BRTB

Baltimore Regional Transportation Board

Baltimore Region Transportation Improvement Program 2024-2027

Developed by the Baltimore Metropolitan Planning Organization

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1500 Whetstone Way, Suite 300
Baltimore, Maryland 21230

Phone: 410-732-0500
Fax: 410-732-8248

Table of Contents

Baltimore Region 2024-2027 Transportation Improvement Program

1.A Introduction - Summary 1
1.B Introduction - Metropolitan Planning Organization Self-Certification 6
1.C Introduction - Consistency with Resilience 2050 7
II.A Federal Requirements - Requirements of the Infrastructure Investment and Jobs Act 9
II.B Federal Requirements - Environmental Justice 13
II.C Federal Requirements - Coordinating Human Service Transportation 22
II.D Federal Requirements - Additional Programs for Seniors and Persons with Disabilities 24
II.E Federal Requirements - Status of Projects from the 2023-2026 TIP and New Projects in the 2024-2027 TIP 26
II.F Federal Requirements - Conformity with Air Quality Planning 39
II.G Federal Requirements - Performance Based Planning and Programming 41
III.A Program Development - Integration with Federal, State and Local Programs 58
III.B Program Development - Federal Fund Sources for Surface Transportation Projects 59
IV. Explanation of Terms and Symbols 60
V. The Financial Plan 65
V.A The Financial Plan - Revenue Projections 67
V.B The Financial Plan - Federal Aid Assumptions 69
V.C The Financial Plan - Where the Money Comes From 71
V.D The Financial Plan - Where the Money Goes 72
V.E The Financial Plan - Documentation of Financial Capacity for Transit Activities 73
V.F The Financial Plan - FY 2024 Federal Aid Annual Element Listing and TIP Funding Summary 74
VI.A TIP Project Information - Project and Environmental Justice Maps and Jurisdictions 99
VI.B TIP Project Information - Detailed Project Listing 107
Anne Arundel County Projects 108
Baltimore City Projects 136

Baltimore County Projects 211
Carroll County Projects 218
Harford County Projects 236
Howard County Projects 269
Maryland Transportation Authority Projects 281
Maryland Port Administration Projects 289
Maryland Transit Administration - Transit Projects 297
Maryland Transit Administration - Commuter Rail Projects 330
Office of the Secretary Projects 339
State Highway Administration (SHA) Projects 341
SHA - Regional Projects 341
SHA - Anne Arundel County Projects 364
SHA - Baltimore County Projects 378
SHA - Carroll County Projects 393
SHA - Harford County Projects 400
SHA - Howard County Projects 406
SHA - Queen Anne's County 410

Appendices 412
Appendix A. Committee and Staff Roster 417
Appendix B. Documentation of Project Prioritization, Financial Reasonableness and Flexible Funding 418
Appendix C. Self Certification 469
Appendix D. Areawide Projects 492
Appendix E. Projects Between Funding Stages (On Hold) and Informational Projects 496
Appendix F. FY 2023-2026 TIP Amendment and Administrative Modification Log 500

Appendix G. Public Participation Component 508
Appendix H. Associated BRTB Resolutions 604
Appendix I. Glossary of Terms 608
Appendix J. Proposed Congressionally Designated Projects 610
Project Index 613

TABLE OF EXHIBITS

Exhibit I-1 The Baltimore Region 3
Exhibit I-2 The Baltimore Region Federal Highway Functional Classification 4
Exhibit I-3 The Baltimore Region - Transit 5
Exhibit II-1 BRTB Region Minority Populations by Race and Hispanic or Latino Origin 18
Exhibit II-2 Low Income Population by TAZ 19
Exhibit II-3 Minority Population by TAZ 20
Exhibit II-4 Environmental Justice TAZs by Type 21
Exhibit V-1 Comparison of the Total Amount Programmed in the 2021,,2022,,2023,and 2024 TIPs 92
Exhibit V-2 FY 2024-2027 TIP Funding by Fiscal Year 93
Exhibit V-3 FY 2024-2027 TIP Funding by Sponsoring Agency 94
Exhibit V-4 FY 2024-2027 TIP Projects by Project Category 95
Exhibit V-5 Share of FY 2024-2027 TIP Funding by Project Category 96
Exhibit V-6 Share of FY 2024 TIP Funding by Project Phase 97
Exhibit V-7 FY 2024 Federal Fund Requests by Fund Source 98
Exhibit VI-1 Projects in Relation to Low Income & Minority Concentrations - Anne Arundel County 100
Exhibit VI-2 Projects in Relation to Low Income & Minority Concentrations - Baltimore City 101
Exhibit VI-3 Projects in Relation to Low Income & Minority Concentrations - Baltimore County..... 102
Exhibit VI-4 Projects in Relation to Low Income & Minority Concentrations - Carroll County..... 103
Exhibit VI-5 Projects in Relation to Low Income & Minority Concentrations - Harford County..... 104
Exhibit VI-6 Projects in Relation to Low Income & Minority Concentrations - Howard County..... 105
Exhibit VI-7 Projects in Relation to Low Income & Minority Concentrations - Queen Anne's County 106

LIST OF TABLES

Table II-1 Low-Income Population by Jurisdiction 15
Table II-2 Minority Population by Jurisdiction 16
Table II-3 Status of Projects from the 2023-2026 TIP 27

Table II-4 New Projects in the 2024-2027 TIP 38
Table II-5 MDOT MTA Revenue Vehicle Performance & Targets 42
Table II-6 Baltimore Region Tier II Revenue Vehicle Performance & Targets 43
Table II-7 Tier I MDOT MTA Non-Revenue Vehicle Performance & Targets 43
Table II-8 Baltimore Region Tier II Non-Revenue Vehicle Performance & Targets 43
Table II-9 Tier I MDOT MTA Infrastructure Performance & Targets 43
Table II-10 Tier I MDOT MTA Facilities Performance & Targets 43
Table II-11 Baltimore Region Tier II Facilities Performance & Targets 44
Table II-12 2024-2027 TIP Projects Related to Transit Asset Management 44
Table II-13 Transit Safety Performance Measures & Targets - MDOT MTA 45
Table II-14 Transit Safety Performance Measures & Targets - Baltimore Region Lots 46
Table II-15 2024-2027 TIP Projects Related to Transit Safety 47
Table II-16 Highway Safety Performance Measures & Targets 48
Table II-17 2024-2027 TIP Projects Programming HISP Funds 48
Table II-18 Traffic Congestion and Emissions Performance Targets 50
Table II-19 2024-2027 TIP Projects Programming CMAQ Funds 51
Table II-20 Pavement and Bridge Condition Performance Measures & Targets 52
Table II-21 2024-2027 TIP Bridge Projects Related to Pavement Condition (Interstate on NHS) 53
Table II-22 2024-2027 TIP Projects Related to Pavement Condition (Non-Interstate NHS) 53
Table II-23 2024-2027 TIP Bridge Projects on NHS 54
Table II-24 Travel Time Reliability Performance Measures & Targets 55
Table V-1 Annual Element 75
Table V-2 FY 2024 Annual Element 80
Table V-3 Summary of FY 2024-2027 TIP Funding by Sponsoring Agency and Fiscal Year 91

I. INTRODUCTION

A. Summary

The Baltimore Region Transportation Improvement Program (TIP) documents the anticipated timing, cost, and rationale for federally-funded transportation improvements to be made in the Baltimore region[1] over the next four years. It is a program of specific projects, not a plan. In accordance with federal guidelines, the TIP is a translation of recommendations from the long-range transportation plan (LRTP), *Resilience 2050*, for the Baltimore region into a short-term program of improvements. This includes specific capacity improvements that have been identified in the LRTP, as well as system preservation projects and operational initiatives that are supported in the LRTP but have not been previously detailed. As such, the TIP ensures consistency between LRTP recommendations and project implementation in the region.

The TIP also serves as a multi-modal listing of transportation projects in the region for which federal funding requests are anticipated between fiscal years 2024-2027.[2]

Chapter II provides a summary of the key federal requirements for the TIP, followed by several sections detailing the requirements in key areas. Chapter III describes the relationship between the TIP and other transportation plans and programs in the region, its fulfillment of federal requirements, and its regional review function. Chapter IV explains the terms and symbols used in the project listings. Chapter V presents the financial plan supporting the projects in the four year program. It also details the amount and source of federal funds to be requested for the coming fiscal year, FY 2024.

Chapter VI includes environmental justice maps and detailed project listings. The detailed project listings include all federally funded and regionally significant projects. The projects are grouped first according to the local jurisdiction or state agency responsible for their implementation. Within those sections

[1] As shown in Exhibit I-1, the Baltimore region is composed of Baltimore City and the City of Annapolis and Anne Arundel, Baltimore, Carroll, Harford, Howard and Queen Anne's counties. As a result of Census 2010, there are three federally recognized urbanized areas in the region. One includes the City of Baltimore and portions of Anne Arundel, Baltimore, Carroll, Howard and Queen Anne's County. The second includes Westminster in Carroll County. The third is Aberdeen – Havre de Grace – Bel Air in Harford County and portions of Cecil County.

[2] The Baltimore Region TIP follows the Maryland state fiscal year: July 1 to June 30

they are then grouped by category in the following order: commuter rail capacity, commuter rail preservation, enhancement program, environmental/safety, emission reduction strategy, highway capacity, highway preservation, transit capacity, transit preservation, ports, and miscellaneous. A timetable for anticipated federal funding requests is presented for each project.

The 2024-2027 TIP programs a total of $4.24 billion. Federal funds account for $2.89 billion of this total, with matching funds accounting for the remaining $1.35 billion. In almost all cases, matching funds are provided by the local or state agency sponsoring the project. Rare circumstances where matching funds are provided by a private source or another local or state agency are noted in the project description in Chapter VI.

Exhibit I-1: The Baltimore Region

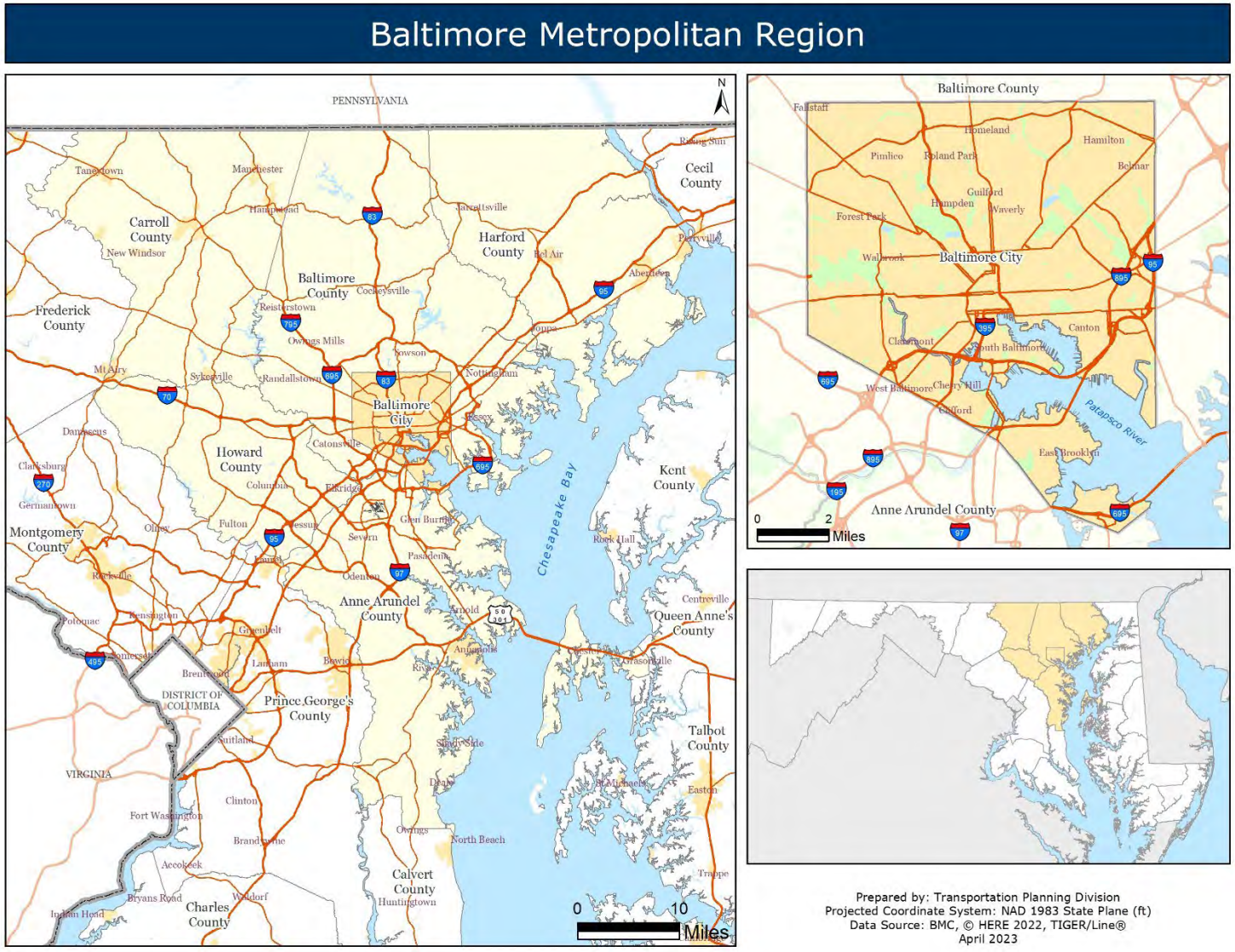


Exhibit I-2: The Baltimore Region Federal Highway Functional Classification

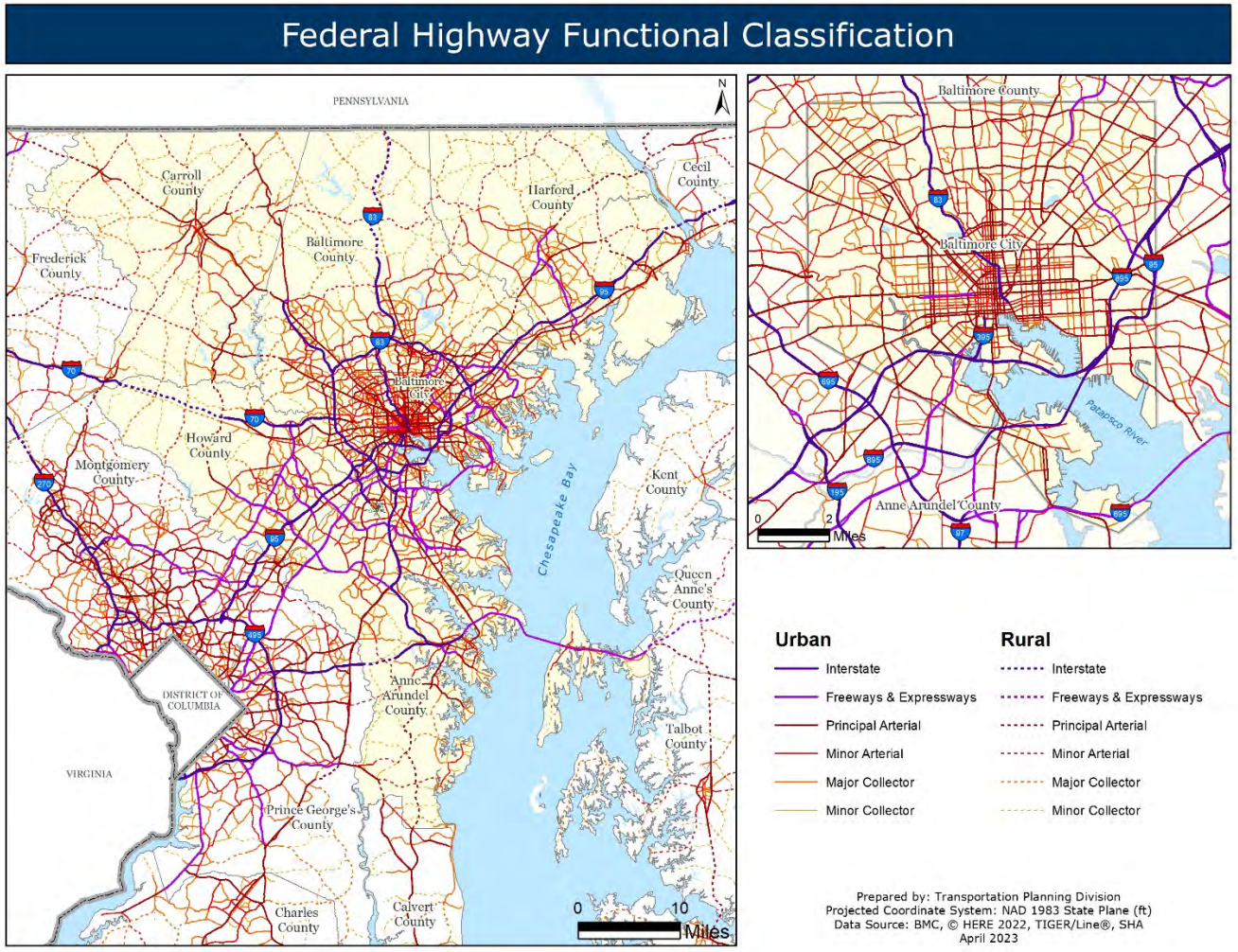
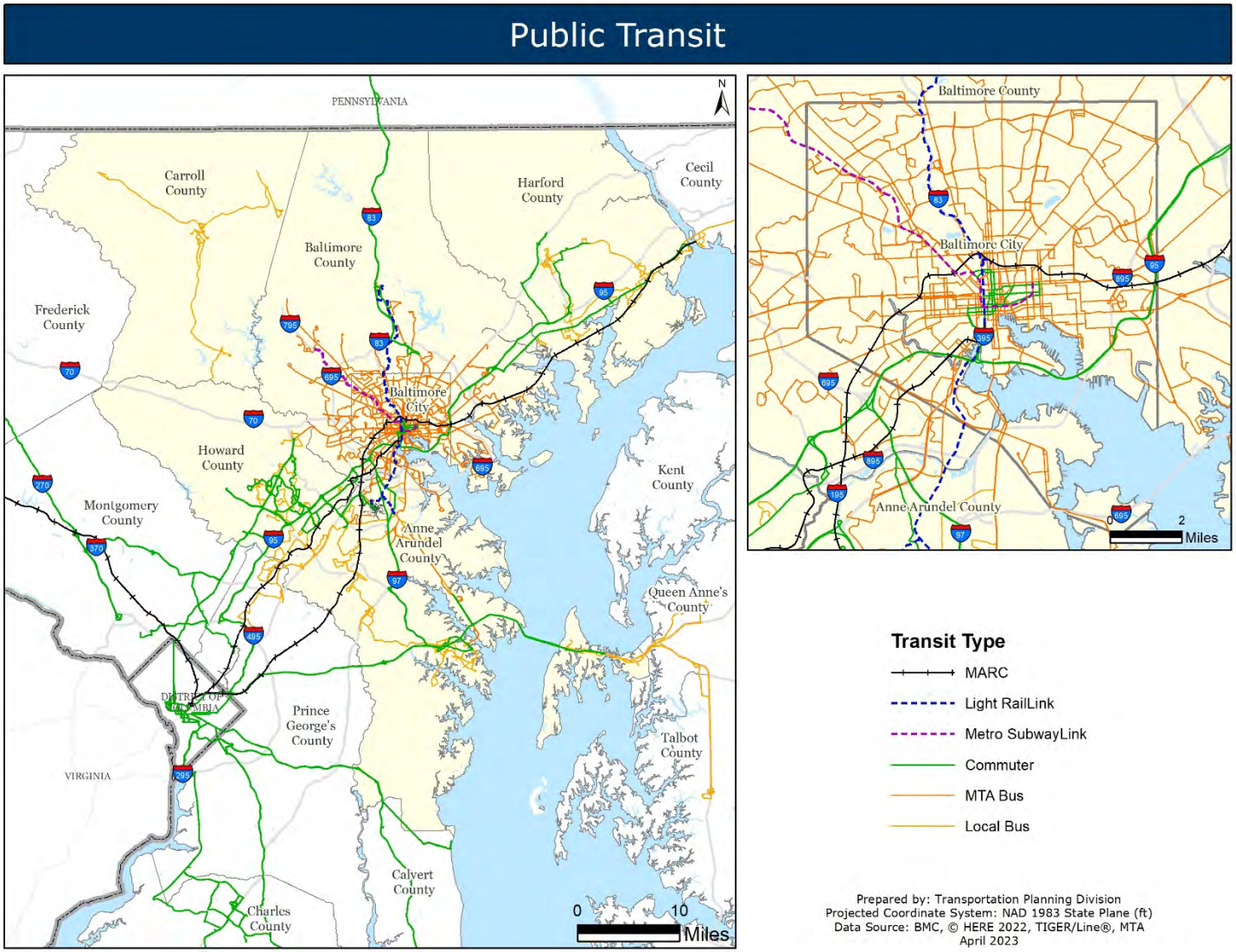


Exhibit I-3: The Baltimore Region – Transit



B. Metropolitan Planning Organization Self-Certification

At the time the metropolitan TIP, and the projects requesting funds in the coming fiscal year, are endorsed for funding out of the U. S. Department of Transportation (DOT), a Metropolitan Planning Organization (MPO) is required to certify that projects selected through the transportation planning process conform with all applicable federal laws and regulations. The Baltimore Regional Transportation Board (BRTB), in its capacity as the MPO for the Baltimore region, certifies under Resolution #24-01 that the transportation planning process is conducted in a manner that complies with the requirements of 23 USC 134, 49 USC 5303, 23 CFR Part 450 and 49 CFR Part 613, and Sections 174 and 176(c) and (d) of the Clean Air Act. The certification requirement directs members of the BRTB to review the planning process that has been under way and ascertain that the requirements are being met. The review serves to maintain focus on essential activities. Members of the BRTB are listed in Appendix A of this document.

The BRTB's commitment to comply with applicable federal transportation planning requirements is evidenced by the following: ❶ the BRTB has a continuing, cooperative and comprehensive (3-C) transportation planning process that results in plans and programs consistent with the general land use and master plans of the local jurisdictions in the urbanized area; ❷ the BRTB has adopted a public participation process that fulfills the requirements and intent of public participation and outreach as defined in the Metropolitan Planning Regulations; ❸ the BRTB adopted a financially constrained long-range transportation plan, *Resilience 2050*, for the Baltimore region consistent with the metropolitan planning factors in the Fixing America's Surface Transportation (FAST) Act and subsequent Infrastructure Investment and Jobs Act (IIJA); ❹ the BRTB maintains a Congestion Management Process (CMP); ❺ the BRTB has determined that conformity (8-hour ozone) of *Resilience 2050* and the 2024-2027 TIP for the Baltimore region has been conducted under the U.S. Environmental Protection Agency's (EPA's) final rule as amended; and ❻ the BRTB adheres to the federal Disadvantaged Business Enterprises (DBE) requirements set forth in 49 CFR Part 26.

C. Consistency with *Resilience 2050*

In an effort to plan for future regional transportation needs and to comply with the intention of the FAST Act and the Clean Air Act Amendments of 1990 (CAAA), the BRTB endorsed *Resilience 2050: Adapting to the Challenges of Tomorrow*, the long-range transportation plan, in July 2023. The factors that guided development of *Resilience 2050* are listed in the Metropolitan Planning Regulations effective May 27, 2016. These regulations continue and strengthen the emphasis on performance-based planning and programming.

Resilience 2050 includes a set of overarching regional goals, specific implementation strategies that support these goals, and a series of performance measures and targets. These measures and targets are consistent with the performance-based approach to planning and programming set forth in MAP-21, the FAST Act, and corresponding regulations. These measures and targets help the BRTB and operating agencies gauge progress relative to regional goals and strategies.

The BRTB has developed and adopted performance measures for transit asset management, transit safety, roadway safety, roadway and bridge conditions, and system performance. Target selection was coordinated with the State and public transportation providers to ensure consistency. All required measures and targets were adopted in compliance with federal due dates. The measures and targets will guide the Maryland Department of Transportation and metropolitan planning organizations in carrying out the requirements of the applicable FHWA and FTA laws and regulations.

Section II.G summarizes the performance measures and targets as well as the anticipated impact of investments in the TIP on these performance measures and targets. Appendix B includes a table connecting TIP projects to *Resilience 2050* goals and performance measures.

In addition to performance measures and targets, *Resilience 2050* reports on forecasted regional growth in population, households and employment to the year 2050 and the projected travel demand resulting from this forecasted growth. It demonstrates how the existing and committed transportation network may struggle to accommodate future travel demand based on projected increases in congested VMT and vehicle hours of delay. The region may need to apply additional transportation demand management strategies to meet future performance targets related to regional mobility.

To address the projected demands on the transportation system, *Resilience 2050* includes a range of projects through the year 2050. It outlines a multimodal array of transportation improvements along with the requisite funding scenario needed to support the program. Non-motorized transportation alternatives are included, as well as intermodal and transportation demand management strategies. The transportation demand management strategies are particularly important to complement the infrastructure improvements and ensure the region meets the conformity requirements for transportation plans and programs by way of national air quality goals and objectives.

Resilience 2050 also discusses the impacts of workers that work from home. From 2010 to 2019 the share of the population working from home showed modest increases (3.9% in 2010 and 5.6% in 2019). However, in 2020 the pandemic resulted in a large increase of the population working from home at nearly 20%. There are variances based on demographic characteristics of workers and the industries in which they work. While the long-term impacts of remote workers is uncertain, consideration for future land use and transportation planning efforts are warranted.

The capacity projects in the 2024-2027 TIP "flow" from *Resilience 2050*, resulting in a prioritized subset of projects for implementation. In this way, long-range policy recommendations are translated into short-range transportation improvements.

II. FEDERAL REQUIREMENTS AND REGIONAL REVIEW FUNCTION

A. Requirements of the Infrastructure Investment and Jobs Act (IIJA)

The Infrastructure Investment and Jobs Act (IIJA) was signed into law on November 15, 2021. The requirements of the IIJA are consistent with the requirements of the FAST Act. Below is a discussion of key federal requirements that are in place regarding development of the TIP. Requirements of the IIJA include:

• Prioritized list of financially constrained improvements: The BRTB, in cooperation with state and local agencies and transit operators, have developed a prioritized and fiscally constrained TIP. Fiscal constraint means that the funds programmed in the 2024-2027 TIP are reasonably expected to be available over the timeframe covered by the TIP. Projects included in the FY 2024-2027 TIP have been cooperatively determined by members of the BRTB. The project selection process considered air quality implications and regional mobility enhancement prior to inclusion in the final TIP document.

Priority is reflected by the year in which a project is shown. Priorities and financial analysis are provided for all four years of the TIP. Financial reasonableness is evaluated on three fronts: ❶ MDOT ensures that federal funding requests during the TIP planning process are reasonable for our region; ❷ MDOT provides documentation of the state's capacity to meet the match requirements associated with state-sponsored projects in the TIP; and ❸ Local governments also provide documentation of the same financial reasonableness requirements to match the federal funds requested for locally sponsored projects.

• Flexing Funds: The TIP is required to take full advantage of the increased flexibility of Federal Highway Administration (FHWA) and Federal Transit Administration (FTA) capital funds. MDOT provides a "statement of concurrence" that consideration of this provision (flexing funds) has been utilized in the development of all state initiatives. Documentation of project prioritization, financial reasonableness and flexible funding is included in Appendix B.

• Financial Plan: IIJA requires that the TIP include a financial plan that demonstrates that the fiscal resources required to construct projects proposed in the TIP are reasonably expected to be available within the timeframe specified. The financial plan in Chapter V demonstrates that the region, through public and

private funding, is reasonably able to generate the projected resources needed to carry out the projects in the TIP.

• Illustrative Projects: Federal regulations for metropolitan transportation planning identify the concept of "illustrative projects" as an element of the planning process. These are projects included in a metropolitan transportation plan for illustrative purposes only. These projects could be included in the adopted transportation plan if additional funds beyond the reasonably anticipated financial resources identified in the plan become available. There is no requirement to select any project from an illustrative list of projects shown in a metropolitan plan at a future date when funding might become available. However, illustrative projects can be helpful in guiding transportation and land use planning efforts at both the regional and local levels. These illustrative projects can provide a resource from which the BRTB can select regional priorities should additional funding become available. A list of illustrative projects is included in Appendix J.

• Congestion Management Process: IIJA states that for "transportation management areas classified as nonattainment for ozone or carbon monoxide. . . , Federal funds may not be advanced in such area for any highway project that will result in a significant increase in the carrying capacity for single-occupant vehicles unless the project is addressed through a congestion management process (CMP)". CMP guidelines were adopted by the BRTB in October, 1997. As potential capacity projects enter the state planning process, the BRTB is invited to participate in interagency discussions. This process allows the BRTB to offer recommendations during the process to address congestion prior to building additional lane capacity. At three stages in this interagency process the BRTB adopts a resolution approving the analysis to date. The BRTB also conducts ongoing data collection and monitoring to assess conditions and ascertain the effectiveness of a range of strategies to relieve congestion. To support regional CMP work, the BRTB CMP Committee meets three times per year to identify and track regional congestion locations and causes and discuss potential approaches to address congestion.

• Public Involvement: The public must have an opportunity to review and comment on the TIP in the early stages of preparation with at least one public meeting. The BRTB updated formal public participation procedures governing metropolitan transportation planning activities in December 2022. These

guidelines reaffirmed a framework for public participation and information dissemination.

The BRTB offered members of the public, affected public agencies, private providers of transportation and other interested parties reasonable opportunities to comment on a draft list of projects.

The draft TIP was made available on the Baltimore Metropolitan Council (BMC) website. Public meetings were held in-person at each of the seven local jurisdictions for the public to provide comments on the draft TIP. A virtual public meeting was held on May 24, 2023 and a recorded version of the public meeting was posted on the BMC website. Opportunities to comment on the draft TIP were advertised on the BMC website and on BMC social media accounts, with outreach work undertaken by public involvement staff. In addition, the public will be able to address the BRTB at its June and July 2023 meetings. Written comments by mail, email, or social media will be accepted during the public review period. In addition, members of the public will be able to submit comments directly via an interactive TIP project map. A summary of all comments received, both verbal and written, BRTB responses, and the public participation notices are included in Appendix G of the final TIP document.

The public participation process for the TIP also meets the FTA public participation requirements for the MDOT Maryland Transit Administration's (MDOT MTA) program of projects. MDOT MTA, in lieu of a separate mandated public comment period for federal funding assistance under 49 USC Sections 5307, 5310, and 5311 has exercised its option to use the procedures of the BRTB's public involvement process for the 2024-2027 TIP to satisfy the public participation requirements associated with development of the MDOT MTA Program of Projects (POP).

- Listing of Obligated Projects: MPO's must publish an annual listing of projects for which federal funds have been obligated in the preceding year. The list must be consistent with projects identified in the TIP, with the intent of improving the transparency of transportation spending decisions.

The FY 2022 obligated listing will include all federal funds obligated in the Baltimore region from July 1, 2021 – June 30, 2022.[3]

- Performance-Based Planning and Programming (PBPP): The U.S. DOT published updated Metropolitan Planning Regulations on May 27, 2016 following the enactment of the FAST Act. These updated regulations continue and strengthen the emphasis on PBPP. The intent of PBPP is to aid MPOs in gauging progress relative to regionally established goals, strategies, and performance measures and targets. Federal rulemaking required MPOs to adopt a series of 25 performance measures and targets and to link investment priorities in the TIP and LRTP to the achievement of these performance measures and targets. Section II.G provides further details on PBPP.
- TIP Changes: The project schedules and funding breakdowns for projects in the TIP represent the best estimates by project sponsors at the time the TIP is developed. However, project schedules and funding can change. As a result, the TIP is frequently updated throughout the year through the TIP change process. There are two types of TIP changes. TIP amendments involve major changes to a project such as the addition or deletion of a project or a major change in project cost, timeline, or scope. Administrative modifications involve minor revisions to project costs, fund sources or project timelines.

The BRTB Public Participation Plan[4] details procedures for TIP amendments and administrative modifications. All amendments are presented to the BRTB Technical Committee and the BRTB for consideration and approval. In addition, any project that requires a new regional emissions analysis, such as roadway or transit capacity expansions, automatically triggers a 30-day public review and public meeting. Administrative modifications are reviewed and approved by the BRTB Executive Committee.

Appendix F lists all amendments and administrative modifications to the 2023-2026 TIP.

[3] The full obligated listing is available here: https://www.baltometro.org/sites/default/files/bmc_documents/general/transportation/tip/22-25/2022_FederalAidObligations.pdf

[4] The BRTB Public Participation Plan is available here: https://baltometro.org/sites/default/files/bmc_documents/general/transportation/advisory/PPP2022.pdf

B. Environmental Justice

Environmental Justice (EJ) seeks to ensure that the benefits and burdens of transportation investments are shared as equitably as possible among all affected communities. Specifically, EJ considers whether low-income and minority populations bear disproportionate impacts resulting from governmental decisions. Historically, EJ was borne out of civil rights and environmental complaints from low-income and minority communities. Concerns were raised, showing that these communities may suffer disproportionately from exposure to toxic chemicals and the siting of industrial plants and waste facilities.

In February 1994, President Clinton signed Executive Order 12898 entitled *Federal Action to Address Environmental Justice in Minority and Low-Income Populations*. In 1997, the U.S. Department of Transportation (DOT) issued an "Order to Address Environmental Justice in Minority Populations and Low-income Populations."

The DOT Order directs consideration of two groups: low-income persons and minorities.

FHWA and FTA allow recipients to establish their own definitions of low-income that are appropriate for the region, as long as they are at least as inclusive as the poverty guidelines set by the U.S. Department of Health and Human Services (HHS). The BRTB previously used the poverty level as its definition of low-income. However, the Public Advisory Committee criticized this definition as too low and recommended increasing it due to the region's cost of living. For example, the 2022 threshold for a four-person family with two children is just $27,750.

In response to this critique, BMC staff reviewed alternative definitions of low-income for use in Environmental Justice mapping and analysis, the Vulnerable Populations Index, and project scoring for the upcoming LRTP. Staff conducted a review of low-income definitions used by other Metropolitan Planning Organizations (MPO) as well as an analysis of ACS data. In addition to the population living below the national poverty level, the ACS also identifies the population that lives at or below higher percentages of the poverty level to account for the higher costs of living in some areas of the country. Many of the MPOs reviewed used a higher percentage of the poverty level as their definition of low-income.

After reviewing alternatives and practices used by other MPOs, BMC staff recommended 200% of the poverty level as the new definition for low-income populations. This increases the definition of low-income to approximately $27,750 for a one-adult family and to about $56,000 for a four-person family. This definition has several advantages. It captures a larger portion of economically insecure persons in the Baltimore region, as the poverty level is not a living wage for the Baltimore region. It is also a close approximation to 50% of Baltimore area AMI, an income level that is utilized for some HUD programs. Another advantage is that it is readily available from the ACS for incorporation into BMC products. Finally, it is also a good approximation of a family-supporting wage. This wage is derived from the Massachusetts Institute of Technology (MIT) living wage calculator and has been utilized in a number of BMC workforce development reports and analyses.

In December 2021, the Technical Committee agreed to move forward with 200% of the poverty level as the definition of low-income populations for use in future analyses.

Minorities are defined as a person belonging to any of the following groups:

- Person of origin in any of the black racial groups of Africa;
- Person of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish culture or origin;
- Person having origins in any of the original peoples of the Far East, Southeast Asia, or the Indian subcontinent;
- Person having origins in any of the original people of North America (American Indian, Alaskan Native) and who maintains cultural identification through tribal affiliation or community recognition; or
- Person having origins in any of the original peoples of Hawaii, Guam, Samoa, or other Pacific Islands

The DOT Order applies to all policies, programs and other activities undertaken, funded or approved by the DOT, including metropolitan planning. There are three fundamental DOT environmental justice principles:

- To avoid, minimize, or mitigate disproportionately high and adverse human health and environmental effects, including social and economic effects, on minority populations and low-income populations.

- To ensure the full and fair participation by all potentially affected communities in the transportation decision-making process.
- To prevent the denial of, reduction in, or significant delay in the receipt of benefits by minority and low-income populations.

MPOs are responsible for assessing the benefits and burdens of transportation system investments for different socio-economic groups. This includes both a data collection effort and engagement of minority and low-income populations in public involvement activities.

EJ Populations in the Baltimore Region

Low-income Populations

As stated previously, the BRTB defines low-income populations as the population below 200% of the poverty level. The primary source of data on low-income persons is the Census Bureau's American Community Survey (ACS). The Census Bureau uses a set of income thresholds that vary by size of family and number of children to determine poverty (and 200% of the poverty level). If a family's total income is less than the threshold for 200% of the poverty level, then that family and every individual in it is considered to have an income less than 200% of the poverty level. For example, the 2022 poverty threshold for a four-person family with two children is $27,750. This means that the 200% poverty threshold for a four-person family with two children is $55,500.

Table II-1 summarizes low-income population by jurisdiction. Population at or below 200% of the poverty line are not evenly distributed throughout the region, ranging from 12.7% of the population in Carroll and Howard Counties to 38.6% of the population in Baltimore City. In total, 21.4% of the population in the Baltimore region have incomes at or below 200% of the poverty line.

Table II-1. Low-Income Population by Jurisdiction

Jurisdiction	*Total Population	At or Below 200% of Poverty Line	
		Low Income Population	Share
Anne Arundel	584,064	79,309	14.0%
Baltimore City	592,211	220,112	38.6%
Baltimore Co	850,702	181,141	21.8%
Carroll	172,148	21,461	12.7%
Harford	259,162	41,009	15.9%
Howard	329,248	41,356	12.7%
Queen Anne's	49,702	7,224	14.7%
BRTB Region Total	**2,837,237**	**591,612**	**21.4%**

Source: U.S. Census Bureau, 2017-2021 American Community Survey 5-Year Estimates (Tables B03002 and C17002)
*Total Population for which poverty level is counted

Minority Populations

The ACS also serves as the primary data source for identifying minority populations. Minorities include individuals who are members of several population groups including Hispanic persons and non-Hispanic persons who are Black, American Indian or Alaskan Native, and Asian or Pacific Islander. Non-minorities are defined as those that are both white and non-Hispanic.

Table II-2 summarizes minority population by jurisdiction. As with low-income populations, minorities are not evenly distributed throughout the region. According to the latest 5-year estimates from the ACS, the share of minorities in BRTB jurisdictions ranges from 12.3% in Carroll County to 72.7% in Baltimore City. In total, minorities make up 44.7% of the Baltimore region population while white, non-Hispanics make up the remaining 55.3%. Exhibit II-1 at the end of this section summarizes minority individuals by Hispanic or Latino origin and race.

Table II-2. Minority Population by Jurisdiction

Jurisdiction	Minority Population	White, non-Hispanic Population	Minority Share	White, non-Hispanic Share
Anne Arundel	198,281	385,783	33.9	66.1
Baltimore City	430,251	161,960	72.7	27.3
Baltimore Co	379,804	470,898	44.6	55.4
Carroll	21,206	150,942	12.3	87.7
Harford	65,686	193,476	25.3	74.7
Howard	165,769	163,479	50.3	49.7
Queen Anne's	7,551	42,151	15.2	84.8
BRTB Region Total	**1,268,548**	**1,568,689**	**44.7**	**55.3**

Source: U.S. Census Bureau, 2016-2020 American Community Survey 5-Year Estimates (Table B03002)

Mapping EJ Populations in the Baltimore Region

The BRTB uses Transportation Analysis Zones (TAZ) as a basis for identifying EJ areas. TAZs are a basic unit of geography used to predict travel behavior in the BRTB's travel demand model. They are constructed using census block information and are smaller than census tracts. Having established that TAZs will be the geographic unit of analysis, we need a way to identify EJ and non-EJ TAZs. This is done through the use of a regional threshold. A TAZ is identified as an EJ area if it has a concentration of low-income population (below 200% of poverty level) or minorities greater than their respective regional averages.

The percentage of low-income population (income below 200% of the poverty level) in the Baltimore region is 21.4%. Thus, TAZs with a concentration of low-income population greater than 21.4% are considered low-income TAZs for EJ purposes. Similarly, TAZs with a concentration of minorities greater than the regional average of 44.7% are considered minority TAZs for EJ purposes. Exhibits II-2 and II-3 show the low-income population and minority population, respectively, by TAZ. Exhibit II-4 shows all EJ TAZs, breaking EJ TAZs into those exceeding the regional average for low-income population, those exceeding the regional average for minority concentration, and those exceeding both regional averages.

Additional EJ maps are available in Section VI.A: Project and Environmental Justice Maps by Jurisdiction. These maps show the locations (by jurisdiction) of specific TIP projects in relation to EJ TAZs. When these and other transportation projects enter project planning, consideration of EJ is undertaken. These studies are conducted by the appropriate state agency (e.g. MDOT SHA, etc.) or a local jurisdiction during the project planning phase. Opportunities for public participation are central to these efforts.

The LRTP, *Resilience 2050*, includes an extensive environmental justice analysis. BMC staff utilized several measures to compare the effects on EJ and non-EJ TAZs of projects in the preferred alternative of *Resilience 2050*, including all nonexempt projects in the TIP. These measures include accessibility to jobs and shopping, travel times for commuting and for other purposes, and proximity to key destinations such as supermarkets and hospitals. The BRTB continues to evaluate methods used by other MPOs as well as guidance issued by FHWA for additional environmental justice analysis of the TIP.

Exhibit II-1: BRTB Region Minority Populations by Race and Hispanic or Latino Origin

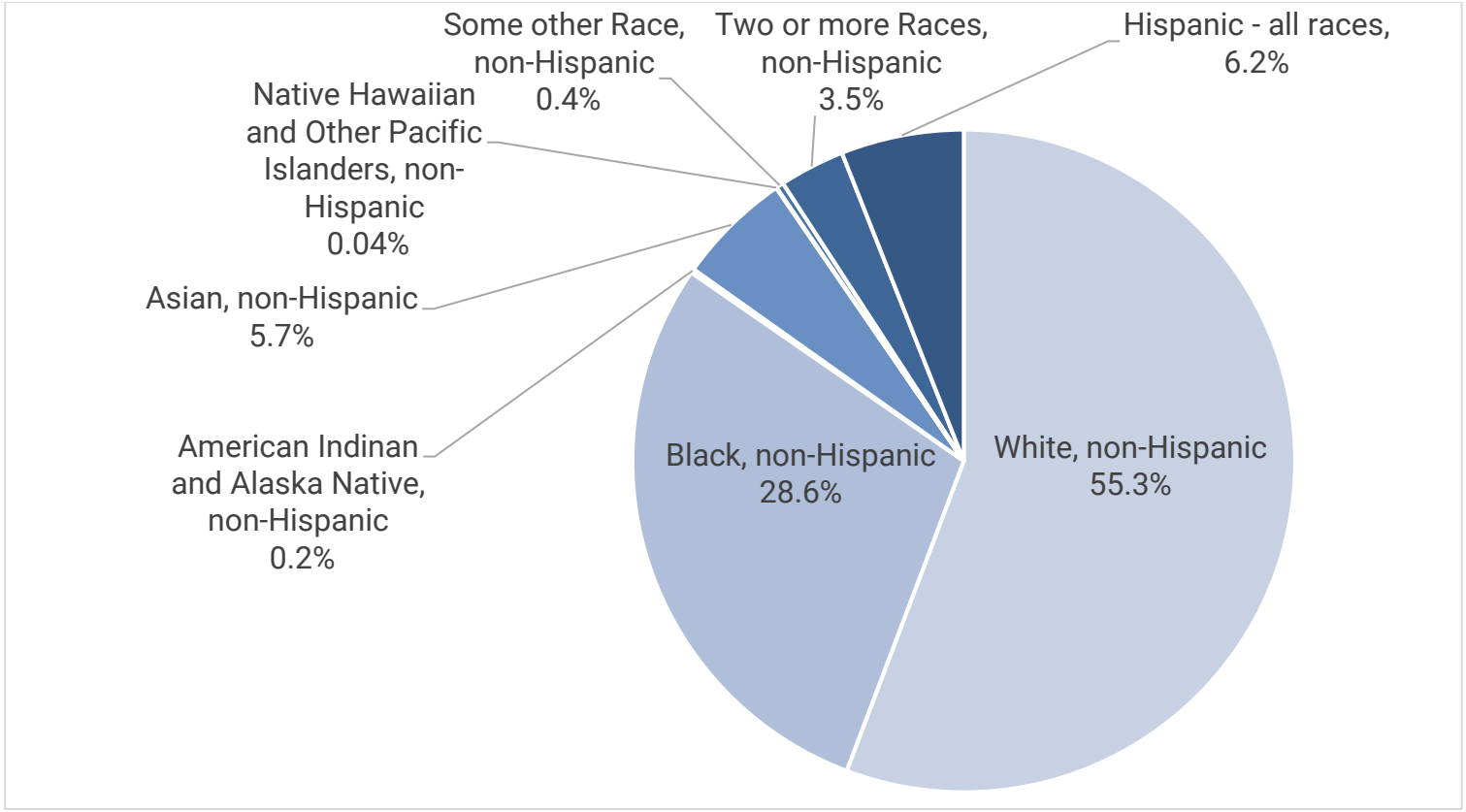


Exhibit II-2: Low Income Population by TAZ

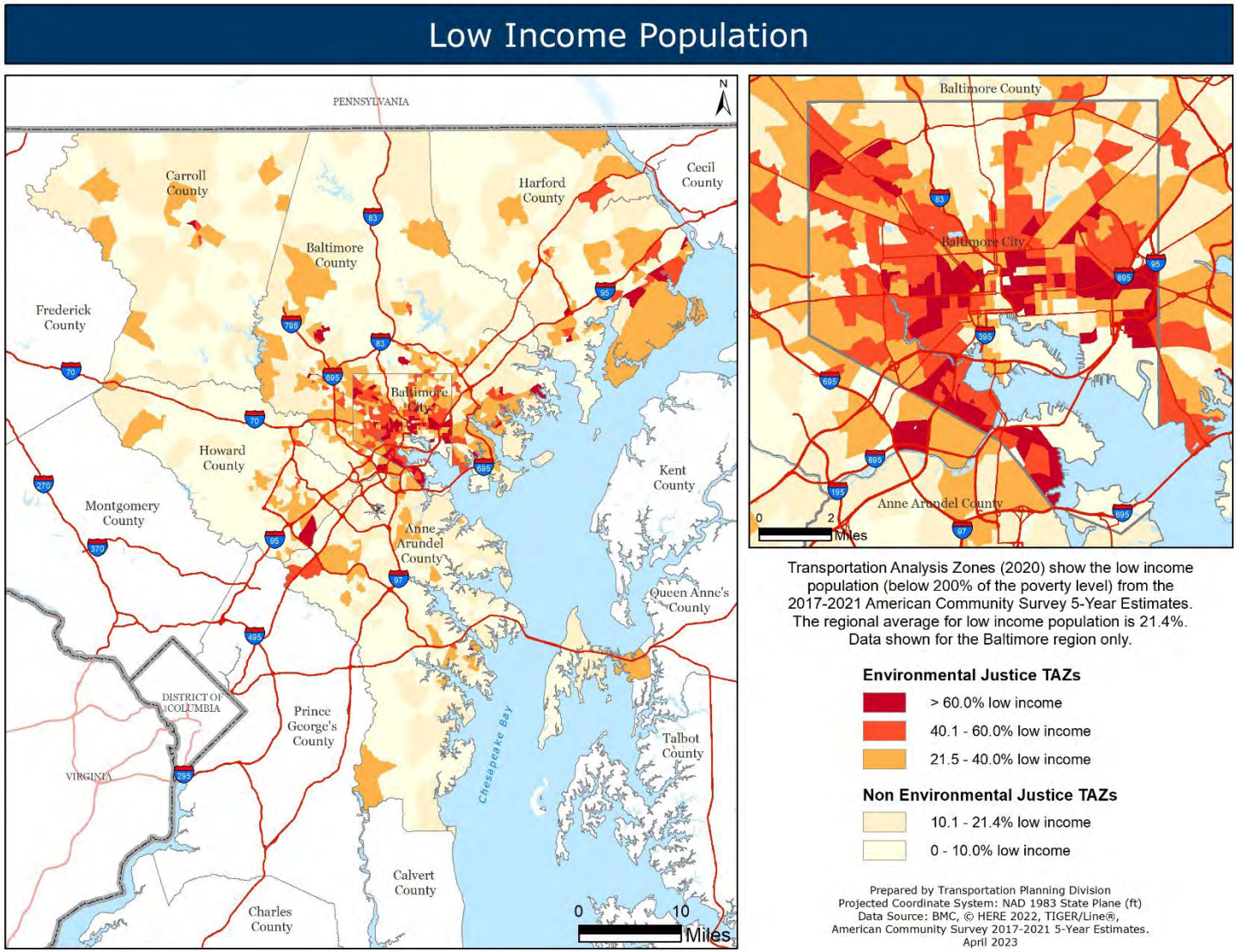


Exhibit II-3: Minority Population by TAZ

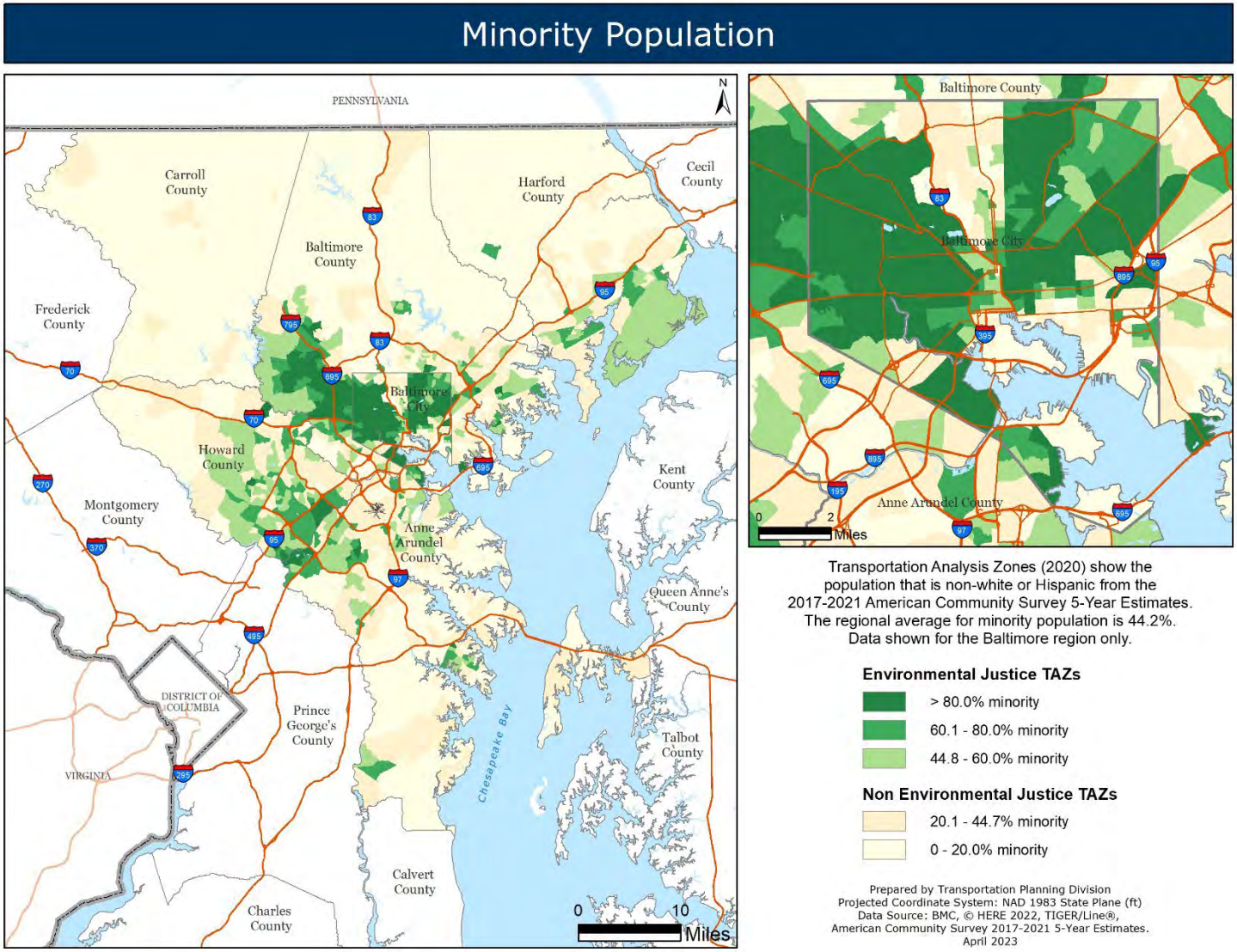
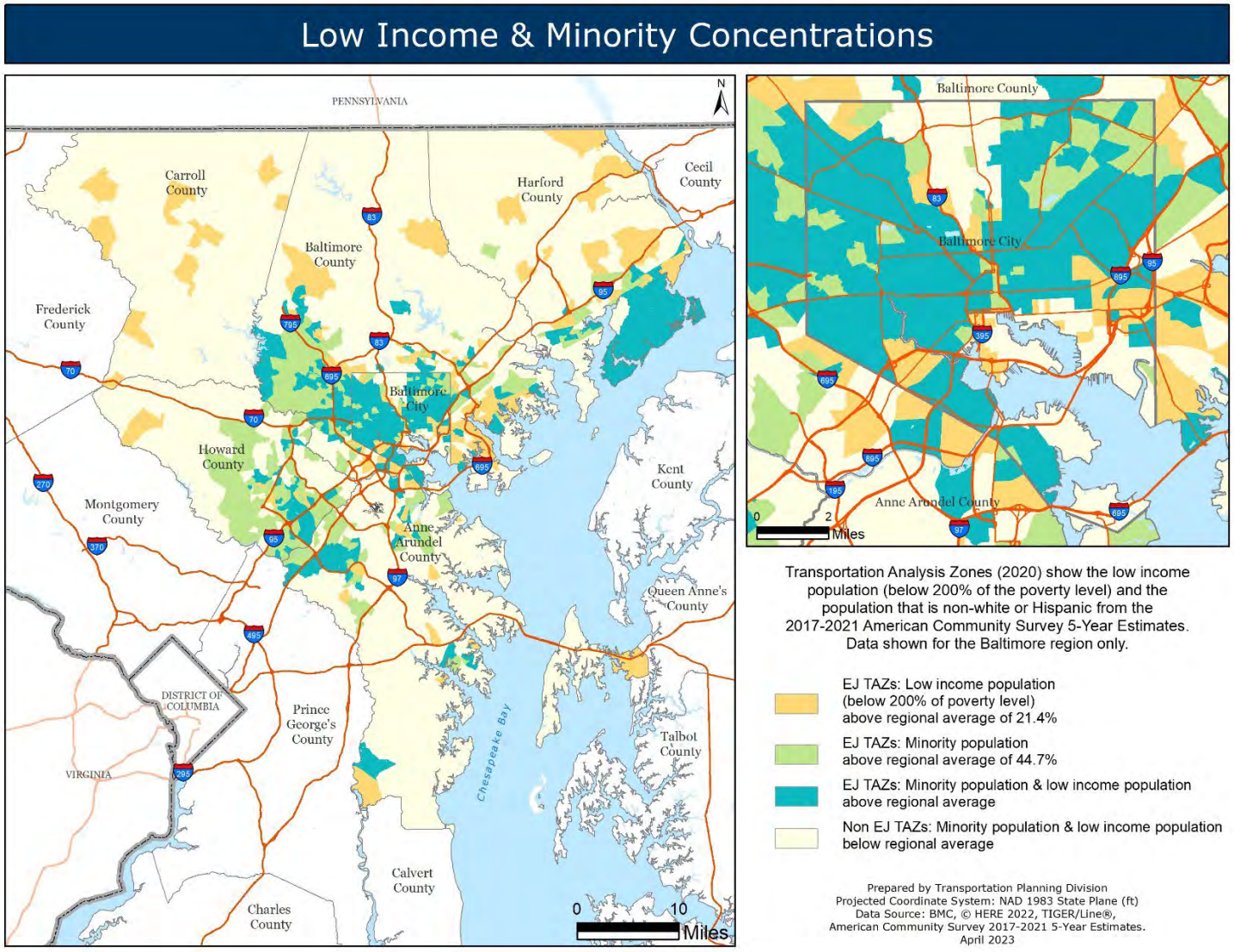


Exhibit II-4: Environmental Justice TAZs by Type



C. Coordinating Human Service Transportation

The FAST Act supported transportation initiatives for elderly and disabled populations through the FTA Section 5310 Capital Grant Program, or Enhanced Mobility of Seniors and People with Disabilities. Low-income populations are served through job access and reverse commute projects under FTA's Urbanized Area Formula Grants (Section 5307) and Formula Grants for Rural Areas (Section 5311) programs. While the FAST Act expired and was replaced by the Infrastructure Investment and Jobs Act in November 2021, some of the FAST Act funding is still in use within the current program cycles. The MDOT Maryland Transit Administration (MDOT MTA) is the administrator for all three programs, and consults with the BRTB on program implementation.

Grant recipients must certify that projects funded through these programs "are included in a locally developed, coordinated public transit-human services transportation plan". The coordinated plan identifies the transportation needs of individuals with disabilities, older adults, and people with low incomes; provides strategies for meeting those local needs; and prioritizes transportation services for funding and implementation. The BRTB is responsible for working with MDOT MTA to facilitate the Coordinated Public Transit-Human Services Transportation Plan for the Baltimore Region. This regional plan includes the Cities of Baltimore and Annapolis, and Anne Arundel, Baltimore, Carroll, Harford, and Howard Counties. The BRTB works with MTA to review applications and make recommendations for the Section 5310 program. The Coordinated Public Transit-Human Services Transportation Plan was last updated in December 2019. An update is expected to be prepared in 2024. Queen Anne's County is included in Coordinated Public Transit-Human Services Transportation Plan for the Upper Shore Region, which is on the same schedule.

The Maryland Job Access Reverse Commute Program (MD-JARC) was passed by the General Assembly in 2018. Modeled after the former FTA grant program of the same name, MD-JARC is designed to connect target populations with employment areas that have experienced significant growth in employment opportunities, by funding transportation services. Target populations reside in low-income areas, have limited or no access to a personal vehicle, and have limited access to fixed route transit service. Up to $400,000 each year will be available for grants, with 70 percent of the funds

for use in urbanized areas and 30 percent for rural areas. The minimum request is $10,000 and must be matched by a 25% local contribution.

Sample projects include 1) Extension of service hours on local fixed route systems, 2) Vanpool services, 3) Employer-provided transportation services, and 4) Demand Response / Deviated Fixed Route service. Baltimore Region projects must be endorsed by the BRTB to be considered. The BRTB last endorsed applications in January 2021. Applications are considered every two years.

D. Additional Programs for Seniors and Persons with Disabilities

In addition to administering the FTA Section 5310 and MD-JARC Programs, MDOT MTA provides paratransit service for the elderly and persons with disabilities. MDOT MTA also operates a fleet of buses that is fully accessible to the elderly and persons with disabilities. All new bus purchases are lift-equipped.

As part of their training program, bus drivers receive disability awareness/passenger assistance technique training for passengers with special needs. The needs of the elderly and disabled customers, those with hidden disabilities and blind, deaf and mentally disabled travelers are discussed. The training emphasizes Americans with Disabilities Act (ADA) service requirements and techniques for communicating with the elderly and people who are disabled. Drivers also learn how to operate lift equipment and assist riders who are disabled.

MDOT MTA operates Mobility and a Reduced Fare Program for the elderly and persons with disabilities. Mobility provides comparable ADA service for those who cannot use fixed-route bus service. The Reduced Fare Program provides a 50% discount for the elderly and persons with disabilities in accordance with requirements for recipients of federal operating assistance from FTA (49 CFR 609.23).

In addition to these programs, MDOT MTA initiated two programs: MDOT MTA Call-a-Ride Service and the Senior Rides Program.

MDOT MTA Call-a-Ride

The MDOT MTA Call-a-Ride Service is open to eligible MDOT MTA Mobility customers. This program offers program participants same day transportation options through a network of taxi and sedan providers. Participants in the program can use the service for any purpose and take it to anywhere within the service area of Mobility. There is a fee of $3.00 for each one way ride with a meter reading of $40 or less. MDOT MTA will pay the fare up to $40, and the participant is responsible for paying the balance of the fare that exceeds the $40 limit in cash. Participants may be accompanied by up to 3 people per trip if all passengers start and end the ride at the same location. A limited number of wheelchair accessible taxis and sedans are available to individuals with mobility impairments who use motorized or non-folding wheelchairs. A list of participating companies is available to users.

Senior Rides Program

Since FY 2006, MDOT MTA has awarded grants to qualified applicants statewide to encourage and facilitate the development of volunteer transportation services for low-income and moderate-income seniors. MDOT MTA offered approximately $187,000 in State funds in FY23, which must be matched by 25% local contributions. The projects must provide door-to-door transportation service, use primarily volunteer drivers, and have a dispatching system.

FY 2022 awards went to the following organizations in the Baltimore Region:

- Action in Maturity (AIM)
- Baltimore County Department of Aging
- Commissioners of St. Mary's Co., Department of Aging
- Comprehensive Housing Assistance, Inc.
- Getting There Ride Share (Grace Memorial Church in Deer Creek Parish-Wilson Ministries)
- Lifestyles of Maryland Foundation, Inc.
- Neighbor Ride
- Onley Homes for Life
- Partners in Care
- Worcester COA

E. Status of Projects from the 2023-2026 TIP and New Projects in the 2024-2027 TIP

As mandated by the federal regulations for metropolitan planning, major projects from the previous TIP, the 2023-2026 TIP, must be tracked and any significant delays in the planned implementation of these major projects must be explained. In order to meet this guideline, Table II-3 lists all projects from the 2023-2026 TIP by jurisdiction including the TIP ID, year of operation in the 2023-2026 TIP, year of operation in the 2024-2027 TIP (if any), and status of the project.

Table II-3 sometimes lists the year of operation in the 2024-2027 TIP as XX. This means the project is not in the new TIP either because funds have been received, the project is complete, the project is between funding stages, the project is on hold, or the project is not being pursued. The reason is noted in the project status. Ongoing means that this project continues year after year. NA means not applicable, usually used for a study where the year of operation has yet to be determined.

Table II-4 lists projects that are new to the 2024-2027 TIP. Additional details on these projects are available in Chapter VI.

Table II-3: Status of Projects from the 2023-2026 TIP

Project	TIP ID	Year of Operation 23-26 TIP	Year of Operation 24-27 TIP	Project Status
Anne Arundel County				
Hanover Road Corridor Improvement	11-1801-42	TBD	2030	ROW Offers underway with anticipated completion in 2024. Design remains at 90%.
Furnace Avenue Bridge over Deep Run	11-1103-13	2026	2027	In Schematic Design. Anticipated ad in Fall 2025, NTP early 2026 and completion in early 2027.
Harwood Road Bridge over Stocketts Run	11-1208-13	2023	2023	Under Construction. Estimated completion in Fall 2023.
Magothy Bridge Road Bridge over Magothy River	11-1402-13	2024	2026	In Bid & Award process. NTP anticipated in 2023.
O'Connor Road Bridge over Deep Run	11-1403-13	2026	2026	In Design Development. NEPA approved in 2022, ad scheduled in 2024, NTP in 2025 and completion in 2026.
McKendree Road Culvert over Lyons Creek	11-1601-19	2024	2025	In Contract Document phase. Current schedule shows AD in 2023, NTP in 2024 and Acceptance in 2024/25.
Polling House Road Bridge over Rock Branch	11-1602-13	2026	2028	In Schematic Design. Current Schedule NEPA 2024, AD 2026, NTP 2026, Complete 2028
Hanover Road Bridge over Deep Run	11-2105-13	2026	2027	In Schematic Design. NEPA approval received. Scheduled for Ad & NTP in2025, Completion 2026
Conway Road Bridge over Little Patuxent River	11-2106-13	2027	2028	In Schematic Design. NEPA anticipated approval in 2023, ad in 2025, NTP in 2026 and completion in FY 2027.
Jacobs Road Bridge over Severn Run	11-2107-13	2027	2027	In Schematic Design. NEPA received in 2022. Ad and NTP anticipated in 2025. Completion in 2026.
Parole Transportation Center	11-2101-66	2025	2026	In Schematic Design. Current Schedule NEPA 2023, Ad 2024, NTP 2024, Complete 2025.
Baltimore City				
Citywide Traffic Signals, Intelligent Transportation System and Safety Improvements	12-1218-07	Ongoing	Ongoing	Shifted $9 million from FY 2023 to FY 2024 for a Traffic Signal Reconstruction project. CCTV and Signal Rewiring Citywide and Fiber Optic and Copper Communications Citywide currently under design. Geometric Improvements at Multiple Intersections Project was advertised FY 2022. The first Traffic Signal Reconstruction project will advertise FY 2023. Traffic Signal Timing Optimization will receive NTP FY 2023.
Northern Parkway at Falls Road Traffic Safety and Bike Facility Improvements	12-2301-39	2027	2027	Planning Complete. Project anticipated for engineering in FY 2023.
Russell Street Pavement Rehabilitation from Russell Street Viaduct to City Line	12-2302-11	2027	2027	Project is currently at 95% design stage. Anticipated Construction start Winter 2025. YOP is 2027. NEPA has been approved.
Frederick Avenue ADA Upgrades (Brunswick to S. Pulaski)	12-2303-25	2028	2028	Design has not Started. Funding Type changed to "NHPP" from "STBG" because Frederick Avenue is on the NHS.

Table II-3: Status of Projects from the 2023-2026 TIP

Project	TIP ID	Year of Operation 23-26 TIP	Year of Operation 24-27 TIP	Project Status
Communication Upgrades - Wireless	12-2304-07	2028	2028	Procurement will begin for work on FY 2024. Engineering anticipated to be completed in CY 2025.
Transportation Management Center Upgrade	12-1701-04	2027	2027	Signal construction at 28 locations, CCTV and rewiring, ITS deployment, and signal timing optimization work planned for FY 24-27.
Greenway Middle Branch Phase 2	12-2102-03	2025	2025	Engineering was not completed in 2022 per previous updates. Baltimore City is working through two tier evaluation before submitting for Request For Proposals. Will be completed with federally approved on-call consultant with an expecting 6-month delay.
Perring Parkway Ramp over Herring Run	12-1215-13	2025	2025	95% design stage, advertisement for construction in Fall 2023.
Sisson Street Bridge over CSX Railroad	12-1216-13	2024	2026	Design complete. Anticipate advertisement for construction in Winter 2024. Working on final construction/funding agreement with CSX before submitting to SHA.
Belair Road Complete Streets	12-1404-11	2026	2027	Phase I is complete. Phase II is at 65% Design Stage, Anticipated Construction start Phase II, Spring 2025, FY 2024 Engineering funds are for Preliminary Design for Phase III work.
Orleans Street Bridge over I-83 and City Streets	12-1601-13	2028	2028	Design has not started. Need the Federal Aid design contracts in order to have consultant selection process.
Remington Avenue Bridge over Stony Run	12-1602-13	2024	2024	Due to a design change the project the advertisement was pushed to Fall/Winter of 2023.
Radecke Avenue and Sinclair Lane over Moores Run	12-1603-13	2026	2026	Design is expected to start in 2023. Need the Federal Aid design contracts in order to have consultant selection process.
I-83 Concrete Deck Mill and Resurface	12-1604-13	2026	2026	Engineering funds were authorized in FY 2020 but design has not yet begun. Construction advertisement anticipated in FY 2024.
Moravia Road Ramp Bridge over Pulaski Highway	12-1605-13	2029	2029	Design is expected to start in 2023. Need the Federal Aid design contracts in order to have consultant selection process.
Monroe Street Ramp over CSX and Russell Street over CSX	12-1801-13	2031	2031	Design is nearly complete with the final submittal to SHA scheduled for the Summer of 2023. The project will be advertised upon proper funding. NEPA was approved, but will have to be re-evaluated prior to advertisement.
25th Street Rehabilitation from Greenmount Avenue to Kirk Avenue	12-2001-11	2027	2027	The project is currently at 95% Design Stage. Anticipated Construction start Winter 2024.

Table II-3: Status of Projects from the 2023-2026 TIP

		Year of Operation		
Project	**TIP ID**	**23-26 TIP**	**24-27 TIP**	**Project Status**
41st Street over I-83, MTA Light Rail Tracks, and Jones Falls	12-2002-13	2030	2030	Design has not started. Need the Federal Aid design contracts in order to have consultant selection process.
Citywide Asset Management	12-2003-19	Ongoing	Ongoing	A citywide ADA ramp analysis and an ADA self-compliance report were completed in FY 2021. BCDOT is finalizing its citywide GIS asset inventory. Programmed funds will be used for a pavement management system including the collection of pavement condition data and the creation of an optimized six-year maintenance and Capital Improvement Plan. BCDOT will utilize federal aid funding for eligible roads and local funding for the remaining roads of the network.
Brehms Lane over Herring Run	12-2005-13	2028	2028	Design is expected to start in 2023. Need the Federal Aid design contracts in order to have consultant selection process.
Fremont Avenue Rehabilitation from Lafayette Avenue to Presstman Street	12-2007-11	2025	2027	The project is currently at 65% Design Stage. Anticipated Construction start Spring 2025.
Hanover Street over CSX	12-2008-13	2027	XX	DOT has had an on-call contractor perform some needed rehabilitation to the bridge in an effort to extend its useful life. As such the project to replace this structure has been pushed off a few years.
Howard Street over I-83, CSX, Amtrak, and Jones Falls	12-2009-13	2030	2030	Design has not started. Need the Federal Aid design contracts in order to have consultant selection process.
Madison Street Rehabilitation from North Milton Avenue to Edison Highway	12-2010-11	2025	2027	The project is currently at 65% Design Stage. Anticipated Construction start Spring 2025.
Park Heights Avenue from West Rogers Avenue to Strathmore Avenue	12-2011-11	2027	2027	The project is currently at 30% Design Stage. Anticipated Construction start Fall 2025.
West Patapsco Avenue from Magnolia Avenue to Potee Street	12-2012-11	2026	2028	The project is currently at 30% design stage. Anticipated design completion in fall of 2024. Anticipated Construction Start Fall 2025. Limits changed to Magnolia Avenue to Potee Street.
Pennington Avenue Rehabilitation from Birch Street to East Ordnance Road	12-2013-11	2026	2027	Project currently at 95% Design Stage. Anticipated Construction start Fall 2024. Cost expected to be $0.85M lower as a result of updated construction costs.
Waterview Avenue over Ramp to 295	12-2015-13	2027	2027	Design is expected to start in 2023. Need the Federal Aid design contracts in order to have consultant selection process.

Table II-3: Status of Projects from the 2023-2026 TIP

Project	TIP ID	Year of Operation 23-26 TIP	Year of Operation 24-27 TIP	Project Status
RAISE Transit Priority Project	12-2201-64	2025	2025	Funding agreement between BCDOT and MDOT MTA was signed and engineering began in FY 2022. The project is currently between the 30-60% design stage. Baltimore City is developing specific site elements.
Harford Road Bridge over CSX	12-2106-13	2024	XX	CSX will be providing all of the funding for this project. Design will be finished and advertised by CSX in 2023.
Capital Project Delivery Services	12-1901-99	Ongoing	Ongoing	BCDOT continues its design efforts for the project management tool, Oracle's Unifier. Following implementation, Unifier will be used to enhance project management capacity in BCDOT's workforce.
Baltimore County				
Dogwood Road Bridge No. B-0072 Over Dogwood Run	13-0001-13	2024	2024	Project redesign efforts are underway. Advertisement is not expected until Spring 2024 given DNR land acquisition requirements and finalization of design. MOU has been developed to allow right of entry to allow advancement of NEPA process and design.
Mohrs Lane Bridge No. B-0143 over CSX Railroad	13-0803-13	2026	2026	Bridge design is approximately 95% complete. The County is working to acquire remaining requisite right of way for the project. CSX has preliminarily agreed to acquisitions needed.
Hammonds Ferry Road Bridge No. B-0100 over CSX Railroad	13-1012-13	2024	2024	Project is back in engineering production with an anticipated construction advertisement date of 4-2023. This advertisement date is contingent on clearing all utility and CSX coordination issues in a timely manner.
Lansdowne Boulevard Bridge No. B-0113 over CSX Railroad	13-1105-13	2028	XX	Engineering is planned to begin in FY2023 with construction beginning in FY2026.
Piney Grove Road Bridge No. B-0140 over CSX railroad	13-1107-13	2029	XX	Engineering is planned to begin in FY2023 with construction beginning in FY2027. First order of work will be to transfer bridge ownership from CSX to Baltimore County.
Peninsula Expressway Bridge No. B-0119 over CSX Railroad	13-1108-13	2026	2026	Typical section has been established and preliminary engineering for project is underway.
Golden Ring Road Bridge No. B-0110 over Stemmers Run	13-1208-13	2027	2027	Preliminary engineering is underway, consultant TS&L submission anticipated in Summer 2023.
Rossville Boulevard Bridge No. B-0132 over Amtrak & Orems Road	13-1701-13	2027	2027	Engineering is planned to begin in FY2023 with the NEPA/Section 106 review taking place during preliminary design. Construction is planned for FY2025. Due to size of structure, AMTRAK involvement and the need to

Table II-3: Status of Projects from the 2023-2026 TIP

Project	TIP ID	Year of Operation 23-26 TIP	Year of Operation 24-27 TIP	Project Status
				construct the new bridge in stages a three year construction duration is anticipated.
Bridge Inspection Program	13-8901-14	Ongoing	Ongoing	Ongoing program
Carroll County				
Shepherds Mill Road Bridge over Little Pipe Creek	14-1102-13	2022	XX	Under construction.
Stone Chapel Road Bridge over Little Pipe Creek	14-1103-13	2025	2025	Design is continuing. PI Submission due March 2023, TS&L Submission anticipated June 2023. Design is expected to be complete by the end of FY 2024 in order to construct in FY 2025.
Babylon Road Bridge over Silver Run	14-1601-13	2026	XX	Revised TS&L Submitted in December 2022. New consultant proposal needed before continuing design.
Gaither Road Bridge over South Branch Patapsco River	14-1602-13	2029	2029	Administrative preliminary paperwork to be completed at a later date due to reorganization of priorities, with engineering planned to begin in FY 2025. Anticipated year of operation extended to 2029.
McKinstrys Mill Road Bridge over Sam's Creek	14-1603-13	2025	2025	Design is continuing. PI Submission due March 2023, TS&L Submission anticipated June 2023.
Hughes Shop Road Bridge over Bear Branch	14-1802-13	2025	2025	Design is continuing. PI Submission due March 2023, TS&L Submission anticipated June 2023.
Old Kays Mill Culvert over Beaver Run	14-2101-13	2028	2028	Preliminary engineering moved out to FY 2027 due to a reorganization of project priorities. Construction remains at FY 2029.
Brown Road Culvert over Roaring Run	14-2102-13	2026	2026	Planning for preliminary engineering will begin in FY 2024.
McKinstrys Mill Road over Little Pipe Creek	14-2103-13	2027	2027	Preliminary engineering will begin in FY 2026.
Patapsco Road Bridge over East Branch Patapsco River	14-2201-13	2024	2024	Project was programmed with FHWA. Preliminary Engineering started. PI Submission due March 2023. TS&L Submission anticipated June 2023.
Upper Beckleysville Road Bridge over Murphy Run	14-2202-13	2024	2024	Project was programmed with FHWA. Preliminary Engineering started. PI Submission due March 2023. TS&L Submission anticipated June 2023.
Bridge Inspection Program	14-9401-14	Ongoing	Ongoing	Ongoing program.
Harford County				
Abingdon Road Bridge #169 over CSX Railroad	15-1001-13	2025	2026	Expected to be in operation in 2026. TSL/Foundation + NEPA Approved, currently working with consultant to

Table II-3: Status of Projects from the 2023-2026 TIP

Project	TIP ID	Year of Operation 23-26 TIP	Year of Operation 24-27 TIP	Project Status
				finalize scope for final design. Construction anticipated in FY 2025.
Glenville Road Bridge #30 over Mill Brook	15-1601-13	2026	2026	Project is in the preliminary stage with anticipated construction advertisement in spring/summer of 2026 and completion in fall/winter of 2026
Grier Nursery Road Bridge #43 over Deer Creek	15-2001-13	2026	2027	In the TIP and funded for construction in FY 2025 and FY 2026. Project nearing TS&L and NEPA Approval.
Hookers Mill Road Bridge #13 over Bynum Run	15-2002-13	2026	2028	In the TIP and funded for construction in FY 2027. Year of operation delayed due to obtaining approvals. Ad anticipated summer 2027.
Madonna Road Bridge #113 over Deer Creek	15-2101-13	2026	XX	Construction funding is delayed and moved to the out years
St. Clair Bridge Road Bridge #100 over Deer Creek	15-2102-13	2028	2030	Engineering scheduled in FY 2025 and FY 2026. Preliminary design/NEPA to begin in 2025.
Stafford Road Bridge #162 over Buck Branch	15-2103-13	2027	2030	In the TIP with engineering funds in FY 24 and right of way funds in FY 25
Trappe Church Road Bridge #161 over Hollands Branch	15-2104-13	2027	2028	In the TIP and funded for construction in FY 2027. Right of way funds in FY 2024
Moores Road Bridge #78 over a tributary of Gunpowder Falls	15-2201-13	2027	2030	In the TIP with engineering funds in FY 2024 and FY 2025. Construction scheduled for FY 2029
Hess Road Bridge #81 over Yellow Branch	15-2202-13	2029	2029	Design to begin in FY 2026
Bridge Inspection Program	15-9411-14	Ongoing	Ongoing	Ongoing
Howard County				
Snowden River Parkway: Broken Land Parkway to Oakland Mills Road	16-1410-41	2025	2030	All break out projects are complete. Ho. Co. wants to construct the remainder as a single project..
US 29/Broken Land Parkway Interchange and North South Connector Road	16-1901-42	2024	2024	This is a developer project. Design continues and is beyond 60% and is expected to be complete in 2024.
Bridge Repairs and Deck Replacement	16-0436-13	Ongoing	Ongoing	River Road over Rockburn Branch is complete. All other projects are in various stages of design.
Replacement of Bridge No. HO-040 on Union Chapel Road over Cattail Creek	16-2201-13	2025	2026	Design is currently at 15% completion. Advertisement anticipated in fall 2025 with spring 2026 construction start.
Maryland Port Administration				
Dundalk Marine Terminal Resiliency and Flood Mitigation Improvements	30-2101-82	2026	2026	The NEPA process is ongoing. Construction is anticipated to begin in FY 2023 and be complete in 2026.
Port of Baltimore Rail Capacity Modernization Project	30-2301-83	2026	2026	The CRISI grant was announced in June 2022 and the project is currently in the engineering and environmental approval phase.

Table II-3: Status of Projects from the 2023-2026 TIP

Project	TIP ID	Year of Operation 23-26 TIP	Year of Operation 24-27 TIP	Project Status
Howard Street Tunnel	32-2101-83	2025	2025	This project is currently under construction with a target completion date of December 2025. General Funds unspent in FY2023 will be encumbered and utilized in FY2024 to meet Maryland's funding commitment to the project.
Masonville Cove Connector: Shared Use Path Design and Construction	32-2301-03	2025	2025	Design, R/W and Construction funded through a combination of FLAP and FLTP grants.
Maryland Transportation Authority				
I-95 Fort McHenry Tunnel: Port Covington Access	22-1901-45	2029	2029	Planning is underway. Construction schedule to be determined. Planning funding shown is for MDTA's oversight of the planning phase which is being funded by a private developer. Construction funding shown is MDTA's match for future INFRA Grant.
I-895/Baltimore Harbor Tunnel Toll Plaza and Interchange Improvements	22-2201-19	2027	2028	Engineering should be completed in the FY 2023 to FY 2024 timeframe. Construction is anticipated to begin in the FY 2025 timeframe, with project completion in 2027.
I-95 Express Toll Lane Northbound Extension	25-1801-41	2027	2027	Construction is ongoing and will be completed through more than two dozen individual construction contracts. To date, several construction contracts have been completed, several are underway, and more construction contracts are scheduled to begin this year. The entire Program is anticipated to be completed by the end of 2027.
I-95 Southbound Part-Time Shoulder Use	25-2101-41	2026	2027	Construction is ongoing and will be completed through more than two dozen individual construction contracts. To date, several construction contracts have been completed, several are underway, and more construction contracts are scheduled to begin this year. The entire Program is anticipated to be completed by the end of 2027.
MTA - Transit				
Urban Transit Systems – Capital Assistance	40-1602-05	Ongoing	Ongoing	Projects are ongoing and on schedule
Bus and Paratransit Vehicle Overhaul and Replacement	40-1802-05	Ongoing	Ongoing	Project is ongoing. 25 Large Mobility Cutaway Vehicles delivered 12/30/2022. 64 of 67 2022 series Nova Buses accepted for revenue service, remaining 3 buses delivering by 4/30/2023. 2023 Nova Bus delivery beginning 9/15/2023.
Rural Transit Systems - Capital Assistance	40-9501-05	Ongoing	XX	No funding identified for this TIP cycle

Table II-3: Status of Projects from the 2023-2026 TIP

Project	TIP ID	Year of Operation 23-26 TIP	Year of Operation 24-27 TIP	Project Status
Small Urban Transit Systems – Capital Assistance	40-9502-05	Ongoing	Ongoing	Projects are ongoing and on schedule
Ridesharing - Baltimore Region	40-9901-01	Ongoing	Ongoing	Projects are ongoing and on schedule
Small Urban Transit Systems – Operating Assistance	40-0104-61	Ongoing	Ongoing	Projects are ongoing and on schedule
Kirk Bus Facility Replacement - Phase 1 & 2	40-1203-65	2021	XX	Project closeout activities are taking place and project completion/closeout will be in June 2023. This project no longer requires funding and will not be included in the 24-27 TIP
Bus and Rail Preventive Maintenance	40-1204-64	Ongoing	Ongoing	Preservation projects ongoing
Seniors and Individuals with Disabilities	40-1502-69	Ongoing	Ongoing	Projects are ongoing and on schedule
Urban Transit Systems – Operating Assistance	40-1603-61	Ongoing	Ongoing	Projects are ongoing and on schedule
Agencywide System Preservation and Improvement	40-1801-64	Ongoing	Ongoing	Various projects ongoing. Particularly large project will consist of the replacement and modernization of 40 elevators.
Bus System Preservation and Improvement	40-1803-64	Ongoing	Ongoing	Project is ongoing. Boiler and other miscellaneous facility preservation improvement projects in the future. No funding programmed until FY 2023.
Metro and Light Rail Rolling Stock Overhauls and Replacement	40-1804-63	Ongoing	Ongoing	Projects are ongoing. 39 of 53 Light Rail Vehicles accepted for revenue service. Projected delivery of final car is 5/17/2024. Metro Fleet & Train Control Replacement Program 6 of 78 railcars will go into revenue service 12/26/2024 with completion of project projected 12/20/2026.
Metro and Light Rail System Preservation and Improvement	40-1805-64	Ongoing	Ongoing	Various projects are ongoing
Rural Transit Systems - Operating Assistance	40-9204-61	Ongoing	Ongoing	Project is ongoing and on schedule
Eastern Bus Facility	40-2301-65	2026	2026	Project Design development is ongoing with completion in June, 2023. Construction will begin July, 2023, after Design development. Expected duration of Construction will continue till project completion in 2028.
Zero Emission Infrastructure and Rolling Stock	40-2302-63	2026	2026	Battery electric bus procurement continues to advance and is on track for June/July 2023, procurement of 350 battery electric buses at the rate of 70 buses per year starting in 2025.
MTA - Commuter Rail				

Table II-3: Status of Projects from the 2023-2026 TIP

Project	TIP ID	Year of Operation 23-26 TIP	Year of Operation 24-27 TIP	Project Status
MARC Rolling Stock Overhauls and Replacement	70-1501-53	Ongoing	Ongoing	Projects are ongoing. 32 out of 63 multi-level vehicles have completed overhaul and are operating in revenue service and 3 out of 6 GP39 diesel locomotive overhauls are complete.
MARC Improvements	70-1502-54	Ongoing	Ongoing	MARC system capacity improvement projects are ongoing. Funds are split 50/50 between the Baltimore and Washington region TIPs as commuter rail funds can be used anywhere MARC runs. Brunswick and Camden line construction completed 2021. All MARC trains operating with Positive Train Control.
MARC Facilities	70-1503-55	Ongoing	Ongoing	Various projects ongoing. MARC Martin State Airport Improvements Construction completion scheduled 10/27/2024. Riverside Heavy Maintenance Facility commissioning near completion and Foreman's office awaiting final material delivery, scheduled to be operational 6/1/2023. MARC Odenton, Elkton, and Bayview stations are in Design. BWI Garage Facility End Work Order notice to proceed issued 11/9/22 with completion in 2023.
MDOT – Office of the Secretary				
State Safety Oversight	90-1401-39	Ongoing	Ongoing	Ongoing project
Baltimore-Washington Superconducting Maglev (SCMAGLEV) Project	90-1901-99	NA	XX	On August 25, 2021, FRA advised that the Maglev NEPA process was paused to review project elements and determine next steps. FRA will share the revised project schedule when it is determined.
State Highway Administration				
Areawide Transportation Alternatives Projects	60-9903-29	Ongoing	Ongoing	Ongoing
Areawide Environmental Projects	60-9506-38	Ongoing	Ongoing	Ongoing
Areawide Congestion Management	60-9504-04	Ongoing	Ongoing	Ongoing
Areawide Bridge Replacement And Rehabilitation	60-9310-13	Ongoing	Ongoing	Ongoing
Areawide Resurfacing And Rehabilitation	60-9501-11	Ongoing	Ongoing	Ongoing
Areawide Safety And Spot Improvements	60-9508-19	Ongoing	Ongoing	Ongoing
Areawide Urban Reconstruction	60-9511-19	Ongoing	Ongoing	Ongoing
Morgan State University Transportation Research Program	60-0702-99	Ongoing	Ongoing	Ongoing

Table II-3: Status of Projects from the 2023-2026 TIP

Project	TIP ID	Year of Operation 23-26 TIP	Year of Operation 24-27 TIP	Project Status
TSMO System 1	60-2301-41	2029	2029	Engineering ongoing. Ad anticipated Winter 2025/2026. US 40 Smart signal work will be the first project to be completed.
MD 175: Sellner Road/Race Road to McCarron Court	61-1701-41	2025	2025	Construction ongoing with anticipated completion in Summer 2025.
MD 2: US 50 to Arnold Road	61-2301-41	2026	2026	Engineering ongoing
MD 3: Waugh Chapel Road/Riedel Road to MD 32/I-97	61-2302-41	2026	2026	Engineering ongoing. 30% design completion expected in fall of 2023 with project advertising for construction in fall 2025.
MD 170: Norcross Lane to Wieker Road	61-2303-41	2025	2026	Engineering and right-of-way acquisition ongoing; utility work underway
MD 214: MD 468 to Camp Letts Road	61-2304-41	2026	2026	Engineering ongoing; right-of-way acquisition underway
I-97: US 50 to MD 32 TSMO	61-2305-41	2027	2027	Engineering ongoing. Construction anticipated in FY 2026
MD 173: Bridge Replacement over Rock Creek	61-2101-13	TBD	TBD	Engineering ongoing and working towards 60% Foundation Review milestone. Delays in construction funding due to extensive utility relocation.
I-795: Dolfield Boulevard Interchange	63-0803-46	2031	2031	Engineering ongoing and is approximately 10% complete. R/W acquisition scheduled to begin in fall 2024.
I-695: US 40 to MD 144	63-1601-41	2021	2021	Roadway improvements complete; noise barrier construction ongoing with anticipated completion in fall 2024.
I-695: I-70 to MD 43	63-1802-41	2024	2024	Construction ongoing with completion expected in fall 2024.
I-83: Bridge Replacement over Padonia Road	63-1701-13	2022	XX	Construction is complete
US 1: Bridge Replacement over CSX	63-1704-13	2022	XX	Construction is complete
US 40: Bridge Replacements over Little & Big Gunpowder Falls	63-1706-13	2023	XX	Construction is complete
MD 151/MD 151B: Bridge Replacements	63-2001-13	2024	2024	Construction ongoing with anticipated completion in 2024. Utility work will continue into FY 2025
I-695: Bridge Replacement on Putty Hill Avenue	63-2002-13	2025	2024	Utility relocation ongoing; bridge construction delayed due to complicated utility relocations
I-695: Reconstruction of Interchange at I-70	63-2201-12	2027	2027	This is a Design Build project with anticipated Request for Qualifications anticipated for summer 2023.
I-95/I-695 Interchange Bridge Deck Replacement	63-2202-13	2024	2025	Construction ongoing with completion anticipated in fall 2024.
MD 32: 2nd Street to Main Street	64-2301-12	2026	2026	Engineering ongoing and is approximately 5% complete. Project tentatively scheduled to advertise in fall 2024.

Table II-3: Status of Projects from the 2023-2026 TIP

		Year of Operation		
Project	**TIP ID**	**23-26 TIP**	**24-27 TIP**	**Project Status**
MD 97: MD 140 to MD 496 Corridor Study	64-2302-41	TBD	TBD	Planning ongoing with anticipated completion in fall 2024.
MD 91: Bridge Replacements over North Branch of Patapsco River and MD Midland Railroad	64-2201-13	2024	2024	Construction underway with anticipated completion in fall 2024.
MD 22: MD 462 to Mount Royal Avenue Noise Abatement	65-2301-31	2026	2026	Engineering ongoing. 30% plans expected to be complete in 2023.
MD 24: South of Stirrup Run Culvert to Deer Creek Bridge, Section G	65-1601-12	TBD	2026	Construction underway with anticipated completion in winter 2026
US 1: Bridge Replacements at Tollgate Road and Winters Run	65-2101-13	2026	2026	Engineering ongoing and is approximately 5% complete.
MD 32: Linden Church Road to I-70, Capacity & Safety Improvements	66-1703-41	2022	2025	Roadway open to traffic; remaining funding needed for Type 1 noise abatement
US 29: Johns Hopkins Road to MD 32 Bicycle-Pedestrian Route	66-2301-25	TBD	XX	Funding for this project is now included in TIP project 66-1406-41
MD 18B: Castle Marina Road to the Kent Narrows Corridor Study	67-2301-41	TBD	TBD	Planning ongoing with anticipated completion in fall 2024.

Table II-4: New Projects in the 2024-2027 TIP

Agency	Project	TIP ID	Project Category	Year of Operation
Anne Arundel	Culvert Invert Paving	11-2401-13	Highway Preservation	2025
Anne Arundel	Town Center Boulevard Bridge over Tributary of Severn Run	11-2402-13	Highway Preservation	2030
Anne Arundel	Patuxent Road Bridge over Little Patuxent River	11-2403-13	Highway Preservation	2030
Baltimore City	W. North Avenue Pedestrian Safety Improvements from Mt. Royal Avenue to Hilton Street	12-2401-03	Highway Preservation	2030
Baltimore City	Pennsylvania Avenue Rehabilitation from North Avenue to MLK Boulevard	12-2402-11	Highway Preservation	2030
Baltimore City	25th Street/Huntingdon Avenue Rehabilitation from Greenmount Avenue to 29th Street	12-2403-11	Highway Preservation	2030
Baltimore City	Johnston Square Improvements	12-2404-11	Highway Preservation	2030
Baltimore City	Orleans Street Rehabilitation from Washington Street to Ellwood Avenue	12-2405-11	Highway Preservation	2030
Harford County	Cullum Road Bridge #12	15-2401-13	Highway Preservation	2031
Harford County	Chestnut Hill Road Bridge #41	15-2402-13	Highway Preservation	2031
Harford County	Woodley Road Extension to MD 715	15-2403-14	Highway Capacity	2026
Harford County	Bridge Painting	15-2404-14	Highway Preservation	Ongoing
*Howard County	Marriottsville Road and I-70 Bridge Improvements	16-2101-41	Highway Capacity	2025
Howard County	Patapsco Regional Greenway: Elkridge to Guinness Open Gate Brewery	16-2301-03	Emission Reduction Strategy	2026
*MDOT SHA	US 29: Middle Patuxent River to Seneca Drive – Phase 2	66-1406-41	Roadway Widening	2030

*Projects appeared in previous TIPs but were not included in the 2023-2026 TIP due to lack of funding and are now requesting funds in the 2024-2027 TIP.

F. Conformity with Air Quality Planning

The Clean Air Act Amendments require careful evaluation of the conformity between transportation plans and programs against the applicable State Implementation Plan (SIP) for attaining air quality standards. The procedures for performing this evaluation have been documented and issued by the U.S. Environmental Protection Agency (EPA) in the final rule, "Criteria and Procedures for Determining Conformity to State or Federal Implementation Plans of Transportation Plans, Programs and Projects Funded or Approved under Title 23 USC or the Federal Transit Act", hereafter termed Final Rule.

The Baltimore region is designated as a moderate nonattainment area with regard to the 8-hour ozone National Ambient Air Quality Standard (NAAQS). The BRTB has conducted a comprehensive analysis of conformity for the 2024-2027 TIP with air quality goals as a pre-condition of its acceptance by federal funding agencies. The results of this work, as summarized below and in an accompanying report entitled *Conformity Determination of the 2024-2027 Transportation Improvement Program and Resilience 2050*, concluded that the region's transportation plan and program are in conformity with air quality goals.

The conformity determination referred to above is founded upon technical analyses of the impact on areawide emissions of air pollutants associated with building, or not building, projects contained in the TIP. These air quality analyses will be based upon Round 10 cooperative socio-economic forecasts, which was approved by the BRTB by Resolution #23-1 on July 15, 2022. All projects that serve as emission reduction strategies (ERS) in the TIP are identified as such by the ERS heading on the top right corner of the page. ERS-related projects are documented in the conformity determination report.

Many of the projects contained in the TIP involve non-capacity improvements such as bridge replacement, bridge rehabilitation, streetscaping, road reconstruction, road resurfacing, road rehabilitation, traffic engineering, safety projects, and bicycle and pedestrian facilities. These improvements do not alter the functional traffic capacity of the facilities being improved and are “exempt” from the requirement to determine conformity according to the Final Rule. Therefore they were not included in the travel demand model-based technical analysis.

Projects in the TIP that are not identified as exempt in the Final Rule are identified in the conformity document as “non-exempt.” They are not exempt from the requirement to determine conformity. These projects in the TIP typically involve capacity changes such as building a new roadway or adding lanes to an existing roadway. Non-exempt projects which are regionally significant were included in the travel demand model. Non-exempt, non-regionally significant projects were evaluated to determine whether they were suitable to be included in the travel demand model. Non-exempt, non-regionally significant projects which were not able to be evaluated in the travel demand model were reviewed through a manual quantitative analysis.

Upon completion of the travel demand forecasting task, the results were analyzed by the Maryland Department of Environment (MDE) to estimate the emission effects of the highway based transportation system. The results are portrayed in tons per day of NO_x and VOC for future horizon years.

Conformity determinations by the BRTB were made with input from the local jurisdictions and modal administrations. All projects were assessed by the Interagency Consultation Group (ICG) to determine conformity status for testing. Through coordination with the submitting agencies, the BRTB made a determination of conformity by testing projects in the model or performing quantitative analyses.

G. Performance Based Planning and Programming

The U.S. DOT published updated Metropolitan Planning Regulations on May 27, 2016 following the enactment of the FAST Act. These updated regulations continue and strengthen the emphasis on performance-based planning and programming. The intent of performance-based planning and programming is to aid MPOs in gauging progress relative to regionally established goals, strategies, performance measures, and performance targets.

- **Goals** are broad aspirations or guiding principles for the region (e.g. “Improve system safety”)
- **Strategies** are specific approaches or policies aiding the implementation of goals (e.g. “Eliminate hazardous or substandard conditions in high-crash locations and corridors”)
- **Performance Measures** are specific metrics the region can use to assess progress towards achieving a goal (e.g. “Decrease number of highway fatalities”)
- **Performance Targets** are specific levels to be reached within a certain time frame (e.g. “Decrease the number of highway fatalities to 121 by 2030”)

Federal rulemaking requires MPOs to adopt a series of 25 performance measures and targets and to link investment priorities in the TIP and LRTP to the achievement of these performance measures and targets. The BRTB coordinated target selection with the State and public transportation providers in the region to ensure consistency. All 25 of the federally mandated performance targets have been adopted by the BRTB.

Performance measures and targets cover several broad categories including transit asset management, transit safety, highway safety, traffic congestion, on-road mobile source emissions, pavement and bridge condition, and travel time reliability.

The following paragraphs summarize each of these performance measures and targets as well as the anticipated impact of investments in the TIP towards their achievement. The BRTB will continue to work to improve the methods utilized to analyze the linkage between TIP investments and regional progress towards performance measures and targets.

Transit Asset Management: Performance Measures and Targets

The Federal Transit Administration (FTA) defines two categories of public transit providers. Tier 1 providers include providers with 101 or more vehicles in revenue service during peak regular service or operators of rail fixed-guideway public transportation systems. Tier II providers include providers that do not operate rail fixed-guideway public transportation systems and have 100 or fewer vehicles in service during peak regular service.

MDOT MTA is a Tier 1 agency and Maryland's direct recipient of federal funds, while all Locally Operated Transit Systems (LOTS) in the Baltimore region are Tier II agencies. As sub-recipients of federal funds, MDOT MTA oversees the LOTS annual asset management requirements.

Tier I providers must develop and carry out an annual Transit Asset Management (TAM) plan, while Tier II providers may participate in a group TAM plan. The plan includes an asset management performance review and sets new targets to monitor and manage public transportation assets to improve safety and increase reliability and performance.

As the regional MPO, BRTB must adopt new baselines and targets on a four-year cycle when updating the Long Range Transportation Plan, the new cycle occurs in 2023. While the group Tier II TAM plan in Maryland is statewide, BRTB elects to adopt regional targets rather than statewide. Asset management FY 2022 baselines and FY 2023 targets adopted by BRTB are as follows.

1) Percentage of revenue vehicles within an asset class that have either met or exceeded their Useful Life Benchmarks (ULBs). Tables II-5 and II-6 summarize these targets.

Table II-5. MDOT MTA Revenue Vehicle Performance & Targets

% of vehicles at or past their ULB		
Equipment Asset Class	2022 Performance	2023 Targets
AB - Articulated Bus	0%	18.5%
AO – Automobile	100%	100%
BU – Bus	22.2%	22.2%
CU – Cutaway	11.5%	3.1%
FB – Ferryboat	45.9%	39.2%
MV – Minivan	100%	100%
SUV - Sports Utility Vehicle	0%	0%
TB - Trolleybus	0%	0%
VN – Van	0%	0%

Table II-6. Baltimore Region Tier II Revenue Vehicle Performance & Targets

% of vehicles at or past their ULB		
Equipment Asset Class	2022 Performance	2023 Targets
AB - Articulated Bus	0.0%	0.0%
AO – Automobile	57.1%	57.1%
BU – Bus	12.3%	23.0%
CU – Cutaway	36.5%	40.8%
FB – Ferryboat	75.0%	100%
MV – Minivan	28.6%	25.0%
SUV - Sports Utility Vehicle	0.0%	0%
TB - Trolleybus	0.0%	100.0%
VN – Van	11.1%	11.1%

2) Percentage of non-revenue vehicles that have either met or exceeded their ULBs. Tables II-7 and II-8 summarize these targets.

Table II-7. Tier I MDOT MTA Non-Revenue Vehicle Performance & Targets

% of vehicles at or past their ULB		
Equipment Asset Class	2022 Performance	2023 Targets
Automobiles	26.9%	24%
Trucks and other Rubber Tire Vehicles	14.6%	16.1%
Steel Wheel Vehicles	75%	75%

Table II-8. Baltimore Region Tier II Non-Revenue Vehicle Performance & Targets

% of vehicles at or past their ULB		
Equipment Asset Class	2022 Performance	2023 Targets
Automobiles	23.1%	23.1%
Trucks and other Rubber Tire Vehicles	23.1%	30.8%

3) Infrastructure (rail fixed-guideway, track, signals, systems): percentage of track segments with performance restrictions. Table II-9 summarizes these targets; note that infrastructure does not apply to the Tier II LOTS.

Table II-9. Tier I MDOT MTA Infrastructure Performance & Targets

% of vehicles at or past their ULB		
Equipment Asset Class	2022 Performance	2023 Targets
CR - Commuter Rail	0.0%	0.0%
HR - Heavy Rail	1.4%	3.5%
LR - Light Rail	8.3%	6.5%

4) Facilities: Percentage within an asset class rated below condition 3 on a scale of 1-5 on the FTA Transit Economic Requirements Model (TERM) scale. Tables II-10 and II-11 summarize the facilities targets.

Table II-10. Tier I MDOT MTA Facilities Performance & Targets

% of facilities at or past their ULB		
Equipment Asset Class	2022 Performance	2023 Targets
Passenger / Parking Facilities	1.7%	1.7%
Administrative / Maintenance Facilities	5.3%	5.3%

Table II-11. Baltimore Region Tier II Facilities Performance & Targets

% of facilities at or past their ULB		
Equipment Asset Class	2022 Performance	2023 Targets
Passenger / Parking Facilities	0%	0.0%
Administrative / Maintenance Facilities	0%	0.0%

The 2024-2027 TIP includes thirteen projects related to the purchase, maintenance and rehabilitation of transit assets. MDOT MTA is the project sponsor for all TAM related projects except for the Anne Arundel County sponsored Parole Transportation Center. Table II-12 summarizes these projects. The 2023-2026 TIP includes a total of over $972 million in TAM related investments. Federal sources such as CMAQ and FTA sections 5307, 5337, and 5339 account for $766.2 million of this total. Matching funds account for the remaining $205.9 million. This investment represents 22.9% of the $4.24 billion programmed in the 2024-2027 TIP.

Table II-12. 2024-2027 TIP Projects Related to Transit Asset Management

Project	TAM Target	Federal	Matching	Total TIP Funds
MARC Rolling Stock Overhauls and Replacement	Vehicles	$42,302	$10,574	$52,876
Bus and Paratransit Vehicle Overhaul and Replacement	Vehicles	$78,026	$19,505	$97,531
Metro and Light Rail Rolling Stock Overhauls and Replacement	Vehicles	$118,460	$34,396	$152,856
Bus and Rail Preventive Maintenance	Vehicles and Infrastructure	$156,412	$39,100	$195,512
MARC Improvements	Infrastructure	$44,623	$11,158	$55,781
MARC Facilities	Facilities	$15,183	$3,796	$18,979
Agencywide System Preservation and Improvement	Facilities and Infrastructure	$27,129	$6,781	$33,910
Metro and Light Rail System Preservation and Improvement	Facilities and Infrastructure	$71,095	$17,773	$88,868
Parole Transportation Center (Anne Arundel County)	Tier II Facilities	$3,000	$10,139	$13,139
Small Urban Transit Systems - Capital Assistance	Tier II Facilities and Vehicles	$1,120	$480	$1,600
Urban Transit Systems - Capital Assistance	Tier II Facilities and Vehicles	$2,132	$532	$2,664
Eastern Bus Facility	Tier II Facilities and Vehicles	$69,016	$17,254	$86,270
Zero Emission Infrastructure and Rolling Stock	Tier II Facilities and Vehicles	$137,703	$34,426	$172,129
Funding Total (in $1,000s)		**$766,201**	**$205,914**	**$972,115**

Transit Safety: Performance Measures and Targets

FTA requires every transit operator that is a direct recipient or sub-recipient of FTA grant funds to implement a Public Transportation Agency Safety Plan (PTASP). Issued in 2019, FTA' s final rule to establish and implement Safety Management Systems includes four performance measures for state departments of transportation, metropolitan planning organizations, and locally operated transit systems to use under the PTASP and National Public Transportation Safety Plan, including: 1) fatalities, 2) injuries, 3) safety events, and 4) system reliability.

The thresholds for reportable fatalities, injuries, and safety events are defined in the National Transit Database (NTD) Safety and Security Reporting Manual. Reportable major mechanical failures are defined in the NTD Glossary as "a failure of some mechanical element of the revenue vehicle that prevents the vehicle from completing a scheduled revenue trip or from starting the next scheduled revenue trip because actual movement is limited or because of safety concerns."

Each operator is required to review their plans annually, and update as needed. An agency is required to submit updates to their MPO; the MPO then has 180 days to adopt the new targets. All statewide LOTS updated their plans and communicated those measures to BRTB in January 2023. MDOT MTA updated its plan and communicated those measures to BRTB in February 2023. Tables II-13 and II-14 summarize the FY 2023 updated targets.

Table II-13. Transit Safety Performance Measures & Targets – MDOT MTA

Mode of Transit Service	Number of Fatalities	Rate of Fatalities per 1M VRM	Number of Injuries	Rate of Injury per 1M VRM	Number of Safety Events	Rate of Safety Events per 1M VRM	Miles between Major Mechanical Failures
Local Bus	2	0.1	141	7.1	57	2.9	6,000
Light Rail	1	0.3	16	5.5	19	6.6	900
Metro Subway	1	0.2	42	9.3	8	1.9	6,000
Mobility	0	0.0	77	4.3	33	1.9	15,000
Commuter Bus	0	0.0	0	0.0	0	0.0	25,000

Table II-14. Transit Safety Performance Measures & Targets – Baltimore Region LOTS

Operator	Number of Fatalities	Rate of Fatalities per 100K VRM	Number of Injuries	Rate of Injury per 100K VRM	Number of Safety Events	Rate of Safety Events per 100K VRM	Miles between Major Mechanical Failures
Annapolis Transit							
Fixed Route	0	0	0	0	3	0.17	Not Available
Demand Response	0	0	0	0	0	0	Not Available
Anne Arundel OOT							
Fixed Route	0	0	1	0	2	0	25,000
Demand Response	0	0	1	0	1	0	75,000
Baltimore County							
Fixed Route	0	0	0	0	0	0	1st year of service
Demand Response	0	0	0	0	0	0	39,614
Carroll Transit							
Fixed Route	0	0	1	0.10	3	1.34	>170,000
Demand Response	0	0	1	0.20	5	1.30	>330,000
Charm City Circulator							
Fixed Route	0	0	<3	<0.5	<1	<0.22	>5,000
Harford Link							
Fixed Route	0	0	<5	<0.55	<15	<1.67	>43,142
Demand Response	0	0	<3	<0.85	<10	<3.33	>26,404
Queen Anne's County							
Fixed Route	0	0	0	0	0	0	0
Demand Response	0	0	0	0	0	0	0
RTA							
Fixed Route	0	0	20	1.5	1.5	1.5	6,000
Demand Response	0	0	3	0.25	0.40	0.40	6,000

The 2024-2027 TIP includes nine projects related to the transit safety performance measures and targets. MDOT MTA is the project sponsor for all of these projects aside from the RAISE Transit Priority Project (Baltimore City) and State Safety Oversight (MDOT Office of the Secretary). Table II-15 summarizes these projects. The 2024-2027 TIP includes a total of $576.6 million in transit safety related investments. Federal sources account for $452.8 million of this total. Matching funds account for the remaining $123.8 million. This

investment represents 13.6% of the $4.24 billion programmed in the 2024-2027 TIP.

Table II-15. 2024-2027 TIP Projects Related to Transit Safety

Project	Federal	Matching	Total TIP Funds
RAISE Transit Priority Project	$6,000	$7,620	$13,620
MARC Improvements	$44,623	$11,158	$55,781
MARC Rolling Stock Overhauls and Replacement	$42,302	$10,574	$52,876
Bus and Paratransit Vehicle Overhaul and Replacement	$78,026	$19,505	$97,531
Bus and Rail Preventive Maintenance	$156,412	$39,100	$195,512
Metro and Light Rail Rolling Stock Overhauls and Replacement	$118,460	$34,396	$152,856
Small Urban Transit Systems - Capital Assistance	$2,132	$532	$2,664
Urban Transit Systems - Capital Assistance	$3,196	$132	$3,328
State Safety Oversight (MDOT TSO)	$1,600	$800	$2,400
Funding Total (in $1,000s)	$452,751	$123,817	$576,568

Highway Safety: Performance Measures and Targets

The FHWA's final rule established five performance measures for state DOTs and MPOs to use to carry out the Highway Safety Improvement Program (HSIP). MDOT and the BRTB coordinated on a methodology using crash data to develop regional targets. The source for all fatality data is the most recently available NHTSA Fatality Analysis Reporting System (FARS) data. Serious injury data were obtained through the state's crash data system. Compliant with the final rule, the methodology uses 5-year rolling averages for each of the measures.

Table II-16 summarizes the five required highway safety performance measures and targets. The table reflects targets adopted by the BRTB in January 2022. The rightmost column in Table II-16 shows 2040 VZ/ZD goals. This refers to the state's and the region's continued commitment to the concept of "Vision Zero/Zero Deaths." While MDOT and the BRTB have adopted short-term yearly highway safety targets in accordance with regulatory guidance and advice from the FHWA, both organizations nonetheless maintain their long-term commitment to achieving zero deaths on the state's and the region's highways. Consistent with the state's Highway Safety Improvement Plan, the 2030 TZD targets are half the 2008 baseline targets.

Table II-16. Highway Safety Performance Measures & Targets

Measures related to funding under the Highway Safety Improvement Program (HSIP)					
Measure	2005-2009 Baseline	2020 Actual	2021 Actual	2019-2023 Target	2030 VZ/ZD Goal
Number of fatalities	244	248	227	212	202
Number of serious injuries	2,094	1,409	1,638	1,269	1,060
Fatality rate per 100 million VMT	0.94	1.06	0.87	0.79	0.73
Serious injury rate per 100 million VMT	8.06	6.04	6.30	4.66	3.75
Number of non-motorized (ped/bike) fatalities and serious injuries	290	331	365	338	281

Table II-17 summarizes the three MDOT State Highway Administration (MDOT SHA) projects programming HSIP funds. HSIP funds are programmed in three MDOT SHA areawide projects focusing on environmental improvements, resurfacing and rehabilitation, and safety and spot improvements. Areawide projects group together many smaller projects throughout the region that do not affect air quality, otherwise known as exempt projects. The complete project list is not available from MDOT SHA, but Appendix D lists known projects that MDOT SHA will pursue as a part of these areawide projects in FY 2024. The 2024-2027 TIP includes $98.7 million in federal HSIP funds along with $25.7 million in matching funds for a total of $124.4 million. This investment represents 2.9% of the $4.24 billion programmed in the 2024-2027 TIP.

Table II-17. 2024-2027 TIP Projects Programming HSIP Funds

Agency	**Project**	**HSIP Federal**	**HSIP Matching**	**Total TIP Funds**
MDOT SHA	Areawide Environmental Projects	$2,240	$560	$2,800
MDOT SHA	Areawide Resurfacing And Rehabilitation	$27,920	$6,480	$34,400
MDOT SHA	Areawide Safety And Spot Improvements	$68,520	$18,680	$87,200
Funding Total (in $1,000s)		**$98,680**	**$25,720**	**$124,400**

While the FHWA-required highway safety performance measures and targets are focused specifically on implementation of the HSIP, the 2024-2027 TIP includes many other projects identified by project sponsors as supporting the BRTB's highway safety goals. Examples include the provision of bicycle and pedestrian facilities along roadways as well as other cost effective safety countermeasures (e.g. rumble strips, signal phasing, etc.). These projects program a variety of funds including other federal sources, state funds, and local funds. Appendix B includes a complete table relating 2024-2027 TIP projects to LRTP goals and performance measures.

In addition to TIP investments, the BRTB has lead or participated in the development and completion of several major projects related to safety throughout the Baltimore region in recent years. Most notably among these are the development and implementation of local Strategic Highway Safety Plans (SHSP), the adoption of Complete Streets policies, and the staffing of pedestrian/bicycle coordinators in local Departments of Transportation or Public Works.

In addition, the BRTB is updating a Congestion Management Process, encouraging traffic incident management training for all first responders through the Traffic Incident Management for the Baltimore Region (TIMBR) committee, and promoting use of the MDOT SHA Transportation Systems Management and Operations (TSMO) Strategic Deployment Plan to ensure that safety is considered for all roadway projects. BMC is also supporting non-motorist safety projects including the Look Alive regional pedestrian and bicycle safety campaign and the promotion of Bike to Work Week which helps to raise awareness of the rules of the road for drivers, pedestrians, and cyclists, and also highlights the need for continued expansion of safe sidewalks, bike lanes and safe crossings.

Traffic Congestion and Emissions: Performance Measures and Targets

The Baltimore region is classified as a nonattainment area for the 8-hour ozone standard. As such, the region must work to ensure it maintains conformity with the state's air quality plan. The Congestion Mitigation and Air Quality Improvement (CMAQ) program provides funding for transportation programs and projects that reduce air pollution and mitigate congestion in the transportation system in nonattainment areas.

The FHWA's final rule established three performance measures for state DOTs and MPOs to use to report on traffic congestion to carry out the CMAQ program. This final rule requires state DOTs and MPOs to coordinate and report on a single unified set of performance targets for each of the measures for the urbanized area. These measures are:

1) Annual hours of peak-hour excessive delay (PHED): This measure presents the annual hours of PHED that occur within an urbanized area on the National Highway System (NHS). The threshold for excessive delay is either 20 miles per hour or 60% of the posted speed limit travel time, whichever is greater, and is measured in 15-minute intervals. Peak travel hours are defined as 6-10 a.m. local time on weekday mornings and either

3-7 p.m. or 4-8 p.m. local time on weekday afternoons. For PHED, the targets were developed by using the existing PHED, calculated through the RITIS tool, and then projecting future delay. The year 2020 was omitted from these calculations to account for the atypical transportation patterns due to the COVID-19 pandemic.

2) calculations to account for the atypical transportation patterns due to the COVID-19 travel, calculated utilizing ACS 5-year data, and forecasting trend lines for the second performance period. Performance data for 2020 was omitted to account for the atypical transportation patterns due to the COVID-19 pandemic.

3) On-road mobile source emission reductions: This measure tracks the total emission reductions attributed to projects funded through the CMAQ program. Total emissions reductions are calculated by summing 2- and 4-year totals of emissions reductions of an applicable criteria pollutant and precursor, in kilograms per day, for all projects funded with CMAQ funds. The applicable pollutants for 8-hour ozone are Volatile Organic Compounds (VOCs) and nitrogen oxides (NOx).

Table II-18 summarizes the current traffic congestion and emissions performance measures and targets for the first performance period. The BRTB adopted initial traffic congestion targets in May 2018 and the emissions target in June 2018, with an update approved in August 2022. BRTB is in coordination with MDOT to develop targets for the second performance period which are expected in 2024.

Table II-18. Traffic Congestion and Emissions Performance Targets

Measures related to funding under the Congestion Mitigation and Air Quality Improvement (CMAQ) Program			
Measure	Baseline (Year)	2-year Targets	4-Year Targets
Annual per capita hours of peak-hour excessive delay (PHED)	20.2 hours (2017)	<25.3 hours	<25.5 hours
Percentage of non-SOV travel	25.1% (2016)	16.8%	16.8%
Reduction of VOC (kg/day)	12.825 (2014-2017)	0.87	6.64
Reduction of NOx (kg/day)	139.478 (2014-2017)	13.63	43.27

Table II-19 summarizes the TIP projects programming CMAQ funds. The 2024-2027 TIP includes $191.8 million in federal CMAQ funds along with $47.3 million in matching funds for a total of $239.1 million. This investment represents 5.6% of the $4.24 billion programmed in the 2024-2027 TIP.

MDOT MTA accounts for nearly 91.6% of CMAQ funds programmed in the TIP, with MDOT SHA accounting for the

remainder. MDOT MTA sponsored projects include two projects focused on the overhaul and replacement of bus, metro, and light rail vehicles as well as funding for ridesharing in the Baltimore region. MDOT SHA sponsored projects include two areawide projects focused on congestion management and safety and spot improvements. As mentioned previously, Appendix D lists known projects that MDOT SHA will pursue as a part of these areawide projects in FY 2024.

Table II-19. 2024-2027 TIP Projects Programming CMAQ Funds

Agency	Project	CMAQ Federal	CMAQ Matching	Total TIP Funds
MDOT MTA	Bus and Paratransit Vehicle Overhaul and Replacement	$38,347	$9,586	$47,933
MDOT MTA	Metro and Light Rail Rolling Stock Overhauls and Replacement	$29,071	$7,267	$36,338
MDOT MTA	Ridesharing - Baltimore Region	$2,672	$0	$2,672
MDOT MTA	Zero Emission Infrastructure and Rolling Stock	$105,581	$26,395	$131,976
MDOT SHA	Areawide Congestion Management	$5,760	$1,440	$7,200
MDOT SHA	Areawide Safety And Spot Improvements	$10,320	$2,580	$12,900
Funding Total (in $1,000s)		**$191,751**	**$47,268**	**$239,019**

Pavement and Bridge Condition: Performance Measures and Targets

The FHWA's final rule established six performance measures for state DOTs and MPOs to use to assess the performance of the NHS under the National Highway Performance Program (NHPP). These include four measures of pavement condition and two measures of bridge condition.

Pavement condition is based on a calculation using measures of international roughness index (IRI), cracking, and rutting or faulting. Bridge condition is based on National Bridge Inventory (NBI) condition ratings for the bridge deck, superstructure, substructure, and culvert. Pavement sections and bridges are assigned a rating of good, fair, or poor based on the worst score among the rated elements. For example, if the bridge deck is rated poor while the other elements are rated fair, the bridge condition will be rated poor.

The pavement and bridge condition targets adopted by the BRTB are based on projecting current conditions out to the target years, considering planned and programmed maintenance. However, the targets do not necessarily represent what the BRTB would like to accomplish with respect to pavement and bridge conditions. The results of this target

setting may be considered as a factor in redirecting funds if deemed appropriate.

Table II-20 summarizes the six required performance measures and targets for pavement and bridge condition. The BRTB adopted these measures and targets in October 2018.

Table II-20. Pavement and Bridge Condition Performance Measures & Targets

Measure	2-Year Targets	4-Year Targets
% of NHS interstate pavement in good condition (2024,2026)	45.3%	42.5%
% of NHS interstate pavement in poor condition (2024,2026)	4.6%	4.1%
% of NHS non-interstate pavement in good condition (2024,2026)	22.5%	21.7%
% of NHS non-interstate pavement in poor condition (2024,2026)	13.7%	15.4%
% of NHS bridges in good condition (2024,2026)	18.3%	18.6%
% of NHS bridges in poor condition (2024,2026)	3.0%	5.0%

Tables 17a and 17b summarizes funds programmed in the 2024-2027 TIP for projects related to pavement condition. Projects are categorized as interstate or non-interstate NHS for consistency with the required performance measures and targets. Project scopes vary and include many elements that do not affect pavement condition. As a result, only a small portion of the funds listed may be utilized to improve pavement condition. The year of operation for each project is listed in parenthesis after the project name.

In addition to the projects listed in Tables II-21 and II-22, MDOT SHA's areawide projects for resurfacing and rehabilitation, safety and spot improvements, and urban reconstruction include funds applicable to pavement condition, though not all of the funds will contribute to improved pavement condition and those that do may not be used on the NHS. Known projects that will be pursued under these areawide projects in FY 2024 are listed in Appendix D. These areawide TIP projects program $425.1 million in federal funds along with $163.9 million in matching funds for a total of $589.0 million. $327.0 million of the funds in these projects are programmed under the National Highway Performance Program, which is used on NHS facilities.

Table II-21. 2024-2027 TIP Projects Related to Pavement Condition

Agency	Project Name (Year of Operation)	Federal	Matching	Total TIP Funds
NHS Interstate Projects				
Baltimore City	Orleans Street Rehabilitation from Washington Street to Ellwood Avenue (2030)	$1,760	$440	$2,200
MDOT SHA	I-695: I-70 to MD 43 (2024)	$111,221	$69	$111,290
MDOT SHA	I-695: US 40 to MD 144 (2021)	$0	$5,117	$5,117
NHS Interstate Subtotal (In $1,000s)		**$112,981**	**$5,626**	**$118,607**

Table II-23 summarizes the funds programmed in the 2024-2027 TIP for bridge projects on the NHS. The programmed funds listed are for various project phases including engineering, right-of-way, and construction. The year of operation for each project is listed in parenthesis after the project name. The 2024-2027 TIP includes a total of $345.9 million in federal funds for these projects along with $27.4 million in matching funds for a total of $373.3 million. The reconstruction of the interchange at I-695 and I-70 accounts for 67.9% of this total.

Table II-22. 2024-2027 TIP Projects Related to Pavement Condition

Agency	Project Name (Year of Operation)	Federal	Matching	Total TIP Funds
Non-Interstate NHS Projects				
Baltimore City	Johnston Square Improvements	$1,600	$400	$2,000
Baltimore City	Belair Road Complete Streets (2027)	$8,160	$140	$8,300
Baltimore City	25th Street Rehabilitation from Greenmount Avenue to Kirk Avenue (2027)	$8,800	$2,200	$11,000
Baltimore City	Freemont Avenue Rehabilitation from Lafayette Avenue to Presstman Street (2027)	$5,600	$1,400	$7,000
Baltimore City	Madison Street Rehabilitation from North Milton Avenue to Edison Highway (2027)	$6,800	$1,700	$8,500
Baltimore City	Park Heights Avenue from West Rogers Avenue to Strathmore Avenue (2027)	$10,920	$2,730	$13,650
Baltimore City	Patapsco Ave. from Magnolia Avenue to Potee Street (2028)	$12,600	$3,150	$15,750
Baltimore City	Pennington Ave. Rehabilitation from Birch St. to East Ordnance Rd (2027)	$5,720	$1,430	$7,150
Baltimore City	Russell Street Pavement Rehabilitation from Russell Street Viaduct to City Line (2027)	$4,000	$1,000	$5,000
MDOT SHA	MD 24: South of Stirrup Run Culvert to Deer Creek Bridge, Section G (2026)	$4,962	$300	$5,262
MDOT SHA	MD 32: Linden Church Road to I-70, Capacity & Safety Improvements (2022)	$3,365	$177	$3,542
Non-Interstate NHS Subtotal (In $1,000s)		**$72,527**	**14,627**	**$87,154**
Interstate and Non-Interstate NHS Funding Total (In $1,000s)		**$183,748**	**$19,813**	**$203,561**

Table II-23. 2024-2027 TIP Bridge Projects on the NHS

Agency	Project Name (Year of Operation)	Federal	Matching	Total TIP Funds
Baltimore City	Radecke Avenue and Sinclair Lane over Moores Run (2030)	$10,800	$2,700	$13,500
Baltimore City	I-83 Concrete Deck Mill and Resurface (2026)	$12,220	$3,055	$15,275
Baltimore City	Monroe Street Ramp over CSX and Russell Street over CSX (2031)	$23,520	$5,880	$29,400
Baltimore City	Moravia Road Ramp Bridge over Pulaski Highway (2029)	$600	$150	$750
Baltimore City	Perring Parkway Ramp over Herring Run (2025)	$4,080	$1,020	$5,100
MDOT SHA	MD 173: Bridge Replacement over Rock Creek (TBD)	$97	$24	$121
MDOT SHA	I-695: Reconstruction of Interchange at I-70 (2027)	$240,873	$12,700	$253,573
MDOT SHA	I-695: Bridge Replacement on Putty Hill Avenue (2024)	$8,664	$997	$10,241
MDOT SHA	US 1: Bridge Replacements at Tollgate Road and Winters Run (2026)	$15,247	$903	$16,150
MDOT SHA	I-95/I-695 Interchange Bridge Deck Replacement (2025)	$29,800	$0	$29,800
Funding Totals (in $1,000s)		**$345,901**	**$27,429**	**$373,330**

In addition to the projects listed in Tables II-21 and II-22, the TIP also includes a number of additional investments in bridges including:

- Areawide Bridge Replacement and Rehabilitation: This MDOT SHA TIP project programs funds for major upgrades and maintenance of structures on state highways. The project programs $213.8 million in federal funds along with $55.7 million in matching funds for a total of $269.5 million. These funds include both NHS and non-NHS structures. $154.2 million of the funds in this project are programmed under the National Highway Performance Program, which is used on NHS facilities.
- Local and state bridge projects not on the NHS: The TIP also includes 46 additional local and state sponsored non-NHS bridge rehabilitation and replacement projects. The 2024-2027 TIP includes $119.0 million in federal funds for these projects along with $57.2 million in matching funds for a total of $176.2 million.

- I-95 Express Toll Lanes Northbound Extension: This Maryland Transportation Authority project will add two express toll lanes on I-95 northbound from north of MD 43 to north of MD 24. The project includes the reconstruction of five overpasses over I-95 and the widening of several bridges along I-95 northbound. The project is anticipated to be complete in 2027.

Travel Time Reliability: Performance Measures and Targets

The FHWA's final rule established three performance measures for state DOTs and MPOs to use to assess the performance of the NHS under the National Highway Performance Program (NHPP). These include two measures related to Level of Travel Time Reliability (LOTTR) as well as a Truck Travel Time Reliability (TTTR) Index. The specific performance measures are:

1) Percentage of person-miles traveled on the Interstate System that are reliable

2) Percentage of person-miles traveled on the non-interstate NHS that are reliable

3) Ratio of Interstate System mileage indicating reliable truck travel times

Level of Travel Time Reliability (LOTTR) is defined as the ratio of travel times in the 80th percentile to a "normal" travel time (50th percentile), using data from FHWA's National Performance Management Research Data Set (NPMRDS) or equivalent. Data are collected in 15-minute segments during all time periods between 6 a.m. and 8 p.m. local time. The measures are the percent of person-miles traveled on the relevant portion of the NHS that are reliable. Segments are considered reliable if the 80th percentile travel time divided by the 50th percentile travel time is less than 1.5. Person-miles take into account the users of the NHS, including bus, auto, and truck occupancy levels.

The TTTR index is a measure comparing the time it takes trucks to travel segments of the NHS in congested conditions (as shown by the 95th percentile time) relative to the time it takes to make a trip in "normal" conditions (as shown by the 50th percentile time). For example, say the 95th percentile truck travel time is 56 minutes for a segment of the NHS that normally takes 30 minutes. This translates into a ratio of 56 minutes / 30 minutes, or 1.87.

Table II-24. Travel Time Reliability Performance Measures & Targets

Measures related to travel time reliability					
Performance Measure	2017 Baseline	2-year Targets* (2019)	4-Year Targets* (2021)	2-year Targets** (2023)	4-Year Targets** (2025)
LOTTR (Interstate) measure: % of person-miles traveled on the Interstate System that are reliable. Observed - Region	71.5% 74.1%	72.1% 71.6%	72.1% 88.4%	72.9%	72.9%
LOTTR (non-Interstate) measure: % of person-miles traveled on the non-Interstate NHS that are reliable. Observed - Region	82.0% 79.8%	N/A 78.9%	81.7% 91.3%	7.94%	79.4%
TTTR Index: Ratio of Interstate System mileage indicating reliable truck travel times. Observed - Region	1.87 2.08	1.87 2.03	1.88 1.64	2.06	2.06

* Set in 2018 using 2017 as baseline year – Region adopted statewide targets
** Regional targets are average of 2017 and 2019 observed values

Table II-24, shown above, summarizes the travel time reliability performance measures and targets. The BRTB adopted these targets in October 2018.

There are no federal funding sources tied directly to travel time reliability on Interstate and non-Interstate NHS facilities. However, a number of projects in the TIP have the potential to improve travel time reliability. Example projects include:

- Baltimore City's RAISE Transit Priority Project (TIP ID 12-2201-64), Traffic Signals and Intelligent Transportation System project (TIP ID 12-1218-07) and Communications Upgrades – Wireless (TIP ID 12-2304-07)
- MDOT SHA's implementation of hard shoulder running on I-695 during peak travel periods between I-70 and MD 43 (TIP ID 63-1802-41)
- MDOT SHA's Areawide Congestion Management project (TIP ID 60-9504-04)
- MDTA's I-95 Southbound Part-Time Shoulder Usage project (TIP ID 25-2101-41)
- MDTA's I-95 Express Toll Lanes Northbound Extension (TIP ID 25-1801-41)

In addition to investments in the TIP, BMC staff are working on the development of an analysis tool for congestion in the Baltimore region. This tool overlays project data from the TIP and *Resilience 2050*, the Baltimore region's top 25 bottlenecks, traffic speed data, and a travel time index. This tool will be useful in analyzing the effectiveness of transportation investments in mitigating congestion in the Baltimore region.[5]

[5] More information on the BRTB Congestion Management Process, including the Congestion Management Process Analysis Tool, is available here: https://www.baltometro.org/transportation/planning-areas/congestion-management-process

Future Performance Monitoring

In cooperation with MDOT and its modal agencies, as well as its other state agency partners, the BRTB will continue to monitor how investments in the TIP are influencing the performance of the region's transportation systems. This includes improving the methods utilized to analyze the anticipated effect of TIP investments towards achieving the performance targets discussed in this section. In addition, the BRTB will use the established targets to help in identifying strategies and in making investment decisions about programs and projects.

For more information on performance measures and targets, please see the System Performance Report in Chapter 5 of *Resilience 2050*.[6]

[6] More information on *Resilience 2050*, including the system performance report, is available here: https://www.baltometro.org/transportation/plans/long-range-transportation-plan/Resilience_2050

III. PROGRAM DEVELOPMENT

A. Integration with Federal, State and Local Programs

The projects contained in the 2024-2027 TIP flow from *Resilience 2050* with detailed information extracted from the capital programs of state and local agencies responsible for implementing transportation projects in the region. Project information was provided by these agencies from the 2024-2027 portions of their respective multi-year improvement programs.[7] For a surface transportation project to be eligible for inclusion in the State TIP (STIP), and thus to receive federal aid, it must first be listed in the TIP.

Because the TIP must reflect regional priorities and be consistent with recommendations contained in the LRTP, it is important that a "regional voice" be expressed in the preparation of individual agencies' capital programs. Meetings that take place as part of the effort to produce a short-range element begin to accomplish this. The meetings foster a more fully coordinated project selection process for the TIP, providing for sound technical analysis early in the programming process, full discussion among local and state agencies and avoidance of unrealistic over-programming.

[7] A list of contributing agencies can be found in Appendix A.

B. Federal Fund Sources for Surface Transportation Projects

Federal regulations require that certain highway and transit projects inside or serving the urbanized area be included in the TIP to gain federal approval. Projects proposed to be funded through the following programs in the current or following fiscal years must be included in the TIP:

- Better Utilizing Investments to Leverage Development (BUILD) grants
- Congestion Mitigation and Air Quality Improvement Program (CMAQ)
- Consolidated Rail Infrastructure and Safety Improvement Program
- Federal Lands Access Program
- Federal Lands Transportation Program
- FTA Capital and Operating – Sections 5307C, 5307 flexed from STBG, 5310, 5311, 5329, 5337, and 5339, 5339C
- Highway Safety Improvement Program
- Infrastructure for Rebuilding America (INFRA) grants
- National Highway Freight Program
- National Highway Performance Program
- Rebuilding American Infrastructure with Sustainability and Equity (RAISE)
- Surface Transportation Block Grant Program
- Transportation Alternatives Program

The BRTB endorsement of the TIP is a DOT requirement and is an opportunity for the BRTB to support or oppose proposed projects in the above program categories.[8] Inclusion of these projects in the TIP indicates endorsement by the BRTB for federal funding of the proposed project phase(s).

[8] Endorsement of projects for planning or engineering does not imply any commitment of funds for later phases (right-of-way acquisition, construction).

IV. EXPLANATION OF TERMS AND SYMBOLS

The TIP covers a four year period. It includes projects for which federal funds are expected to be requested in Fiscal Years 2024, 2025, 2026 and 2027. The full project listing is contained in Chapter VI. A project index is included at the end of the document.

Projects in Chapter VI are listed first by sponsoring agency – The City of Annapolis, Baltimore City and the six counties in alphabetical order, the MDOT Office of the Secretary, and the MDOT modal administrations, included as the Maryland Transportation Authority (MDTA), the Maryland Port Administration (MPA), Maryland Transit Administration (MTA) MTA – Transit, MTA – Commuter Rail, and the State Highway Administration (MDOT SHA). Projects implemented by MDOT SHA are broken down further by county in alphabetical order. While a portion of Queen Anne's County is part of the Baltimore urbanized area, there are no local projects for Queen Anne's County in the 2024-2027 TIP.

Within these groups, projects are listed by category in the following order: commuter rail capacity, commuter rail preservation, enhancement program, environmental/safety, emission reduction strategy, highway capacity, highway preservation, transit capacity, transit preservation, ports and miscellaneous.

The project numbers (TIP ID) printed below each project name show the project's location and type according to the following codes: **AB-CCCC-DD**, where:

A Implementing Agency
- 0 - Other State Agencies
- 1 - Local Project
- 2 - Maryland Transportation Authority
- 3 - Maryland Port Administration
- 4 - Maryland Transit Administration (Transit)
- 5 - Maryland Aviation Administration
- 6 - State Highway Administration
- 7 - Maryland Transit Administration (Commuter Rail)
- 8 - Baltimore Metropolitan Council
- 9 - Office of the Secretary

B Location / Jurisdiction selected
- 0 - Regional
- 1 - Anne Arundel County
- 2 - Baltimore City
- 3 - Baltimore County
- 4 - Carroll County
- 5 - Harford County
- 6 - Howard County
- 7 - Queen Anne's County
- 8 - City of Annapolis

CCCC The first two digits display the fiscal year the project first appeared in the TIP; the last two digits are a unique count of the number of projects for that agency, jurisdiction, and fiscal year.

DD Project Type by Category:

EMISSION REDUCTION STRATEGY (ERS)
- 01 - Ridesharing
- 02 - Park-and-ride lots
- 03 - Bicycle/pedestrian facilities
- 04 - Traffic engineering
- 05 - Fleet improvement
- 06 - System expansion
- 07 - ITS
- 09 - Other (ERS)

HIGHWAY PRESERVATION
- 11 - Road resurfacing/rehabilitation
- 12 - Road reconstruction
- 13 - Bridge repair/deck replacement
- 14 - Bridge inspections
- 19 - Other

ENHANCEMENT PROGRAM
- 21 - Archaeology
- 22 - Acquisition/preservation of easements or sites
- 23 - Rehabilitation/operation of historic transportation structures/facilities
- 24 - Landscaping
- 25 - Bicycle/pedestrian facility
- 29 - Other

ENVIRONMENTAL/SAFETY
- 31 - Noise barriers
- 32 - Lighting, signs
- 33 - Wetland mitigation
- 34 - Scenic beautification, reforestation
- 38 - Environmental other
- 39 - Safety other

HIGHWAY CAPACITY
- 41 - Roadway widening
- 42 - New or extended roadways
- 43 - Bridge widening
- 44 - New bridge/elimination of at-grade crossing
- 45 - Interchange ramp added or widened
- 46 - New interchange

COMMUTER RAIL CAPACITY
- 57 - Commuter rail capacity expansion

COMMUTER RAIL PRESERVATION
- 51 - Operating assistance
- 52 - Operations support equipment
- 53 - Fleet improvement
- 54 - Preservation and improvements
- 55 - Rehabilitation of facilities
- 56 - New rail facilities
- 59 - Other

TRANSIT CAPACITY
- 67 - Transit capacity expansion

TRANSIT PRESERVATION

61 - Operating assistance
62 - Operations support equipment
63 - Fleet improvement
64 - Preservation and improvements
65 - Rehabilitation
66 - New bus facilities
69 - Other

AIRPORTS

71 - Facility maintenance
72 - Facility rehabilitation
73 - Facility expansion
79 - Other

PORTS

81 - Facility maintenance
82 - Facility rehabilitation
83 - Facility expansion
89 - Other

MISCELLANEOUS

99 - Miscellaneous

Conformity Status reflects one of two classifications: Exempt (for projects which are exempt from the requirement to determine conformity) or Not Exempt (for capacity type projects evaluated using the travel demand model or evaluated off-model) in accordance with meeting the Clean Air Act Amendments. Wherever possible, local Capital Improvement Program (**CIP**) or state Consolidated Transportation Program (**CTP**) page numbers are provided to assist in finding projects in their respective capital improvement or development programs.

Year of Operation indicates the calendar year the facility or service will be open to traffic or for public use. For road and bridge projects, the **Functional Class** of the existing facility as specified by the FHWA functional classification system is given. Functional classes are:

- Interstate
- Freeway
- Principal arterial
- Minor arterial
- Collectors, major or minor
- Local

The **Physical Data** line, which pertains to road and bridge projects, indicates the project length in **Miles** and the present/future number of **Lanes**. The **Estimated Total Cost** lists the entire cost of the project. This is useful as projects in the TIP are often long-term phased projects that began before or extend beyond the four fiscal years covered by the TIP.

Also included for road projects is an indication if the project is part of the **National Highway System**. The National Highway System Designation (NHS) was signed into law on November 28, 1995. The NHS designates key road segments that provide improved access to work and markets; to ports, airports, and rail stations; to our national parks; and to bordering countries. Principal contributions of the NHS are to facilitate sustainable economic growth by enhancing intermodal and highway system connections, improving productivity and efficiency of commercial vehicle operations, facilitating the movement of agricultural produce, advancing safety, alleviating congestion, supporting national defense, and improving system performance. Nationally, the total mileage is about 164,000 miles and includes the Interstate Highway System, as well as other roads important to the nation's economy, defense and mobility.

The Moving Ahead for Progress in the 21st Century Act (MAP-21), Section 1104 expanded the NHS to include urban and rural principal arterials that were not included in the NHS before October 1, 2012.

The project **Description** and **Justification** provide a detailed project scope and reason(s) that the project should be funded over others. The **Connection to Long-Range Transportation Planning Goals** connects TIP projects to the long-range plans regional goals and strategies.

Funding Source indicates the source of federal aid. Project funding source(s) are designated in the funding table on the second page of the project summary. Federal funding sources are abbreviated as follows:

<u>Federal Highway Administration Funds:</u>

- BUILD Better Utilizing Investment to Leverage Development Grants
- CMAQ Congestion Mitigation and Air Quality
- CRISI Consolidated Rail Infrastructure and Safety Improvement
- FLAP Federal Lands Access Program
- FLTP Federal Lands Transportation Program
- FRA Federal Railroad Administration
- HSIP Highway Safety Improvement Program
- INFRA Infrastructure for Rebuilding America Grants
- NHFP National Highway Freight Program
- NHPP National Highway Performance Program (National Highway System, Interstate Maintenance, Bridge (on-system))
- RAISE Rebuilding American Infrastructure with Sustainability and Equity
- STBG Surface Transportation Block Grant Program
- TAC Transportation Alternatives (including Safe Routes to School)

Federal Transit Administration Funds:

- 5307C Section 5307 Urbanized Area Formula Program (Funding for capital projects)
- 5307O Section 5307 Urbanized Area Formula Program (Funding for operating projects)
- 5310 Section 5310 Enhanced Mobility of Seniors and Individuals with Disabilities Program
- 5311O Section 5311 Non-urbanized Area Formula Program (funding for operating assistance in non-urbanized areas)
- 5329 Section 5329 (State Safety Oversight)
- 5337 Section 5337 (State of Good Repair Formula Program)
- 5339F Section 5339 (Bus and Bus Facilities Formula Program)
- CMAQ Congestion Mitigation and Air Quality (flexed to transit becomes 5307)

Project costs in the funding tables represent anticipated funding requests during a particular year by project phase. **All figures are in thousands of dollars.** The abbreviations in the **Phase** column stand for the following:

- PL – Planning: Initial phase of project development where the need and feasibility of a project is documented and scoping is broad and involves the public.
- ENG – Engineering: Engineering projects include preliminary and final design. Engineering funds involving detailed environmental studies and engineering to obtain NEPA are under preliminary design. Design activities following preliminary design involve the preparation of final construction plans and are under final design.
- ROW – Right-of-Way: Funding to provide the necessary land for the project, or to protect corridors for future projects.
- CON – Construction: Funding to build the designed facility.
- OTH – Other[9]: This funding may include permits, inspections, utility costs, and other non-infrastructure costs or in the case of transit, the purchase of capital equipment.

The **Matching Funds** column indicates the state and/or local funds programmed to match the federal funding requested for that fiscal year. In all but a few cases, matching funds are provided by the agency or jurisdiction under which the project is listed.

[9] The 2024-2027 TIP includes $200 million for the Other phase including:

- MDOT MTA projects including bus and rail preventive maintenance, section 5310 grants, ridesharing, funding for LOTS agencies, and state safety oversight of light rail and metro ($129 million or 64.5% of total)
- MDOT SHA Areawide Congestion Management funds not involving construction such as CHART vehicle purchases ($46.6 million or 23.3% of total)
- Permits, inspection fees, and local bridge inspection programs ($12.6 million or 6.3% of total)
- Non-infrastructure funds for project delivery services and research ($.9 million or 0.45% of total)