



# BALTIMORE REGION TRANSPORTATION IMPROVEMENT PROGRAM 2019-2022



**DEVELOPED BY THE BALTIMORE METROPOLITAN PLANNING ORGANIZATION**

CITY OF ANNAPOLIS • ANNE ARUNDEL COUNTY • BALTIMORE CITY • BALTIMORE COUNTY

CARROLL COUNTY • HARFORD COUNTY • HOWARD COUNTY • QUEEN ANNE'S COUNTY • HARFORD TRANSIT

MD DEPARTMENT OF TRANSPORTATION • MD DEPARTMENT OF THE ENVIRONMENT • MD DEPARTMENT OF PLANNING • MD TRANSIT ADMINISTRATION



The preparation of this document has been financed through funds provided by the Maryland Department of Transportation and the Baltimore Metropolitan Council as matching shares for funds from the Federal Highway Administration and the Federal Transit Administration of the United States Department of Transportation.

**Electronic copies are available from the:**

**Baltimore Metropolitan Council's website**

**<http://baltometro.org/phocadownload/Publications/Transportation/Plans/TIP/19-22TIP.pdf>**

**Print copies are available from the:**

**Baltimore Metropolitan Council  
1500 Whetstone Way, Suite 300  
Baltimore, Maryland 21230**

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





Information about the TIP	1
I.A Introduction - Summary	1
I.B Introduction - Metropolitan Planning Organization Self-Certification	6
I.C Introduction - Consistency with Maximize2040	7
II.A Federal Requirements - Requirements of the Fixing America's Surface Transportation (FAST) Act	9
II.B Federal Requirements - Environmental Justice	12
II.C Federal Requirements - Coordinating Human Service Transportation	17
II.D Federal Requirements - Additional Programs for Seniors and Persons with Disabilities	18
II.E Federal Requirements - Status of Projects from the 2018-2021 TIP	20
II.F Federal Requirements - Conformity with Air Quality Planning	29
III.A Program Development - Integration with Federal, State and Local Programs	31
III.B Program Development - Federal Fund Sources for Surface Transportation Projects	32
IV. Explanation of Terms and Symbols	33
V. The Financial Plan	38
V.A The Financial Plan - Revenue Projections	40
V.B The Financial Plan - Federal Aid Assumptions	42
V.C The Financial Plan - Where the Money Comes From	43
V.D The Financial Plan - Where the Money Goes	44
V.E The Financial Plan - Documentation of Financial Capacity for Transit Activities	45
V.F The Financial Plan - FY 2019 Federal-Aid Annual Element Listing and Summary	46
Table 1. Annual Element by Implementing Agency and Fund Source	47
Table 2. Annual Element by Implementing Agency and Project	52
Table 3. Summary of FY 2019-2022 TIP Funding by Implementing Agency and Fiscal Year	61

---

Exhibit 1: Comparison of the Total Amount Programmed in the 2016, 2017, 2018, and 2019 TIPs	62
Exhibit 2: Distribution of FY 2019-2022 TIP Funding by Fiscal Year	63
Exhibit 3: Distribution of Federal and Matching Funds in the FY 2019-2022 TIP by Implementing Agency	64
Exhibit 4: Number of Projects in the FY 2019-2022 TIP by Project Category	65
Exhibit 5: Distribution of Total Funding in the FY 2019-2022 TIP by Project Category	66
Exhibit 6: Distribution of FY 2019 Funding by Project Phase	67
Exhibit 7: Distribution of FY 2019 Federal Fund Requests by Fund Source	68
VI. Jurisdictional Low-Income and Minority Maps	69
Project Detail with Map	77
Anne Arundel County Projects	77
Baltimore City Projects	93
Baltimore County Projects	142
Carroll County Projects	174
Harford County Projects	192
Howard County Projects	206
Maryland Transportation Authority Projects	218
MTA - Transit Projects	222
MTA - Commuter Rail Projects	253
Office of the Secretary Projects	261
State Highway Administration	267
SHA - Regional Projects	267
SHA - Anne Arundel County Projects	291
SHA - Baltimore County Projects	302

---

---

SHA - Carroll County Projects	329
SHA - Harford County Projects	335
SHA - Howard County Projects	340
Appendices	348
Appendix A. Committee and Staff Roster	348
Appendix B. Documentation of Project Prioritization, Financial Reasonableness and Flexible Funding	353
Appendix C. Performance-Based Planning and Programming	400
Appendix D. Self Certification	403
Appendix E. Areawide Projects	428
Appendix F. Projects Between Funding Stages (On Hold) and Informational Projects	431
Appendix G. FY 2018-2021 TIP Amendment and Administrative Modification Log	433
Appendix H. Public Participation Component	441
Appendix I. Associated BRTB Resolutions	456
Appendix J. Glossary of Terms	462
Project Index	464

---

## 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<sup>1</sup> 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, *Maximize2040*, for the Baltimore region into a short-term program of improvements. This includes specific capacity improvements that have been identified in the long-range plan, as well as system preservation projects and operational initiatives that are supported in the plan but have not been previously detailed. As such, the TIP ensures consistency between plan recommendations and project implementation in the region.

---

<sup>1</sup>. As shown in Exhibit I-1, the Baltimore region is composed of Baltimore City, 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.

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 2019-2022.<sup>2</sup>

A summary of the key federal requirements is provided in Chapter II. The summary is followed by several sections that provide information for the requirements in key areas. The relationship between the TIP and other transportation plans and programs in the region, its fulfillment of federal requirements, its regional review function and the procedures for amending it are described in Chapter III. 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 2019.

All federally funded projects in the TIP are listed in Chapter VI. The projects are grouped first according to the local jurisdiction or state agency responsible for their implementation. Within those sections they are then grouped by category in the following order: commuter rail, enhancement program,

---

<sup>2</sup>. The Baltimore Region TIP follows the Maryland state fiscal year which is July 1 to June 30.

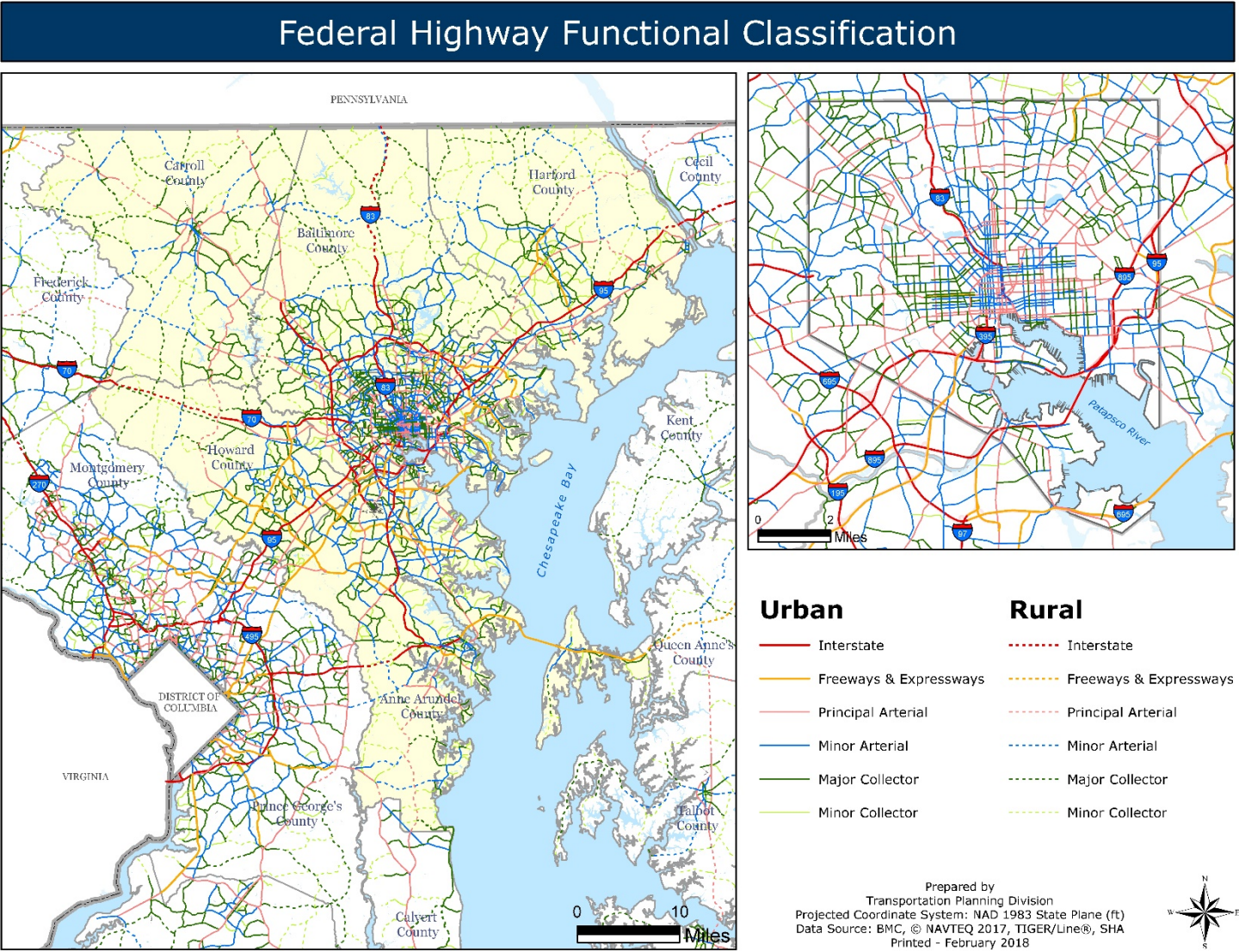


environmental/safety, emission reduction strategy, highway capacity, highway preservation, transit, ports, and miscellaneous. A timetable for anticipated federal funding requests is presented for each project. The estimated total cost of the projects in the 2019-2022 TIP is approximately \$3.20 billion. Of that amount, \$2.22 billion will be provided by federal funding authorities, while the local and state matching funds are \$.98 billion.

## Exhibit I-1: The Baltimore Region

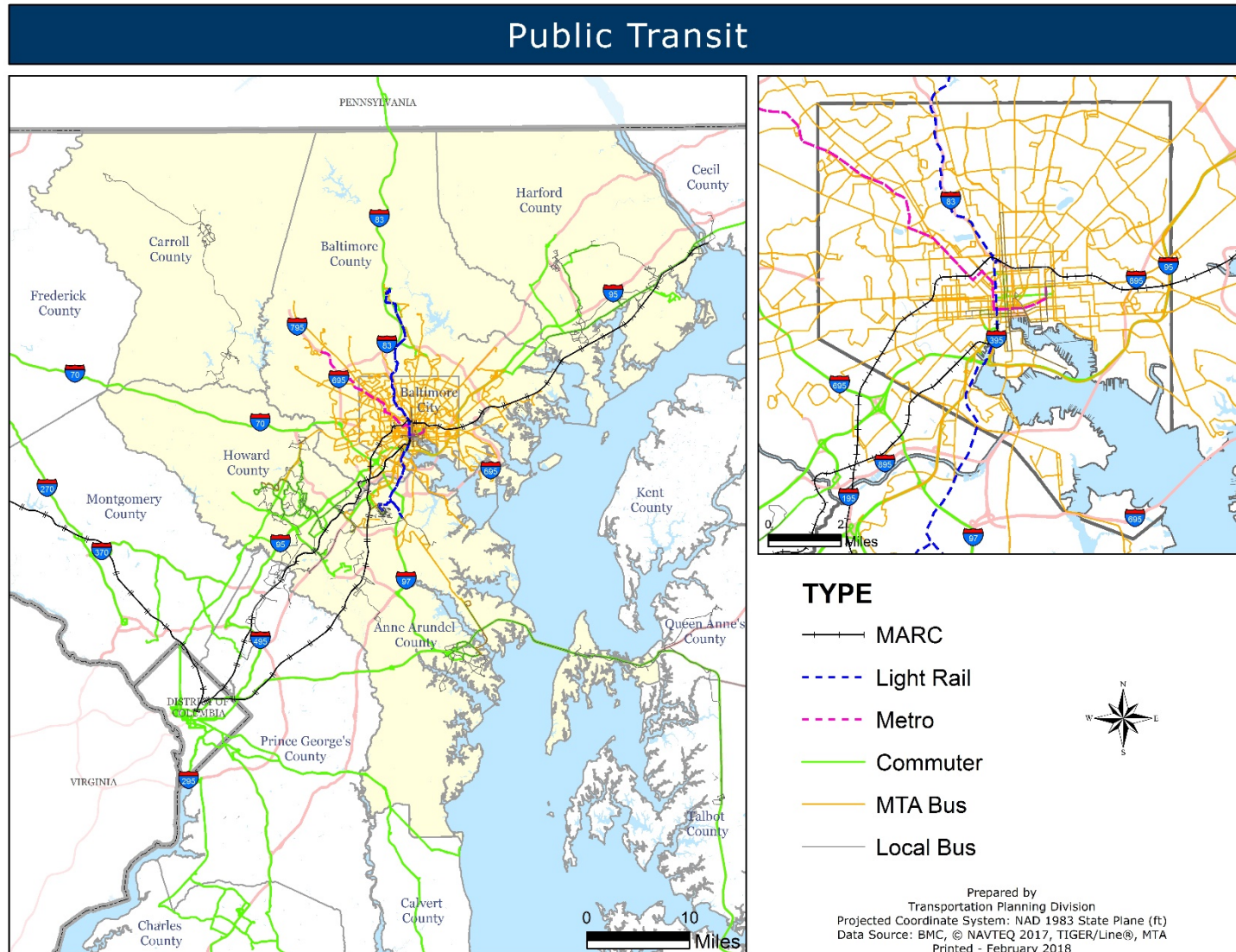


# Exhibit I-2: The Baltimore Region Federal Highway Functional Classification





## 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 via Resolution #19-3 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, *Maximize2040*, for the Baltimore region consistent with the metropolitan planning factors in Moving Ahead for Progress in the 21st Century (MAP-21); ❹ the BRTB maintains a Congestion Management Process (CMP); ❺ the BRTB has determined that conformity (8-hour ozone) of *Maximize2040* as amended and the 2019-2022 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 Minority Business Enterprise/Women Business Enterprise (MBE/WBE) requirements set forth in 49 CFR Part 26.

### **C. Consistency with Maximize2040**

In an effort to plan for future regional transportation needs and to comply with the intention of MAP-21 and the Clean Air Act Amendments of 1990 (CAAA), the BRTB endorsed *Maximize2040: A Performance-Based Transportation Plan*, the long-range transportation plan, in November 2015 (and as amended in March 2018). The factors that guided development of *Maximize2040* are listed in the Metropolitan Planning Regulations effective February 14, 2007.

Subsequently, following the enactment of the Fixing America's Surface Transportation (FAST) Act on December 4, 2015, the U.S. DOT published updated Metropolitan Planning Regulations on May 27, 2016. These updated regulations continue and strengthen the emphasis on performance-based planning and programming.

*Maximize2040* 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.

A new set of performance measures and targets is being developed in preparation for the next long-range transportation plan. Performance measures have been or are being developed for transit asset management, transit safety, roadway safety, roadway and bridge conditions, and system performance. Target selection is being coordinated with the State and public transportation providers to ensure consistency.

Appendix C summarizes the process for developing performance measures and targets. It also reports on those performance measures and targets that have already been adopted. While most measures are still in development, the BRTB has adopted several performance measures and targets in compliance with federal requirements. These include: (1) transit asset management measures and targets in June 2017, (2) safety measures and targets in January 2018, and (3) system performance measures and targets related to CMAQ funds in May 2018. The BRTB will adopt the remaining measures and targets, in coordination with MDOT, by the November 2018 due date. All of the measures and targets will be used to guide the Maryland Department of Transportation

and metropolitan planning organizations in carrying out the requirements of the applicable FHWA and FTA laws and regulations, including the Highway Safety Improvement Program (HSIP).

*Maximize2040* reports on forecasted regional growth in population, households and employment to the year 2040 and the projected travel demand generated as a result of this forecasted growth. It demonstrates how the existing and committed transportation network likely will 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, *Maximize2040* includes a range of projects through the year 2040. A multimodal array of transportation improvements is outlined in *Maximize2040* 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.

The capacity projects in the 2019-2022 TIP "flow" from the conforming Plan, 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 Fixing America's Surface Transportation (FAST) Act**

The Fixing America's Surface Transportation (FAST) Act was signed into law on December 4, 2015. Future TIP documents will incorporate any changes to federal requirements regarding development of the TIP that result from this legislation. Below is a discussion of key federal requirements that are in place regarding development of the TIP. These include a prioritized list of financially constrained improvements, a consideration of "flexing" funds between traditional highway and transit sources of money, completion of congestion management studies prior to inclusion of any project that contributes to an increase in single-occupant vehicles, and the role of public involvement throughout the process.

As a requirement of FAST, the BRTB, in cooperation with state and local agencies and transit operators, have developed a prioritized and financially reasonable TIP. 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; while ❸ Local governments also provide documentation of the same financial reasonableness requirements to match the federal funds requested for locally sponsored projects.

Federal law requires that projects proposed for inclusion in plans and programs be analyzed to ensure that the fiscal resources required to construct them are reasonably expected to be available within the timeframe specified. With the additional revenue projected as a result of passage of the Transportation Infrastructure Investment Act of 2013, the funding will be available to advance some projects. Within this context, the proposed projects have been assessed and found to meet the fiscal constraint requirement.

As a further requirement of FAST, 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.

Projects included in the 2019-2022 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.

An additional requirement of FAST is to include a financial plan that demonstrates that the projects proposed in the TIP can be funded. 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.

Another requirement of FAST 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.

Also as a requirement of the regulations implementing FAST and its predecessors, 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. Formal public participation procedures to govern metropolitan transportation planning activities were updated by the MPO in June 2018. 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. A schedule of key dates in the development of the TIP was provided to the members of the Public Advisory Committee (PAC) along with a description of

the information available in the TIP. Opportunities to comment on the draft list were publicized primarily through electronic means (website and e-newsletters) and PAC meetings, with outreach work undertaken by Public Involvement staff.

The draft TIP was made available online. For the draft TIP, flyers announcing public meetings were advertised in local papers and through social media. The PAC members were asked to distribute the flyer to their constituencies as an additional way of disseminating the information. Public involvement activities were also announced via the Baltimore Metropolitan Council (BMC) website. One public meeting was held for the public to comment on the draft TIP. In addition to this public meeting, the public was able to address the BRTB at its June 2018 and July 2018 meetings. Written comments by mail, email or social media are accepted during the public review periods. A summary of all comments received, both verbal and written, BRTB responses to comments, and the public participation notices are included in Appendix H.

The public participation process for the TIP also meets the FTA public participation requirements for the MTA's Program of Projects. The Maryland Transit Administration (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 2019-2022 TIP to satisfy the public participation requirements associated with development of the MTA Program of Projects (POP).

## **B. Environmental Justice**

Environmental justice (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 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. A person whose household income is at or below the U.S. Department of Health and Human Services poverty guidelines is considered low-income. A person belonging to any of the following groups is considered part of a minority population:

- 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, Indian subcontinent, or Pacific Islands; or
- 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.

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.

Metropolitan planning organizations (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, low-income, and disability populations in public involvement activities.

In *Maximize2040*, an analysis was done to measure the region's ability to improve access to jobs and other destinations. Included in this document is information about where upcoming transportation projects are located relative to concentrations of minority and low-income populations. Exhibit II-1 shows census tracts where the concentration of minority populations exceeds the average for the region. Exhibit II-2 shows the median income level in census tracts relative to the regional median household income. Data from the 2012-2016 American Community Survey (ACS) is used to calculate the regional information.

### Minority Populations

From the 2012-2016 ACS, the region's minority population is 39.07% of the total population, although the concentrations of such groups are not equally distributed throughout the region. For example, the number of African-Americans living in Baltimore City is significantly higher than in other jurisdictions. In order to show where large concentrations of minorities are living in the region, Exhibit II-1 shows census

tracts (i.e. neighborhoods) with minority populations greater than 39.07%.

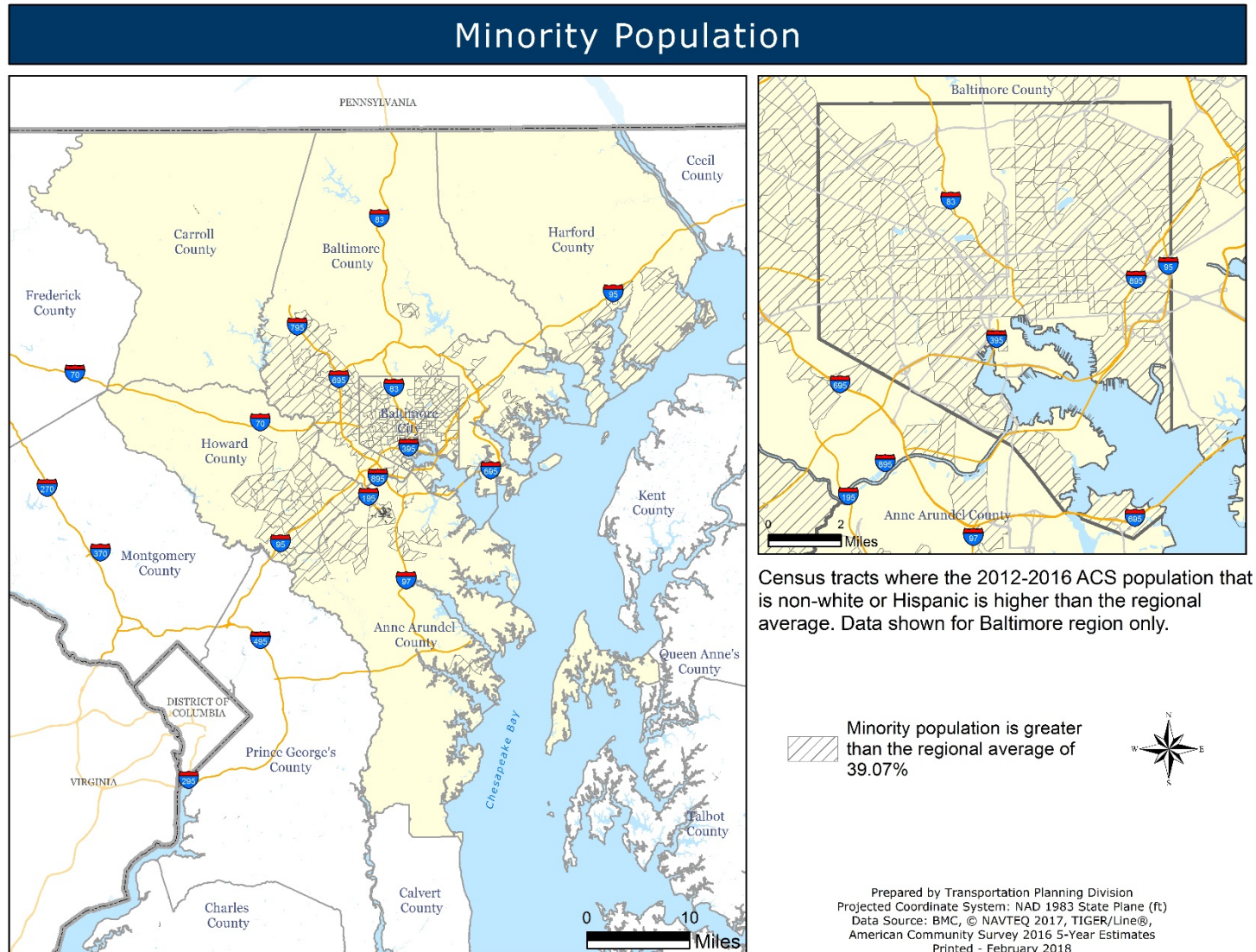
### Low-income Populations

Similarly, income is not distributed equally throughout the region. The 5-year estimate of the region's median household income from the 2012-2016 ACS is \$71,122. Low-income populations can be identified as earning 50% or less of the median household income. Therefore, a household at the 50% rate has a maximum income of \$35,561, while a household at the 80% rate has a maximum income of \$56,898. Exhibit II-2 shows census tracts that are below 50%, between 50% and 80%, and above 80% of the region's median household income.

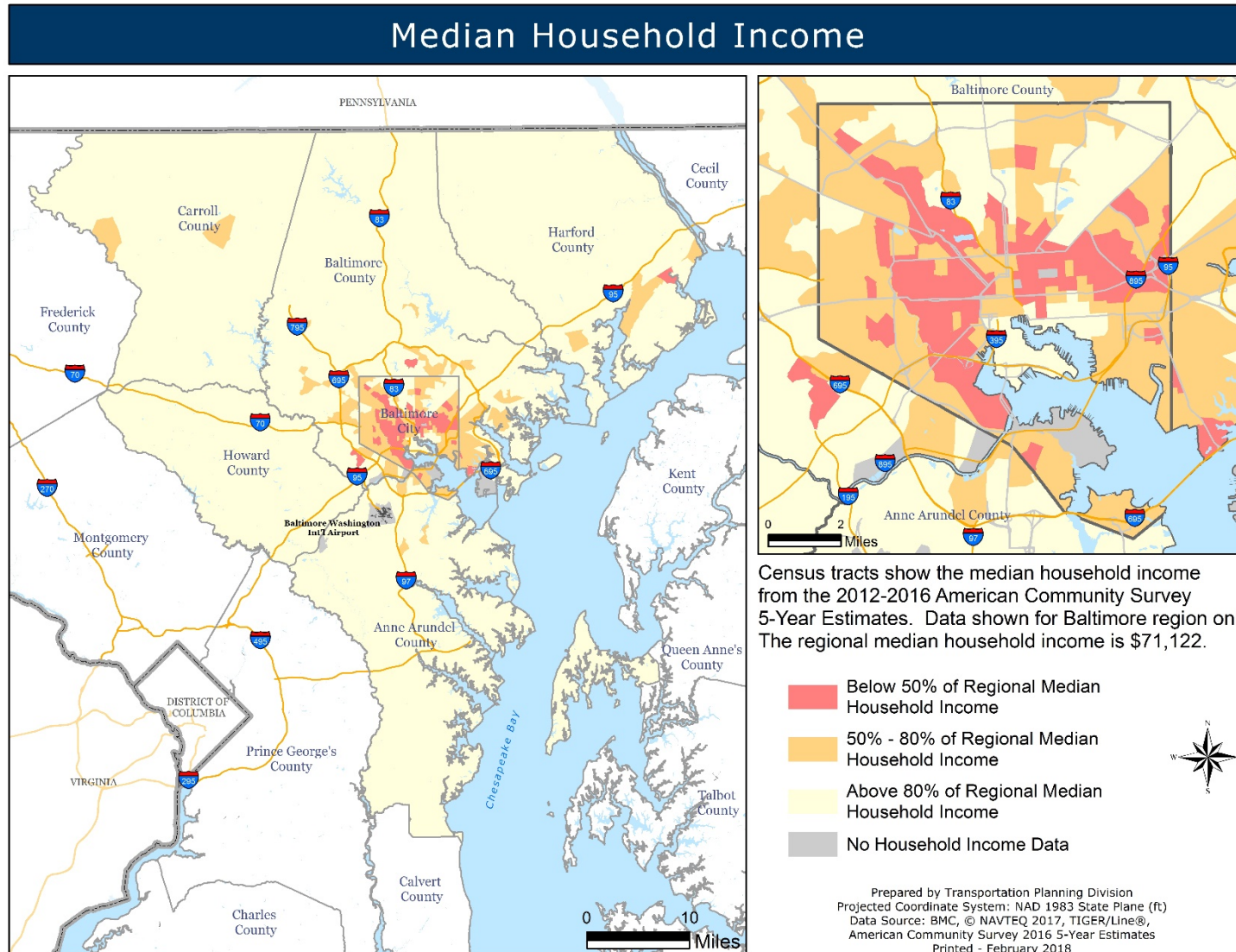
When a transportation project enters project planning, consideration of EJ is undertaken. These studies are conducted by the appropriate state agency (e.g. Maryland State Highway Administration, Maryland Transit Administration, or Maryland Transportation Authority) or a local jurisdiction during the project planning phase. Opportunities for public participation are central to these efforts.

Additional EJ maps are available in Section VI: Individual Project Listings. These maps show the locations (by jurisdiction) of specific projects in relation to minority and low-income population concentrations.

## Exhibit II-1: Minority Concentration, Baltimore Region



## Exhibit II-2: Low Income Concentration, Baltimore Region



### **C. Coordinating Human Service Transportation**

The FAST Act continues to support transportation initiatives for elderly and disabled populations through the FTA Section 5310 Capital Grant Program and low-income populations through the eligibility of job access and reverse commute projects under the FTA Section 5307 Urbanized Area Formula Grants Program. The Maryland Transit Administration (MTA) is the administrator for both 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 takes the lead, with assistance from MTA, for development of the Baltimore Region Coordinated Public Transit-Human Services Transportation Plan. MTA and the BRTB last updated the Baltimore Region Coordinated Transportation Plan in October 2015.



## **D. Additional Programs for Seniors and Persons with Disabilities**

In addition to administering the FTA Section 5310 Program, MTA provides paratransit service for the elderly and persons with disabilities. 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.

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 66% 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, MTA initiated two programs: MTA Taxi Access II Service and the Senior Ride Program.

### MTA Taxi Access II Service

The MTA Taxi Access II Service is open to eligible 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 ride. MTA will pay the fare up to \$20, and the participant is responsible for the balance of the fare that exceeds the \$20 limit. Participants may be accompanied by up to 3 people per trip if all passengers start and end the ride at the same location. A list of participating companies is available to users.

### Senior Ride Program

Since FY 2006, 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. MTA has offered approximately \$180,000 in State funds each year to be matched by 25% local contributions. The projects must provide door-to-door transportation service, use primarily volunteer drivers, and have a dispatching system.

## **E. Status of Projects from the 2018-2021 TIP**

As mandated by the federal regulations for metropolitan planning, major projects from the previous TIP, the 2018-2021 TIP, that were implemented 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-1 lists all projects from the 2018-2021 TIP by jurisdiction including the TIP number, year of operation in the 2018-2021 TIP, year of operation in the 2019-2022 TIP (if any), and status of the project.

Key for Table II-1:

XX 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, or it 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 year of operation has yet to be determined.

**Table II-1: Status of Projects in the 2018-2021 TIP**

Year of Operation				
Project	Project TIP ID	18-21 TIP	19-22 TIP	Project Status
<b><u>Anne Arundel County</u></b>				
Hanover Road Corridor Improvement	11-1801-42	2021	2021	Traffic studies are being completed along with 30% design plans. 30% Plans anticipated early summer 2018.
MD 214: MD 468 Intersection Improvements	11-1803-41	2017	XX	Project completed in 2017 and is not requesting further funds.
Furnace Avenue Bridge over Deep Run	11-1103-13	2019	2020	Alignment and bridge width determined. Working on Architecture/Engineering contract tasks and manhours. Negotiations proceeding. Construction advertisement anticipated April/May 2019.
Harwood Road Bridge over Stocketts Run	11-1208-13	2019	2021	The design is partially delayed awaiting NEPA approval from SHA. Once approval is received, A/E will receive full Notice to Proceed to complete design
Magothy Bridge Road Bridge over Magothy River	11-1402-13	2018	2020	Structural review, NEPA, and permitting in process. Construction advertisement anticipated November 2018.
O'Connor Road Bridge over Deep Run	11-1403-13	2020	2020	The project is in the Preliminary Field Investigation / Pre-Type, Size, and Location phase. Construction advertisement anticipated 7/2019.
Polling House Road Bridge over Rock Branch	11-1602-13	2022	2022	The project is nearing federal aid eligibility. Design will initiate once it is eligible.
Mountain Road Corridor Revitalization – Phase I	11-1802-19	2022	2022	Anne Arundel County is entering into an agreement with SHA to complete the Preliminary Field Investigation phase of the design.
<b><u>Baltimore City</u></b>				
Citywide Bicycle and Pedestrian Improvements	12-1217-25	Ongoing	Ongoing	Various projects ongoing
Citywide Traffic Signals, Intelligent Transportation System and Safety Improvements	12-1218-07	Ongoing	Ongoing	Project ongoing
Transportation Management Center Upgrade	12-1701-04	2021	2021	Project anticipated to advertise by the end of FY 2019
Citywide Road Resurfacing - Federal Aid Program	12-0207-11	Ongoing	Ongoing	Project ongoing
Perring Parkway Ramp and Hillen Road Bridge	12-1215-13	2021	2022	65% Design stage. Project anticipated to advertise in the late spring or early summer of 2019
Sisson Street Bridge over CSX Railroad	12-1216-13	2019	2022	65% Design stage. The project has encountered design delays associated with railroad access and coordination and is anticipated to advertise early summer 2019. Length of construction due to interaction with active railroad.

Table II-1: Status of Projects in the 2018-2021 TIP

Year of Operation				
Project	Project TIP ID	18-21 TIP	19-22 TIP	Project Status
<b><u>Baltimore City (continued)</u></b>				
Citywide Guide Sign Replacement	12-1222-19	Ongoing	Ongoing	Project ongoing.
Harford Road Bridge over Herring Run	12-1402-13	2021	XX	Project advertised for construction on 12/8/17 and is not requesting further funds. Projected year of operation is 2021.
Wilkins Avenue Bridge over Gwynns Falls	12-1403-13	2019	2021	65% Design stage. Project has encountered delays due to utility coordination and is projected to advertise in the spring of 2019.
Belair Road Complete Streets	12-1404-11	2022	2022	Phase I is at the 95% Design stage and is anticipated to advertise in spring 2019.
Greenmount Avenue Reconstruction: 43rd Street to 29th Street	12-1408-12	2019	2020	Plans, specifications, and estimates design stage. Project delayed one year to accommodate utility construction work. Project is anticipated to advertise late summer 2018.
Citywide System Preservation	12-1414-11	Ongoing	Ongoing	Project ongoing.
Orleans Street Viaduct Rehabilitation	12-1601-13	2022	2023	Design anticipated to be initiated in FY 2019.
Remington Avenue Bridge over Stony Run	12-1602-13	2021	2022	30% Design stage. Updated costs include utility costs as well as updated costs associated with excavation and replacement of the structure.
Radecke Avenue over Moores Run	12-1603-13	2022	2022	Design anticipated to be initiated in FY 2019.
I-83 Concrete Deck Mill and Resurface	12-1604-13	2020	2023	Design anticipated to be initiated in FY 2019.
Moravia Road Ramp Bridge over Pulaski Highway	12-1605-13	2022	2023	Design anticipated to be initiated in FY 2019.
Citywide Road Reconstruction	12-1607-12	Ongoing	Ongoing	Project ongoing.
Replacement of Dartmouth Retaining Wall	12-1703-19	2020	XX	Project is not eligible for federal funds and has been removed from the TIP.
Curtis Avenue Corridor Improvements (Phase I and II)	12-1704-11	2025	XX	Environmental study phase. Project is between funding stages and is not requesting additional funds at this time.
Hanover Street Bridge Deck Repair over Middle Branch	12-1705-13	2021	2022	Awaiting Notice to Proceed for design.
MLK Blvd. and Howard St. Intersection Improvements	12-1706-11	2018	2021	Project has been delayed as it was tied to the State Center redevelopment project. BCDOT is rescoping the project to perform urgently needed work.
Monroe Street Ramp over CSX and Russell Street over CSX	12-1801-13	2022	2022	65% Design stage. Project costs have been revised to include utility and inspection costs as well as updated construction costs for retaining walls and replacement of the structures.

**Table II-1: Status of Projects in the 2018-2021 TIP**

		Year of Operation		
Project	Project TIP ID	18-21 TIP	19-22 TIP	Project Status
<b><u>Baltimore City (continued)</u></b>				
Hawkins Point Bridge over CSX Railroad	12-9903-13	2021	XX	Project anticipated to advertise for construction in April 2018. Project is not requesting further funds. Project expected to be completed in 2021.
Transportation Career Development Innovation Program (BCDOT)	12-0002-99	2019	XX	Project is on hold.
Baltimore City Locked Gate Interstate Access Point Approval (IAPA)	12-1201-99	2019	2021	FY19 Program.
Pavement Management System	12-1206-99	2019	2020	BCDOT is working with SHA and FHWA to receive approval to initiate the project.
<b><u>Baltimore County</u></b>				
Dogwood Road Bridge No. B-0072 Over Dogwood Run	13-0001-13	2019	2021	Design nearly complete, project delayed due to right of way acquisition from MD Dept. of Natural Resources. Construction advertisement date planned for 11/2019.
Mohrs Lane Bridge No. B-0143 over CSX Railroad	13-0803-13	2020	2022	Construction phase contract to be advertised in July 2019. This schedule is dependent on right of way acquisition and clearing all environmental permits.
Gunpowder Road Bridge No. B-0409	13-1005-13	2024	2025	Design planned FY2021, Construction FY2023. Project may be delayed due to other projects having higher priority.
Hammonds Ferry Road Bridge No. B-0100 over CSX Railroad	13-1012-13	2020	2021	Design continuing, 7/2019 construction advertisement anticipated. Project may be delayed due to coordination issues with utility companies and CSX.
Lansdowne Boulevard Bridge No. B-0113 over CSX Railroad	13-1105-13	2025	2026	Design planned FY2022, Construction FY2025.
Piney Grove Road Bridge No. B-0140 over CSX railroad	13-1107-13	2023	2025	Design planned FY2022, Construction FY2024. Project may be delayed due to ownership issues of existing bridge with CSX.
Peninsula Expressway Bridge No. B-0119 over CSX Railroad	13-1108-13	2023	2024	Design planned FY2022, Construction FY2024. Project may be delayed due to other projects having higher priority.
Dogwood Road Bridge No. B-0347 over Dogwood Run	13-1201-13	2018	XX	Construction contract advertised 2/2/18, Bids opened 3/6/18, anticipated notice to proceed June 2018. Project is not requesting further funds.
Old Ingleside Avenue Bridge No. B-0096 over Dead Run	13-1202-13	2023	2023	Design planned FY2020, Construction FY2022.
Old Court Road Bridge No. B-0237 over Bens Run	13-1204-13	2019	2020	Construction advertisement anticipated November 2018.

**Table II-1: Status of Projects in the 2018-2021 TIP**

Year of Operation				
Project	Project TIP ID	18-21 TIP	19-22 TIP	Project Status
<b><u>Baltimore County (continued)</u></b>				
Sparks Road Bridge No. B-0018 over Gunpowder Falls	13-1206-13	2019	2021	Design planned FY2019, Construction FY2020. Project may be delayed due to other projects having higher priority.
Golden Ring Road Bridge No. B-0110 over Stemmers Run	13-1208-13	2024	2025	Design planned FY2020, Construction FY2024.
Rolling Road Bridge No. B-0358 over Branch of Dead Run	13-1209-13	2023	2023	Design planned FY2021, Construction FY2023.
Rossville Blvd. Bridge No. B-0132 over Amtrak & Orems Rd.	13-1701-13	2024	2024	Design planned FY2020, Construction FY2023.
Bridge Inspection Program	13-8901-14	Ongoing	Ongoing	Ongoing program.
<b><u>Carroll County</u></b>				
Bixler Church Road Bridge over Big Pipe Creek	14-1101-13	2019	2019	Final PE stages. Advertisement scheduled for winter 2019.
Shepherds Mill Road Bridge over Little Pipe Creek	14-1102-13	2020	2020	In preliminary stages of PE
Stone Chapel Road Bridge over Little Pipe Creek	14-1103-13	2021	2021	SHA approval received to "bundle" 3 projects for PE and Construction; will initiate PE spring 2018.
Babylon Road Bridge over Silver Run	14-1601-13	2021	2022	In preliminary stages of PE
Gaither Road Bridge over South Branch Patapsco River	14-1602-13	2022	2022	PE planned to begin in 2019.
McKinstry's Mill Road Bridge over Sam's Creek	14-1603-13	2021	2021	SHA approval received to "bundle" 3 projects for PE and Construction; will initiate PE spring 2018.
Bear Run Road Bridge over Bear Branch	14-1801-13	2024	2024	Considering rehabilitation option in lieu of federal aid replacement. Decision pending analysis.
Hughes Shop Road Bridge over Bear Branch	14-1802-13	2022	2022	SHA approval received to "bundle" 3 projects for PE and Construction; will initiate PE spring 2018.
Bridge Inspection Program	14-9401-14	Ongoing	Ongoing	Ongoing program
<b><u>Harford County</u></b>				
Tollgate Road	15-1404-42	2018	XX	Project completed and open to traffic in the summer of 2017.
Carrs Mill Road Bridge #216 over Bear Cabin Branch	15-0701-13	2018	XX	Project is currently under construction and is approximately 70% complete. The bridge will be in operation in 2018.
Abingdon Road Bridge #169 over CSX Railroad	15-1001-13	2019	2021	In the current TIP and expected to be in operation in FY20 (calendar year 2021)
Chestnut Hill Bridge #40	15-1101-13	2021	2019	In the current TIP and expected to be in operation in FY19.

**Table II-1: Status of Projects in the 2018-2021 TIP**

Year of Operation				
Project	Project TIP ID	18-21 TIP	19-22 TIP	Project Status
<b><u>Harford County (continued)</u></b>				
Phillips Mill Road Bridge #70 over East Branch tributary	15-1102-13	2020	2020	In the current TIP and expected to be in operation in FY20.
Robinson Mill Road Bridge #154 over Broad Creek	15-1401-13	2018	2018	In the current TIP and expected to be in operation in FY19 (calendar year 2018)
Stafford Road Bridge #24 over Deer Creek	15-1501-13	2019	2021	In the current TIP and expected to be in operation in FY20 (calendar year 2021)
Glenville Road Bridge #30	15-1601-13	2020	2023	In the current TIP and expected to be in operation in FY22 (calendar year 2023)
Bridge Inspection Program	15-9411-14	Ongoing	Ongoing	Ongoing
<b><u>Howard County</u></b>				
Dorsey Run Road: MD 175 to CSX Railroad Spur	16-1403-41	2021	2021	The project is in the design and land acquisition phase, with design at 90%. It is expected to be completed in 2021.
Guilford Road: US 1 to Dorsey Run Road	16-1405-41	2021	2021	The project is currently in the 60% design phase and is expected to be completed by the end of 2021.
MD 175 at Oakland Mills Road Interchange	16-1407-46	2021	2020	Phase I road construction complete. Design of the bridge over 175 is being finalized. The project is expected to be completed in 2020.
Snowden River Parkway: Broken Land Parkway to Oakland Mills Road	16-1410-41	2020	2023	Project is at 30% design. The project will be phased, with the last phase expected to be completed in 2023.
Bridge Repairs and Deck Replacement	16-0436-13	Ongoing	Ongoing	Projects are in various phases, with most of the projects in the design phase. The Daisy Road Bridge over Cattail Creek project (Capital Project B3840) has been completed. The Daisy Road Bridge over Little Cattail Creek project (Capital Project B-3849) will not be completed until 2020 and is in the design phase.
<b><u>MDOT – Office of the Secretary</u></b>				
State Safety Oversight	90-1401-39	Ongoing	Ongoing	Ongoing project.
Port of Baltimore Enhancements	92-1401-83	2018	2018	Initial dry basin filled. Railroad connection made. Some dredging to be completed. Final fill needed after fill settles.
<b><u>Maryland Transportation Authority</u></b>				
I-95: Moravia Road to Fort McHenry Tunnel	22-1601-41	2018	2018	This project is currently under construction and is expected to be completed this year.



**Table II-1: Status of Projects in the 2018-2021 TIP**

Year of Operation				
Project	Project TIP ID	18-21 TIP	19-22 TIP	Project Status
<b><u>Maryland Transportation Authority (continued)</u></b>				
I-95 Express Toll Lane Northbound Extension	25-1801-41	2022	2022	The proposed improvements will be constructed through 7 construction contracts. The first construction contract is scheduled to begin in January 2019. The last construction contract is scheduled to be completed by December 2022.
<b><u>MTA - Transit</u></b>				
Urban Transit Systems – Capital Assistance	40-1602-05	Ongoing	Ongoing	Project is ongoing and is on schedule
Bus and Paratransit Vehicle Overhaul and Replacement	40-1802-05	Ongoing	Ongoing	Project is ongoing
Small Urban Transit Systems – Capital Assistance	40-9502-05	Ongoing	Ongoing	Project is ongoing and is on schedule
Ridesharing - Baltimore Region	40-9901-01	Ongoing	Ongoing	Project is ongoing and is on schedule
Small Urban Transit Systems – Operating Assistance	40-0104-61	Ongoing	Ongoing	Project is ongoing and is on schedule
Kirk Bus Facility Replacement - Phase 1 & 2	40-1203-65	2019	2021	Project is anticipated to be completed by 2021
Bus and Rail Preventive Maintenance	40-1204-64	Ongoing	Ongoing	Project is ongoing and is on schedule
Seniors and Individuals with Disabilities	40-1502-69	Ongoing	Ongoing	Project is ongoing and is on schedule
Urban Transit Systems – Operating Assistance	40-1603-61	Ongoing	Ongoing	Project is ongoing and is on schedule
Agencywide System Preservation and Improvement	40-1801-64	Ongoing	Ongoing	Preservation project ongoing
Bus System Preservation and Improvement	40-1803-64	Ongoing	Ongoing	Project is ongoing
Metro and Light Rail Rolling Stock Overhauls and Replacement	40-1804-63	Ongoing	Ongoing	Project is ongoing
Metro and Light Rail System Preservation and Improvement	40-1805-64	Ongoing	Ongoing	Project is ongoing
Rural Transit Systems - Operating Assistance	40-9204-61	Ongoing	Ongoing	Project is ongoing and is on schedule
<b><u>MTA - Commuter Rail</u></b>				
MARC Rolling Stock Overhauls and Replacement	70-1501-53	Ongoing	Ongoing	Projects are ongoing
MARC Improvements	70-1502-54	Ongoing	Ongoing	Projects are ongoing
MARC Facilities	70-1503-55	2021	Ongoing	Projects are ongoing

**Table II-1: Status of Projects in the 2018-2021 TIP**

		Year of Operation		
Project	Project TIP ID	18-21 TIP	19-22 TIP	Project Status
<b><u>State Highway Administration</u></b>				
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
MD 175: Mapes and Reece Road Intersection Reconstructions	61-1402-39	2018	XX	Project is complete and is not requesting further funds
MD 175: MD 295 to MD 170	61-0605-41	2025	2025	Engineering and ROW continue for the segment between Mapes Road and MD 32
MD 198: MD 295 to MD 32	61-1403-41	2030	2030	Engineering continues
US 50: MD 70 to MD 2	61-1404-41	2019	2019	Construction to be completed FY18 (Calendar year 2019)
MD 175: Disney Road to Reece Road	61-1601-41	2020	2019	Construction continues with new open to traffic date of December 2019
MD 175: National Business Parkway to McCarron Court	61-1701-41	2021	2021	\$1 million added for revised plats. Utility relocation underway
I-695 at Cromwell Bridge Road – Drainage Improvement	63-1801-38	2020	2020	Engineering and ROW ongoing. Construction began in FY18
MD 140: Painters Mill Road to Owings Mills Boulevard – Phase 2	63-0802-41	2025	2025	Engineering continues
I-795: Dolfield Boulevard Interchange	63-0803-46	2026	2026	Engineering continues
MD 140: Garrison View Road to Painters Mill Road – Phase 1	63-1203-41	2019	2019	Utility relocation ongoing. Notice to Proceed delayed to March 2018.
I-695: MD 41 to MD 147 Auxiliary Lane and MD 147 Inner Loop Ramp Reconstruction	63-1206-41	2017	XX	Open to traffic August 2017. Project is not requesting further funds.
I-695: US 40 to MD 144	63-1601-41	2021	2021	Construction ongoing. 11/2017 admin mod shifted some funding to NHFP.
I-695 Bridge Replacements at Benson Ave and US 1	63-1602-43	2017	2018	Construction to be complete Spring 2018. 11/2017 admin mod to shifted some funds to NHFP
I-695: Bridge Replacement on Crosby Road	63-1702-43	2019	2019	Construction is ongoing

**Table II-1: Status of Projects in the 2018-2021 TIP**

Year of Operation				
Project	Project TIP ID	18-21 TIP	19-22 TIP	Project Status
<b>State Highway Administration (continued)</b>				
I-695: I-70 to MD 43	63-1802-41	2023	2023	Project planning began in FY 2018
MD 25: Bridge Replacement over Georges Run	63-1603-13	2016	XX	Project is complete and is not requesting further funds.
I-83: Bridge Replacement over Padonia Road	63-1701-13	2021	2021	Project advertised Feb 2018
MD 137: Bridge Replacement over I-83	63-1703-13	2018	2018	Construction underway
US 1: Bridge Replacement over CSX	63-1704-13	2019	2019	Construction expected to begin spring 2018
US 40: Bridge Replacements over Little & Big Gunpowder Falls	63-1706-13	2020	2020	Permitting has delayed construction to FY19. Funding changes were completed in an amendment to the FY 2018-2021 TIP in March 2018.
MD 45: Padonia Road to Wight Avenue	63-1707-11	2018	2019	Construction start estimated spring 2018.
MD 30 Business: North Woods Trail to CSX Railroad (Hampstead Community Safety & Enhancement)	64-1401-19	2020	2020	Construction underway
MD 86: Bridge Replacement over Gunpowder Falls	64-1701-13	2019	2019	Construction underway
MD 496: Bridge Replacement over Big Pipe Creek	64-1702-13	2018	2018	Construction underway
MD 22: Beards Hill Road Intersection Reconstruction	65-1205-41	2017	XX	Construction completed in FY18. Project is not requesting further funds.
US 40: MD 7 & MD 159 Intersection Reconstruction - Phase 2	65-1402-41	2019	2019	Utility coordination and construction ongoing
MD 22: Paradise Road Intersection Reconstruction	65-1403-41	2018	XX	Construction expected to be completed in FY 18. Project is not requesting further funds.
MD 24: South of Stirrup Run Culvert to Deer Creek Bridge, Section G	65-1601-12	TBD	TBD	Engineering ongoing.
I-95: Montgomery Road to I-895 Noise Barrier	66-1701-31	2018	XX	Project completed January 2018 and is not requesting further funds.
US 29: Seneca Drive to MD 175 – Phase 1B	66-1101-41	2017	XX	Project completed in 2017 and is not requesting further funds.
US 29: Middle Patuxent River to Seneca Drive – Phase 2	66-1406-41	2030	2030	Engineering continues
MD 32: MD 108 to Linden Church Road	66-1602-41	2020	2020	Construction underway. \$5 million increase in total cost due to unfavorable bid.
MD 32: Linden Church Road to I-70, Capacity & Safety Improvements	66-1703-41	2022	2021	Engineering and ROW underway. Construction will begin in FY19.
I-95: Active Traffic Management	66-1801-41	TBD	TBD	Engineering began in FY18.

## 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 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 2019-2022 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 2019-2022 Transportation Improvement Program and Amended Maximize2040*,

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 are based upon Round 9 cooperative socio-economic forecasts, which were endorsed by the BRTB on June 26, 2018. 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.

It should be noted that 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 improvements. 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<sub>x</sub> 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.

### III. PROGRAM DEVELOPMENT

#### A. Integration with Federal, State and Local Programs

The projects contained in the 2019-2022 TIP flow from *Maximize2040* 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 2019-2022 portions of their respective multi-year improvement programs.<sup>3</sup> 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 long-range transportation plan, 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.

---

<sup>3</sup>. 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:

- 1702 High Priority Projects
- Congestion Mitigation and Air Quality Improvement Program
- FTA Capital and Operating – Sections 5307, 5307 flexed from STBG, 5310, 5311, 5329, 5337, and 5339
- Highway Safety Improvement Program
- National Highway Freight Program
- National Highway Performance Program
- National Highway System Program
- Recreational Trails Program
- Surface Transportation Block Grant Program
- Transportation Alternatives Program
- Transportation Investment Generating Economic Recovery

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.<sup>4</sup> Inclusion of these projects in the TIP indicates endorsement by the BRTB for federal funding of the proposed project phase(s).

---

<sup>4</sup>. Endorsement of projects for planning/preliminary 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 2019, 2020, 2021, and 2022.

The projects are listed first by implementing agency - Baltimore City and the six counties in alphabetical order, the MDOT Office of the Secretary, and the three MDOT modal administrations, included as the Maryland Transportation Authority (MDTA), MTA – Transit, MTA – Commuter Rail, and the State Highway Administration (SHA). Projects to be implemented by SHA are broken down further by county in alphabetical order. While a portion of Queen Anne's County is now a part of the Baltimore urbanized area, there are no local or state projects for Queen Anne's County in the 2019-2022 TIP.

Within these groups, projects are listed by category in the following order: commuter rail, enhancement program, environmental/safety, emission reduction strategy, highway capacity, highway preservation, transit, ports and miscellaneous. The ERS category consists of the following types of projects: ridesharing, park-and-ride lots or garages, bicycle and pedestrian facilities, traffic engineering, fleet

improvement, system expansion and ITS. The preservation category consists of the following types of projects: road resurfacing/rehabilitation, road reconstruction, bridge repairs/deck replacement and bridge inspections. All new, relocated or widened roads and bridges or interchange reconstructions that increase capacity are considered highway capacity, not preservation. Each category of projects is further subdivided by funding source. A full project index is included at the end of the document.

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 (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 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

- 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

- 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

Wherever possible, local Capital Improvement Program (**CIP**) number or state Consolidated Transportation Program (**CTP**) page numbers are provided to assist in finding projects in their respective capital improvement or development programs. 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

**Funding Source** indicates the source of federal aid using the following symbols:

For Federal Highway Administration Funds:

1702	Section 1702 High Priority Project
CMAQ	Congestion Mitigation and Air Quality
HSIP	Highway Safety Improvement Program
NHFP	National Highway Freight Program
NHPP	National Highway Performance Program (National Highway System, Interstate Maintenance, Bridge (on-System))
NHS	National Highway System
RTP	Recreational Trails Program
STBG	Surface Transportation Block Grant Program
TAC	Transportation Alternatives (Transportation Enhancement, Safe Routes to School)
TIGER	Transportation Investment Generating Economic Recovery

For Federal Transit Administration Funds:

5307C	Section 5307 Urbanized Area Formula Program (funding for capital projects)
5307F	Section 5307 Flex (STBG funds flexed to Section 5307)
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 Nonurbanized 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)

**Year of Operation** indicates when the facility or service will be open to traffic or for public use. **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 CAAA. The **Physical Data** line, which pertains to road and bridge projects, indicates the project length in **Miles** and the present/future number of **Lanes**. Also included for road projects is an indication if the project is a **Highway Capacity Improvement** or if it 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.

As called for in 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.

New maps are based on the 2011 Highway Performance Monitoring System (HPMS) for purposes of identifying the non-NHS principal arterials for inclusion in the NHS. The maps include the non-NHS principal arterial coding from the State-submitted HPMS GIS Shape files. The updated NHS maps incorporate these additional principal arterials as well as any principal arterial functional reclassification adjustments that were reported by September 20, 2012.

For all projects, the adopted plan or program in which the project is contained is designated in the funding table on the second page of the project summary.

In the listing in Chapter VI, project costs are presented on the basis of the amount of federal funding expected to be requested during a particular year. All figures are in thousands

of dollars. The abbreviations in the **Phase** column stand for the following:

PP - Project Planning

PE - Preliminary Engineering

ROW - Right-of-way or property acquisition

CON - Construction

OTH – Other<sup>5</sup>

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, the local match is provided by the agency or jurisdiction under which the project is listed.

---

<sup>5</sup>. Other phase funds include (a) permits and inspection fees for roadway and bridge projects as well as local bridge inspection programs; (b) non-infrastructure funds for research and operations related projects; and (c) funds for MTA projects including items such as bus and rail preventive maintenance, section 5310 grants, ridesharing, and capital and operating funds for LOTS agencies. Approximately 95.5% of other phase funds in the 2019-2022 TIP are for MTA projects.