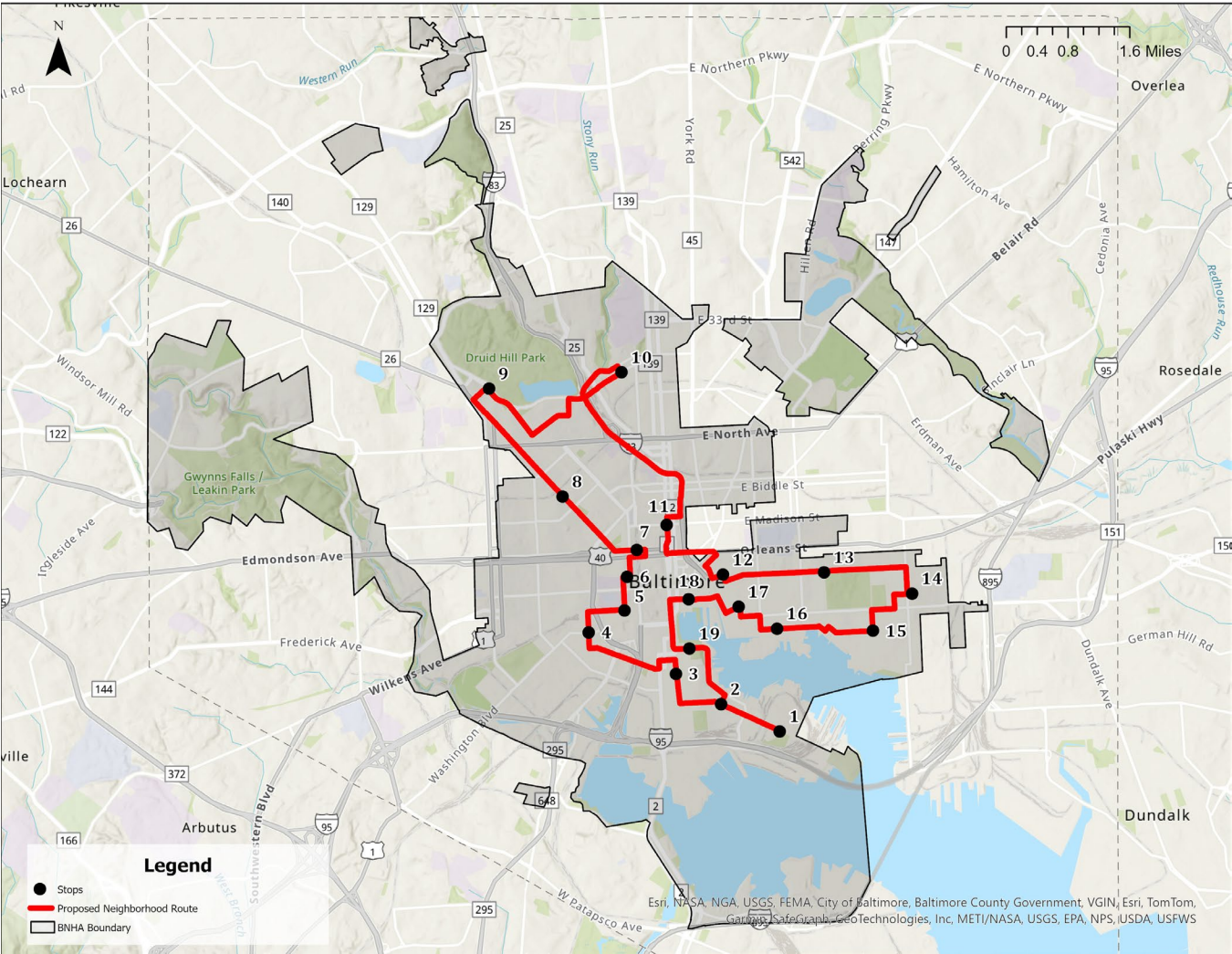
Scenario Two: Proposed Points of Interest Route

Scenario Three: Neighborhoods / Communities

- Focuses on unlocking historic neighborhoods, with two lines heading eastbound and southbound respectively, beginning in the Inner Harbor.
- Highlights the already programmed Heritage Walk along the Inner Harbor, Little Italy, and Historic Jonestown.
 - As seen in Scenario Two, service would intersect with the CCC's Banner, Purple, and Orange Routes, in addition to the Green Route.
 - MTA service intersection includes bus lines 65, 67, 71, and 94, as well as CityLink Navy, Silver, Yellow, and Gold.

Scenario Three: Neighborhoods / Communities (Continued)

Stop No.	Name	Stop No.	Name
1	Locust Point	11	Mount Vernon
2	Riverside	12	Jonestown
3	Cross Street Market	13	Upper Fells Point/Patterson Park
4	Pigtown	14	Highlandtown
5	Camden Yards	15	Canton
6	Lexington Market	16	Fells Point
7	Bromo Arts District	17	Little Italy
8	Upton/Black Arts District	18	Inner Harbor
9	Druid Hill Park	19	Federal Hill
10	Remington		



Scenario Three: Proposed Neighborhoods / Communities Route

Comparison of Transit Shuttle Service Scenarios

- Both Scenario Two and Scenario Three require capital purchases of vehicles, maintenance, driver compensation, and other staffing needs will need to be considered.
- Scenario Three omits key points of interest in the BNHA, repeating the issues established in the Charm City Circulator Service. The variability in site location seen in Scenarios Two and Three necessitates frequent turns that would add difficulty to buses remaining on schedule.

Transit Scenarios Comparison

Transit Scenario	Approximate Route Length (Minutes)	Standard Hours of Operation	Number of Stops	Desired Headway (Minutes)	Approximate Number of Vehicles	Daily Capacity Range
One	31 minutes	7:00 am – 9:00 pm	20	15-20 minutes	2-3	3,360 – 4,480 riders
Two	119 minutes	10:00 am – 5:30 pm	17	15-20 minutes	7-9	1,800 – 2,400 riders
Three	100 minutes	10:00 am – 5:30 pm	19	15-20 minutes	6-8	1,800 – 2,400 riders

Note: Scenario One as included in this table is referencing the CCC's Banner Route.

Peer Systems

D.C. Circulator

- National Mall Route launched in June 2015 as a partnership between National Park Service (NPS) and D.C. Department of Transportation (DDOT).
- Route stretches from the U.S. Capitol to the Potomac River to include **15 stops**.
- Hours vary by season.
- During peak use, **14 buses service the route** and buses arrive at **10-minute intervals** during normal service.
- Numerous connections to other transit options and the entire Circulator system, including the National Mall route, costs \$1.00 to ride.
- In 2019, annual ridership for the National Mall route **was just under 800,000 riders**.
- Operating costs are shared; **DDOT pays two-thirds** of the operating cost and **NPS pays the remaining one-third** of the operating costs, partially funded by parking fees on the National Mall.



Source: DC Circulator

Discover Niagara Shuttle



Source: Niagara Falls Heritage Area

- Discover Niagara Shuttle began in 2016.
- Operates seasonally, with service available Fridays through Sundays from May to September.
- Seven shuttles service the area and headways vary across routes, but shuttles arrive **every 30 minutes** (traffic dependent) during the day, and **40 minutes in the evenings**.
- Occupancy taxes in the area are the largest source of funding for the shuttle and have allowed the service to be operated fare-free.
 - New York Power Authority also makes a significant annual contribution to the shuttle.
- Shuttles provides service along **three** different routes.
- Shuttles are ADA accessible and equipped with bike racks, complimentary Wi-Fi, and digital displays that play narrated segments about each of stops on a constant loop.

Havre de Grace “The Tide” Trolley

- Began in May 2022 as a **3.7-mile loop with 14 stops**.
- Operates seasonally from April through mid-December, with service running most Fridays, Saturdays, and Sundays during its seasonal operation and schedule modifications for special events.
- **Six trolleys** service the route, arriving **every 10-15 minutes** at stops during normal service conditions.
- Does not connect to other transit options, but there are free parking areas that provide access to the trolley.
- Service is fare-free.
- Ridership is a combination of residents and visitors; reached **17,505 riders** in 2022 and **20,483 riders** in 2023 (approximately **17 percent** increase).
- Vehicles are owned and operated by the City of Havre de Grace and is funded through the municipal budget.



Source: City of Havre de Grace

BNHA Partner Coordination

Partner Coordination Efforts

- Consulted with NPS Chesapeake Gateways and worked closely with BNHA to identify the appropriate contacts at the City of Baltimore and Heritage Area sites.
- **April 3, 2024:** Volpe, BNHA, and NPS Chesapeake Gateways hosted a Partner Engagement meeting to get partner feedback on the challenges and opportunities at individual sites.
- Engagement Takeaways:
 - Participants noted that parking throughout the BNHA was limited.
 - Several representatives, such as Historic Ships in Baltimore and the Peale Museum, identified being well-connected to current transit options.
 - Sites on the edge of the BNHA, like the National Great Blacks in Wax Museum, noted a lack of established transit connections and the visibility of vacancy in the surrounding area affecting visitation.
 - Better thematic connections between sites as a tool to raise awareness to visitors; an online guide addressing for each site was also a suggestion for better cohesion.
- Overall, partners agreed that the frequency and reliability issues of the current transit service would benefit from additional systems with consistent coverage.

Recommended Next Steps

Summary of Next Steps

- **Main Study Recommendation:** BNHA should coordinate with the City of Baltimore CCC to identify whether the existing service could accommodate a BNHA route that serves the needs of BNHA and visitors.
 - CCC already services many of the sites, the cost to implement the system could be much lower than to initiate a new system with a new operator.
 - May be additional benefits to the CCC and its ridership to partner with BNHA.
- **Alternative:** If Charm City Circulator is not a suitable option for implementing the service, BNHA could solicit a Request for Information (RFI) to identify a partner to own and operate the service.
 - Once a partner is identified, a more detailed transit feasibility study would need to be undertaken to consider the specific requirements of the owner/operator and other factors.
- In the interim, there are several initiatives that BNHA and its partners could start, including:
 - Data Collection
 - Financial Analysis
 - Coordination with Existing Transportation
 - Pilot Shuttle Route

Thank You!