Baltimore Regional Transportation Board

CMP Committee

June 6, 2023

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Agenda

1. **WELCOME AND INTRODUCTIONS** (5 min.)

2. **APPROVAL OF MINUTES FROM FEBRUARY 7, 2023 MEETING** (5 min.)

3. **MEETING OBJECTIVE** (5 min.)

4. **OVERVIEW OF UPDATES TO REGIONAL ONLINE CMP TOOL AND OTHER RESOURCES** (10 min.)
   BMC staff will present an overview of the recent updates to the Online CMP Tool and other resources including the Pedestrian Infrastructure Assessment Tool.

5. **OVERVIEW OF CONGESTION MANAGEMENT IN DRAFT *RESILIENCE 2050*** (20 min.)
   BMC staff will present an overview the draft long range transportation plan, *Resilience 2050*, and of the congestion management-related sections. The group will also discuss their comments on these sections.

6. **2023 PRIORITY LETTER DEVELOPMENT** (20 min.)
   The group will review the process for developing 2023 priority letters and discuss suggestions for enhancing regional components next year.

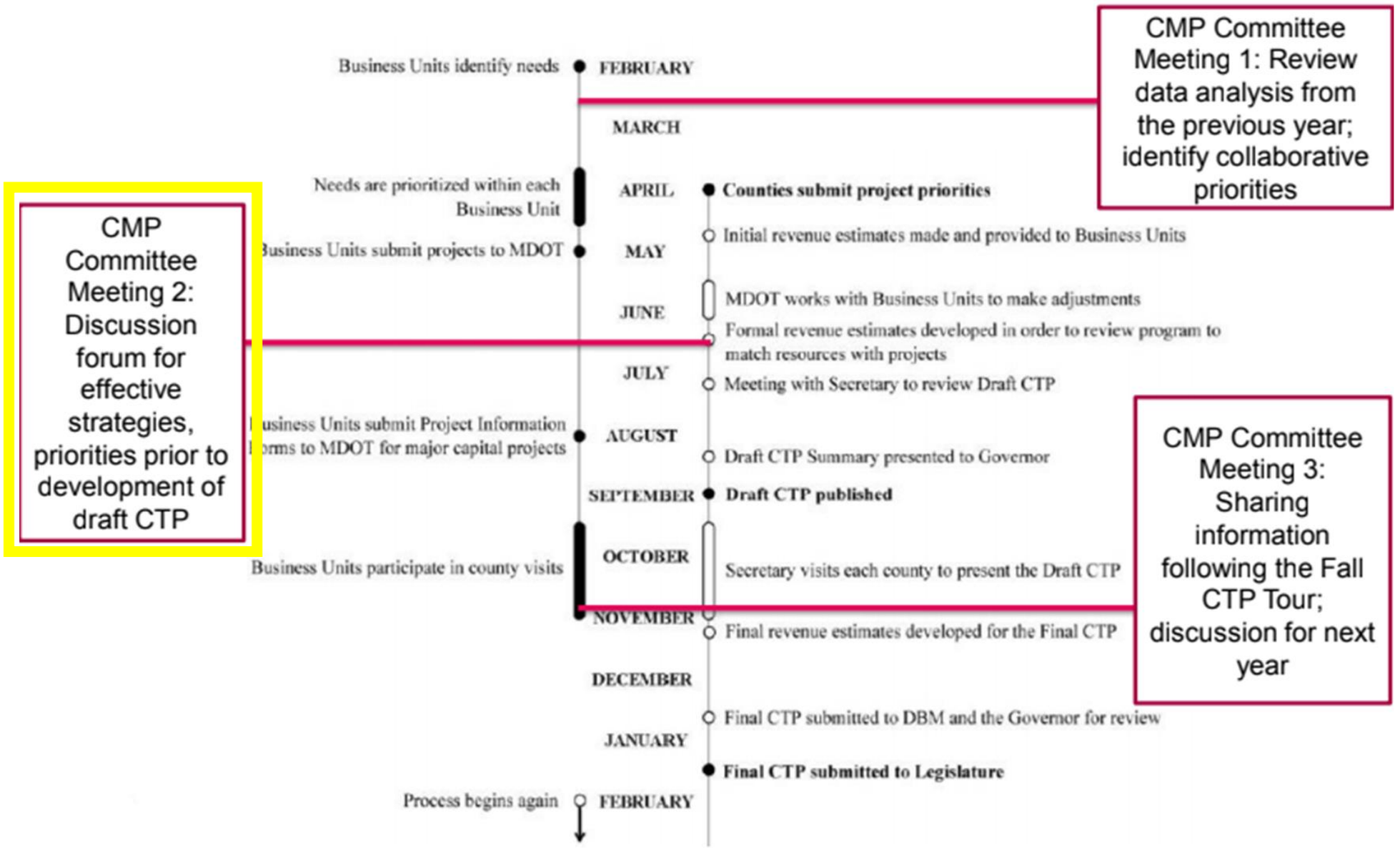
7. **OTHER BUSINESS** (5 min.)

2023 Meetings –November 7, 2023

3. Meeting Objective

- Provide updates on regional CMP resources
- Discuss link to congestion management in draft *Resilience 2050*
- Debrief on development of 2023 priority letters

Reminder: CMP Committee Schedule



4. Overview of Regional CMP Resources

- Online CMP Tool
- Quarterly Congestion Analysis Reports
- Pedestrian Infrastructure Assessment Tool
- RITIS Workzone Dashboard

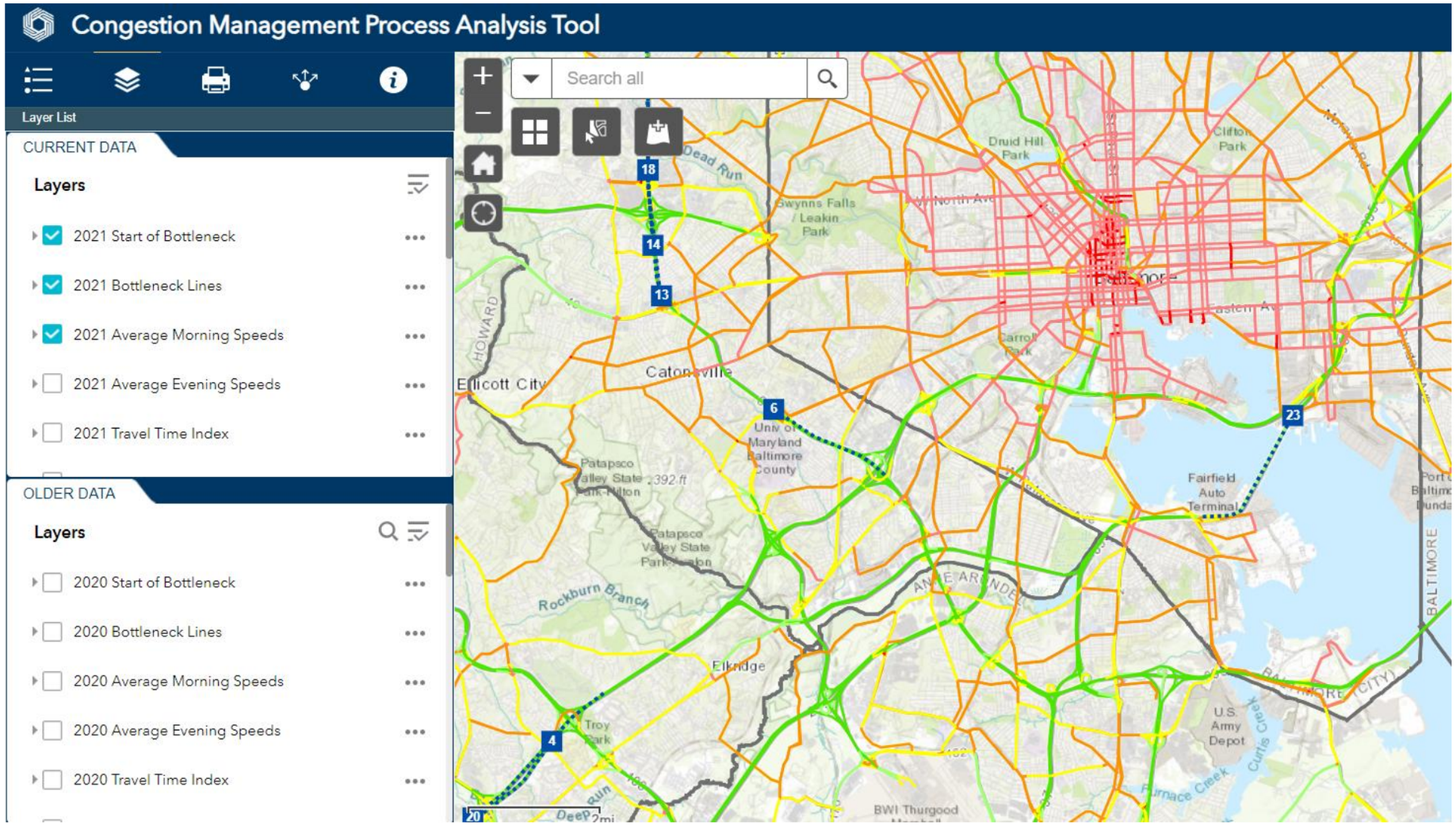
Online CMP Analysis Tool

- Data updated to 2021
- 2022 data expected to be available in the tool in June

- BMC Congestion Management Process Main Page
- https://www.baltometro.org/transportation/planning-areas/congestion-management-process

- Direct Link to the CMP Tool
- https://www.arcgis.com/apps/webappviewer/index.html?id=4d20765080344347adee174c51fe7c19&extent=-8612298.4332%2C4687633.1609%2C-8441538.112%2C4808556.5397%2C102100

Online CMP Analysis Tool



Quarterly Congestion Analysis Reports – Top 10 Bottlenecks

- 2022 Reports now available online
- New format implemented from RITIS Performance Measures Users Group
- Expanded analysis following BMC Committee suggestions
- Better graphics
- Monthly Bottleneck Comparisons
- https://www.baltometro.org/transportation/data-maps/congestion-analysis-report

Quarterly Congestion Analysis Reports – Top 10 Bottlenecks

1 MD-295 S @ MD-198

Southbound PM congestion from MD-198 extending into the southern portion of the Baltimore region near Fort Meade occurring during both the morning and afternoon peak periods.

Volume-related delays are most likely caused by factors such as Baltimore commuters to DC and Fort Meade and MD-295 merge with the heavily congested Capital Beltway.

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Quarterly Bottleneck Evaluation Summary Q1 2022

PK. AVG. SPEED

AM Peak | 7:45 AM
52.9 mph
(24% slower than free flow)

PM Peak | 5:35 PM
43.2 mph
(34% slower than free flow)

PK. TRAVEL TIME

AM Peak | 7:45 AM
16.5 min

PM Peak | 5:35 PM
20.2 min

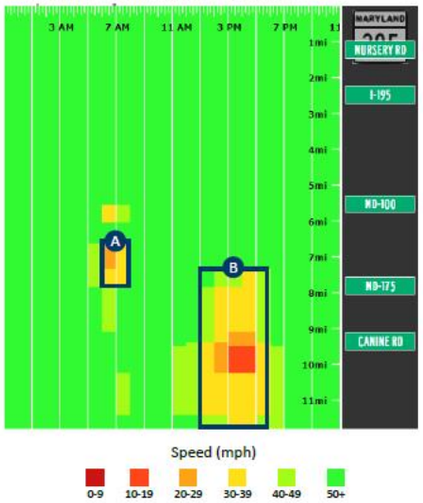
Q1 DELAY COST

Delay Cost
$2.135M

Veh-hrs. of Delay
70,727 h

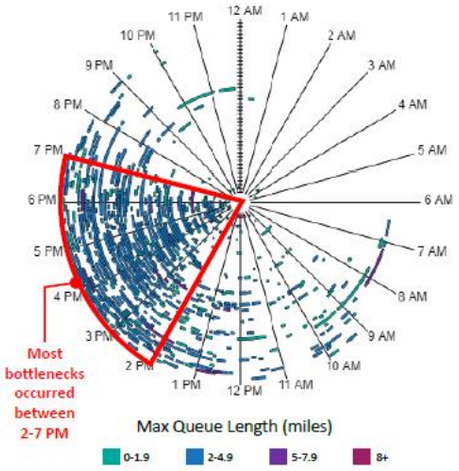
Congested Locations

A 7AM – 9AM Arundel Mills Blvd. to MD-175
B 2PM – 7PM MD-175 to MD-198



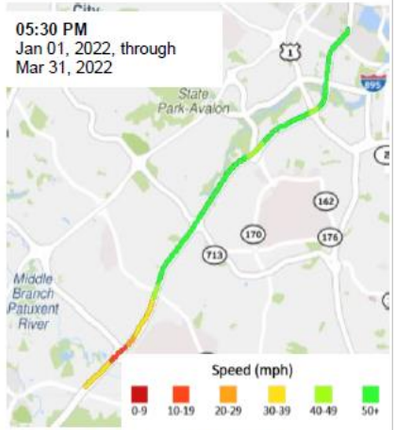
Bottleneck Occurrences

The center represents the beginning of 01.01.22 and the outer edge the end of 03.31.22



Corridor Speeds Over Time

Peak period conditions.



BALTIMORE METROPOLITAN COUNCIL | 12

For More Information

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Pedestrian Infrastructure Assessment Tool

- **ArcGIS-based desktop tool that will assist planners in:**
  - Prioritizing sidewalk projects
  - Identifying sidewalk mileage and gaps
  - Visualizing sidewalk data
  - Facilitating pedestrian planning in general
- **Comprehensive regional sidewalk and crosswalk dataset**
  - BMC acquired in support of the tool
  - Created by Ecopia using artificial intelligence

Example of regional sidewalk and crosswalk dataset

Pedestrian Infrastructure Assessment Tool

- **November 2022**
  - Planners and GIS staff from Carroll County and the City of Annapolis tested the tool and provided feedback

- **January 2022**
  - A demonstration of the tool was given to stakeholders at BPAG

- **February 2023**
  - Final delivery of the tool, manual, instructional webinar and the sidewalk inventory was delivered to planners and GIS staff in the Baltimore region

RITIS Workzone Dashboard

Work Zone Dashboard

Welcome, Eileen Singleton | Help | Logc

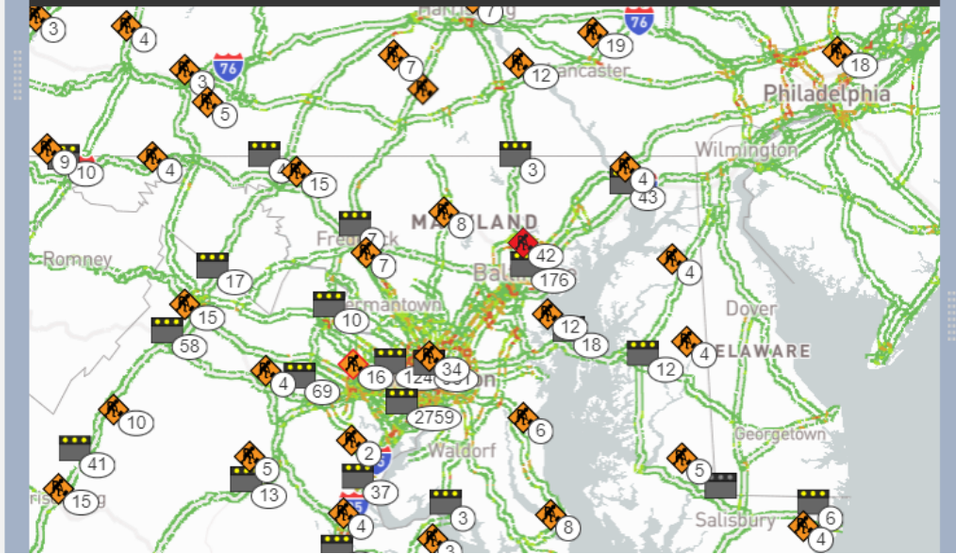
CURRENT WORK ZONES

WORK ZONE LOCATIOI	# NEARBY INCIDENTS	QUEUE LENGTH (MI)	USER DEL COST ($)
Maryland (151)	0	10.9	$639.8K
Allegany (9)	0	-	$3.9K
US 40A...	-	-	$52
I-68 WE...	-	-	$77
MD 51 ...	-	-	$1.3K
US 40A...	-	-	$946
I-68 WE...	-		$1.3K
I-68 EA...	-	-	$23
MD 36 ...	-	-	-
MD 36 ...	-	-	-
MD 36 ...	-	-	$112
Anne Arundel (1	0	-	$51.0K
MD 2 N...	-		$2.3K
MD 100...	-		$10.5K
MD 10 ...	-	-	$460
MD 70 ...	-	-	$15.9K
US 50 ...	-	-	$382
US 50 ...	-		$12.0K
MD 258...	-	-	$128
MD 3 S...	-		$6.1K

TOP CRITICAL WORK ZONES

WORK ZONE LOCATION	LOCATION	QUEUE LENGTH (MI)	LANE STATUS	USER DELAY COST ($)
Critical (23)				$1.5M
Northbound on I-275 at I-4	Hillsborough, FL	7.8		$3.3K
Eastbound on I-10 at MM 88 with Right lane block...	Walton, FL	15.8		$15.4K
Westbound on I-10 at MM 89 with Right shoulder ...	Walton, FL	9.4		$249.2K
I-495 North/South	Essex, MA	5.9		$63.8K
I-495 north	Essex, MA	5.9		$63.8K
US-1 north	Essex, MA	5.8		$7.1K

WORK ZONE LOCATIONS



USER DELAY COST BY CORRIDOR AND DAY OF WEEK

Total User Delay Cost

	I-95 (MD)	I-695 (MD)	I-495 (MD)	US-50 (MD)	MD-32 (MD)	I-270 (MD)	I-70 (MD
Tue 5/23	$1.9M	$517.7K	$889.1K	$198.2K	$130.4K	$196.3K	$96.
Wed 5/24	$449.0K	$585.7K	$970.2K	$260.6K	$99.0K	$226.1K	$10
Thu 5/25	$469.8K	$578.1K	$1.0M	$295.7K	$79.1K	$244.0K	$13
Fri 5/26	$325.0K	$308.4K	$735.0K	$256.9K	$23.3K	$245.4K	$24
Sat 5/27	$250.8K	$65.1K	$391.4K	$124.2K	$13.8K	$137.3K	$92.
Sun 5/28	$39.0K	$5.8K	$141.9K	$115.6K	$6.6K	$42.6K	$4.5
Mon 5/29	$160.0K	$1.5K	$186.3K	$402.7K	$11.5K	$60.8K	$10
Tue 5/30	$296.8K	$432.5K	$739.7K	$146.6K	$84.7K	$234.2K	$57

5. Draft *Resilience 2050*

- Overview
- Congestion Management in *Resilience 2050*
  - Chapter 5 Regional Performance Measures and Targets and System Performance Report

    https://www.baltometro.org/sites/default/files/bmc_documents/general/transportation/long-range/2050/Resilience2050_Chapter5.pdf
  - Appendix D Congestion Management

    https://www.baltometro.org/sites/default/files/bmc_documents/general/transportation/long-range/2050/Resilience2050_AppendixD.pdf

What is the LRTP?

- Addresses at least a 20-year planning horizon *beyond timeframe covered by the TIP*
  - TIP: 2024-2027
  - *Resilience 2050*: 2028-2050
- Updated every 4 years (in non-attainment areas); otherwise 5
- Financially constrained
- Core of the plan is a list of planned major federally funded capital projects, their estimated costs, and the revenues expected to be available to fund the projects

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Resilience 2050

Resilience 2050 Resolutions

- Goals and Strategies: BRTB Res #22-6 (Nov 2021)
- Project Scoring Methodology: BRTB Res #22-7 (Nov 2021)
- Round 10 Socioeconomic Forecasts of Population, Households and Employment: BRTB Res #23-1 (July 2022)
- Financial Forecast: BRTB Res #23-13 (January 2023)

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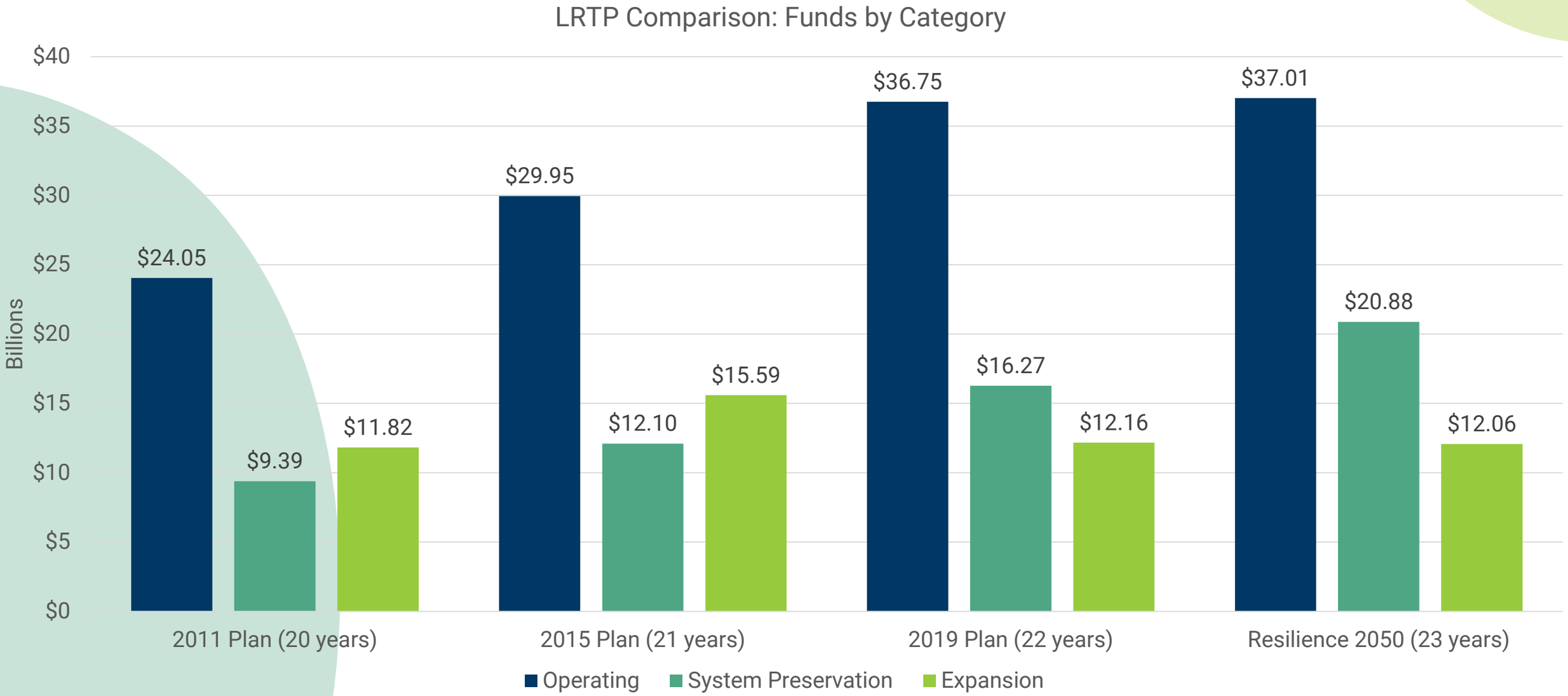
Resilience 2050

Financial Forecast



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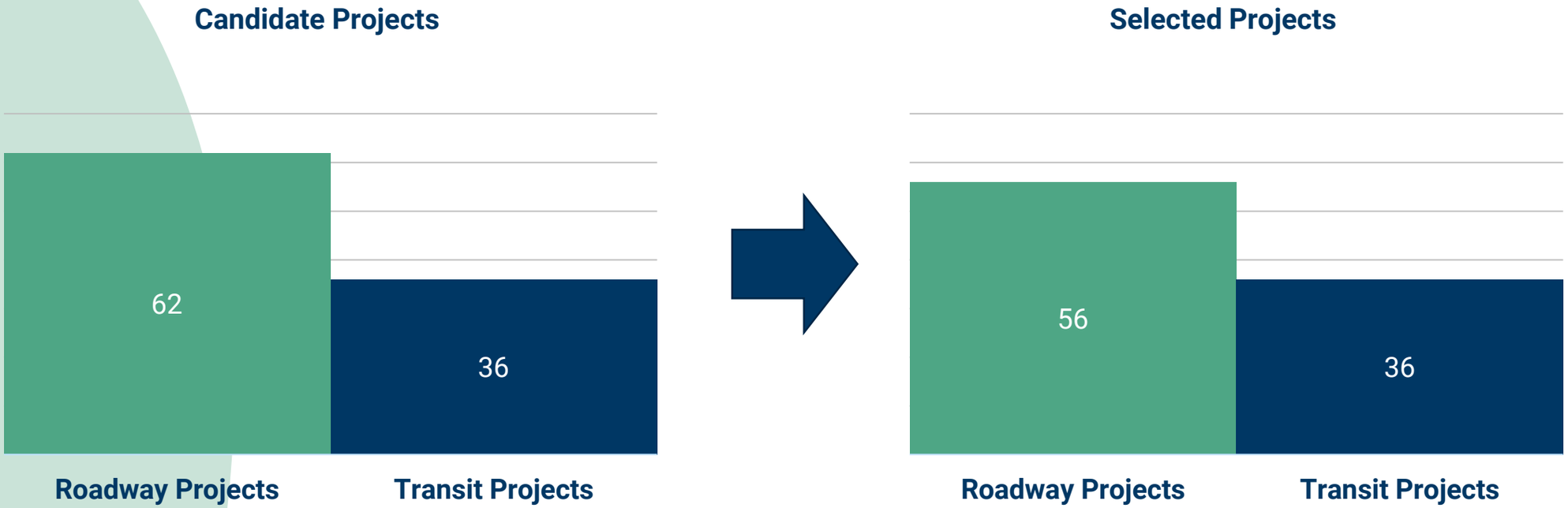
Resilience 2050

Resilience 2050 Preferred Alternative

- Preferred Alternative of Major Capital Expansion and System Preservation projects selected based on:
  - Project Scores
  - Project Costs
  - Revenues anticipated to be available from 2028-2050



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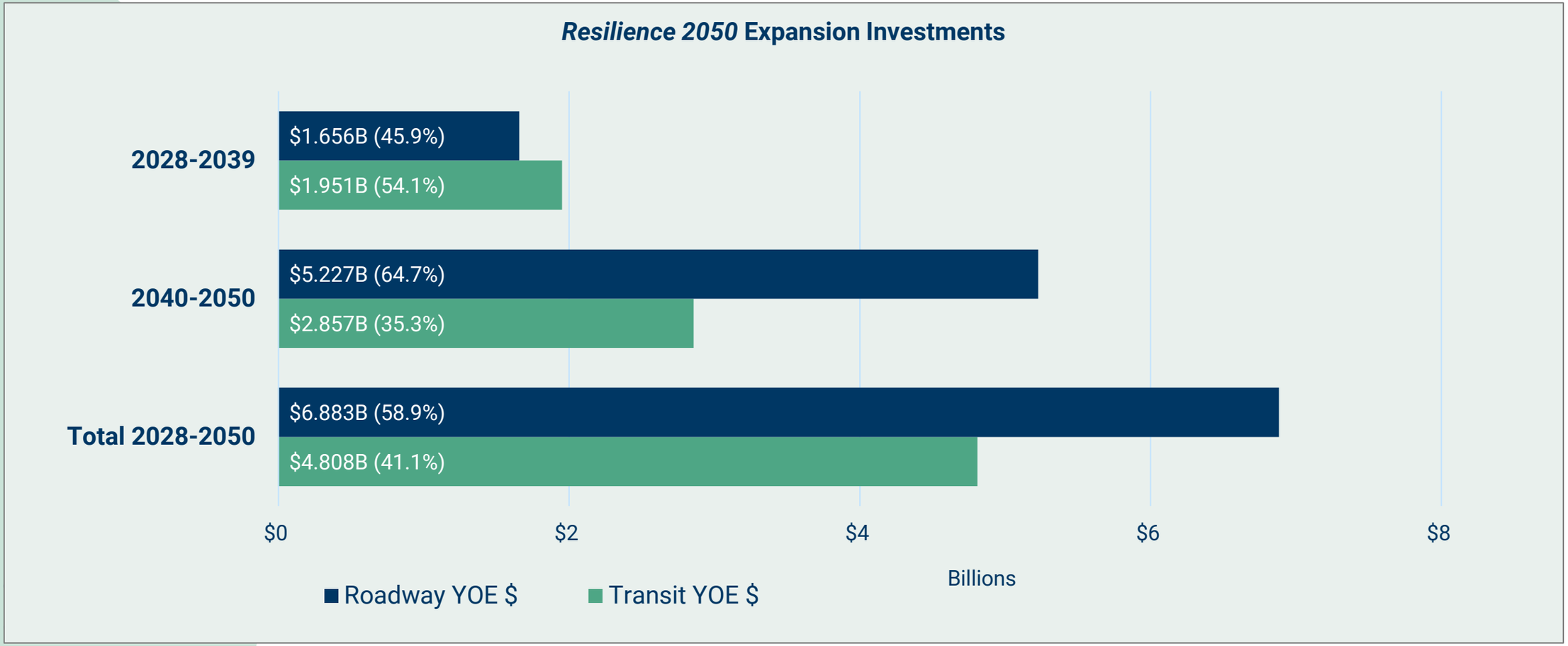
Resilience 2050

Resilience 2050 Preferred Alternative

- Preferred Alternative:
  - 79 Expansion Projects
  - 13 System Preservation Projects



Resilience 2050 Preferred Alternative

- $280 million in funding set aside from expansion funds to support various strategies intended to improve air quality:
  - Transportation System Management and Operations strategies intended to optimize the performance of existing roadway infrastructure without adding capacity
  - Complete Streets strategies focused on creating roadways that are safe and comfortable for all users and that increase equity and access to destinations
  - Strategies to reduce emissions through cleaner technologies, capital improvements, and behavioral incentive programs
  - Regional active transportation priority projects identified by BPAG in 2022

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Resilience 2050

Public Comment Period

- Comment period for *Resilience 2050*, 2024-2027 TIP and associated Air Quality Conformity Determination: May 17 – June 20, 2023
- 8 Meetings throughout the region:
  - **Virtual:** Wednesday, May 24 at 12 p.m.
  - **Carroll:** Wednesday, May 31, 6-8 p.m. at the Carroll County Government Building, 225 North Center Street, Westminster MD 21157
  - **Harford:** Monday, June 5, 6-8 p.m. at the Harford County Government Building, 1st Floor Conference Room, 220 South Main Street, Bel Air MD 21014
  - **Anne Arundel:** Tuesday, June 6, 6-8 p.m. at the Henry L. Hein Public Service Building, Auditorium, 7480 Baltimore Annapolis Boulevard, Glen Burnie MD 21061
  - **Baltimore Co:** Wednesday, June 7, 5-7 p.m. at the Baltimore County Library – Towson Branch, Towson Meeting Room, 320 York Road, Towson MD 21204
  - **Queen Anne's:** Thursday, June 8, 5-6:30 p.m. at the Kent Island Senior Center, 891 Love Point Road, Stevensville MD 21666
  - **Baltimore City:** Monday, June 12, 6-8 p.m. at the War Memorial Assembly Hall, 101 North Gay Street, Baltimore MD 21202
  - **Howard:** Thursday, June 15, 6-8 p.m. at the Howard County Government George Howard Building, Columbia/Ellicott Room, 3430 Court House Drive, Ellicott City MD 21043

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Resilience 2050

Resources

- For comments: https://publicinput.com/resilience2050
- Storymap
- BMC Website: Resilience2050.com

Thanks!

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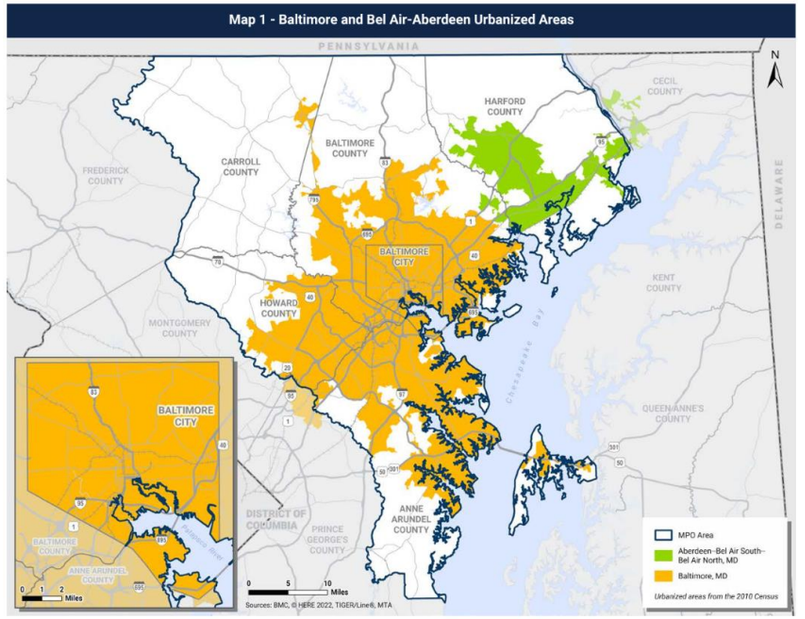
Resilience 2050

Chapter 5: TPM3 Traffic Congestion
Annual Hours of Peak-Hour Excessive Delay (p. 17)

Table 12 - Annual Per Capita Hours of Peak-Hour Excessive Delay in the Baltimore and Aberdeen Urbanized Areas

Urbanized Area	Previous Regional Performance Targets		Actual Regional Performance					Updated Regional Performance Targets	
	2018-2019 2-year Target	2018-2021 4-year Target	Baseline (Year)	2018	2019	2020	2021	2022-2023 2-year Target	2022-2025 4-year Target
Baltimore	<21.8 hours	<22.6 hours	19.7 hours (2017)	21.5	20.6	8.4	13.9	<14.8 hours	<15.7 hours
Aberdeen	NA	NA	9.6 hours (2017)	9.4	7.8	NA	NA	<6.9 hours	<6.9 hours

- These targets are the same as the MDOT target for the metropolitan area.



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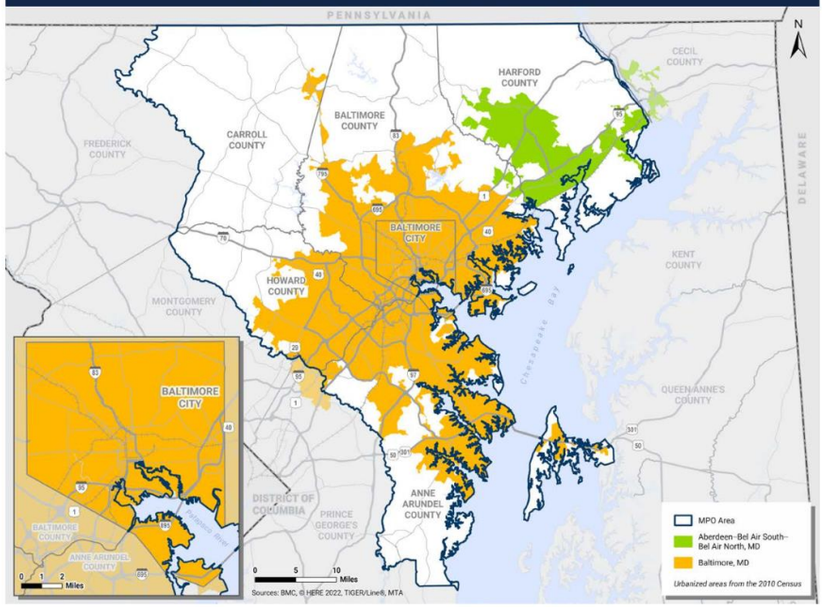
Chapter 5: TPM3 Traffic Congestion
Percentage of Non-Single-Occupancy Travel (p. 19)

Table 13 - Percentage of non-SOV travel in the Baltimore and Aberdeen Urbanized Areas

Urbanized Area	Previous Regional Performance Targets		Actual Regional Performance					Updated Regional Performance Targets	
	2018-2019 2-year Target	2018-2021 4-year Target	Baseline (Year)	2018	2019	2020	2021	2022-2023 2-year Target	2022-2025 4-year Target
Baltimore	24.8%	24.8%	25.1% (2016)	25.2%	25.4%	27.1%	NA	25.3%	25.5%
Aberdeen	NA	NA	16.9% (2017)	16.7%	16.1%	NA	NA	16.8%	16.8%

- These targets are the same as the MDOT target for the metropolitan area.

Map 1 - Baltimore and Bel Air-Aberdeen Urbanized Areas



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Chapter 5: TPM3 Traffic Congestion
Travel Time Reliability (p. 27)

Table 16 - Travel Time Reliability Performance Measures and Targets

Measure	Previous Performance Targets		Actual Regional Performance		Updated Regional Performance Targets	
	2018-2019 2-year Target	2018-2021 4-year Target	2018-2019	2018-2021	2023 2-Year Target	2025 4-Year Target
LOTTR (Interstate) Measure: Share of Person-miles Traveled on the Interstate System that are Reliable	72.1%	72.1%	71.6%	88.4%	72.9%	72.9%
LOTTR (Non-Interstate) measure: Share of Person-miles Traveled on the Non-Interstate NHS that are Reliable	NA*	81.7%	78.9%	91.3%	79.4%	79.4%
TTTR Index: Ratio of Interstate System Mileage Indicating Reliable Truck Travel Times	1.87	1.88	2.03	1.64	2.06	2.06

** For the first performance period only, FHWA does not require state DOTs and MPOs to set a 2-year target for the LOTTR non-Interstate measure.*

Chapter 5: Progress Toward Travel Time Reliability Performance Targets and *Resilience 2050*

Resilience 2050 includes 36 transit projects and 56 roadway projects, for a total of 92. Project sponsors identified the CMP strategies these projects are anticipated to include during the call for projects for the LRTP.

- **Demand Management Strategies:** 33 percent of all projects are anticipated to incorporate demand management strategies, including seven percent of roadway projects and 72 percent of transit projects,
- **Transportation System Management and Operations (TSMO) Strategies:** 50 percent of all projects are anticipated to incorporate TSMO strategies, including 41 percent of roadway projects and 64 percent of transit projects,
- **Public Transportation Strategies:** 46 percent of all projects are anticipated to incorporate public transportation strategies, including 13 percent of roadway projects and 97 percent of transit projects (the lone transit project which does not incorporate one of these CMP strategies focuses solely on overhauling light rail vehicles),
- **Bicycle/Pedestrian and Micromobility Strategies:** 68% of all projects are anticipated to incorporate bicycle/pedestrian and micromobility strategies, including 77% of roadway projects and 56% of transit projects and
- **Road Capacity Strategies:** 80% of all projects are anticipated to incorporate road capacity strategies, including 96% of roadway projects and 56% of transit projects.

We are also beginning to track these CMP strategies across TIP projects. While there are no federal funding sources tied directly to travel time reliability on Interstate and non-Interstate NHS facilities, the TIP does include a number of projects that have the potential to improve travel time reliability. These projects include traffic signals and Intelligent Transportation Systems (ITS) projects in Baltimore City, two projects involving part-time shoulder use and small-scale congestion management projects on state roadways.

Appendix D Congestion Management (p. 13)

Resilience 2050 Strategies

In November 2021, we approved the following strategies under the goal of Increase Mobility. These strategies will help the region reduce congestion and improve traffic flow:

- Continue to coordinate with MDOT and local agencies to improve travel time reliability through performance-based planning and programming.
- Continue to refine and implement a CMP that incorporates TSMO strategies to optimize the performance of the existing transportation system and minimize impact and costs.
- Analyze congestion causes and mitigation strategies for corridors and locations experiencing recurring high congestion levels.
- Consider how all modes — roadway, transit, pedestrian, bicycle and shared mobility — can work together to address system capacity needs.
- Support a regional multimodal freight network for safe and efficient freight movement.
- Increase mobility, including traffic and transit incident response and recovery, through traffic and transit system management and operations techniques.
- Reduce the effects of non-recurring incidents (such as crashes, weather-related delays and special events) by enhancing methods of sharing information across agencies and modes, responding to and managing these incidents and sharing information with travelers.
- Develop and support a regional, long-distance bikeway network, including consistent guide signage.

Other strategies that might be considered in the future to help the region ease congestion are:

- Work more closely with other adjacent metropolitan areas to develop interregional approaches to measuring and managing congestion, including performance measures adopted and applied on an interregional basis. The Baltimore region has taken some initial steps in this area by meeting periodically with traffic and operations staff from adjacent MPOs and other state DOTs to discuss interregional approaches to improving mobility and managing congestion.
- Select relatively low-cost, “low-hanging fruit” congestion management projects (“spot” improvements, signal timing) that could be funded with CMAQ or potentially PL or STBG funds.

Appendix D Congestion Management (p. 14)

Specific Strategies – Preferred Alternative Projects

We requested some detailed information from local jurisdictions submitting projects for consideration for *Resilience 2050*. Some of this information relates to strategies, either in place or under consideration, which could provide congestion management benefits for each proposed project. The strategies are drawn from the CMP and include:

- Demand Management and Regional Strategies, including
  - Commuter related programs (employer outreach, commuter benefits policies, etc.) and
  - Promoting regional coordination (intra-jurisdictional projects/strategies),
- TSMO Strategies, including
  - Intersection control (traffic signal coordination, ramp metering, etc.),
  - Real-time monitoring (active traffic management, real time parking info, traveler information systems, etc.) and
  - Operational improvements (movable barriers, reversible commuter lanes, geometric improvements, etc.),
- Public Transportation Strategies, including
  - Operational improvements (transit signal priority, optimizing transit service, etc.),
  - New infrastructure (bus rapid transit, network expansion, etc.) and
  - User-oriented improvements (trip-planner application, real-time data, etc.),
- Bicycle/Pedestrian and Micromobility Strategies, including
  - Infrastructure addition (new bike lanes, streetscape elements, etc.),
  - Infrastructure improvements (traffic calming, etc.) and
  - Sharing programs (bikeshare programs, micromobility, etc.) and
- Road Capacity Strategies, including
  - Roadway changes (new lanes, spot improvements, etc.),
  - Intersection changes (grade separated intersections, intersection improvements, etc.) and
  - Freight improvements (address freight bottlenecks, rail/port access, truck parking, etc.).

Local agencies can share information on evaluation practices and findings at CMP Committee meetings.

6. Regional Priority Letter Text for 2023

- Status of regional text in 2022 and 2023 local priority letters.

Full Regional Text

2022
Anne Arundel Co
Carroll Co
Howard Co
Queen Anne's Co

2023
Carroll Co
Harford Co
Howard Co
Queen Anne's Co

Partial Regional Text

2022
Baltimore Co

2023

References the Region

2022

2023
Anne Arundel Co
Baltimore City
Baltimore Co

Regional Text Not Included

2022
Baltimore City
Harford Co

2023

BMC

6. Regional Priority Letter Text for 2023 - Introduction

Introduction to Regional Priority Letter Text

Each jurisdiction is very invested in cost effective, systematic, and regionally integrated approaches to addressing multimodal congestion, mobility, and safety in the Baltimore region. We can best achieve these goals through coordinated project development that is informed by conditions outside of our local borders. As one way to achieve this and for the first time last year, many of the local priority letters from our region included regional text that was developed by the BRTB Congestion Management Process Committee. We have heard anecdotally that MDOT found this approach useful to help identify common priorities across the Baltimore region.

Based on positive response, the CMP Committee has again prepared regional text for consideration of inclusion in the 2023 priority letter of each Baltimore region jurisdiction. The text shows the coordinated efforts to identify and support priorities across jurisdictional boundaries and conveys to MDOT the multijurisdictional approach to developing priorities.

The general locations of the priority transit corridors from the MDOT MTA Regional Transit Plan can be found on the Baltimore Metropolitan Council's Online CMP Tool (select "MTA RTP Early Opportunity Corridors 2020" layer).

The MDOT SHA System corridors are shown in the MDOT SHA TSMO Strategic Plan on page 15.

For additional information, please contact your local jurisdiction CMP Committee representative or Eileen Singleton (esingleton@baltometro.org).

6. Regional Priority Letter Text for 2023

As a member of the Baltimore Regional Transportation Board, we are very invested in cost effective, systematic, and regionally integrated approaches to addressing multimodal congestion, mobility, and safety in the Baltimore region. Therefore, we have identified several regional priorities:

- *We strongly support funding and implementing the regional transit corridors in the State's Regional Transit Plan and request MDOT advance planning, design, and operational funding, in coordination with our local and regional transit systems, to meet the goals and priorities in the Regional Transit Plan. MDOT should ensure public transit can provide equitable and high quality service to all public transit riders, particularly our transit dependent community members, regardless of whether they are served by the State or local system or need to travel between two systems for essential services. We are especially interested in the interjurisdictional east-west corridors (#16 and #17) and north-south corridors (#1 and #6).*

- *Transportation Systems Management and Operations (TSMO) strategies offer cost effective and considered approaches that leverage our investments in the existing transportation system. We strongly support funding and implementing TSMO strategies, particularly in MDOT SHA TSMO System corridors 1, 2, 3, 4, 9, 10, 11, and 13, and are particularly interested in how these strategies can address the region's freight bottlenecks. We encourage continued work on TSMO Systems 1 and 2 and support initiation of work in the other TSMO corridors. We also encourage smaller projects (such as signal system retiming and signal reconstruction) in the TSMO system corridors to support and enhance the larger TSMO components (such as hard shoulder running, queue warning systems, and ramp meters).*

- *We strongly support funding and implementing bike and pedestrian projects, particularly cross border projects, to enhance safety and provide expanded multi-modal options.*

- *To facilitate this interjurisdictional coordination, we would prioritize the following multi-jurisdiction corridors/projects that fall within our jurisdiction:*
  - *[EACH JURISDICTION ADDS ITS INTERJURISDICTIONAL PROJECT PRIORITIES HERE]*

7. Other Business

- CMP Committee chair position is still 

- 2023 meeting: November 7