BALTIMORE METROPOLITAN PLANNING ORGANIZATION

BALTIMORE REGIONAL TRANSPORTATION BOARD
RESOLUTION #25-22

RESOLUTION TO ENDORSE ALTERNATIVES RETAINED FOR DETAILED STUDY
BAY CROSSING STUDY

WHEREAS, the Baltimore Regional Transportation Board is the designated Metropolitan Planning Organization for the Baltimore region, encompassing the Baltimore Urban Area, and includes official representatives of the cities of Annapolis and Baltimore, the counties of Anne Arundel, Baltimore, Carroll, Harford, Howard, and Queen Anne's as well as representatives of the Maryland Department of Transportation, the Maryland Department of the Environment, the Maryland Department of Planning, the Maryland Transit Administration, and the RTA of Central Maryland; and

WHEREAS, Section 450.322 of the Final Metropolitan Transportation Planning Rules issued by the Federal Highway Administration and Federal Transit Administration on May 27, 2016 identifies the requirements of a congestion management process in transportation management areas. In TMAs designated as nonattainment for ozone or carbon monoxide, the congestion management process shall provide an appropriate analysis of reasonable (including multimodal) travel demand reduction and operational management strategies for the corridor in which a project that will result in a significant increase in capacity for SOVs is proposed to be advanced with Federal funds; and

WHEREAS, in October of 1997, the Baltimore Regional Transportation Board approved Resolution #98-7, adopting a work program for the Congestion Management System (CMS) corridor implementation; and

WHEREAS, one of the primary purposes of the Congestion Management System process is to identify promising mobility improvement and congestion management strategies, rather than select specific transportation improvement projects for implementation. These improvements will be considered for the next steps of the planning and project development process and, where appropriate, studied further in more detail; and

WHEREAS, the Baltimore Regional Transportation Board, as a commenting agency, endorsed Resolution #24-14 endorsing the Purpose and Need Statement for the Bay Crossing Study on February 27, 2024; and

WHEREAS, the Maryland Transportation Authority (MDTA) conducted public review between December 4, 2024 and January 13, 2025 and made a formal presentation of the proposed Alternatives Retained for Detailed Study at the Interagency Review meeting on February 26, 2025; and

NOW, THEREFORE, BE IT RESOLVED, that the Baltimore Regional Transportation Board, as a commenting agency, endorses the Bay Crossing Alternatives Retained for Detailed Study Statement as described in Attachment A.

I HEREBY CERTIFY that the Baltimore Regional Transportation Board, as the Metropolitan Planning Organization for the Baltimore region, approved the aforementioned resolution at its March 25, 2025 meeting.

3-25-25
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Date

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Tony Russell, Chairman
Baltimore Regional Transportation Board

Alternatives Retained for Detailed Study

Overview

The MDTA identified the Alternatives Retained for Detailed Study (ARDS) which are the NEPA range of reasonable alternatives for evaluation in the Tier 2 Study EIS. The ARDS include the No-Build Alternative and six build alternatives. Each build alternative includes removing the existing eastbound and westbound bridge structures and replacing them with two new bridge structures constructed near the location of the existing bridges. The ARDS are differentiated by the number of lanes provided across the new bridge and on the approaches as well as the bridge location, as described below.

Alternative A: No Build (6-5-6)

Alternative A, the No Build Alternative, would retain the existing Bay Bridge, the US 50/301 alignment, and the existing number of lanes. This alternative would retain six lanes on the approaches on the Eastern and Western Shores and five lanes on the two-span Bay Bridge. The No-Build Alternative will include regular maintenance of the Bay Bridge and US 50/301, but no capital improvements other than currently planned and programmed projects.

The No-Build Alternative would not address the Tier 2 Study's Purpose and Need but will be retained as a baseline for comparison with the ARDS.

Alternative B: 6-8-6 North

Alternative B (6-8-6 North) would replace the existing Bay Bridge with two new bridge spans located just north of the existing Bay Bridge alignment and would consist of six lanes along US 50/301 on the Western Shore (three per direction), eight lanes on a new bridge (four per direction), and six lanes along US 50/301 on the Eastern Shore (three per direction). The two new bridge spans would include one span to the north and one span in-between the location of the existing bridge spans. The approach roadways would remain on the existing roadway alignment, except where necessary to connect to the new bridge spans. Thus, with Alternative B, the five existing bridge lanes would be increased to eight bridge lanes; however, the number of lanes on the Western Shore and Eastern Shore would not change and would remain at six total travel lanes beyond the immediate tie-ins to the new bridge spans.

Alternative C: 6-8-6 South

Alternative C (6-8-6 South) would replace the existing Bay Bridge spans with two new bridge spans just south of the existing Bay Bridge alignment and would consist of six lanes along US 50/301 on the Western Shore (three per direction), eight lanes on a new bridge (four per direction), and six lanes along US 50/301 on the Eastern Shore (three per direction). The two new bridge spans would include one span to the north and one span in-between the location of the existing bridge spans. The approach roadways would remain on the existing roadway alignment, except where necessary to connect to the new bridge spans. Thus, with Alternative C, the five existing bridge lanes would be increased to eight bridge lanes; however, the number of lanes on the Western Shore and Eastern Shore would not change

and would remain at six total travel lanes beyond the immediate tie-ins to the new bridge spans.

Alternative D: 8-8-8 North
Alternative D (8-8-8 North) would replace the existing Bay Bridge spans with two new bridge spans just north of the existing Bay Bridge and would consist of eight lanes along US 50/301 on the Western Shore (four per direction), eight lanes on a new bridge (four per direction), and eight lanes along US 50/301 on the Eastern Shore (four per direction). The two new bridge spans would include one span to the north and one span in-between the location of the existing bridge spans. Alternative D would increase the number of lanes along the US 50/301 approaches to eight lanes from the MD 2/450 interchange on the Western Shore to the US 50/301 split on the Eastern Shore and would generally remain on the existing roadway alignment except where necessary to connect to the new bridge spans. Thus, with Alternative D, the five existing bridge lanes would be increased to eight bridge lanes and the number of lanes on the Western Shore and Eastern Shore would increase from six total travel lanes to eight total travel lanes.

Alternative E: 8-8-8 South
Alternative E (8-8-8 South) would replace the existing Bay Bridge spans with two new bridge spans just south of the existing Bay Bridge and would consist of eight lanes along US 50/301 on the Western Shore (four per direction), eight lanes on a new bridge (four per direction), and eight lanes along US 50/301 on the Eastern Shore (four per direction). The two new bridge spans would include one span to the south and one span in-between the location of the existing bridge spans. Alternative E would increase the number of lanes along the US 50/301 roadway approaches to eight lanes from the MD 2/450 interchange on the Western Shore to the US 50/301 split on the Eastern Shore and would generally remain on the existing roadway alignment except where necessary to connect to the new bridge spans. Thus, with Alternative E, the five existing bridge lanes would be increased to eight bridge lanes and the number of lanes on the Western Shore and Eastern Shore would increase from six total travel lanes to eight total travel lanes.

Alternative F: 8-10-8 North
Alternative F (8-10-8 North) would replace the existing Bay Bridge spans with two new bridge spans just north of the existing Bay Bridge and would consist of eight lanes along US 50/301 on the Western Shore (four per direction), ten lanes on a new bridge (five per direction), and eight lanes along US 50/301 on the Eastern Shore (four per direction). The two new bridge spans would include one span to the north and one span in-between the location of the existing bridge spans. Alternative F would increase the number of lanes along the US 50/301 roadway approached to eight lanes from the MD 2/450 interchange on the Western Shore to the US 50/301 split on the Eastern Shore and would generally remain on the existing roadway alignment except where necessary to connect to the new bridge spans. Thus, with Alternative F, the five existing bridge lanes would be increased to ten bridge lanes and the number of lanes on the Western Shore and Eastern Shore would increase from six total travel lanes to eight total travel lanes.

Alternative G: 8-10-8 South

Alternative G (8-10-8 South) would replace the existing Bay Bridge spans with two new bridge spans just south of the existing Bay Bridge and would consist of eight lanes along US 50/301 on the Western Shore (four per direction), ten lanes on a new bridge (five per direction), and eight lanes along US 50/301 on the Eastern Shore (four per direction). The two new bridge spans would include one span to the south and one span in-between the location of the existing bridge spans. Alternative G would increase the number of lanes along the US 50/301 roadway approached to eight lanes from the MD 2/450 interchange on the Western Shore to the US 50/301 split on the Eastern Shore and would generally remain on the existing roadway alignment except where necessary to connect to the new bridge spans. Thus, with Alternative G, the five existing bridge lanes would be increased to ten bridge lanes and the number of lanes on the Western Shore and Eastern Shore would increase from six total travel lanes to eight total travel lanes.

Considerations Included in All Build Alternatives

The build alternatives will include the following options for or consideration of bus service improvements, Transportation Systems Management (TSM)/Transportation Demand Management (TDM) improvements and the safe inclusion of a pedestrian/bicycle shared use path (SUP).

- **Bus Improvements**: The MDTA will further consider potential transit priority treatments, such as bus-on-shoulder, and improvements to park-and-ride facilities. The ARDS will explore financial support for bus improvements to encourage transit use in the region. Impacts and feasibility associated with these improvements will be studied as part of the ARDS.
- **TSM / TDM Improvements**: Two TSM/TDM measures will be considered with the ARDS: variable pricing and part-time shoulder use (PTSU) lanes.

  The Bay Bridge will continue to be a tolled facility. If a Build Alternative is selected, variable pricing could be considered in the future to provide flexibility for management strategies that could be modified over time to reduce congestion and achieve transportation goals.

  The MDTA will continue to study options for a PTSU configuration on the Bay Bridge. A PTSU on the bridge could be used for general vehicular operations or bus-on-shoulder operations. The shoulders on the Bridge would be wide enough to accommodate future maintenance needs and incident management. The MDTA will also continue to study options for PTSU on the US 50/301 approaches to the Bridge where there is adequate existing median width to accommodate a full-width paved shoulder, without needing outside widening.
- **Pedestrian / Bicycle Shared Use Path (SUP)**: The MDTA will consider the option of including a SUP along a new bridge as part of the ARDS. The SUP would be separated from the roadway lanes by a barrier. This analysis will include study of the environmental impacts, tie-in locations to existing pedestrian and bicycle facilities, and the cost associated with constructing an SUP.

Alternatives Options Not Retained for Detailed Study

The MDTA analyzed key elements and screened options of each element to determine which options would be reasonable to include in the end-to-end alternatives. The key elements included existing bridges, structure type, alignment, number of lanes, structure location, Transit/Transportation Systems Management/Transportation Demand Management (TSM/TDM), and pedestrian and bicycle shared use path. Each element was evaluated and screened independently using the project needs and objectives. The options that passed the screening were used to identify and develop the proposed ARDS listed above. Options that did not address the needs and objectives, and thus would not be able to address the Preliminary Purpose and Need for the proposed action, were not included in the proposed ARDS. These options not recommended for inclusion in the ARDS are listed described below.

Existing Bridges

- **Keep one or both existing bridge spans:** Keeping one or both existing bridge spans would not address the roadway deficiencies, existing and future maintenance, and navigation needs. The shoulders on the existing bridges do not meet currently accepted highway design criteria. Keeping the spans would require lane closures that would continue to impact the traveling public as the magnitude of the repairs increases with the age of the spans. The vertical clearance of the existing bridge spans is a constraint on shipping and does not meet the USCG's required clearance. Additionally, there is a high cost associated with keeping one or both bridge spans relative to the age and condition of the existing bridge spans. Overall, keeping one or both existing bridge spans would not be reasonable.

Structure Type

- **Full Tunnel:** A full tunnel does not have the potential to address the mobility need and the environmental responsibility and cost and financial responsibility objectives. Vehicles carrying hazardous and explosive materials, such as fertilizer and gasoline, would be prohibited from using a tunnel, and would have to be diverted to other routes. Additionally, a tunnel could not accommodate a pedestrian/bicycle SUP. The tunnel would have steeper maximum grades than a bridge reducing speeds and capacity. A full tunnel would also have substantial impacts to the Chesapeake Bay bottom due to the tunnel approach portals and manmade islands for ventilation. The portal islands would also have impacts to environmental resources on land. A north alignment would have substantial impacts to Sandy Point State Park and Terrapin Nature Park. A southern alignment would have substantial impacts to Westinghouse Bay and the Bay Bridge Marina. The full tunnel would require disposal of substantial degree of dredge and boring material, over 10 million cubic yards of spoil for an 8-lane tunnel. A full tunnel would be approximately two to three-and-a-half times more expensive than a new bridge that provides the same number of lanes. Therefore, a full tunnel option would not be reasonable.
- **Bridge-Tunnel Combination:** Similar to the full-length tunnel option, the bridge-tunnel combination would not have the potential to address the mobility need, the environmental responsibility, and cost and financial responsibility objectives.

Vehicles carrying hazardous and explosive materials, such as fertilizer and gasoline, would be prohibited from using a tunnel and would have to be diverted to other routes. Additionally, a tunnel could not accommodate a pedestrian/bicycle SUP. The tunnel would have steeper maximum grades than a bridge thus reducing speeds and capacity. A bridge-tunnel option would require creation of large man-made portal islands in the Chesapeake Bay and substantial environmental impacts at the tunnel approach portals, thus resulting in substantial environmental impacts. A bridge-tunnel would also be more expensive than a new bridge that provides the same number of lanes, as under a significant portion of the Bay and construction of the portal islands would have high costs. The cost of a bridge-tunnel would be less than the cost of a full tunnel due to the shorter length of the tunnel components, but still substantially greater than a new bridge. Therefore, the bridge-tunnel option would not be reasonable.

- **Double Decker Bridge:** Compared to the full bridge option, a double decker bridge option would require additional structure to accommodate the grade change for the upper deck. Bridge piers and foundations would also need to be larger to accommodate the additional weight and height of a double decker bridge. One single double-decker bridge would not provide the redundancy that the two existing bridge spans currently provide. Without the redundancy of two structures, an incident that requires a closure could impact the whole crossing. Therefore, a double decker bridge would not address the roadway deficiency need.

Alignments Relative to Existing US 50/301

- **Off existing approach alignment**: An approach alignment off the existing US 50/301 centerline would not have the potential to address the study's environmental responsibility and cost and financial responsibility objectives. An approach alignment off the existing U.S. 50/301 centerline would have a higher relative environmental impact and cost compared to an alignment along existing US 50/301. There would be substantial unavoidable impacts to environmental and community resources, including Section 4(f) properties such as Sandy Point State Park, Holly Beach Farm, Terrapin Nature Preserve, and historic sites; Section 6(f) properties including Sandy Point State Park and Holly Beach Farm; community facilities; numerous wetlands, tidal and non-tidal waters; forests; and private property. There would be substantial cost associated with constructing a completely new roadway, including costs for both construction itself and ROW acquisition. An approach alignment off the existing U.S. 50/301 centerline therefore would not be reasonable.

Number of Lanes

- **6-6-6**: The 6-6-6 lane configuration option would not have the ability to address the adequate capacity and reliable travel times need. This configuration would add only one travel lane across the Chesapeake Bay and would not add any travel lanes to US 50/301 east and west of the existing Bay Bridge. The 6-6-6 option would not appreciably reduce congestion or improve the travel time reliability relative to existing and 2045 no-build conditions and would therefore not be reasonable.

- **10-10-10**: The 10-10-10 option would address the study's needs; however, preliminary analysis shows that the 8-10-8 option would provide sufficient additional capacity to alleviate congestion and improve travel time reliability compared to existing and 2045 no-build conditions. Thus, a larger 10-10-10 option, which would add an additional lane in each direction along the U.S. 50/301 approaches compared to the 8-10-8 lane configuration, would not be necessary to accommodate future traffic volumes and would provide more transportation capacity than necessary. Additionally, the 10-10-10 configuration would have a larger footprint and require additional right-of-way along US 50/301 on both the Eastern and Western Shores, which would have greater impacts to the environment and local communities compared to any of the other lane options. The 10-10-10 lane configuration would include substantial additional roadway infrastructure construction and thus would be more costly than any of the other lane options. Therefore, the 10-10-10 option would not be reasonable.
- **More than 10 lanes**: Constructing a roadway larger than the 8-10-8 lane configuration would have greater impacts, cost more money, and have diminishing returns in terms of traffic improvement. The 10-10-10 option, and any number of lane combinations that have more than eight lanes on the Eastern and Western Shores and more than ten lanes on the bridge. Therefore more than 10 lanes would not be reasonable.

Structure Location

- **Fully in between bridge location:** The in-between bridge location is infeasible to construct without demolishing one of the existing spans before constructing the new span because there is not enough space between the existing spans on the Western Shore approach to construct a new span. Demolishing one of the existing spans before constructing a new span would reduce the number of existing travel lanes during construction and result in severe congestion and extremely unreliable travel conditions. Therefore, during construction, the in-between bridge location would not have the potential to address the adequate capacity and reliable travel times and mobility needs. Therefore, the in-between bridge location option would not be reasonable nor practical to construct.
- **Far south bridge location:** The far-south bridge location would not address the study's environmental responsibility and cost and financial responsibility objectives. The far-south option would have substantially greater unavoidable impacts to environmental and community resources compared to the other structure location options. This would include the Holly Beach Farm Section 4(f) and Section 6(f) property; historic properties; community facilities; numerous wetlands, tidal and non-tidal waters; forests; and private property including residences, Northrup Grumman, and a marina. There would be substantial cost associated with constructing a far-south bridge location, including costs for both construction itself and ROW acquisition. Therefore, a far-south bridge location option would not be reasonable.

Transit

- **Ferry:** The ferry option would not have the potential to address the adequate capacity and reliable travel times need or the environmental responsibility and cost and

financial responsibility objectives. A ferry would be able to accommodate less than five percent of the anticipated growth in traffic volume between 2017 and 2045; therefore, it would not appreciably reduce existing volumes. In combination with proposed ARDS that include additional highway capacity, a ferry would only provide a small amount of additional capacity. Additionally, a ferry would require additional infrastructure within the corridor for the ferry terminals and access roads, which would have environmental impacts. Fare revenues generated by most ferry route locations would not be adequate to cover operational costs and there would be substantial additional cost associated with the infrastructure needed for ferry terminals and access roads. Therefore, a ferry option would not be reasonable. The Tier 2 Study does not preclude implementation of a new ferry service resulting from another study.

- **Rail:** The rail option would not have the potential to address the adequate capacity and reliable travel times need or the environmental responsibility and cost and financial responsibility objectives. Rail is estimated to have the potential to remove less than 2 percent of traffic from vehicular travel lanes, which would not appreciably relieve congestion nor improve travel times. Providing rail on a new bridge, either on the same bridge as roadway lanes or on a separate bridge, would necessitate a larger structure or an additional structure. This option would also require construction of lengthy new rail connections to reach the existing rail networks on both shores, resulting in substantial environmental impacts. The larger or additional structure and the lengthy new rail connections would also have substantial cost. Therefore, the rail option would not be reasonable.
- **Bus Rapid Transit (BRT):** The BRT option would not have the potential to address the adequate capacity and reliable travel times need or the environmental responsibility and cost and financial responsibility objectives. BRT is estimated to have the potential to remove less than 2 percent of traffic from vehicular travel lanes, which would not appreciably relieve congestion and improve travel times. A BRT option would require construction of lengthy new connections to reach appropriate high-capacity end points, resulting in substantial environmental impacts. The lengthy new BRT connections would also have substantial cost. Therefore, a BRT option would not be reasonable.

Transportation Systems Management/Transportation Demand Management (TSM/TDM)

- **Ramp Metering:** Ramp metering would not have the potential to address the adequate capacity and reliable travel times and mobility needs. Ramp metering would not add capacity to the Bay Bridge or the US 50/301 approaches. Ramp metering could result in queuing at ramps and worsen backups on local roadways in some areas, thereby hindering local trips. Therefore, ramp metering would not be reasonable.
- **Express-Local Lanes:** Express-local lanes would not address the study's mobility need and the environmental responsibility and cost and financial responsibility objectives. Express-local lanes require local traffic to use the local lanes but do not limit through traffic to the express lanes. Through traffic can use the local lanes when the express lanes are congested, but local traffic cannot use the express lanes when

local lanes are congested. Express and local lanes need some type of physical separation between each other, which increases the width of the roadway, leading to potentially more environmental impacts than the same number of general purpose lanes. The additional roadway width needed for physical separation would also lead to a larger cost than the same number of general purpose lanes. Therefore, express-local lanes would not be reasonable.

- **Priced Managed Lanes:** Priced managed lanes would not address the study's adequate capacity and reliable travel time and mobility needs and the environmental responsibility and cost and financial responsibility objectives. Priced managed lanes are intended to maintain free-flow speed in the managed lanes. While congestion in the general-purpose lanes would improve slightly because some vehicles would use the managed lanes, there would still be significant congestion in the general purpose lanes. Managed Lane traffic can use the local lanes when the managed lanes are congested, but local traffic cannot use the managed lanes when local lanes are congested. Priced managed lanes need some type of physical separation between the managed lanes and the general purpose lanes, which increases the width of the roadway, leading to potentially more environmental impacts than the same number of general purpose lanes. The additional roadway width needed for physical separation would also lead to a larger cost than the same number of only general purpose lanes. Therefore, the priced managed lanes option would not be reasonable.