

Bay Bridge Reconstruction Advisory Group (BBRAG)
Wednesday, April 29, 2020
Scheduled 6:00 – 8:00 p.m.

Members Present

Tracy Schulz
Barbara Hitchings
Jack Broderick
Pat Lynch
Kurt Riegel
Commissioner Stephen Wilson
Ramond Robinson

MDTA Staff

Jim Ports
Mary O’Keeffe
John O’Neill
Richard Jaramillo
Melissa Williams
Mike Rice
Melissa Bogdan
Kim Millender
Heather Lowe
Colin Sweetin
John Sales
Brad Ryon
April King
Steven Zawodny
Charles Kenny

Other Attendees

Media

N/A

Handouts

Agenda

Welcome and Introductions – 6:04 p.m. Tracy Schulz

- Mr. Schulz began the meeting with welcoming attendees - Good Morning – my name is Tracy Schulz and I am serving as the Chair for the BBRAG. I hereby call the Meeting of the Bay Bridge Reconstruction Advisory Group to order at 6:04p.m.
- Due to the COVID-19 situation, this meeting is being conducted exclusively by conference call.
- To minimize background noise during the call, I would ask that everyone on the line please mute your phones except when speaking.

- For members of the public calling in to join us, we invite you to listen in but ask that you please refrain from disrupting the meeting. If members of the public pre-registered to comment on a specific agenda item, I will provide you an opportunity to comment after the agenda item is presented. For members of the public that were unable to pre-register, I will provide you an opportunity to provide your comments at the end of the meeting before closing. So, we appreciate everyone’s patience and ask that you hold any comments until the designated time.
- To ensure we have a quorum of Board members on the line, I will now take a roll call vote and ask that each Member acknowledge their presence on their line when I call their name:
 - Member Hitchings
 - Member Broderick
 - Member Cogan - Not Present
 - Member Lynch
 - Member Riegel
 - Member Robinson
 - Member Wilson
- I will now take a roll call of the MDTA staff members on the line:
 - Jim Ports
 - Mary O’Keeffe
 - John O’Neill
 - Richard Jaramillo
 - Glend McGuire - Not Present
 - Melissa Williams
 - Kelly Melhem – Not Present
 - Mike Rice
 - Melissa Bogdan
 - Kim Millender
 - Natalie Henson - Not Present
 - Ebony Moore - Not Present
 - Heather Lowe
 - Colin Sweetin
 - John Sales
 - Brad Ryon
 - April King
 - Steven Zawodny
 - Charles Kenny

- If I missed any MDTA staff or if there are other State employees on the line, please now take turns and identify yourself so that the minutes may accurately reflect everyone's attendance.
- Finally, I would ask any members of the public on the line to now please identify yourself by stating your name and then spelling it, so that our minutes accurately reflect everyone's attendance.
- No members of the public were present during the meeting.
- To avoid any confusion during the meeting, I ask that each person speaking today please identify themselves before speaking so we can keep an accurate record for our minutes. Also, please speak clearly so that everyone on the line can hear the discussion.
- Thank you.

House Bill 56 – 6:11 p.m. Jim Ports

When does this Bill goes into effect?

This Act is an emergency measure and shall take effect immediately from the date it is enacted. The Governor has until May the 7th to act on this Bill.

What is the new makeup of the group and who decides?

The newly constituted BBRAG will consists of the following members, which will serve staggered 3-year terms:

- Secretary of Transportation, or his designee.
- SHA Administrator, or his designee.
- MDTA Executive Director, or his designee.
- Two members appointed by the Anne Arundel County Council.
- Two members appointed by the County Commissioners of Queen Anne's County;
- Appointed by the Governor; three citizen members from Anne Arundel County, and three citizen members from Queen Anne's County, all six members must be familiar with issues faced by commuters who cross the Chesapeake Bay Bridge.

How often will the BBRAG meet?

The bill originally called for monthly meetings, but the bill now calls for the BBRAG to adopt its own bylaws.

Who will lead the group?

BBRAG would now be led by MDOT, but still staffed by MDTA.

Additional:

- Any entity that conducts a traffic capacity study pertaining to the Chesapeake Bay Bridge and certain surrounding highways will be required to report its findings and recommendations to the BBRAG;

- The BBRAG will be required to report its activities to the Governor and the General Assembly annually. On or before July 1, 2021, and each July 1 thereafter.
- The BBRAG will be required to report its activities and recommendations quarterly to the MDTA.

Given this bill was introduced as emergency legislation, counsel agrees effective immediately once signed. This current BBRAG would no longer exist and appointments would be made.

Mr. Broderick - 6:16 p.m. - Was its revenue neutral?

Mr. Ports - Significant based on studies – that has been taken out.

Mr. Riegel – 6:18 p.m. - all appointments for AAC made by the county council

Ms. Lynch - 6:19 p.m. – Can you define stagger term of 3 years?

Mr. Ports - Appointed for 1 year, 1 appointed 2 years, 3 years – current BBRAG members are not automatically appointed.

Bay Bridge Community System Preservation Updates (Westbound Overlay/AET/Automated Gates System) - 6:20 p.m. Richard Jaramillo

Mr. Jaramillo - Good evening, I hope everyone is healthy and staying safe. My name is Richard Jaramillo, Bay Bridge Administrator. The Bay Bridge Preservation Updates are as follows:

WB Suspension Span Rehabilitation

- Project includes, Installation of supplemental suspension cables (strands) in main span. Project is Wrapping Up. Substantially complete.
- Remaining work still have several Punch List items & some Painting Touch-ups which will go sometime into June 2020.

WB Cleaning & Painting Structural Steel – Phase IV

- Project includes, Cleaning & Painting of Deck Girder Spans on eastern shore side and Cleaning & Painting of the Through Truss. Cleaning & Painting of bridge rail & rail posts. Replacement of 320 rail posts. Majority of work is performed via access from the water / barges to minimize lane closure needs.
- Remaining work includes completion of Thru Truss Painting and Cleaning & Painting of Rail and Rail Posts.

Westbound Bay Bridge Deck Rehabilitation & Miscellaneous Modifications

- Project includes, an overlay of Westbound Bay Bridge, Lane 1 and patching in lanes 2 and 3. The project also includes Replacing the WB gantries with lane use signals and rail posts. Resurface the approach roadways and perform subgrade repairs to pavement.
- Recent accomplishments:
 - Restored 3 westbound lanes to traffic – April 1, 2020
 - Restored temporary pavement markings to pre-construction pattern

- Within the next 90-days, we anticipate:
 - Install Rumble Strips – Lane 2/3
 - Install Raised Pavement Markers
 - Replace Expansion Joints – Lane 2/3
 - Steel Plates on Bridge for joint replacement
 - Continue Rail Post Replacement
 - Anticipate Receiving New Gantries – July or August
- Summary
 - In brief, LMC Overlay was completed March 30, 2020. Lane 1 was reopened to traffic on April 1, 2020
 - Now that the westbound right lane rehabilitation is finished more than a year ahead of schedule, I may add, the MDTA is able to return to regular, cyclical maintenance, repair and inspection schedules that are more familiar to motorists.

Project Name: All Electronic Toll Collection Conversion

- Project includes, All-Electronic Tolling (AET) conversion project which will remove the conventional toll plaza and canopy at the Bay Bridge facility.
- Recent Accomplishments include:
 - Canopy and Booth Demolition complete for AET lanes. Eastern shore gantry foundation complete, gantry structure set. Equipment cabinets set. Loops installed. Tolling equipment installed on gantry. Testing occurring.
- Within the next 90-Days:
 - Place toll plaza in final temporary construction configuration. Power testing ongoing. Communication testing ongoing.

Crossover Automated Lane Closure System

- Project includes, New enhanced lane use signals, gantries, signing, pavement markings, dynamic in pavement lights, DMS and cameras to deploy lane closures and two-way traffic automatically on bay bridge.
- Recent and upcoming work includes work WB (Cox Creek) east to west starting on RT shoulder using day / night lane closure to excavate and install gantry foundations. Some barrier wall may be placed on the shoulders (only) to safeguard excavation / formwork. Due to development, manufacture & testing of IT components most of that work will not occur until 2021.

- You will see work on right shoulder from Cox Creek moving westward with boring ongoing, followed by actual gantry foundation excavation throughout next few months.
- Some single lane closures possible.
- Overhead gantries are scheduled to be set in place around 8/2021 through 12/2021.

Ferry Service for the Chesapeake Bay Crossings – Report Summary – 6:29 p.m. Heather Lowe w/ Introductions. Charles Kenny – 6:30 p.m. - Ferry Report

Mrs. Lowe provided the following information regarding the Chesapeake Bay Crossing Ferry Service.

Hello all. My name is Heather Lowe and I am a Project Manager in MDTA’s Division of Planning and Program Development, and I am attending this evening to discuss the Electric Ferry Report the MDTA completed early this year. The report was developed in response to budgetary requirements identified in the 2019 Senate Budget and Taxation Committee and House Appropriations Committee Joint Chairmen’s Report. The committees requested a report on the feasibility of an MDTA-operated ferry service using all-electric ferries as an alternative to a third crossing for the Chesapeake Bay.

The final report is posted on the Maryland Department of Legislative Services website and we will send out the link to the report to the group. It’s important to note that this study is independent of the current Bay Crossing Tier 1 NEPA Study.

Now I’ll turn the presentation over to **Charles Kenny** to go over details of the report.

Mr. Kenny provided the following information regarding the detailed report on the Chesapeake Bay Crossing Ferry Study.

Hello everyone, my name is Charles Kenny and I’m a consultant who has been assisting MDTA with this electric ferry study. As you may know, the study was requested by the General Assembly during the 2019 session and tasked MDTA with studying ferry service as an alternative to a third crossing of the Chesapeake Bay. Please note that this study is independent of the ongoing Tier I NEPA Bay Crossing Study.

State where people can find the report with the link.-

http://dlslibrary.state.md.us/publications/JCR/2019/2019_86-87.pdf

Two aspects that make this study stand out compared to other ferry studies conducted previously are that it focuses particularly on all-electric ferries (which we’ll describe in a minute), and that such a ferry service should create an “appreciable” difference to congestion on the existing Bay Bridge

Today I’ll be giving a summary of the study’s methodology, analysis, findings, and conclusions.

Previous Ferry Service

The first task was to take a look at the ferry service that previously operated on the bay. We did this because it was both a viable ferry service and was taken into consideration when the location for the Bay Bridge was chosen.

Ferry service ended the day the original span of the Bay Bridge opened in 1952 by which point there were five vessels capable of carrying about 65 cars and 750 passengers each. The only routes in operation by then were from Sandy Point to Matapeake on Kent Island, and from Romancoke to Caliborne in Talbot County.

Primary sources from that time indicate that traffic congestion, long delays, and a desire to improve access to and from the eastern shore were the primary motivators for building the original Bay Bridge.

All-Electric Ferry Technology and Services

Next, we looked at ferries, which come in a variety of styles and propulsion systems. An all-electric ferry is one where electricity stored in on-board batteries is used to power an electric motor that turns the propeller. They are the same concept as any other battery-powered electronic device or appliance, just on a vastly larger scale. Like those appliances, they must be charged regularly which is accomplished by a charging port located at the terminal dock.

All-electric vessel technology is new and while it is currently operating on a few ferry routes, there is not a significant amount of operational history. Existing all-electric ferry vessels are relatively small and have a limited range of operation which is dictated by current battery technology. The EF Ellen began regular operations last fall and represents the latest in all-electric ferry technology with a 5MW on-board supply and a 26 NM range. It can carry 31 cars and 198 passengers.

Some operators are exploring converting existing vessels to all-electric operation. Washington State Ferries is moving forward with converting their existing vessels to all-electric operation as part of their mid-life upgrade, albeit with a diesel backup for emergencies.

Other green technologies include solar and hydrogen fuel cells but neither of these is mature enough for operational service as of 2020.

Traffic Data

Traffic on the Bay Bridge is projected to increase by 2040 with delays also increasing for both non-summer weekdays and summer weekends. This means that congestion is projected to worsen so that by 2040, almost all daytime hours would experience delays.

For traffic on the existing bridge, we noticed that upwards of two thirds of non-summer weekday, and one half of summer weekend traffic originates and terminates near the existing bridge. In other words, a significant portion of traffic crossing the bridge on any given day of the week is travelling locally not regionally.

Ferry Service Considerations

Appreciable Difference

MDTA determined that an 'appreciable' difference to congestion should be considered as maintaining traffic volumes and congestion at existing levels and accommodating the additional volume projected to be added by 2040 with ferry vessels.

Route

The next step was to look at potential routes for a Chesapeake Bay ferry service. In considering potential routes, we looked at data from the Tier I NEPA study that identified corridors along the Chesapeake Bay that could potentially maintain traffic volumes and congestion on the existing Bay Bridge at current levels.

Given that traffic using the bridge today will likely continue to use the bridge in the future, and that a majority of non-summer and summer weekend traffic is located near the existing bridge, it was determined that a ferry route at or near the existing Bay Bridge would be necessary to attract the most ridership and thereby maximize its potential for congestion relief. MDTA did not determine an exact operational route as part of this study.

Ferry Capacity

Ferry capacity would be based on the need to accommodate the difference between existing traffic volumes now and project volumes for 2040. Although total daily volumes are higher on summer weekends, the hour with the greatest volume of traffic is actually 7-8am on non-summer weekdays. This hour is projected to see 900 additional vehicles crossing the bridge in 2040 and, given that these travelers are likely commuters due to the time of day and predominant westbound direction of travel, they dictate potential ferry capacity.

With the maximum hourly capacity identified, the next step was to determine the vessel capacity which must strike a balance between capacity, number of vessels, and potential wait time. Smaller vessels would mean lower wait times but would require more vessels which would be prohibitively expensive. Conversely, larger vessels would be more efficient, but with longer wait times.

The analysis determined that individual vessels carrying a third of the peak hour capacity would be the best option. With journey times of around 50 minutes, three vessels capable of carrying 300 vehicles each would accommodate the peak hour volume of 900 vehicles with acceptable wait times at each terminal. In order to accommodate fluctuations in demand, an extra 25% capacity was added; bringing individual vessel capacity to 400 vehicles, and total peak hour capacity to 1,200 vehicles.

Passenger capacity was determined based on vehicular capacity and ratios for other ferries of a similar size. Individual vessels would accommodate 1,200 passengers each.

An additional vessel would be required to serve as a spare in cases of emergency or routine maintenance.

Schedules

Operating schedules were created using a variety of known parameters from existing services. All-electric vessels must be charged regularly, and this can be accomplished while the vessel is loading and unloading vehicles. Twenty minutes is the currently accepted norm for charging time and that value was used for this study.

Twenty minutes would also permit vessels to load and unload vehicles through the use of multi-lane, bi-level ramps that would enable simultaneous loading and unloading to minimize turnaround time.

Weekday services in 2040 would feature a peak schedule from 6am to 10am before operating on an off-peak schedule until 2pm when a peak schedule would resume and operate until 8pm. In 2040, summer weekend service would be on a full-time, continuous daytime peak schedule, with extended evening hours on Fridays and Sundays to accommodate the additional demand. Peak schedule is considered as running three vessels nonstop.

Terminals

To provide a way to board ferries, terminals would be needed on both shores and would need to adequately accommodate 650 cars to account for fluctuations in demand. Terminals would also need to feature fare collection facilities, access roads, vessel docks, and on one shore, another separate dock for maintenance. Terminals would be approximately 25 acres in size each. MDTA did not determine locations on either shore for the terminals.

Additional Considerations

Other aspects that were considered and studied include the personnel resources necessary for ferry service operations, navigational concerns within the Chesapeake Bay, environmental concerns of initiating and operating ferry service, the cultural context of the Chesapeake Bay, and the suitability of MDTA-owned facilities for use or adaptation for ferry service.

Most critically, the navigation channel in the middle of the Bay is federally managed to maintain access to the Port of Baltimore. Vessels within this channel have priority right-of-way over other vessels within the bay. A cross-bay ferry service would have to contend with this traffic and sailings could be delayed or disrupted as a result.

The Chesapeake Bay is also a wildly diverse environmental resource filled with aquatic and land-based features. Implementing a ferry service could produce environmental impacts and these would have to be investigated and documented as part of the planning process. Dredging of the bay would be necessary to accommodate the size of vessels needed.

Locations where ferries form part of the cultural makeup include Seattle and New York City. These cities, however, have route termini in major metropolitan areas. In contrast, a Chesapeake Bay service would only form one part of a traveler's overall journey. Furthermore, although ferries have been part of the Chesapeake Bay culture for centuries, they have disappeared for regular cross-bay travel in the almost 70 years since the original Bay Bridge was opened.

Lastly, we determined there are no MDTA facilities that could be adapted for use in a ferry service. MDTA would also need to hire and train staff.

Fiscal Analysis

A fiscal analysis of a ferry service is usually a long and detailed process that can take years. Thankfully, the US DOT has a computer modelling tool that can provide a relatively detailed 'ballpark' cost for a ferry service. We used this model with some changes to account for the all-electric nature of the study.

An important thing to note is the need to replace the batteries onboard vessels every four years (\$6 million total for four vessels) and in the landside charging stations every 20 years (\$4 million total for two stations). There would also likely need to be upgrades to local utility infrastructure to accommodate the increased demand and these costs were estimated to be between \$12 and \$16 million.

Total service costs over 40 years are estimated to be between \$3.3 and 3.4 billion with average operating costs of \$45 million per year. The total vessel cost of between \$692 and \$780 million is included in this figure.

This total cost translates into a cost per vehicle per one-way trip across the bay of between \$37 and \$150 depending on service ridership as a percentage of route capacity. This analysis only looks at costs and so these figures should not be construed as the actual ticket fare price, but they do give an indication of the costs that the ridership would need to cover.

Conclusion

To conclude, this study was quite a unique and challenging look at an emerging vessel technology and its potential application in a Chesapeake Bay ferry service. MDTA determined that it would need to accommodate up to 900 vehicles per hour and would need four vessels capable of carrying 400 cars each. It also determined that although all-electric vessel technology is feasible, no vessels of the size needed are currently being built or in operation anywhere in the world. Two terminals capable of accommodating 650 cars would be needed and would be approximately 25 acres in size each.

There are concerns with navigation within the Chesapeake Bay and a ferry service would likely require dredging, and ferry vessels would be required to give way to vessels within the federally managed channel in the center of the bay.

Implementing a ferry service could create impacts to the environment and these would have to be fully investigated and identified.

Lastly, MDTA determined that all-electric ferry service as a standalone option is not an alternative to a third crossing of the Chesapeake Bay. If the current Tier I NEPA study moves into Tier II, ferry service would be studied in conjunction with other alternatives.

Ms. Lynch - 6:43 p.m. – Can you send the online link?

Mr. Riegel - 6:44 p.m.: What is a comparable cost for a new bridge Mrs. Lowe: We don't have that information.

Mr. Riegel: What's a provision for moving people other than private car? Mrs. Lowe: It will help improve congestion.

Mr. Robinson - 6:46 p.m.: This study is not a good comparison – levels to help mitigate traffic. Tunneler approach. This is about moving people, not just cars. Mrs. Lowe: Language is specific – this is the response to that language. Independent of the Tier 1 study. Tier 2 would look at that.

Mr. Ports - 6:51 p.m.: Joint chairman's report – they determined. \$37 is at 100% capacity Difference between Washington State – bridges to islands. Talks about passengers too.

Mr. Robinson: Virginia Fast Ferries – point this document and NEPA might refute before it truly gets looked at.

Mr. Ports: The report is more comprehensive. Read it. When you look at the Ferry option – looks at 7 prior reports by previous administrations. Hard to justify \$37 to \$2.50.

Ms. Lynch - 6:57 p.m.: Excellent report. I lived in NY – this situation here is different than anywhere else.

New Toll Payment Options – 6:59 p.m. John O'Neill

Mr. O'Neill provided the following information regarding New Toll Payment Options.

Pay by plate

Early payment Prepay video tolls

- We will have new pay options once AET is finished.
- One payment method is pay by plate. Toll automatically billed to credit cards at the same toll rate. Alternate option to not stop, keep driving, without needing an EZPASS. It is a good way for someone who uses a facility to use a facility
- Another payment type is discount. For those who do not receive a video toll that do not want an EZPASS or use a credit card. They can pay an invoice at a discounted rate at 15%. Pay via credit card before using the facility that will save on postage fees (to the customer). We still focus on EZPASS being the most effective and efficient.
 - Mr. Riegel - 7:03 p.m. - Venmo type option considered? Mr. O'Neill: You can do it to fund the EZ-Pass account. We will continue to look at those options. Video tolling administrative costs to split the toll for 2-way.
 - New Vehicle classes

Update on new vehicle classes. Governor reduced toll rates for motorcycles. Cutting the cost on towing vehicles – not the same toll rate as larger towing vehicles. This was discussed last year.

- Mr. Broderick at 7:05 p.m. – Can you comment on the future of toll collections going westbound?
- Mr. O’Neill - Answered by saying they will continue to do traffic studies. Plus, or minus 3% depending on the time of day. Concentrating on single toll rating right now. No plans on moving to two-way tolling. Big obstacle is video tolling, if we had two-way tolling, we would be splitting the tolling and still must mail out notices for both directions. The customer would be getting double the notices. Next Big announcement – moving to electronic tolling by the summer (awaiting on the governor). We are currently in cashless tolling now due to COVID-19. Now we do have parity from studies. Continuing to with the single tolling point. No plans.

Community Traffic Workshop Follow Up – 7:08 p.m. Jack Broderick. Melissa Bogdan with additional comments – 7:11 p.m.

Melissa Bogdan provided the following information regarding Community Traffic Workshop.

1. Overhead and roadside message boards - a comprehensive signage plan w/SHA. We are coordinating with SHA for signage and social media messaging. We are currently evaluating our summer campaign in light of COVID and the state of emergency.
2. Stay on 50 reminders at the beginning of the Bayspan announcement - Unfortunately, it's technologically impossible with the existing system to put a pre-recorded message at the start of Bayspan. The only way it can be done is for a Bayspan operator to record EVERY message any time the hotline needs to be updated. This is a significant time investment by the operator, especially in the midst of an emergency incident with frequently changing updates, that would delay getting real-time and accurate info to the traveling public.
3. Stay on 50 EZ-Pass account holder email

Mr. Broderick: We need to continue to investigate Federal funding opportunities.

Mr. Ports: I ran that through the Attorney General’s Office, separate part of government. Constitutionality of how we build infrastructure we receive Federal Funds. People can drive freely. Every local community would start doing that. We would come to a screeching halt. We can try with the marketing and signage...we’re fighting the apps. Only way is to expand capacity on the highways like with the TRP. The only way to get them out of the communities is to expand the bridge. They cannot handle the economic development.

Mr. Broderick: Thanks to you and MDTA for trying to help us.

Mr. Ports: AET will happen before summer, but it does not address the capacity situation on that bridge.

Mr. Schulz: When lane 1 was opened – it would have been nice if BBRAG was told in advance that it would be open. So, we could relay a message to the community.

Mr. Ports: You're right, we are sometimes restricted. The MDTA gives as much possible advance notice to Elected Officials and the BBRAG prior to releasing to the Media and General Public.

Mr. Schulz: Are we considering doing contra flow?

Mr. Jaramillo: Not at this point due to COVID-19.

Ms. Lynch: Can we get notification the day before that an announcement is coming?

Mr. Ports: We'll have to look at that with the help of Mary O'Keefe.

Mr. Riegel: What are the chances this is our last meeting?

Mr. Ports: You're correct.

Mr. Riegel: In the future, can we make an item on the agenda for Public Comment.

Meeting Adjourned – 7:32 p.m.