

PASSENGER FAST FERRY SERVICE IN THE NATIONAL CAPITAL REGION

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TPB Technical Committee
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Agenda Item #7



National Capital Region
Transportation Planning Board

Background and Purpose

- Passenger fast ferry service in the National Capital Region has been discussed and studied many times since 2000.
- Recent technological innovation in watercraft vehicles has renewed interest and examination of a ferry service in the region, including a current study by the DC Mobility Innovation District.
- Purpose of this briefing is to determine if there is an interest to re-examine the assumptions and update the 2023 study to revisit the business case for a passenger fast ferry system based on the new technology that's available.

Ferry Transit Service

Types of Services

- **Point-to-point services**, typical of most urban ferry services, crossing harbors or major rivers
- **Linear multiple-stop services**, either along a river (e.g., East River service in New York) or a waterfront
- **Circulators**, with fixed routes but often not fixed schedules, that serve destinations around the edge of, or a designated portion of, a harbor or riverfront via a loop route
- **Water taxis**, which have fixed landing sites, but pick up passengers on demand, similar to a regular taxi service

Major North American Commuter Ferry Hubs

- New York City / New Jersey
- Seattle / Puget Sound
- San Francisco Bay Area
- Boston
- Vancouver, B.C.

Source: Transit Capacity and Quality of Service Manual—4th Edition, Ch.2 – Ferry Transit

Potomac Water Taxi Service

- Water Taxi service is currently operated daily between The Wharf, Old Town Alexandria, and National Harbor; and from Old Town Alexandria to Navy Yard for events at Nationals Park and Audi Field
- Mostly tourism-oriented
- Fares are roughly \$20+ (1-way) and \$30+ (round trip)
- Travel time from The Wharf:
 - Georgetown (30 min)
 - Alexandria (30 min)
 - National Harbor (45 min)



Prior Fast Ferry Studies - National Capital Region

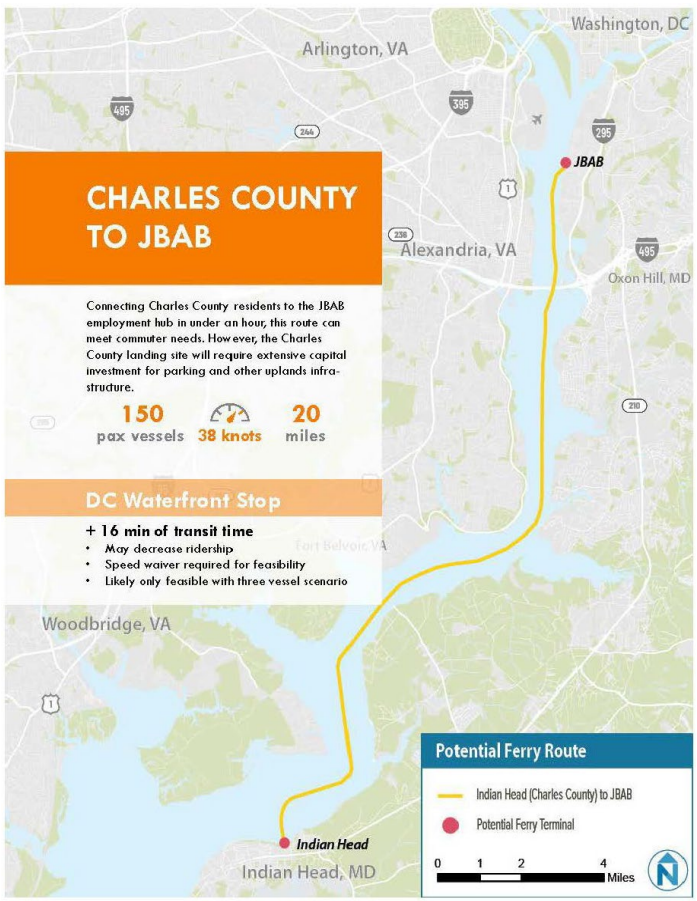
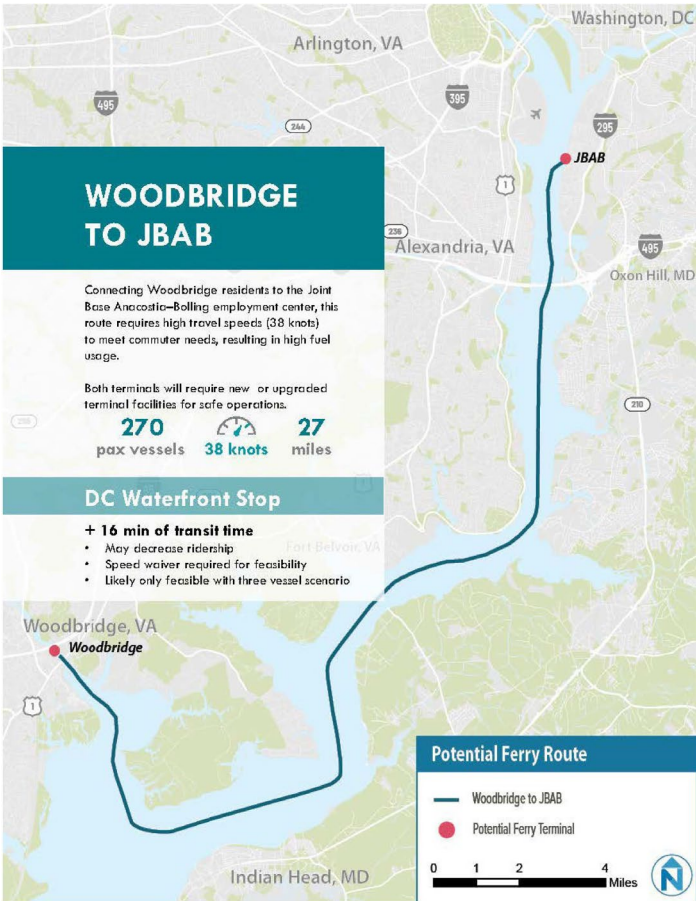
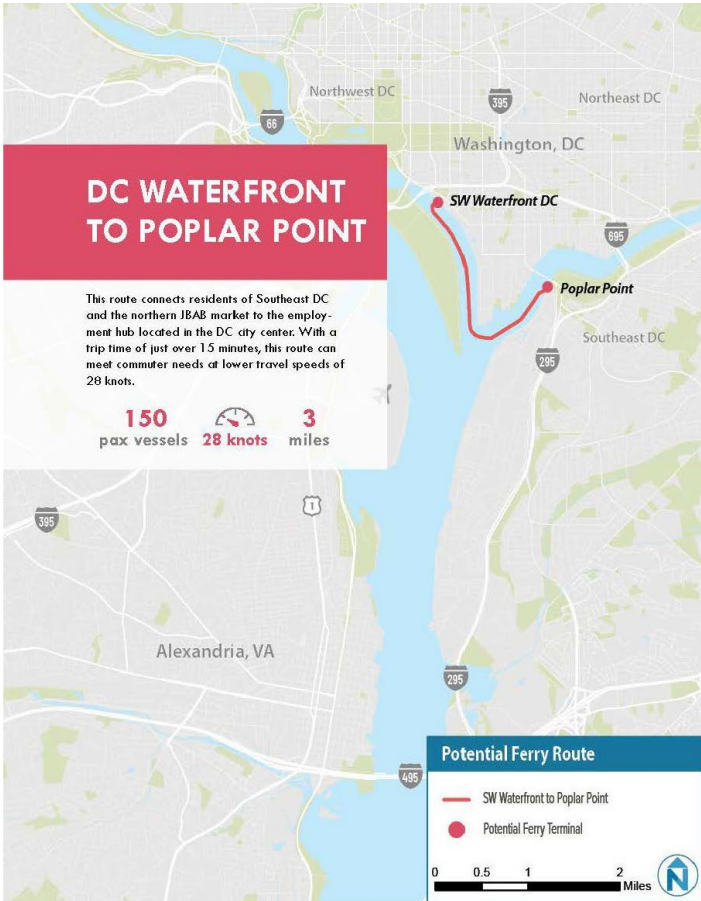
- Potomac Fast Passenger Ferry Business Plan, Phase 1 and 2 – Northern Virginia Regional Commission - NVRC (2023)
- M-495 Commuter Fast Ferry | Project Development Phase – NVRC (2019)
- Market Analysis for Commuter Ferry Service on the Occoquan, Potomac, & Anacostia Rivers – NVRC (2015)
- Prince William County Service Study and Route Proving Exercise – NVRC (2009)
- Ferry Feasibility Study – VDOT (2000)

Several factors have limited further project planning, including the pandemic as well as considerations of travel times, land side infrastructure siting considerations, and costs and funding.

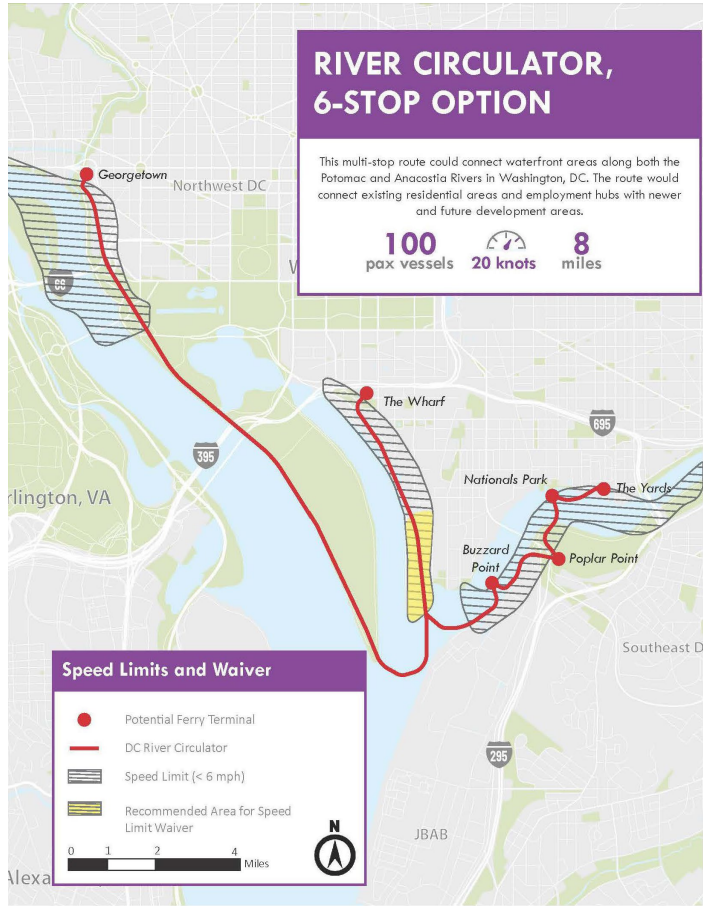
Potomac Fast Passenger Ferry Business Plan, Phase 1 and 2 – NVRC (2023)

- A decade-plus history of studies has offered evidence that service is feasible, and a substantial and competitive potential market exists for commuter ferry service in the region.
- Private sector is interested but continues to wait for more signs of support from the public sector in the region before moving ahead.
- Business plan addressed operational details (service levels, market demand), financial structure, and governance/leadership.
- Highlights several key opportunities for the realization of a fast passenger commuter ferry: federal grant funding, recent development along waterfront areas, and public-private partnerships in cooperation with the BIDs.

Phase 1 Routes and Operations

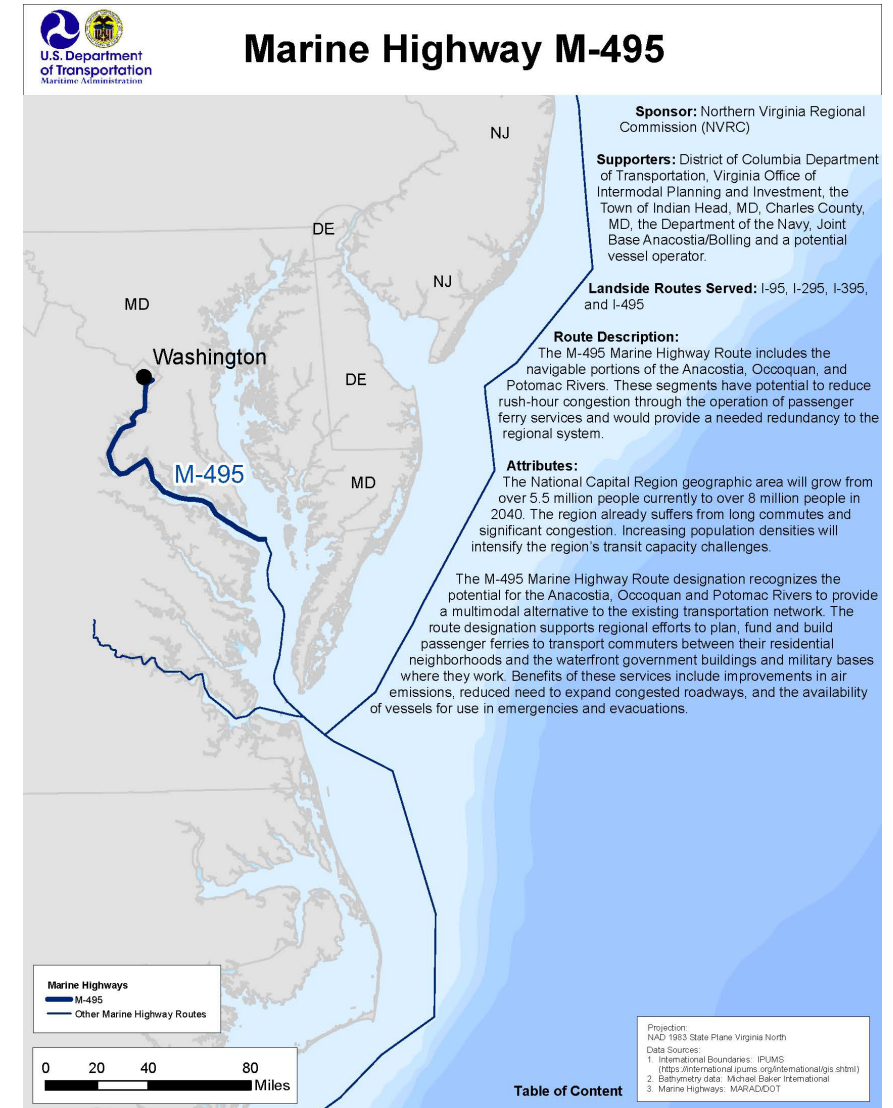


Phase 2 Routes and Operations



Marine Highway M-495

- In 2007, US DOT established the U.S. Marine Highway Program (USMHP).
- The M-495 Marine Highway Route is a designated federal water corridor that includes the navigable portions of the Anacostia, Occoquan, and Potomac Rivers.
- The USMHP discretionary grant program supports waterborne alternatives that "Provide transportation services for passengers or freight (or both) that may reduce congestion on land-side infrastructure using documented vessels."



Current Status

- Business Improvement Districts in the District of Columbia have examined a technology breakthrough in watercraft – the electric hydrofoil – that could address the travel time concerns of previous studies.
- The DC Mobility Innovation District (DC MID) is currently conducting an assessment evaluating the near-term opportunity for an electric hydrofoil ferry pilot connecting major Capitol Region waterfront destinations
 - Review of up to two relevant peer water transit systems
 - Updated market assessment and route analysis
 - Pilot service concept and phasing

New Hydrofoil Technology

- Flying on Foils: Computer-guided underwater wings adjust 100 times per second to maintain stability above the waves
- No Wake: Produces minimal wake, allowing it to bypass standard speed limits in city waterways without causing shoreline erosion
- Zero Emission: Powered completely by batteries, cutting carbon dioxide emissions by over 90% compared to diesel vessels
- Capacity & Range: Carries 30 passengers with a cruising range up to 40 nautical miles and fast-charging capabilities



Swedish Candela P-12 Shuttle

Next Steps

- September 29th event “Unlocking the District’s Waterways” - Demonstration of new hydrofoil technology
- Review DC MID study and gauge level of interest to re-examine the assumptions and analyses of the 2023 NVRC Study
 - Impacts of new technology on wake restrictions and travel times
 - Types of service: Long-haul vs short-haul, commuter vs all-day / circulator service
 - Public-private partnership opportunities
- Scheduled briefings:
 - COG Board – October 14th
 - Transportation Planning Board – October 21st

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