



BALTIMORE REGION TRANSPORTATION IMPROVEMENT PROGRAM 2017-2020



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

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.

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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 region¹ 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.

¹ 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 2017-2020.²

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 2017.

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,

² 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 2017-2020 TIP is approximately \$2.71 billion. Of that amount, \$1.87 billion will be provided by federal funding authorities, while the local and state matching funds are \$.84 billion.

Exhibit I-1: The Baltimore Region

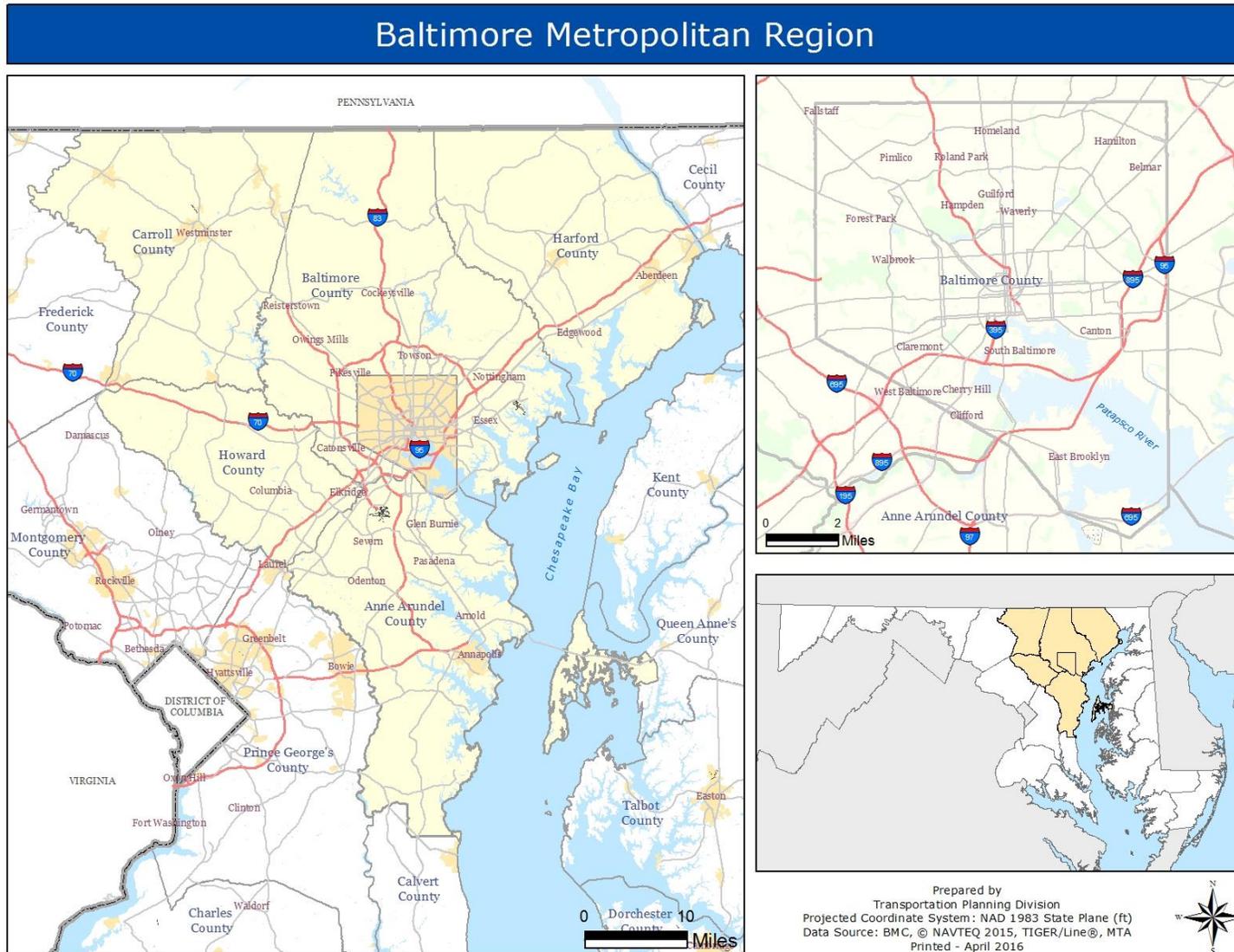


Exhibit I-2: The Baltimore Region Federal Highway Functional Classification

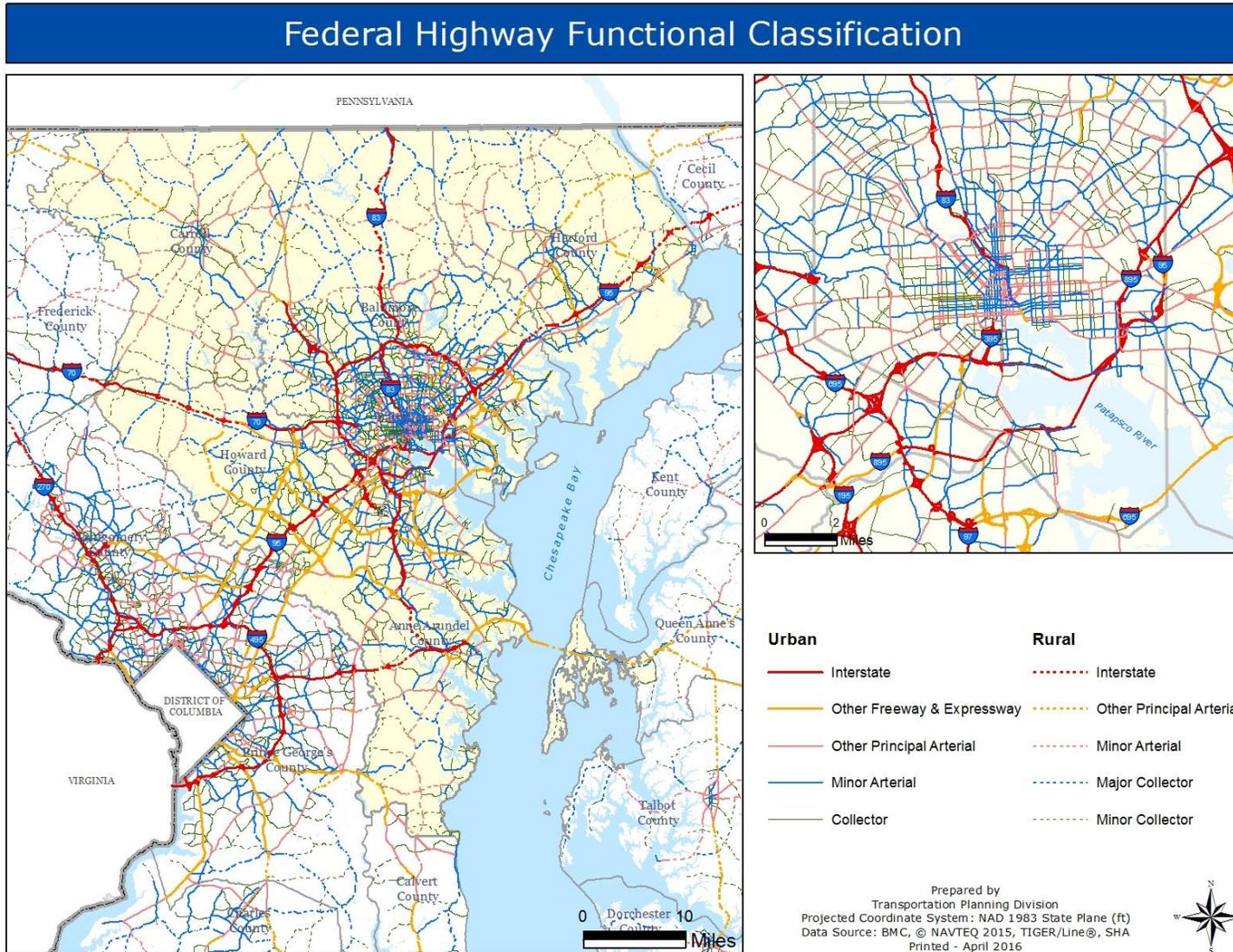
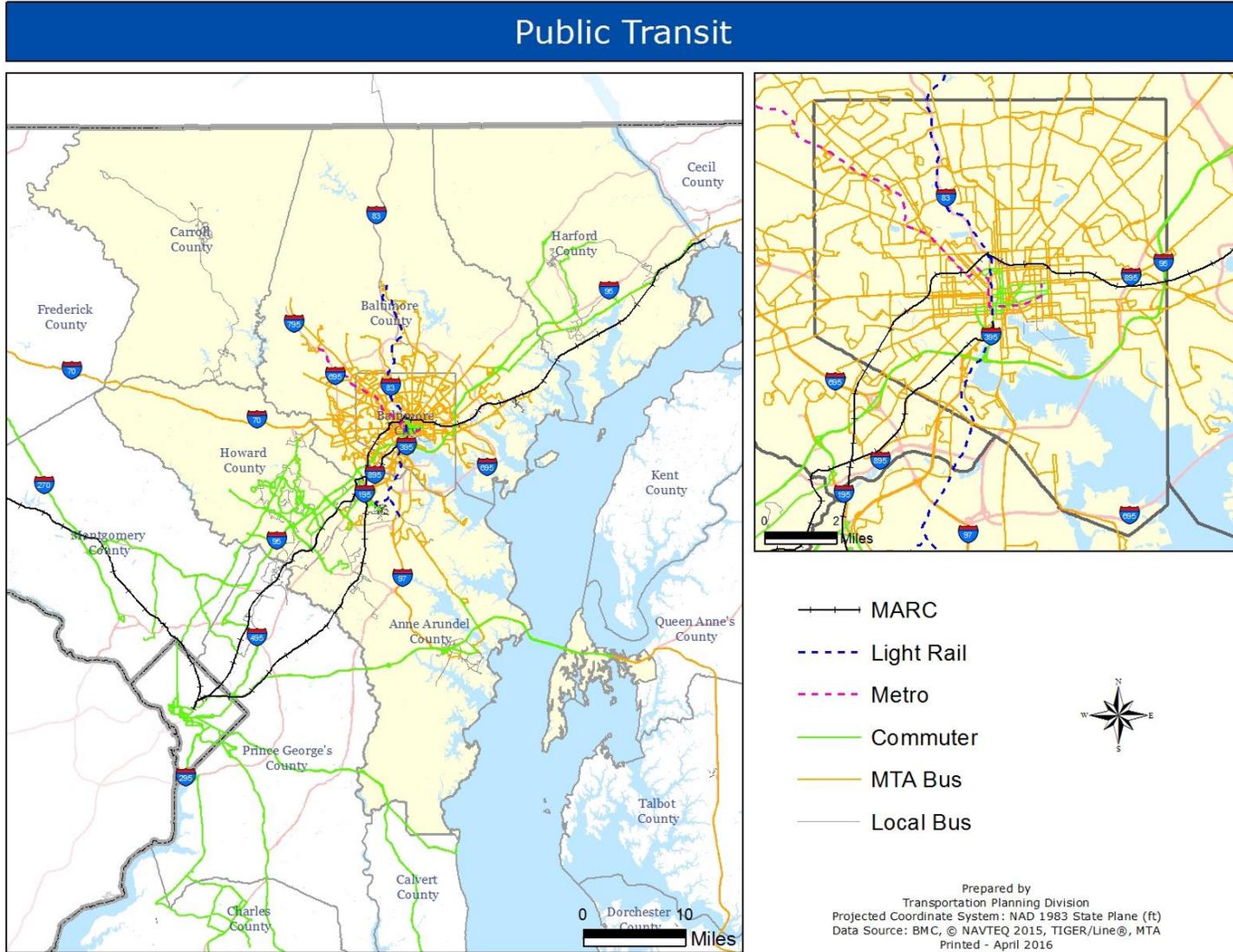


Exhibit I-3: The Baltimore Region – Transit



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 #17-6 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, fine particulate matter and carbon monoxide) of *Maximize2040* as amended and the 2017-2020 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 23.

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 April 2016). The factors that guided development of *Maximize2040* are listed in the Metropolitan Planning Regulations effective February 14, 2007.

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 multi-modal array of transportation

improvements are outlined in *Maximize2040* with the requisite funding scenario needed to support the program. Non-motorized transportation alternatives are included, as well as inter-modal 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 2017-2020 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 2017-2020 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 TIP 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 September 2014. 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 public participation process for the TIP also meets the FTA public participation requirements for the MTA's Program of Projects.

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 announced on the Internet via the Baltimore Metropolitan Council (BMC) website. Four public meetings were held for the public to comment on the draft TIP. In addition to these public meetings, the public was able to address the BRTB at its July 2016 meeting. 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 G.

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 way of the original peoples of the Far East, Southeast Asia, Indian subcontinent, or Pacific Islands; or
- Person having origins in way 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 2009-2013 American Community Survey (ACS) is used to calculate the regional information.

Minority Populations

From the 2009-2013 ACS, the region's minority population is 41% 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 41%.

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 2009-2013 ACS is \$69,367. 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 \$34,684, while a household at the 80% rate has a maximum income of \$55,494. 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

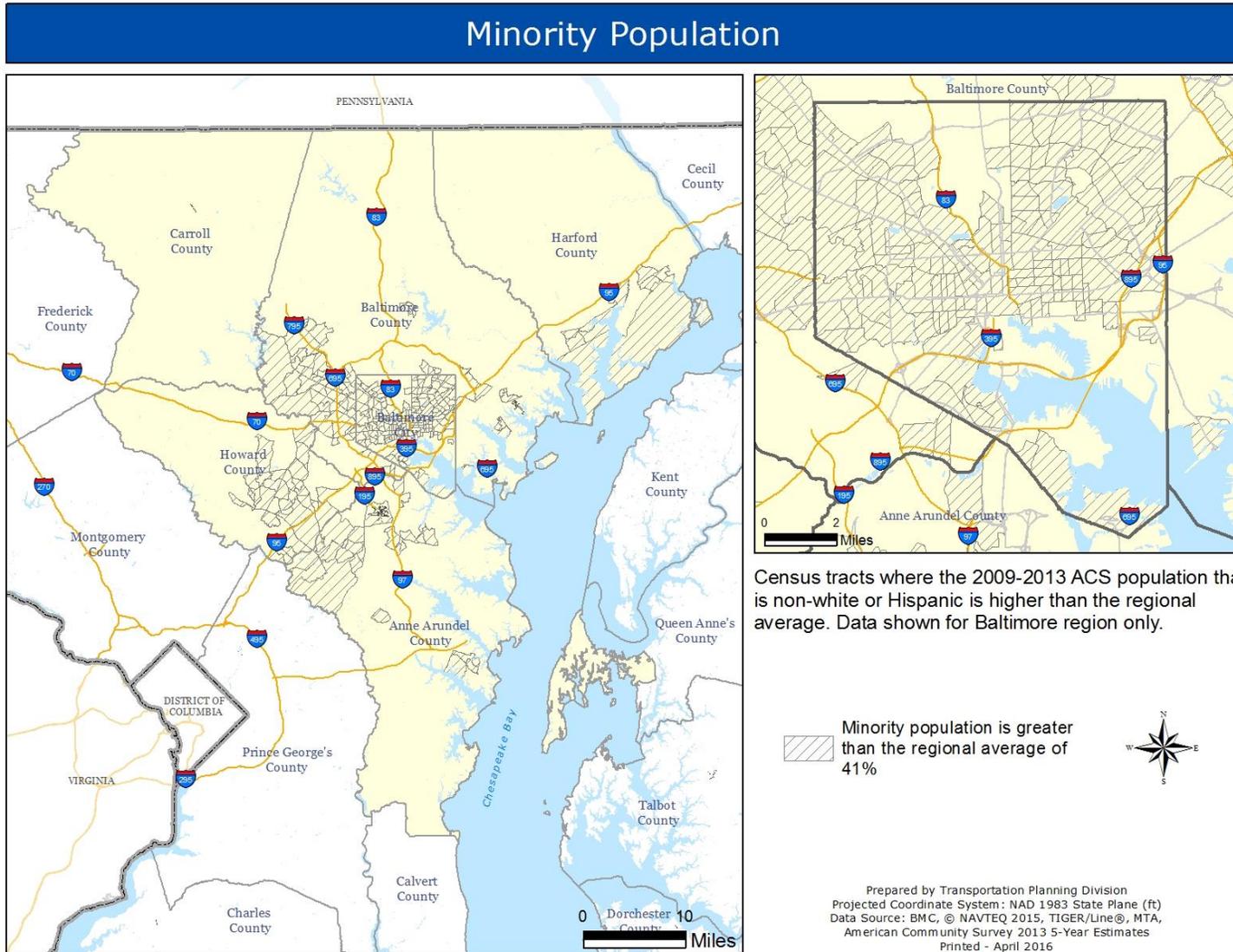
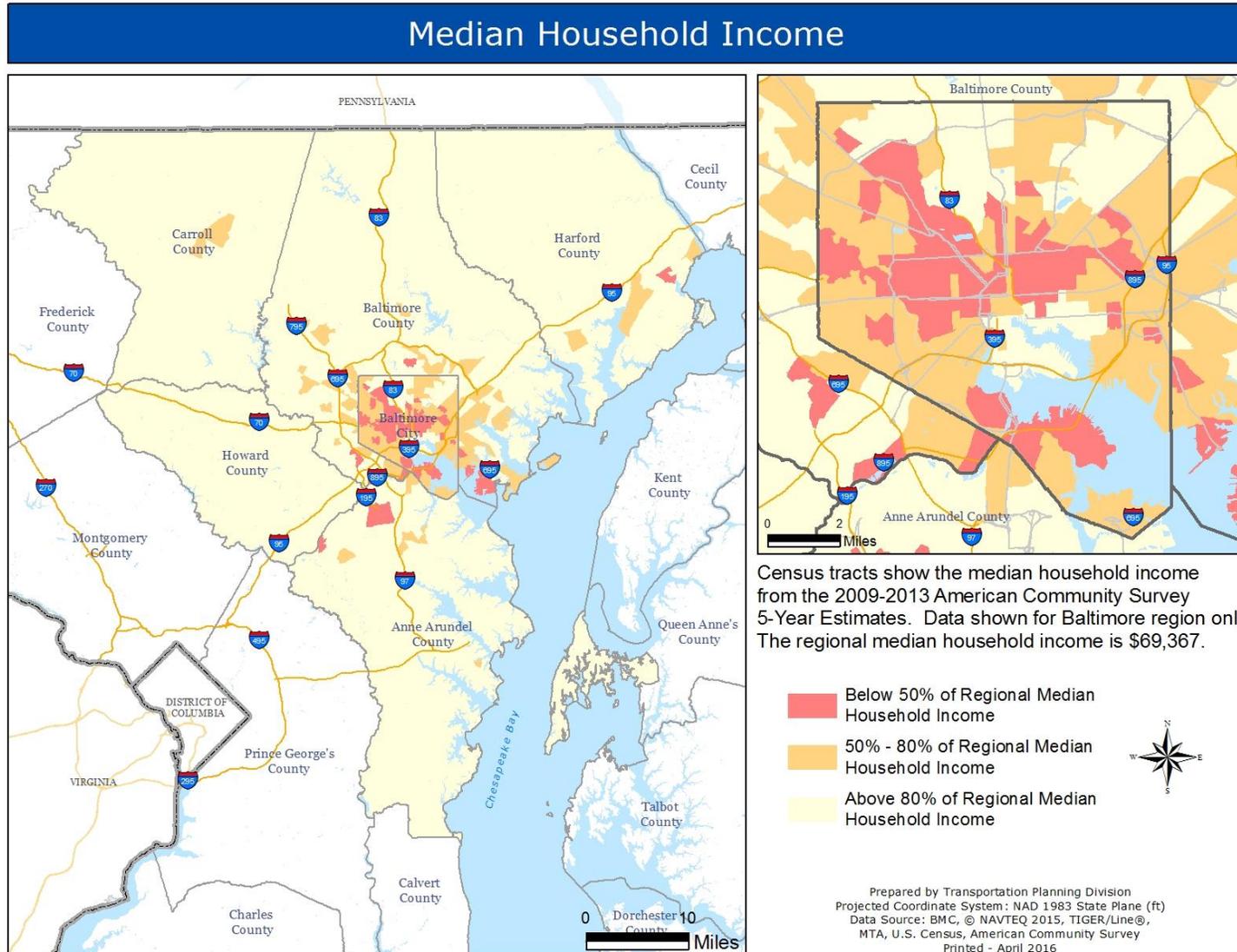


Exhibit II-2: Low Income Concentration, Baltimore Region



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. The MTA 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 a Mobility Program and Reduced Fare Program for the elderly and persons with disabilities. Mobility provides comparable ADA service for those who cannot use fixed-route 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 \$20.00 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 services, use primarily volunteer drivers, and have a dispatching system.

E. Status of Projects from the 2016-2019 TIP

As mandated by the federal regulations for metropolitan planning, major projects from the previous 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 by jurisdiction including the TIP number, year of operation 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 2016-2019 TIP

Project	Project TIP ID	Year of Operation		Project Status
		16-19 TIP	17-20 TIP	
Anne Arundel County				
Chesterfield Road Bridge over Bacon Ridge Branch	11-1101-13	2016	XX	1/2016 construction advertisement. Project is not requesting any more funds and is expected to be in operation in 2016.
Furnace Avenue Bridge over Deep Run	11-1103-13	2018	2018	In design.
Sands Road Bridge over Wilson Owens Branch	11-1203-13	2016	XX	In construction and expected to be in operation in 2016
Harwood Road Bridge over Stocketts Run	11-1208-13	2018	2019	In design. 6/2018 advertisement is planned.
Magothy Bridge Road Bridge over Magothy River	11-1402-13	2017	2018	In design. 9/2016 construction advertisement planned.
O'Connor Road Bridge over Deep Run	11-1403-13	2018	2020	2/2016 design notice to proceed. 3/2019 construction advertisement planned.
McKendree Road Culvert over Lyons Creek	11-1601-19	2020	2021	Initiating design. 12/2019 construction advertisement planned
Polling House Road Bridge over Rock Branch	11-1602-13	2021	2021	Funding to initiate design in FY18 and expected to be in operation in 2021.
Baltimore City				
Bayview MARC Intermodal Station	12-1413-56	2018	XX	Project on hold.
Citywide Bicycle and Pedestrian Improvements	12-1217-25	Ongoing	Ongoing	Various projects ongoing.
Inner Harbor Water Taxi Terminal	12-1612-23	2018	XX	Preliminary design stage. No further funding requests.
Citywide ADA Improvements	12-1417-39	Ongoing	XX	On hold until ADA self-evaluation survey is completed
Reconnecting West Baltimore	12-1122-03	2017	XX	Contract award stage. Project is not requesting further funds.
Citywide Traffic Safety and Intelligent Transportation System	12-1218-07	Ongoing	Ongoing	Ongoing. Name changed to Citywide Traffic Signals, Intelligent Transportation System and Safety Improvements
Boston St. Realignment and Reconstruction	12-1102-42	2016	XX	Project on hold.
Citywide Road Resurfacing - Federal Aid Program	12-0207-11	Ongoing	Ongoing	Project ongoing.
Citywide Bridge Preservation and Rehabilitation	12-1030-13	2016	XX	No further funding required. Project removed from TIP.
Key Highway and Light Street Roundabout	12-1123-12	2016	XX	Plans, specifications, and estimates stage. No further funds requested.
Waterview Ave/Annapolis Road Bridge Replacements	12-1202-13	2016	XX	Plans, specifications, and estimates stage. No further funds requested.
Park Circle Intersection Improvements	12-1204-12	2016	XX	Plans, specifications, and estimates stage. No further funds requested.

Table II-1: Status of Projects in the 2016-2019 TIP

Project	Project TIP ID	Year of Operation		Project Status
		16-19 TIP	17-20 TIP	
Baltimore City (continued)				
Central Avenue - Phase II	12-1205-12	2017	XX	Contract award stage. Project is not requesting further funds.
Perring Parkway Ramp and Hillen Road Bridge	12-1215-13	2021	2021	Preliminary design stage.
Sisson Street Bridge over CSX Railroad	12-1216-13	2017	2019	65% design stage
Midtown Streetscape/Traffic Improvements	12-1222-11	2016	2019	Plans, specifications, and estimates stage.
Citywide Guide Sign Replacement	12-1222-19	2016	Ongoing	Project ongoing
Harford Road Bridge over Herring Run	12-1402-13	2017	2020	95% design stage
Wilkens Avenue Bridge over Gwynns Falls	12-1403-13	2017	2019	60% design stage
Belair Road Complete Streets	12-1404-11	2020	2022	Proposal stage
Greenmount Avenue Reconstruction: 43rd Street to 29th Street	12-1408-12	2017	2019	65% design stage
I-83: Joint Repairs - Phase II	12-1411-13	2018	XX	Plans, specifications, and estimates stage. No further funds requested.
Citywide System Preservation	12-1414-11	Ongoing	Ongoing	Project ongoing.
Hanover Street Bridge Multimodal Corridor	12-1419-13	NA	NA	Initial planning underway
Orleans Street Viaduct Rehabilitation	12-1601-13	2019	2020	Proposal stage. Name changed to Orleans Street Bridge over I-83 and City Streets
Remington Avenue Bridge over Stony Run	12-1602-13	2018	2021	Preliminary design stage
Radecke Avenue over Moores Run	12-1603-13	2018	2021	Preliminary design initiation in FY17
I-83 Concrete Deck Mill and Resurface	12-1604-13	2018	2020	Preliminary design initiation in FY17
Moravia Road Ramp Bridge over Pulaski Highway	12-1605-13	2019	2022	Preliminary design initiation in FY17
Reconnecting Charles Street – Mt. Royal to Lanvale Street	12-1606-12	2018	XX	Project on hold pending further coordination with MTA
Citywide Road Reconstruction	12-1607-12	Ongoing	Ongoing	Ongoing
East Baltimore Development Inc. (EBDI) Road Reconstruction	12-1608-12	2017	XX	Funding received/approved with no additional requests. Project is moving forward. Anticipated year of operation is 2018.
SE Baltimore Freight Corridor: Colgate Creek Bridge Replacement	12-1609-13	2018	2020	Preliminary design stage.
SE Baltimore Freight Corridor: Keith and Holabird Avenue Improvements	12-1610-11	2018	2019	Preliminary design stage.
SE Baltimore Freight Corridor: Broening Highway Complete Streets	12-1611-09	2018	2019	Preliminary design stage.

Table II-1: Status of Projects in the 2016-2019 TIP

Project	Project TIP ID	Year of Operation		Project Status
		16-19 TIP	17-20 TIP	
Baltimore City (continued)				
Hawkins Point Bridge over CSX Railroad	12-9903-13	2017	2020	Plans, specifications, and estimates stage.
Baltimore City Locked Gate Interstate Access Point Approval (IAPA)	12-1201-99	2018	2018	Project to be completed
Baltimore County				
Rolling Road Widening - Phase I	13-1405-41	2018	2018	Construction to start in FY 2017.
Security Boulevard Extension	13-1406-42	2018	XX	Project on indefinite hold.
Dogwood Road Bridge No. B-0072 Over Dogwood Run	13-0001-13	2017	2018	Design nearly complete, 6/2017 construction advertisement date planned, project in ROW acquisition but delayed by issues involving MD DNR property & unknown property-owner parcel condemnation process.
Gwynnbrook Avenue Bridge No. B-0202 over Gwynns Falls	13-0411-13	2017	2018	Design complete, 2/2017 construction advertisement date planned, project in ROW acquisition but delayed by issues involving MD Dept. of Health & Mental Hygiene property.
Mohrs Lane Bridge No. B-0143 over CSX Railroad	13-0803-13	2018	2019	Project in final design phase, 11/2016 construction advertisement date planned but contingent on right of way clearance.
Gunpowder Road Bridge No. B-0409	13-1005-13	2019	2021	Design planned FY2019, construction FY2020. Project may be delayed due to other projects having higher priority.
Hammonds Ferry Road Bridge No. B-0100 over CSX Railroad	13-1012-13	2017	2019	Design underway, 11/2017 advertisement date planned. Project may be delayed due to other projects having higher priority.
Lansdowne Boulevard Bridge No. B-0113 over CSX Railroad	13-1105-13	2021	2024	Design planned FY2020, Construction FY2023.
Piney Grove Road Bridge No. B-0140 over CSX railroad	13-1107-13	2021	2023	Design planned FY2020, construction FY2022.
Peninsula Expressway Bridge No. B-0119 over CSX Railroad	13-1108-13	2020	2022	Design planned FY2018, construction FY2021. Project may be delayed due to other projects having higher priority.
Gores Mill Road Bridges No. B-0136, 0137, 0138, and 0346	13-1109-13	2018	2018	Construction shifted from FY 2016 to FY 2017 due to production and right of way delays. Anticipated 11/2016 advertisement date.
Old Ingleside Avenue Bridge No. B-0096 over Dead Run	13-1202-13	2020	2022	Design planned FY2018, construction FY2021.
Gorsuch Mill Road Bridge No. B-0071 over Blackrock Run	13-1203-13	2019	2019	Design planned FY2017, construction FY2020.

Table II-1: Status of Projects in the 2016-2019 TIP

Project	Project TIP ID	Year of Operation		Project Status
		16-19 TIP	17-20 TIP	
Baltimore County (continued)				
Old Court Road Bridge No. B-0237 over Bens Run	13-1204-13	2017	2018	Construction FY2017. Early 2017 advertisement date anticipated.
Sparks Road Bridge No. B-0018 over Gunpowder Falls	13-1206-13	2017	2019	Design planned FY2017, construction FY2018. Project may be delayed due to other projects having higher priority.
Golden Ring Road Bridge No. B-0110 over Stemmers Run	13-1208-13	2020	2023	Design planned FY2019, construction FY2023.
Rolling Road Bridge No. B-0358 over Branch of Dead Run	13-1209-13	2021	2021	Design planned FY2019, construction FY2020.
Ingleside Avenue Bridge No. B-0097 over Dead Run and Dogwood Road	13-1210-13	2020	2025	Design planned FY2018, construction FY2023. Name changed to correct road name – Forest Park Avenue N. Bridge No. B-0097.
Bridge Inspection Program	13-8901-14	Ongoing	Ongoing	Ongoing program
Carroll County				
Governor Brown Trail	14-1401-25	2017	XX	Design is underway. Project removed from TIP because it does not include federal funds.
Stone Chapel Road over Little Pipe Creek	14-1103-13	2019	2019	In the current (FY 2017-2020) TIP; preliminary engineering FY 2017
Countywide Bridge Maintenance, Repair, and Replacement	14-1402-13	Ongoing	Ongoing	In the current (FY 2017-2020) TIP
Babylon Road Bridge over Silver Run	14-1601-13	2018	2019	In the current (FY 2017-2020) TIP; construction FY 2018
Gaither Road Bridge over South Branch Patapsco River	14-1602-13	2021	2021	In the current (FY 2017-2020) TIP; preliminary engineering FY 2018
McKinstry's Mill Road Bridge over Sams Creek	14-1603-13	2018	2020	In the current (FY 2017-2020) TIP; preliminary engineering FY 2017
Bridge Inspection Program	14-9401-14	Ongoing	Ongoing	Ongoing
Harford County				
Bata Boulevard Access Road	15-1402-42	2020	2020	In the current TIP and expected to be constructed in FY20
Tollgate Road	15-1404-42	2018	2018	In the current TIP and expected to be in operation in FY 2018
Watervale Road Bridge # 63 over Winters Run	15-0404-13	2016	XX	Under construction. No further funds requested.
Pleasantville Road Bridge #67	15-0406-13	2016	2020	In the current TIP. Construction funding moved to FY20
Carrs Mill Road Bridge #216 over Bear Cabin Branch	15-0701-13	2017	2017	Project expected to advertise in July 2016 and to begin construction in fall 2016.

Table II-1: Status of Projects in the 2016-2019 TIP

Project	Project TIP ID	Year of Operation		Project Status
		16-19 TIP	17-20 TIP	
Harford County (continued)				
Abingdon Road Bridge #169 over CSX Railroad	15-1001-13	2018	2018	In the current TIP and expected to be in operation in FY 2018
Chestnut Hill Bridge #40	15-1101-13	2018	2018	In the current TIP and expected to be in operation in FY 2018
Phillips Mill Road Bridge #70 over an East Branch tributary	15-1102-13	2019	2019	In the current TIP and expected to be in operation in FY 2019
Prospect Road Bridge #217 over Deep Run	15-1104-13	2020	XX	The existing triple cell culvert will now be repaired with County funds. The project does not need to be in the TIP.
Robinson Mill Road Bridge #154 over Broad Creek	15-1401-13	2016	2017	In the current TIP and expected to be open in operation in 2017
Stafford Road Bridge #24 over Deer Creek	15-1501-13	2017	2017	In the current TIP and expected to be open to traffic in FY 2017
Glenville Road Bridge #30	15-1601-13	2019	2019	In the current TIP and expected to be open to traffic in FY19
Bridge Inspection Program	15-9411-14	Ongoing	Ongoing	Ongoing
Howard County				
Dorsey Run Road: MD 175 to CSX Railroad Spur	16-1403-41	2020	2021	Project currently under design. Project anticipated to be completed by FY21.
Guilford Road: US 1 to Dorsey Run Road	16-1405-41	2020	2020	Project design and land acquisition in process. Project anticipated to be completed by FY20.
MD 175 at Blandair Park	16-1407-46	2019	2020	Phase 1 construction started Spring 2015. Design in progress of Phase II. Project anticipated to be completed and closed out in FY20. Project name changed to MD 175 at Oakland Mills Rd Interchange.
Skylark Boulevard extended to MD 216	16-1409-42	2017	XX	Project on hold.
Snowden River Parkway: Broken Land Parkway to Oakland Mills Road	16-1410-41	2020	2020	Project will be phased. Study complete. Design in progress. Project anticipated to be completed in FY20.
Bridge Repairs and Deck Replacement	16-0436-13	Ongoing	Ongoing	In the current TIP - Bridge projects are being developed and implemented from year to year
MDOT – Office of the Secretary				
Susquehanna Bridges	95-1401-59	n/a	n/a	Preliminary engineering and environmental documentation activities are currently underway with an expected completion date of Summer 2017.
State Safety Oversight	90-1401-39	Ongoing	Ongoing	Ongoing project.

Table II-1: Status of Projects in the 2016-2019 TIP

Project	Project TIP ID	Year of Operation		Project Status
		16-19 TIP	17-20 TIP	
MDOT – Office of the Secretary (continued)				
Port of Baltimore Enhancements	92-1401-83	n/a	2018	This TIGER project has three portions: 1) Seagirt access channel has been widened (completed); 2) the contract to expand rail capacity to Fairfield is underway and will be completed by summer 2017; and 3) the contract to fill the basin has been awarded and new cargo storage will be operational by autumn 2018.
Baltimore and Potomac Tunnel	92-1101-99	n/a	n/a	Preliminary engineering and environmental documentation activities are currently underway with an expected completion date of Summer 2017.
MTA - Commuter Rail				
MARC Bayview Station	72-1202-56	2020	XX	Project is on hold.
MARC Rolling Stock Overhauls and Replacement	70-1501-53	Ongoing	Ongoing	Ongoing
MARC Improvements	70-1502-54	Ongoing	Ongoing	Ongoing
MARC Facilities	70-1503-55	Ongoing	2021	Estimated completion date 2021.
MTA - Transit				
MTA Core Bus and Paratransit Vehicle Replacement	40-1601-05	Ongoing	Ongoing	Ongoing
Urban Transit Systems – Capital	40-1602-05	Ongoing	Ongoing	Project is ongoing and is on schedule
Urban Transit Systems – Operating	40-1603-05	Ongoing	Ongoing	Project is ongoing and is on schedule
Small Urban Transit Systems – Capital	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
Bus & Rail System Preservation and Improvement	40-0015-64	Ongoing	Ongoing	Project is ongoing and is on schedule
Small Urban Transit Systems – Operating	40-0104-61	Ongoing	Ongoing	Project is ongoing and is on schedule
Baltimore Red Line	40-0602-69	n/a	XX	Project is being closed out.
Light Rail Mid-Life Overhaul	40-1001-64	2019	2019	Project is on schedule.
Kirk Bus Facility Replacement - Phase 1 & 2	40-1203-65	2018	2018	Project on schedule. Will be completed in 2018.
2017 Bus and Rail Preventive Maintenance	40-1204-64	Ongoing	Ongoing	Will appear as an ongoing project in the 2017 TIP. Project rolls over from year to year.
Bus New Main Shop	40-1401-66	2017	XX	Project to be completed August 2016
Metro Railcar and Signaling Systems Replacement	40-1403-64	2022	2022	On schedule
Seniors and Individuals with Disabilities	40-1502-69	Ongoing	Ongoing	Project is ongoing

Table II-1: Status of Projects in the 2016-2019 TIP

Project	Project TIP ID	Year of Operation		Project Status
		16-19 TIP	17-20 TIP	
MTA – Transit (continued)				
Rural Transit Systems - Operating Assistance	40-9204-61	Ongoing	Ongoing	Project is ongoing and is on schedule
State Highway Administration				
MD 175: Mapes and Reece Road Intersection Reconstructions	61-1402-39	2017	2018	Construction is ongoing
MD 175: MD 295 to MD 170	61-0605-41	2020	2025	Preliminary engineering underway for Phases I & II; Phase II construction starts in FY 2017.
MD 198: MD 295 to MD 32	61-1403-41	2020	2030	Preliminary engineering for Phase I is underway
US 50: MD 70 to MD 2	61-1404-41	NA	2019	Preliminary engineering is underway for bridge improvements; new state construction funding added in FY18 and FY19.
MD 175: Disney Road to Reece Road	61-1601-41	2020	2020	Construction starts in Summer 2016.
MD 295: I-895 to North of Daisy Avenue - Noise Wall	63-1405-31	2017	2017	Construction is ongoing.
I-695: Low-Cost Operational and Safety Improvements Study	63-1204-04	NA	NA	Operational studies are ongoing.
I-695: I-95 to MD 122 (Southwest Beltway)	63-0602-41	2018	2025	Project planning on hold; Projects funded for construction are broken out and have their own TIP ID numbers.
MD 140: Garrison View Road to North of Owings Mills Boulevard (Phase 2)	63-0802-41	2020	2025	Preliminary engineering is ongoing.
I-795: Dolfield Boulevard Interchange	63-0803-46	2026	2026	Preliminary engineering is ongoing.
MD 140: Garrison View Road to Painters Mill Road – Phase 1	63-1203-41	2017	2021	New construction funding added (\$5.2M); Construction starts in FY 2017
I-695: Bridge Over Milford Mill Road Reconstruction	63-1205-43	2016	XX	Construction to be completed in FY 2016.
I-695: MD 41 to MD 147 Auxiliary Lane and MD 147 Inner Loop Ramp Reconstruction	63-1206-41	2018	2017	Construction to be completed in FY 2017.
I-695: US 40 to MD 144	63-1601-41	2018	2021	Construction is ongoing.
I-695 Bridge Replacements at Benson Ave and US 1	63-1602-43	2017	2017	Construction and right-of-way acquisition are ongoing.
MD 25: Bridge Replacement over Georges Run	63-1603-13	2016	2016	Construction is ongoing. Bridge reopened to traffic January 2016.
MD 30 Business: North Woods Trail to CSX Railroad (Hampstead Community Safety & Enhancement)	64-1401-19	2019	2019	Construction starts in FY 2017; State construction funding.

Table II-1: Status of Projects in the 2016-2019 TIP

Project	Project TIP ID	Year of Operation		Project Status
		16-19 TIP	17-20 TIP	
State Highway Administration (continued)				
MD 22: Beards Hill Road Intersection Reconstruction	65-1205-41	2016	2017	Construction to be completed in FY 2017
US 40: MD 7 & MD 159 Intersection Reconstruction - Phase 2	65-1402-41	2019	2019	Construction and right-of-way acquisition are ongoing.
MD 22: Paradise Road Intersection Reconstruction	65-1403-41	2017	2017	Construction and right-of-way acquisition are ongoing.
MD 22: Old Post Road Intersection Reconstruction	65-1202-12	2016	2016	Construction is complete; Right-of-way acquisition continues through FY 2017.
US 40: MD 7 & MD 159 Intersection Reconstruction - Phase 1	65-1401-12	2014	XX	Project will be complete in FY 2016.
MD 24: South of Stirrup Run Culvert to Deer Creek Bridge, Section G	65-1601-12	TBD	TBD	Preliminary engineering is ongoing.
I-95: Welcome Center Truck Parking Lot Expansion	66-1203-04	2014	XX	Construction was completed in Fall of 2015.
US 29: Seneca Drive to MD 175 – Phase 1B	66-1101-41	2017	2017	Construction to be completed in FY 2017.
MD 32: MD 108 to I-70	66-1405-41	2024	XX	Project planning is complete; All identified improvements now have their own TIP ID number.
US 29: Middle Patuxent River to Seneca Drive – Phase 2	66-1406-41	2025	2030	Preliminary engineering is ongoing.
US 29: Seneca Drive to MD 175 – Phase 1A, Old Columbia Road Access Only	66-1601-42	2015	2015	Construction is complete; Right-of-way acquisition continues through FY 2018.
MD 32: MD 108 to Linden Church Road	66-1602-41	2020	2020	Project amended into 2016-2019 TIP; Preliminary engineering is underway; Construction starts in Spring 2017.
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

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), and is in a "maintenance" phase for the annual fine particulate matter NAAQS. The BRTB has conducted a comprehensive analysis of conformity for the 2017-2020 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 2017-2020 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 8-A cooperative socio-economic forecasts, which were endorsed on June 24, 2014. 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_x and VOC, and tons per year of PM_{2.5} and the PM_{2.5} precursor NO_x, 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 2017-2020 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 2017-2020 portions of their respective multi-year improvement programs.³ 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.

³. 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 Project
- Congestion Mitigation and Air Quality Improvement Program
- FTA Capital and Operating – Sections 5307, 5307(h), 5310, 5311, 5329, 5337, and 5339
- Highway Safety Improvement Program
- High-Speed Intercity Passenger Rail Program
- National Highway Performance Program
- National Highway System Program
- Recreational Trails Program
- Surface Transportation 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.⁴ Inclusion of these projects in the TIP indicates endorsement by the BRTB for federal funding of the proposed project phase(s).

⁴. 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 2017, 2018, 2019, and 2020.

The projects are listed first by implementing agency - Baltimore City and the six counties in alphabetical order, the Office of the Secretary, and the two MDOT modal administrations, included as MTA - Commuter Rail, MTA - Transit, 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 2017-2020 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 Reference Number) 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 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
HSIPR	High-Speed Intercity Passenger Rail
NHPP	National Highway Performance Program (National Highway System, Interstate Maintenance, Bridge (on-System))
NHS	National Highway System
RTP	Recreational Trails Program
STPC	Surface Transportation Program (Surface Transportation, Bridge (Off-System))
TAC	Transportation Alternatives (Transportation Enhancement, Safe Routes to School)
TIGER	Transportation Investment Generating Economic Recovery
Other	Other

For 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)
5307(h)	Section 5307(h) Passenger Ferry Grant Discretionary Program
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 161,000 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 previously received or 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 – Other⁵

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.

⁵ Other phase funds include (a) permits and inspection fees for 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, vehicle replacement, ridesharing, and capital and operating funds for LOTS agencies. Approximately 98% of other phase funds in the 2017-2020 TIP are for MTA projects.