

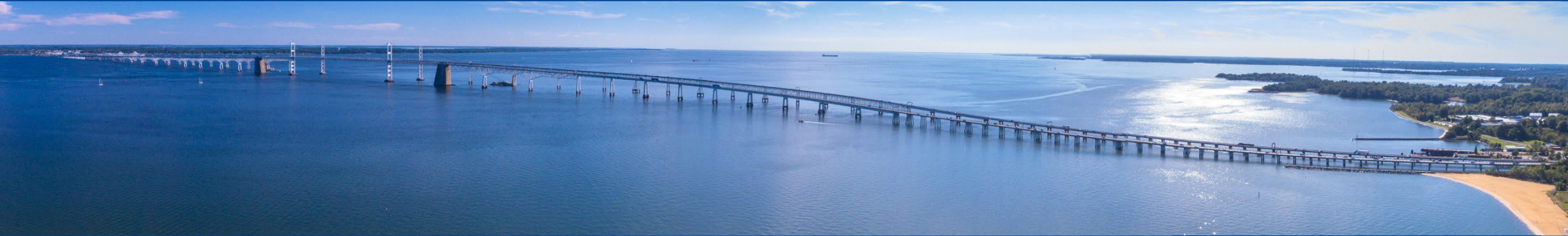
Chesapeake BAY CROSSING STUDY TIER 2 NEPA



Maryland
Transportation
Authority



Kent Island Heritage Society Meeting



March 19, 2024

NEPA

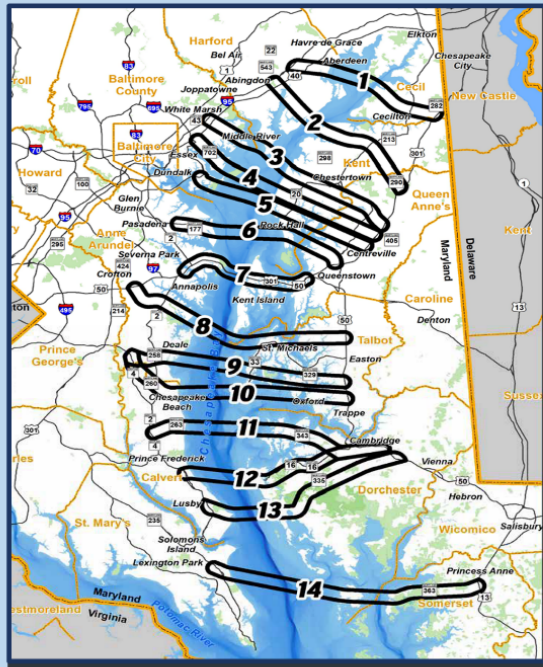
- ▶ The Maryland Transportation Authority (MDTA) and the Federal Highway Administration (FHWA) are following a tiered National Environmental Policy Act (NEPA) process to improve mobility, travel reliability and safety at the existing William Preston Lane, Jr. Memorial (Bay) Bridge



Tier 1 Study

STEP 1

14 two-mile-wide Corridor Alternatives were evaluated for their ability to address the Tier 1 Purpose and Need.



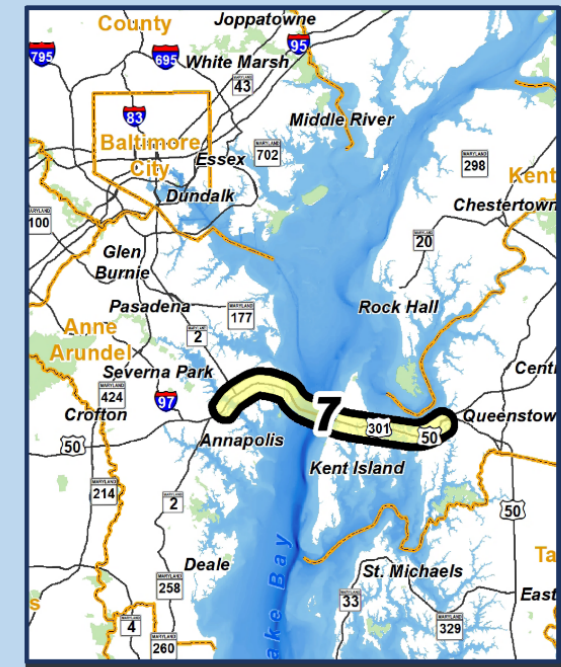
STEP 2

Analysis of traffic, engineering, cost and environmental considerations indicated that Corridors 6, 7 and 8 best met the Tier 1 Purpose and Need.



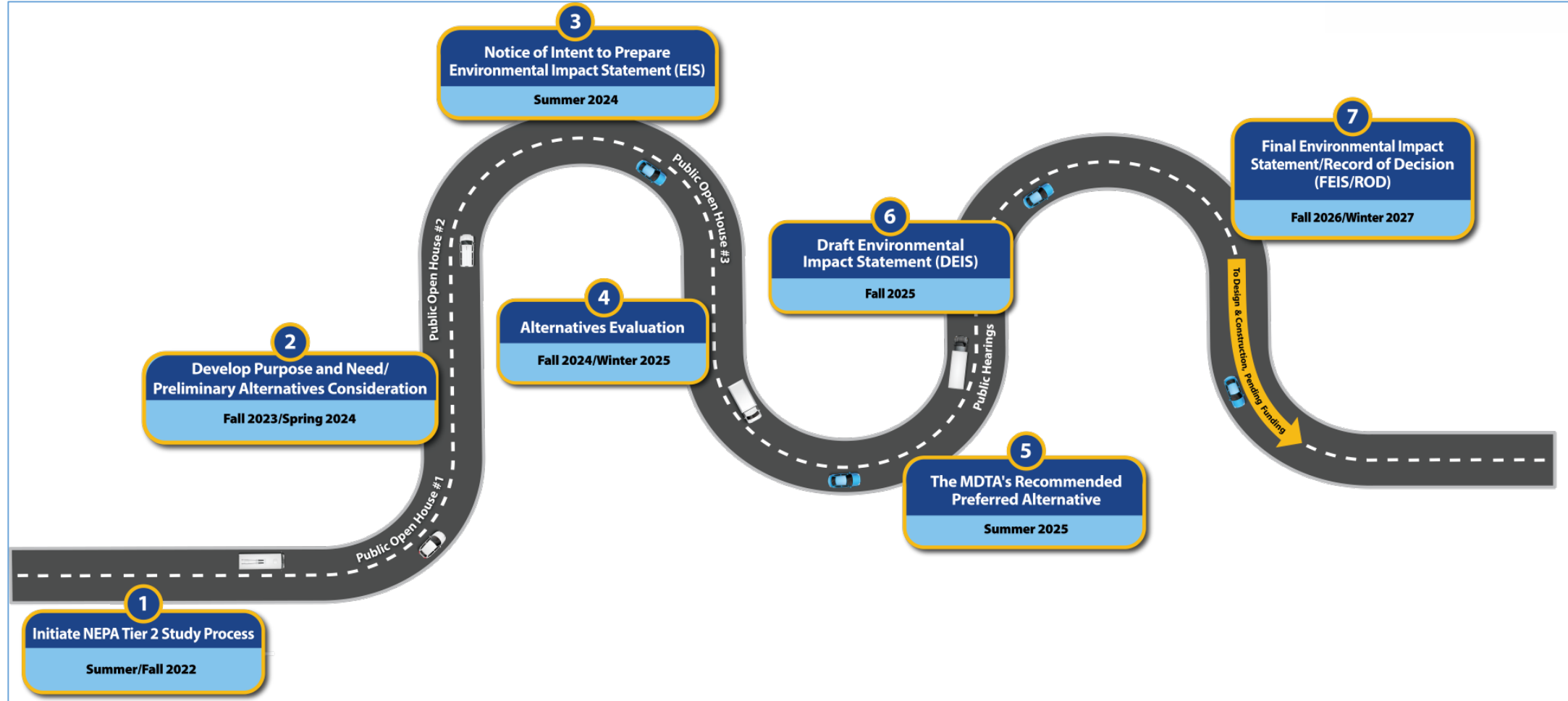
STEP 3

Corridor 7 was identified as the Selected Corridor Alternative to be studied in greater detail during the Tier 2 Study.



Tier 2 Study

- In June 2022, the MDTA launched the Chesapeake Bay Crossing Study Tier 2 NEPA (Tier 2 Study).



Proposed Purpose and Need

- ▶ The MDTA currently is developing the Purpose and Need for the Tier 2 Study and seeking input. The recommended Purpose and Need below may be further refined with public and agency input. The Purpose and Need will be used to assess transportation alternatives.

Draft Purpose

The Tier 2 Study will evaluate reasonable alternatives for providing adequate capacity and access to improve travel reliability, mobility and safety across the Chesapeake Bay and along the US 50/301 corridor. The Tier 2 Study will evaluate existing and potentially expanded transportation infrastructure to support additional capacity, improve travel times, accommodate maintenance activities and improve navigational clearances. The Tier 2 Study will consider equity and environmental responsibility, and cost and financial viability.

Study Needs



Adequate Capacity and Reliable Travel Times



Mobility



Safety



Existing and Future Maintenance Needs



Navigational Clearance

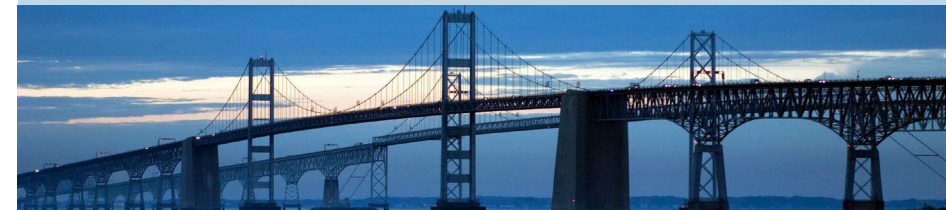
Additional Considerations



Equity and Environmental Responsibility

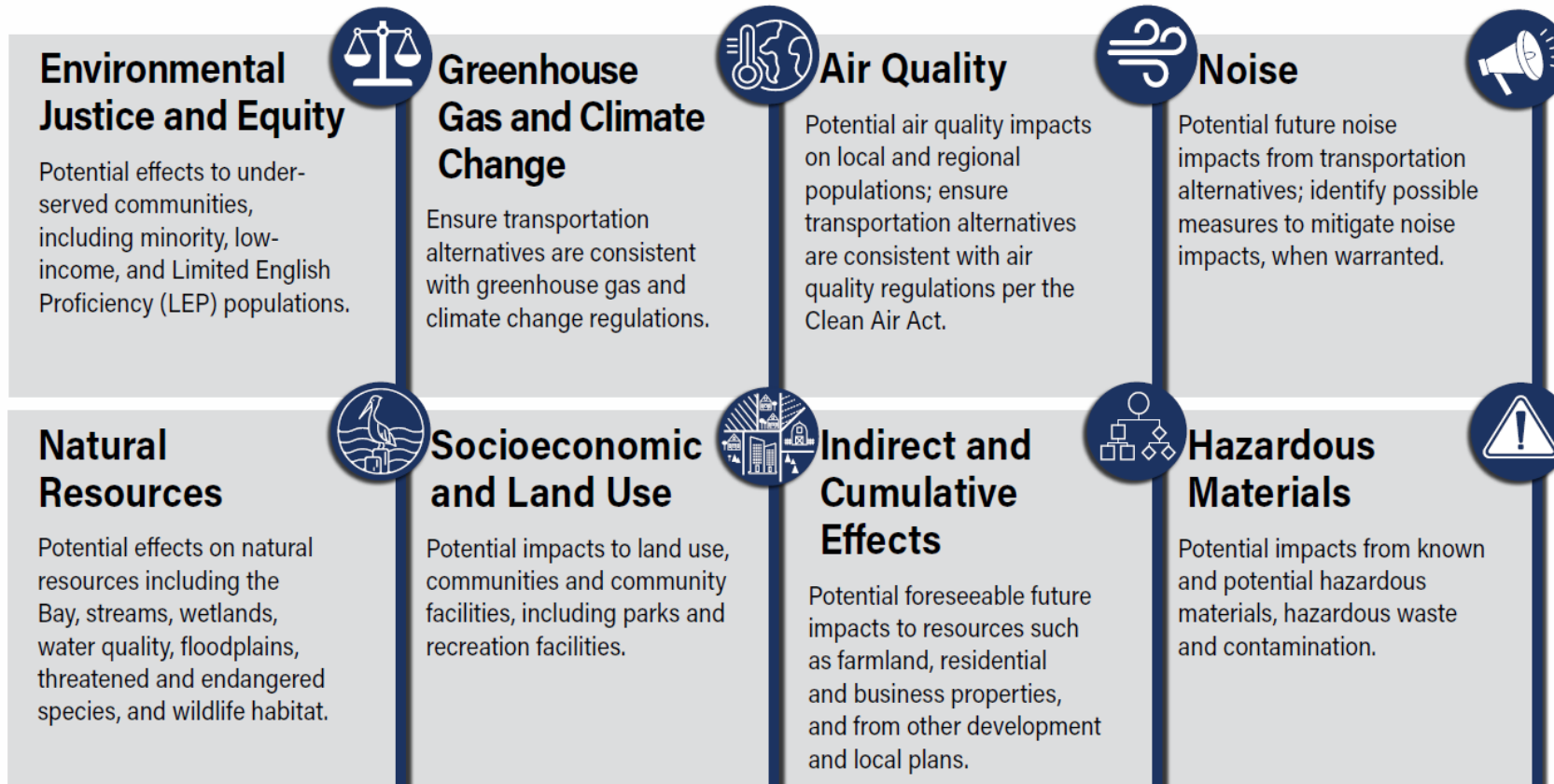


Cost and Financial Viability



Environmental Studies

- As required by NEPA, the Tier 2 Study will identify potential environmental impacts associated with transportation alternatives. Avoidance, minimization, and mitigation opportunities also will be developed. The following environmental technical studies will be conducted:



Section 106 of the National Historic Preservation Act requires federal agencies to take into consideration the effect their actions will have on historic properties. The MDTA and FHWA will identify historic properties, assess effects to these properties and resolve potential adverse effects. The assessment will include consultation with federal, state and local government agencies, federally recognized tribes and other consulting parties.

Section 106 of the NHPA

The National Historic Preservation Act of 1966 (NHPA) is a federal law governing stewardship of our nation's cultural heritage.

Section 106 of the NHPA creates a process by which federal agencies take into consideration the effects their actions will have on historic properties.

State projects using federal funding, or requiring federal approval or permitting, are required to comply with Section 106.



White's Heritage (Stoopley-Gibson)

What is a Historic Property?

Section 106 defines a historic property as any site, district, building, structure, or object included in, or eligible for inclusion in, the National Register of Historic Places (National Register).

Some jurisdictions have their own list of local landmarks. These resources are not historic properties under Section 106 unless they are also determined eligible for the National Register.

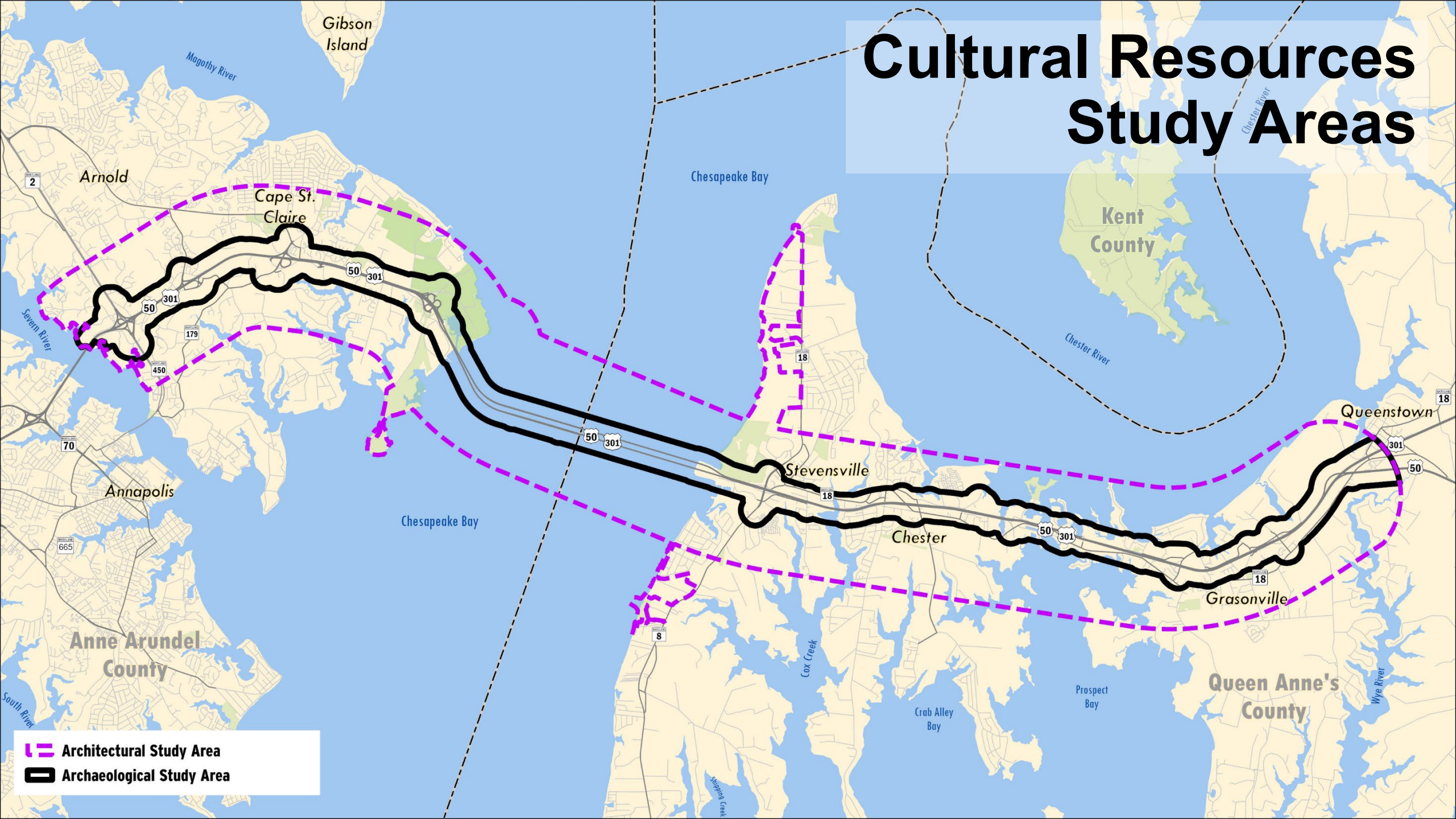


**William Preston Lane, Jr. Memorial Bridge, Westbound & Eastbound,
Determined eligible for the National Register in 2001**

Section 106 Process

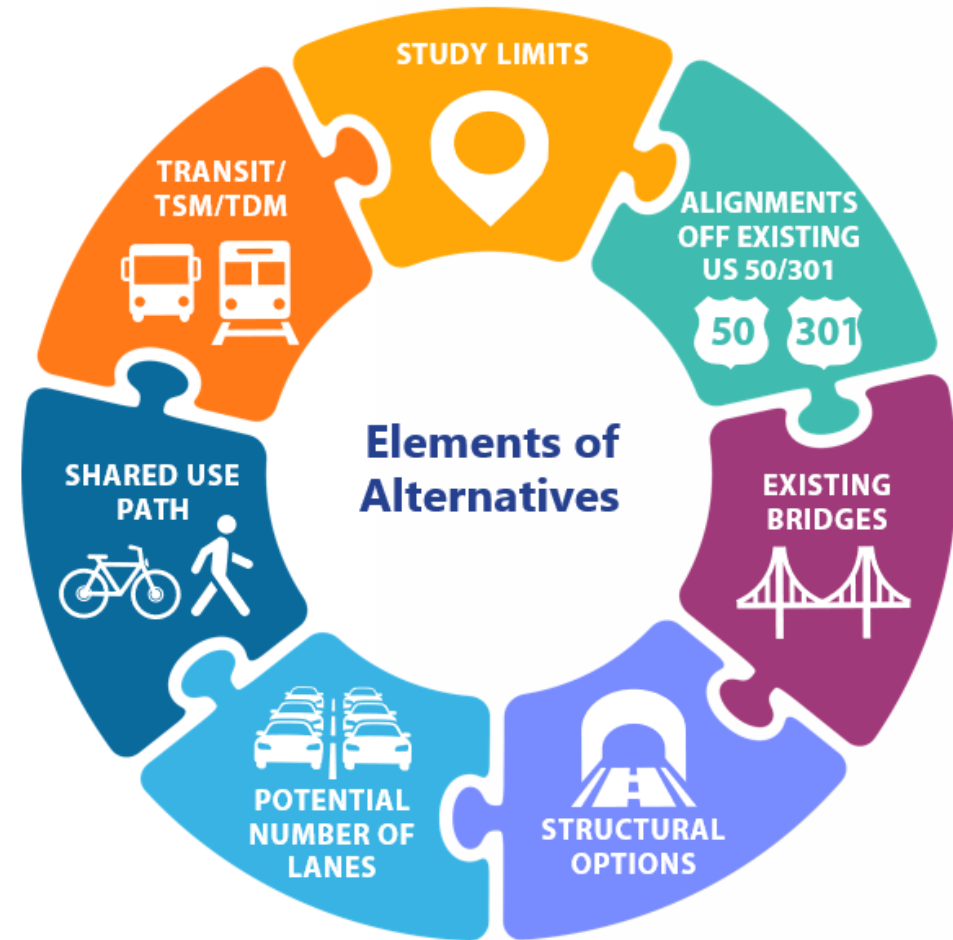


Cultural Resources Study Areas



Tier 2 Study – Alternatives Development Process

- ▶ The MDTA is currently evaluating seven key alternative elements
- ▶ Evaluation of each element will inform development of a range of reasonable alternatives



Study Limits Summary

Western Shore:

- Traffic volumes across the Bay Bridge are lower than volumes across the Severn River Bridge on both Non-summer weekdays and summer weekends.
- Approximately 33% to 53% of the traffic on the Bay Bridge enters or exits US 50/301 on the Broadneck Peninsula.
- Approximately 42% to 71% of the traffic on the Severn River bridge enters or exits US 50/301 on the Broadneck Peninsula.

Eastern Shore:

- There are no major changes in traffic volumes between the Bay Bridge and US 50/301 split.
- The US 50/301 split is a major highway decision point for traffic heading north or south on the Eastern Shore with nearly 60% of the traffic using US 50 and 40% of the traffic using US 301.



MOVING FORWARD:

The MDTA's recommended western limit is the MD 2/MD 450 Interchange.

The MDTA's recommended eastern limit is the US 50/301 split.

Alignment off Existing US 50/301

The MDTA has identified the environmental resources within the study area to determine whether roadway alignments off existing US 50/301 should be advanced.



ALIGNMENTS OFF
EXISTING US
50/301

50

301

Alignment off Existing US 50/301

Preliminary assessment shows potential for substantial unavoidable impacts to private right-of-way and environmental and community resources from alignments off existing US 50/301.

MOVING FORWARD

The MDTA recommends no further evaluations of alignments off the existing US 50/301 roadway.



ALIGNMENTS OFF
EXISTING US
50/301

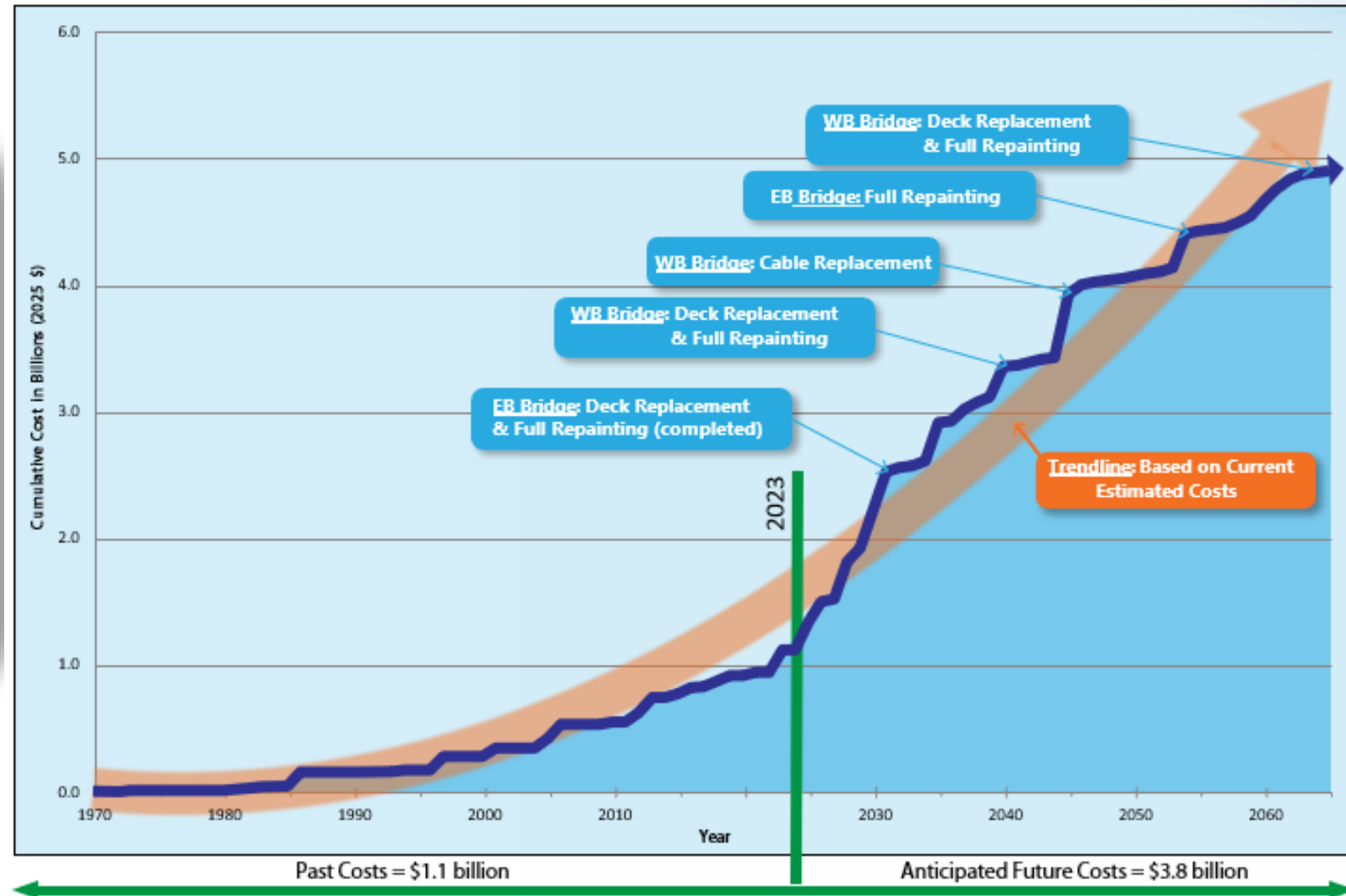
50

301

Existing Bay Bridge – Maintenance/Rehabilitation Costs

MOVING FORWARD

- Significant ongoing investments are necessary for small maintenance repairs and large rehabilitation projects.
- Over the next 40 years these projects will continue to result in increasingly significant impacts to the traveling public due to the duration of the construction.



EXISTING
BRIDGES



Structural Options Design Considerations

- ▶ The type of structure for a potential new crossing is being evaluated as part of the Tier 2 Study.
- ▶ MDTA is evaluating three potential structure types: **bridge**, **tunnel**, and **bridge-tunnel**.
- ▶ There are many considerations including the existing structures and navigable channel conditions.



Source: MDTA



Fort McHenry Tunnel Source: MDTA



Hampton Roads Bridge Tunnel

Source: VDOT



Structure Type: Bridge

Benefits:

- + Impacts to Bay habitat and environment limited to new bridge pier locations.
- + Limited impact to shipping during construction.
- + Opportunity for inclusion of pedestrian and bicycle shared use path.
- + Ability to include shoulders along travel lanes for incident management and/or potential transit use.
- + No limitation on materials transported across a bridge (e.g. trucks with flammable material).
- + Lower cost compared to tunnel and bridge-tunnel.

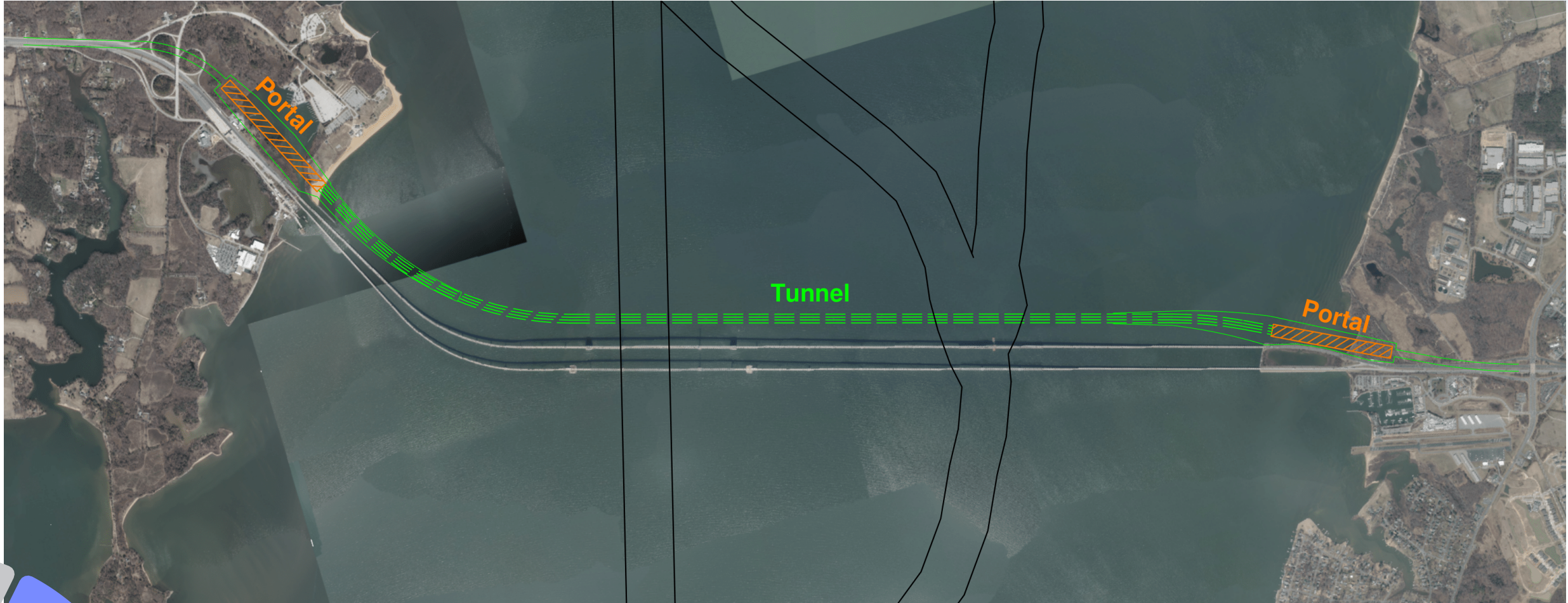
Disadvantages:

- Vertical restriction for channel.
- Potential weather restrictions.
- Potential interference with Bay Bridge Airport.

All the disadvantages listed are disadvantages for the existing bridges as well.



Structure Type: “Full” Tunnel



Structure Type: Bridge-Tunnel



Structure Type: Tunnel and Bridge-Tunnel

Benefits:

- + Fewer weather restrictions than a bridge.
- + Less potential interference with Bay Bridge
- + Airport. No vertical restriction to the channel.



Disadvantages:

- Impacts to Bay habitat and environment.
- Higher construction costs.
- Steeper roadway grades in tunnels, causing slower traffic and reduced capacity.
- Impacts to shipping during construction.
- Due to the length of the crossing and additional safety elements, such as safety and security in a tunnel, the MDTA will only consider a shared use path on a bridge.
- No shoulders for incident management and/or potential transit use.
- Limitations on materials transported through tunnels (e.g. no trucks with flammable materials).

Structural Options

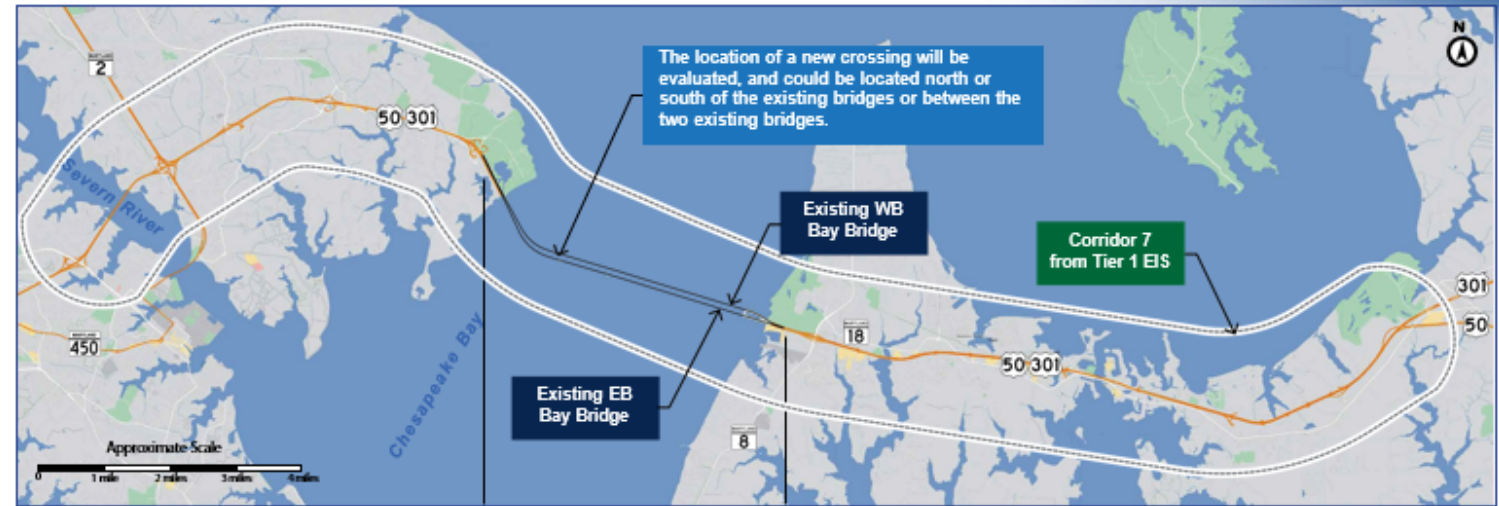
MOVING FORWARD

The MDTA's recommendation is to continue to evaluate all structure types. Preliminary analysis indicates that a Tunnel or Bridge-Tunnel likely would have many disadvantages and substantially higher cost than a bridge crossing.



Potential Number of Lanes

- ▶ The MDTA is evaluating the potential number of lanes for providing additional capacity across the Bay, while also considering the sensitive environmental resources in the corridor.
 - The existing bridge has less capacity than the approach roadways.
 - In the existing conditions, local roads often carry volume from US 50/301 during congested periods.
 - The number of lanes could vary between a future Bay crossing and the approach roadways.
 - The number of lanes will be informed by future traffic and capacity analysis.



The following table shows possible combinations of number of lanes on the Western Shore, on a future crossing, and on the Eastern Shore. This list does not include all possible combinations, but is rather an example to demonstrate how the number of lanes could vary.*

	Western Shore	Bay Crossing	Eastern Shore
Existing	6 Lanes	5 Lanes**	6 Lanes
Sample Lane Combinations	6 Lanes	6 Lanes	6 Lanes
	6 Lanes	8 Lanes	6 Lanes
	8 Lanes	8 Lanes	8 Lanes
	8 Lanes	10 Lanes	8 Lanes
	10 Lanes	10 Lanes	10 Lanes

*Approach roads include only US 50/301. Service roads and local roads are not included

**The 5 lanes across the existing bridges include a contraflow lane that allows for 3 lanes in the peak direction

MOVING FORWARD

TheMDTAwill continue studying the potential lane configurations.The MDTArecommendsstudying no more than 10 through lanesacrossingthe Bayor on approachroads.

POTENTIAL
NUMBER OF LANES



Shared Use Path

Benefits of a shared use path include:

- increasing pedestrian and bicycle connectivity with existing and planned pedestrian and bicycle facilities,
- connecting communities on Western and Eastern Shores,
- potential health benefits for shared use path users,
- potential to increase tourism, and
- potential to increase local retail spending near pedestrian and bicycle facility.

During the comment period for the June Virtual Transit & Bicycle/Pedestrian Listening meeting, many comments were made about the benefits and/or drawbacks of having a shared use path.

Design Elements Under Consideration:

- Height of Bridge
- Wind
- Length of Bridge (4+ miles)
- Deflection/Vibration
- Grade
- Shared Use Path Width
- Safety Barrier

MOVING FORWARD

Based on the potential advantages and strong interest from the public, the MDTA recommends evaluating the safe inclusion of a shared use path with bridge alternatives.



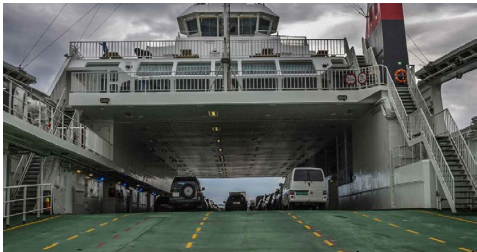
SHARED
USE PATH



Transit/TSM/TDM

- ▶ Tier 1 Study concluded that ferry service, bus rapid transit (BRT), rail transit, and Transportation Systems Management (TSM)/Transportation Demand Management (TDM) would not be carried forward for further evaluation as stand-alone alternatives.
- ▶ However, these transit and TSM/TDM elements are being evaluated in the Tier 2 Study as part of the build alternatives.
- ▶ The MDTA received many comments about transit/TSM/TDM at the Listening Meeting held on June 27, 2023, and is considering these comments as the analysis moves forward.

Options Under Consideration



Source: Shutterstock

FERRY

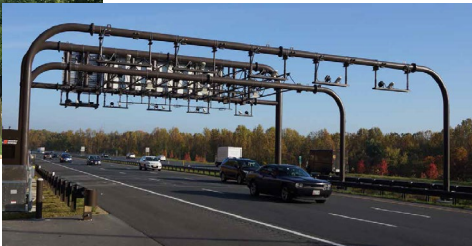


Source: Shutterstock

HIGH-CAPACITY
TRANSIT



Source: SHA



Source: MDTA

TSM/TDM



Source: Shutterstock

BUS

MOVING FORWARD

The MDTA will continue to evaluate Transit/TSM/TDM options to potentially include as part of build alternatives.

Engaging the Community

- ▶ The MDTA has attended several events throughout the Study Area since May 2023 to get the word out about the Tier 2 Study and encourage public participation

Where We've Been:

- ▶ Kent Island Day
- ▶ Annapolis Pride Festival and Parade
- ▶ Annapolis Juneteenth Celebration
- ▶ Blood drives
- ▶ STEM events
- ▶ Farmers Markets
- ▶ National Night Out
- ▶ Maryland Seafood Festival
- ▶ Queen Anne's County Fair
- ▶ Anne Arundel County Fair
- ▶ Bay Bridge Paddle
- ▶ Annapolis Baygrass Festival
- ▶ Bay Bridge Run/Walk



Source: MDTA



Source: MDTA



Source: MDTA

Hope to see you soon!

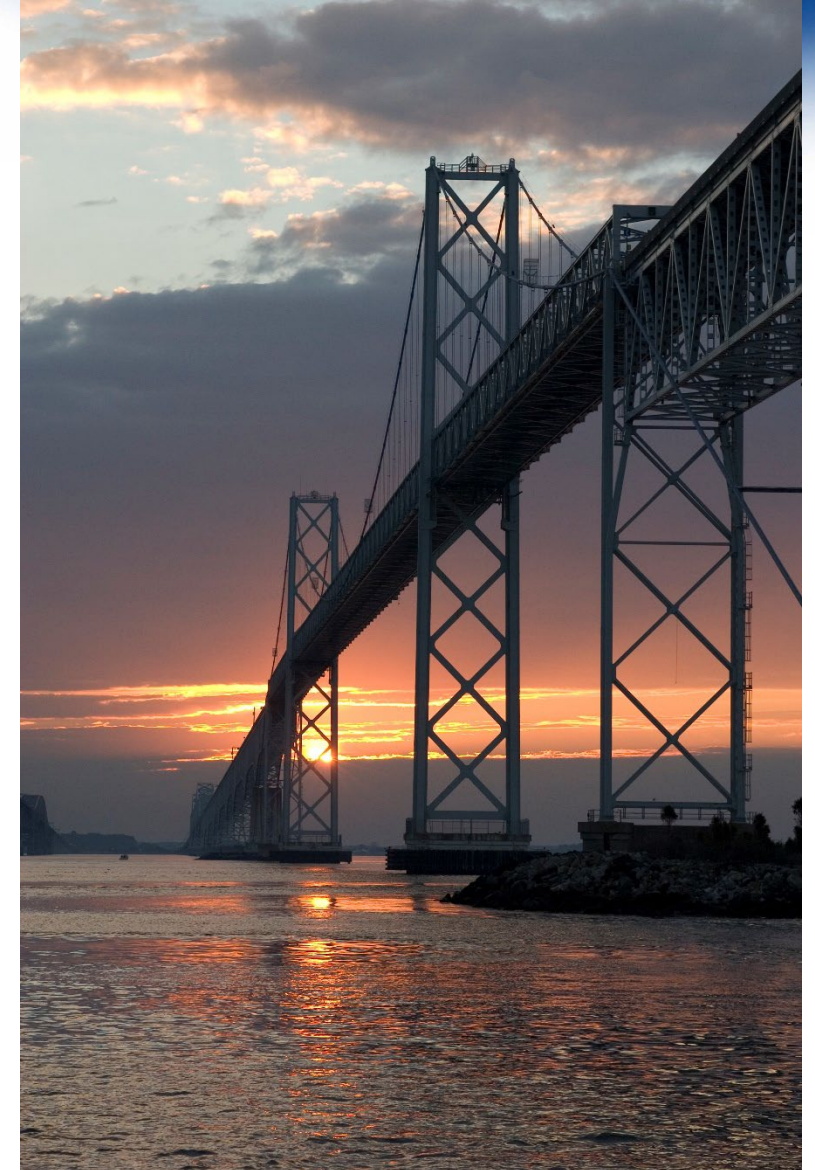
If your community/organization has an event you'd like us to attend, please email info@baycrossing.com with details.

Current Study Activities

- ▶ Ongoing traffic analysis
- ▶ Environmental fieldwork
- ▶ Development of conceptual alternatives

Next Steps

- ▶ Beginning environmental studies
- ▶ Notice of Intent for the Environmental Impact Statement
- ▶ Continued public and stakeholder engagement





Discussion

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