



2020-2025

FEDERAL FISCAL YEARS

**Statewide
Transportation
Improvement
Program**

September 2019

FINAL

Jim Justice

GOVERNOR

Byrd E. White, III

SECRETARY OF TRANSPORTATION/
COMMISSIONER OF HIGHWAYS

Jimmy Wriston, P.E.

DEPUTY SECRETARY/
DEPUTY COMMISSIONER

The West Virginia Department of Transportation

IN COOPERATION WITH THE
Federal Highway Administration

AND THE
Federal Transit Administration



State of West Virginia
Department of Transportation



U.S. Department of Transportation
Federal Transit Administration

West Virginia
Statewide Transportation Improvement Program

TABLE OF CONTENTS

1.	Introduction-----	1
2.	West Virginia Department of Transportation-----	5
2.1	Division of Highways-----	6
2.2	Division of Public Transit-----	6
3.	Financial Resources-State Road Funds-----	9
3.1	State Road Fund-State Revenue-----	10
3.2	State Revenue Projections-----	14
3.3	State Road Fund – Federal-Aid Reimbursement-----	20
4.	Financial Goals and Policies-----	23
4.1	Debt Service-----	24
4.2	Operating Expenses-----	28
4.3	Routine Maintenance-----	28
4.4	Other Goals and Policies-----	30
5.	Performance Based Planning Requirements-----	31
5.1	Performance Measures and Target-----	33
6.	Federal STIP Funding-----	38
7.	Cash Flow-----	71
7.1	General-----	71
7.2	Development-----	73
8.	The Six-Year STIP-----	76
8.1	STIP Development-----	76
8.2	STIP Amendments/Administrative Adjustments-----	77
8.3	Guidance-----	79
8.4	How to “Read” the STIP-----	80
9.	Financial Tables and Information-----	86
10.	Public Involvement-----	94
11.	Planning Findings-----	96

West Virginia 2016-2021 STIP

APPENDICES

A.	WVDOH Federal Project Listings-----	A-1
B.	WVDOH Federal Project Maps-----	B-1
C.	Non-Federal Aid Project Listings (State Funded Projects) -----	C-1
D.	WVDOH Non-Federal Aid Project Maps (State Funded Projects) -----	D-1
E.	Eight Core Programs of the Federal STIP and 2016 Federal Program Charts -----	E-1
F.	Division of Public Transit Project Listing -----	F-1
G.	Federal Lands Project Listing -----	G-1
H.	WVDOT Organizational Charts and List of Contacts -----	H-1

West Virginia 2020-2025 STIP

1. INTRODUCTION

The need for an effective local, regional and national transportation network touches every citizen of West Virginia and the United States. Virtually every aspect of daily life depends on adequate roadways and other modes of transportation. Whether it is for transporting our children to school, getting us to work, or bringing goods to our stores from across the country or around the globe, an adequate transportation network enables individuals to experience a higher quality of life by improving access to social, economic, educational and recreational opportunities. Since the need and desire for safe and efficient transportation is so universal, citizens, businesses, and elected representatives alike are concerned with the details of transportation maintenance, improvement, and construction activities. In recognition of the impact that the transportation network has on our Nation, the federal government requires each state to prepare a Long-Range Statewide Transportation Plan. The purpose of these statewide long-range (i.e. at least 20 year) plans is for each state to outline the strategies for how it intends to preserve and enhance the transportation infrastructure for the traveling public with the resources that can reasonably be anticipated to be available for those purposes.

Long-term goals and policies for the WVDOT currently reside in West Virginia's Multi-Modal Statewide Transportation Plan for 2010-2034, which discusses in broad terms the long-range goals and objectives of its member agencies, of which the West Virginia Division of Highways (WVDOH) is a part. The current plan, which can be viewed at www.transportation.wv.gov, not only met federal requirements in place at the time, but also made the plan more project specific than prior documents by incorporating a tool for calculating a preliminary benefit/cost ratio on larger projects. This tool, in conjunction with other data, can be used to help prioritize larger projects, which must compete for scarce resources. The prioritization tool allows both existing unfunded projects and future proposals to be monitored and adjusted to meet the needs of the citizens of West Virginia.

The State's long-range transportation plan is by necessity both multi-modal in nature to reflect the interconnectivity and interdependence of the various modes of transportation used for getting people, goods and services from point A to point B, but is also intended to be a strategic document. The plan also serves as a blueprint of what the State desires to achieve during the planning horizon (i.e. currently 2034) and is not intended to specifically identify what needs to be done by the State and or other entities to meet those goals. For example, the long-range plan identifies the goal of "Preserve past investment by maintaining the existing system" but does not and could not realistically identify all construction projects across all modes over a twenty-plus year period that would be needed to achieve that goal. Achieving the goals and objectives of the long-range plan is complicated by the fact that private not public entities are responsible for some infrastructure like railroads and shipping terminals and as such states cannot force these private entities to

West Virginia 2020-2025 STIP

construct facilities or locate in a specific area. These outcomes are further complicated by the fact that even where modes are controlled primarily by public entities (airports, highways, mass transit, etc...) funding at the federal, state and local level for investing in these facilities is typically mode specific and each funding source has rules and regulations governing how those funds can be utilized. This remainder of this Statewide Transportation Improvement Plan (STIP) document focuses on the funding and requirements associated with highways and public transit.

In order to ensure that states are working on near-term highway and transit initiatives that will produce the desired strategic outcomes reflected in their long-range statewide plans, states are also federally required to develop a four-year program of federally funded projects that reflect what projects the state intends to implement during the four-year period with the funds that are anticipated to be available for those purposes. The four-year document is called the STIP.

In West Virginia, unlike the majority of states, State government rather than county or local government, has ownership and responsibility for virtually all public highways. With this in mind, it is important that the West Virginia Department of Transportation (WVDOT) and specifically the West Virginia Division of Highways (WVDOH) and West Virginia Division of Public Transit (WVPT) clearly outlines the tasks and improvements that can realistically be funded in the near future with not only federal funds, but also State funds. As a result, for a brief period the WVDOH produced a six-year planning document referred to as the Six-Year Plan. This document outlined both State and federally funded highway projects that the WVDOH anticipated implementing during the period. Due to the documents overlap with the federally required STIP and timing issues surrounding the updates of both documents, it generated considerable confusion. As such, it was determined that a more prudent course of action would be to merge the two documents. As an initial step in merging the two documents, in January 2008, the Agency produced the first Six-Year STIP covering FFY 2008-2013, providing the outer two years for information only.

In November 2008 the merger process culminated when the 2009-2014 STIP was approved. This was the first official document issued by the WVDOT, which included a listing of federal-aid projects along with a listing of projects to be funded solely with State monies. The first four years of the program served as the State's official STIP and the remaining two years were provided for informational purposes only. The development, adjustment and or amendments to the federally funded portion of the document follow the required federal procedures and regulations associated with the STIP. The State funded projects identified in the document do not however follow the same federal requirements for public involvement and fiscal constraint. The State funded projects are by necessity much more fluid than federal projects. They are typically smaller in size, scope and cost than federal counterparts and are frequently done by State employees or through the use of purchase order contracts rather than full contract. Many of these projects are located on facilities of lower functional classification and not eligible for federal-aid funds. State funded project lists

West Virginia 2020-2025 STIP

are only formally updated when a new six-year STIP is developed. However, the listing of State funded projects is revised monthly and circulated internally and available to the public upon request. The currently approved STIP document covers FFY 2016-2021, with the last two years (i.e. FFY 2020 and 2021) being for illustrative purposes only. While the STIP is only federally required to be updated once every four years, the WVDOT has routinely updated the document more frequently to revise and maintain a six-year planning horizon. However, for this update, which is being developed to cover FFY 2020-2025, the WVDOT has opted to wait until the required four-year cycle before resubmitting this document to the Federal Highway Administration (FHWA), Federal Transit Administration (FTA) and the public. It is anticipated that future updates of the STIP will be submitted on a biennial basis.

The STIP is not a static document and continues to evolve over time in an effort to keep the public informed and engaged in the Transportation Planning and Programming process. Enhancements have been and will continue to be implemented to keep the document relevant and compliant with ever changing federal requirements.

The 2010-2015 STIP and all subsequent STIP documents have each provided a section outlining the efforts that were made to improve the management and reporting of the program. The STIP was organized so that all programmed projects would fall within one of the eight designated core programs. The goal was to better manage assets to meet the program's needs and with less emphasis on the type of funding used. Furthermore, the types of investments and the amount of funding directed to each of the sub-programs can be compared to targets contained in the State's long-range plan.

The timing of federal legislation and the actions mandated by them will by necessity have a significant impact on the work conducted on the transportation network and the content of required documents, such as the STIP. As an example, the implementation of Public Law 112-141, the Moving Ahead for Progress in the 21st Century (MAP-21) Act, which was enacted on July 6, 2012, made significant changes to the programs through which transportation projects were funded. Although project eligibility generally remained unchanged, the number of highway programs was reduced in an attempt to give states more flexibility to deal with their specific issues. As a result, the WVDOT had to transition its STIP away from SAFETEA-LU funding programs to MAP-21 programs. Subsequently, while the WVDOT was in the midst of updating its current FFY 2016-2021 STIP, which was approved jointly by FHWA and FTA on April 22, 2016, a new multi-year transportation bill was approved. Public Law 114-94, the Fixing America's Surface Transportation (FAST) Act, was enacted on December 4, 2015. In transportation circles, the abbreviations of FAST Act and simply FAST are used interchangeably. Fortunately, the FAST Act, which covers FFY 2016-2021, built upon the foundations of MAP-21 leaving many of the prior Act's programs

West Virginia 2020-2025 STIP

and performance based requirements intact. As such, the WVDOT was able to proceed with, and gain approval of their current STIP.

Although now somewhat dated, another example of how outside factors can impact the WVDOT's transportation program was the designation of the Huntington, WV-KY-OH metropolitan statistical area as a Transportation Management Area (TMA). On July 18, 2012, the U.S. DOT, FTA and FHWA announced that all urbanized areas with populations greater than 200,000, as determined by the 2010 Census, are designated as TMAs. As a result of this announcement, a new urbanized area that is generally centered on Huntington, West Virginia was identified during the 2010 Census with a population of 202,637 and was listed as a TMA. The new TMA not only comprises portions of Cabell, Wayne and Putnam counties in West Virginia, but also extends across state lines into Kentucky and Ohio.

Prior to the 2010 Census, the areas that comprised the new TMA already met lower urbanized thresholds (50,000) that necessitated a host of additional planning requirements in order to be eligible for federal-aid funds. Those functions are performed in part by Metropolitan Planning Organizations (MPOs). Within West Virginia, the new TMA covers areas within the planning boundaries of two MPOs, which are the KYOVA Interstate Planning Commission (KYOVA), which serves Cabell and Wayne counties in West Virginia (in addition to Boyd and Greenup counties in Kentucky and Lawrence County in Ohio) and the Regional Intergovernmental Council (RIC) Metropolitan Planning Organization, which serves Kanawha and Putnam Counties. Funding requirements associated with TMAs necessitated that West Virginia's 2013-2018 STIP and subsequent STIP documents be changed to reflect the sub-allocation of federal funds required for TMAs. Since portions of both the KYOVA and RIC planning areas have been designated as a TMA, a small part of the federal-aid highway funds apportioned to West Virginia are sub-allocated for use solely within the TMA.

The Six-Year STIP includes a wide variety of projects including roadway, bridge, bicycle, pedestrian, safety and public transportation (transit) projects. While the primary concern of this document is federally funded projects, Regionally Significant State funded projects are also listed. A significant departure from prior STIPs, in the FFY 2020-2025 STIP, is West Virginia's intent to avail itself of the ability to "group" some projects for financial constraint and administrative purposes rather than listing all projects individually. Most highway projects are typically defined by three phases of activity, such as ENG (Design), ROW (Right of Way) and CON (Construction). Each phase of a standalone project is shown in its respective year of anticipated authorization. The federally funded portion of the STIP is fiscally balanced (or constrained to include projects for which there is committed funding available) and includes project phases that have a reasonable expectation of being ready for implementation by the year listed. Grouping allows for certain projects that meet specific criteria to be combined and represented as line items in the STIP. The

West Virginia 2020-2025 STIP

primary purpose of grouping is to avoid delays in project implementation by providing flexibility and limiting the administrative actions required on lower cost projects that will have negligible environmental impacts. All information relating to the individual projects that comprise the group as they are determined are still maintained and available for public review. A more detailed discussion of how the WVDOT intends to implement “grouping” into the STIP will be presented later in this document.

Projects are subject to many considerations and actions from conception to completion that may impede or accelerate their progress. These considerations may include policy decisions; changes in design requirements; conflicts with other scheduled activities; unforeseen circumstances such as cutbacks in funding; shortage of manpower; or inflation of project costs. Project cost estimates are based on best available engineering estimates at the time the STIP is developed. As required by MAP-21 and FAST, the projects are shown in anticipated year of expenditure dollars; however, final cost for the actual projects may differ as the projects are refined in the project development process prior to construction. When a project is adversely affected by any of the abovementioned factors, the projected fiscal year dates and/or costs will be adjusted accordingly.

Given the complexity of the STIP document and its emphasis on financial constraint a description of how the WVDOT is organized and how it obtains and is required to direct its financial resources is warranted and in reality, necessary for the public to provide meaningful input into the transportation planning and programming process.

2. WEST VIRGINIA DEPARTMENT OF TRANSPORTATION

Comprised of more than 6,000 employees, the West Virginia Department of Transportation (WVDOT) provides essential services in transportation, tourism and economic development. These services provide for the safety and protection for the citizens of West Virginia, as well as the traveling public, through a modern highway, rail and airport system.

The WVDOT consists of the following agencies:

- Aeronautics
- Highways
- Motor Vehicles
- Office of Administrative hearings
- Parkways
- Public Port Authority
- Public Transit
- State Rail Authority

West Virginia 2020-2025 STIP

2.1 DIVISION OF HIGHWAYS

The West Virginia Division of Highways (WVDOH) is responsible for the planning, engineering, right-of-way acquisition, construction and maintenance of more than 34,000 miles of State maintained roads. Being only one of four states, including Virginia, Delaware and North Carolina, West Virginia owns virtually all of the roadways within the State and does not split roadway jurisdiction with a county or a township system. This equates to 89% of the public roads being the responsibility of the WVDOH with the remaining 11% being owned by a municipality, a federal agency or the West Virginia Parkways Authority. Additional responsibilities include highway research, outdoor advertising, roadside development, safety, bridge inspection and dissemination of highway related information. These responsibilities are administered by the several divisions situated within the central headquarters (such as Engineering Division, Right-of-Way Division, Traffic Engineering Division, Maintenance Division, etc.) and by the ten districts located throughout the State. The districts and their respective counties are as follows:

- District 1: Boone, Clay, Kanawha, Mason, Putnam
- District 2: Cabell, Lincoln, Logan, Mingo, Wayne
- District 3: Calhoun, Jackson, Pleasants, Ritchie, Roane, Wirt, Wood
- District 4: Doddridge, Harrison, Marion, Monongalia, Preston, Taylor
- District 5: Berkeley, Grant, Hampshire, Hardy, Jefferson, Mineral, Morgan
- District 6: Brooke, Hancock, Marshall, Ohio, Tyler, Wetzel
- District 7: Barbour, Braxton, Gilmer, Lewis, Upshur, Webster
- District 8: Pendleton, Pocahontas, Randolph, Tucker
- District 9: Fayette, Greenbrier, Monroe, Nicholas, Summers
- District 10: McDowell, Mercer, Raleigh, Wyoming

2.2 DIVISION OF PUBLIC TRANSIT

The Division of Public Transit fosters the development of public transportation services in the State and administers federal and state transit programs by being the designated State organization for the receipt of Federal Transit Administration (FTA) funding.

The Division assists public transportation providers, not by actually operating buses and vans, but by keeping local systems safe, efficient and effective through financial support, technical and administrative assistance, statewide marketing and training. The Division ensures that all Federal Transit Administration grant requirements are met by the Division and its subrecipients. The Division is also the state safety oversight agency (SSOA) responsible for

West Virginia 2020-2025 STIP

overseeing the safety of the Morgantown Personal Rapid Transit (MPRT) system operated by West Virginia University.

Some of the numerous services that WVDPT provides include:

- Distribution of operating and capital assistance to small urban and rural transit systems to help cover cost of essential public transportation services and miscellaneous equipment,
- Serving as a central procurement source for vehicles and communication equipment for The Section 5310 and 5311 providers (transit authorities and private non-profit agencies),
- Providing planning and technical assistance, either directly or through contractors, to enhance the safety, efficiency and effectiveness of transportation services in the State,
- Providing driver training on the safe and proper ways to transport the elderly and disabled, as well as provide access to supervisory training, defensive driving, mechanics training and many other topics,
- Documenting and promoting the benefits of public transportation for both users and nonusers,
- Provides information and guidance on responsible funding levels to support the development and enhancement of public transportation facilities and services.
- Ensures compliance with numerous federal requirements attached to Federal Transit Administration funding.

The WVDPT administers four FTA programs for the State of West Virginia. They are:

- Section 5304 (Statewide Transportation Planning Program)
- Section 5310 (Enhanced Mobility of Seniors and Individuals with Disabilities)
- Section 5311 (Rural Area Formula Program)
- Section 5339 (Bus and Bus Facilities)

Two other FTA programs are included in the STIP, the Section 5307 (Urbanized Area Formula Grants), utilized by transit organizations situated within the eight metropolitan areas of the State, and the Section 5337 State of Good Repair Grants utilized by West Virginia University for the Personal Rapid Transit facility. Both of these organizations are direct FTA recipients; this funding is not administered by the Division.

The FAST Act, took effect in FFY2016 and provides funding through FFY2020. The FAST Act continued many trends first initiated in the Moving Ahead for Progress in the 21st Century Act, or MAP-21 such as safety, transit asset management and discretionary federal programs

West Virginia 2020-2025 STIP

for asset replacement. Overall, the FAST Act provided much needed additional funding for transit; but, given the state of good repair of the national transit fleet, funding is short of what is needed to replace rapidly aging vehicles.

The outlook for transit in the post-FAST Act environment is dependent on the evolution of several issues. Over the next 18 months, the need for action on making the Highway Trust Fund solvent is expected to come to the forefront of the national transportation debate. Whatever option is chosen (a raise in the gas tax, the initiation of VMT, etc.), spending on transit will likely remain stable without a serious decline over the next funding act.

What could affect transit is a delayed passage of the next transportation bill. If the FAST Act is extended by continuing resolution, and the funding trickles in accordingly, this could have a chilling effect on transit. However, if the new legislation is framed in terms of infrastructure improvements, it is anticipated this may assist in timely passage of legislation.

Additional issues that affect transit in West Virginia include:

- Transit Asset Management – The Division has completed a compliant group Transit Asset Management plan that includes all the State’s recipients of FTA Sections 5307, 5311 and 5310 (where applicable). In addition, the Division has issued two years of performance targets based upon the group transit asset management plan. This has allowed the Division to have enough information to begin committing resources to areas shown to be deficient by the yearly inventory analysis for the performance targets.
 1. The 12 Year Asset Class had an overall SGR score of 98%. However, these vehicles, in use with the small urban transit providers, are aging rapidly. These vehicles are approaching the end of their service life and due to this class’s prohibitive cost and their extended fabrication time this category has become a funding priority.
 2. The “10 Year” Asset Class, with an overall SGR score of 97%, shared the same status as the “12 Year” Asset Class.
 3. The “7 Year” Asset Class had an overall SGR score of 89%.
 4. The “5 Year” Asset Class had an overall SGR score of 96%. This asset class has a minimal number of vehicles (3 out of 75 total) in the marginal or poor rankings, it is anticipated that present levels of funds will be able to sustain this asset class at an adequate level of SGR.
 5. The “4 Year” Asset Class has an overall SGR score of 84%. This asset class has had number numerous procurements since this SGR has been prepared. If this asset class’s SGR has not improved, additional resources may need to be committed.

West Virginia 2020-2025 STIP

6. Equipment—this category includes all shop equipment over \$50,000 and service vehicles. As of the latest annual certification, this category only includes service vehicles. The overall SGR score is 70%. The Division realizes this category is lowest SGR in the TAMP. A course of action to improve SGR is currently in progress.\
 7. Facilities—The Division and transit providers are currently developing methodologies for this asset class.
- Safety – The mandate for the small urban transit agencies to develop a new safety plan based on the aviation-derived Safety Management System (SMS) safety methodology is currently in progress. The Division and transit agencies are currently working with a consultant to develop the PTASP and SMS plans. The Division anticipates these plans being completed in 2020.

Our communities are enriched by a safe, affordable public transportation system and this contributes to the economic vitality of the State. West Virginians and visitors to our State depend on public transportation daily - for work, business, recreation, shopping, and access to education or medical services. Many elderly, disabled and economically disadvantaged citizens rely on public transportation and making the choice for using public transportation can help reduce traffic congestion and help the environment. For these reasons the Division is committed to the STIP process as a means of continuing to provide funding for these services.

3. FINANCIAL RESOURCES - STATE ROAD FUNDS

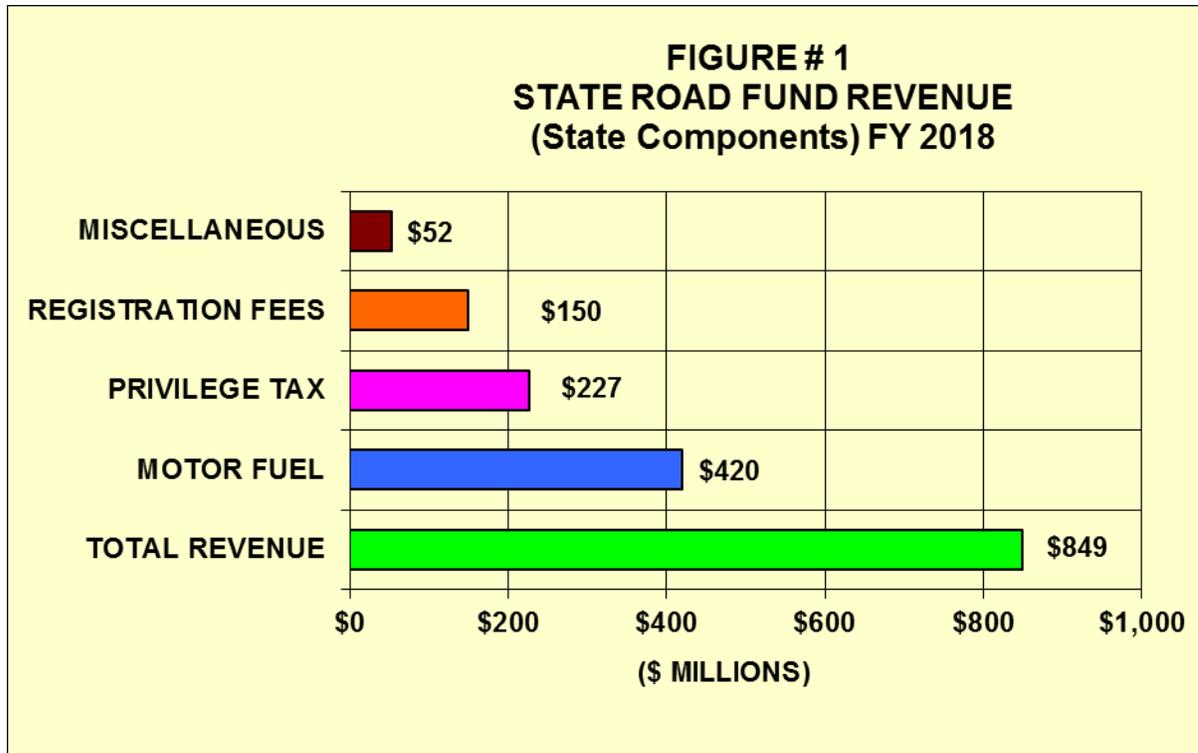
While it would seem deceptively simple for WVDOH staff to identify all highway improvements that will occur over the next six years on roadways under its jurisdiction, the reality is that providing that information with a reasonable degree of accuracy is quite difficult. Before a program that identifies future highway improvements can be laid out, it is important to understand the many functions that the State Road Fund (discussed below) must support and the limited funds which are available. The activities of the WVDOH are funded almost exclusively from the State Road Fund, which receives its funding from State revenue collections and federal reimbursement. The State revenue component of the State Road Fund is derived from motor fuel taxes, registration fees, privilege taxes, and miscellaneous income levied and generated at the State level. The federal component is derived from federal-aid reimbursements available to the State through national federal-aid highway legislation. Federal-aid highway funds are generated by motor fuel taxes and fees levied at the national level and are deposited in the Highway Trust Fund. In order to help highway departments plan and schedule projects, Congress will typically pass legislation that authorizes the expenditure of federal-aid funds over a multi-year period and specifies how those

West Virginia 2020-2025 STIP

funds are to be distributed among the states, that has not however been the case of late. The current multi-year federal reauthorization legislation is the FAST Act, which was signed into law on December 5, 2015 and replace the prior multi-year legislation (MAP-21). As mentioned previously, the FAST Act covers FFY 2016-2020 and without action at the federal level will expire on September 30, 2020. As such, five of the six years covered in the WVDOT's FFY 2020-2025 STIP will have to be based solely on assumptions regarding the potential size and scope of any federal transportation program after FFY 2020. It is unfathomable to believe that the federal government would or could potentially divest itself of investing in highway and transit initiatives. However, the simple lack of any clarity or certainty regarding their involvement helps to illustrate how difficult it is to plan and budget for a multi-year program that relies on estimates and anticipated funding from a highway bill that has not been drafted. Given the uncertainty that exists surrounding the level of federal support in the outer years and the direct impact it will have on West Virginia's STIP, conservative assumptions are prudent. Specifics regarding those assumptions will be explained later in this document.

3.1 STATE ROAD FUND – STATE REVENUE

The State Road Fund collected \$853 million in State revenue for State Fiscal Year (FY) 2018 (see Figure #1). Those revenues were generated from four basic categories: Motor Fuel Taxes, Registration Fees, Privilege Taxes, and Miscellaneous Revenues.



West Virginia 2020-2025 STIP

While the Motor Fuel Tax has served as the primary revenue generator for the State Road Fund, it has at times come under scrutiny, especially when retail fuel prices significantly increase, which in turn generated Legislative action. A brief outline of some of the past volatile activity regarding Motor Fuel Tax rates in West Virginia follows below.

The Motor Fuel Tax rate was 27¢ per gallon in calendar year (CY) 2006 and had increased to 31.5¢ per gallon for CY 2007 and subsequently increased to 32.2¢ in CY 2008 due to a continual rise in the variable rate component of the State's Motor Fuel Tax. In response to the run-ups in retail fuel prices in 2007 and 2008, the Legislature forestalled a subsequent increase in the variable rate by freezing that portion of the Motor Fuel Tax at a rate of 11.7¢ for CY 2009. The actions taken by the Legislature represented the second time during a five-year period where the variable rate portion of the tax had been frozen. In an effort to curb dramatic swings in the variable portion of the Motor Fuel Tax, in November 2009, the Legislature revised West Virginia Code and established a new floor for the variable rate portion of the tax, which was previously established at 4.85¢ per gallon. The new rate was based on 5% of a minimum wholesale price of motor fuel of \$2.34 per gallon, which is equivalent to 11.7¢ per gallon. The rate is calculated by the Department of Revenue yearly and any adjustment in the rate is effective on January 1 of the next year. In addition to the higher floor value, a maximum annual variance in the variable rate portion of the tax was set at 10% (i.e. the variable rate can adjust up or down no more than 10% from the prior year). Because of this change made, the variable rate the rate increased to 11.7¢ per gallon in CY 2010. After 2010, the variable component continued to change annually CY 2011(11.7¢), CY 2012 (12.9¢), CY 2013 (15.6 ¢), CY 2014 (15.2¢), CY 2015 (14.1¢), CY 2016 (12.7), CY 2017 (11.7¢) without incident. However, early in 2017, the Legislature again revised West Virginia Code and established a new floor for the variable rate portion of the tax increasing it to \$3.04 per gallon and made it effective July 1, 2017. As a result of the changes made, the variable rate portion of the Motor Fuel Tax increased from 11.7¢ per gallon to 15.2¢ per gallon for the second half of CY 2017. The rate remained the same for CY 2018 and the West Virginia State Tax Department has set the same rate for CY 2019.

In addition to the actions regarding the variable rate portion of the Motor Fuel Tax, in November 2009, the Legislature also set the flat rate portion of the Motor Fuel Tax permanently at its current rate of 20.5¢. Prior to the change, the flat rate portion would have reverted to 15.5¢ per gallon on July 31, 2013. As the result of these changes, the total Motor Fuel Tax rate for FY 2018 was set at 35.7¢ per gallon, respectively. During FY 2018, the Motor Fuel Tax generated \$420 million in revenue.

West Virginia 2020-2025 STIP

For the purposes of this document, Registration Fees encompass not only vehicle registration fees but also driver's licenses, permits, and litter control fees. Vehicle registration fees are based on a vehicle's classification and are renewed annually or on a multi-year basis. Driver's licenses and learner's permit fees are imposed on persons qualified to operate a motor vehicle. In CY 2017, in conjunction with changing the variable rate floor value of the Motor Fuel Tax, the Legislature also acted to significantly increase a number of the components that make up Registration Fees, which had not been modified in decades. Some examples are that the cost of Registration increased from \$30 to \$51.5 per year and Titling was increased from \$10 to \$15. As a result of the changes imposed, revenue generated by Registration Fees into the Road Fund increased from \$104 million in FY 2017 to \$150 million in FY 2018.

The Privilege Tax, imposed when the certificate of title is issued, was first enacted in 1935 at a rate of 2% of the vehicle value. The rate was increased to 5% in 1971 and remained unchanged until 2017. As was the case with Registration Fees and the Motor Fuel Tax, the Legislature took action increasing the rate from 5% to 6% to be more consistent with other sales taxes. In FY 2017, Privilege Taxes generated \$204 million in revenue. Due in large part to the Legislature's action, in FY 2018, revenue generated from Privilege Taxes increased to \$250 million.

Miscellaneous Revenue sources typically include revenue from interest on investments, map sales, permits, etc., and have historically been small in comparison to the other revenue sources of the State Road Fund. However, due to several legislative actions, Miscellaneous Revenue now frequently accounts for a larger share of State Road Fund monies. The most significant impact has been a legislatively mandated yearly transfer of revenue from the State's General Fund to the State Road Fund, which is intended to offset costs incurred by the WVDOH when its contractors pay State Sales Tax on construction materials. The amount of the transfer varies yearly depending on the size and scope of the WVDOH's construction program, but typically adds several million dollars to the State Road Fund annually.

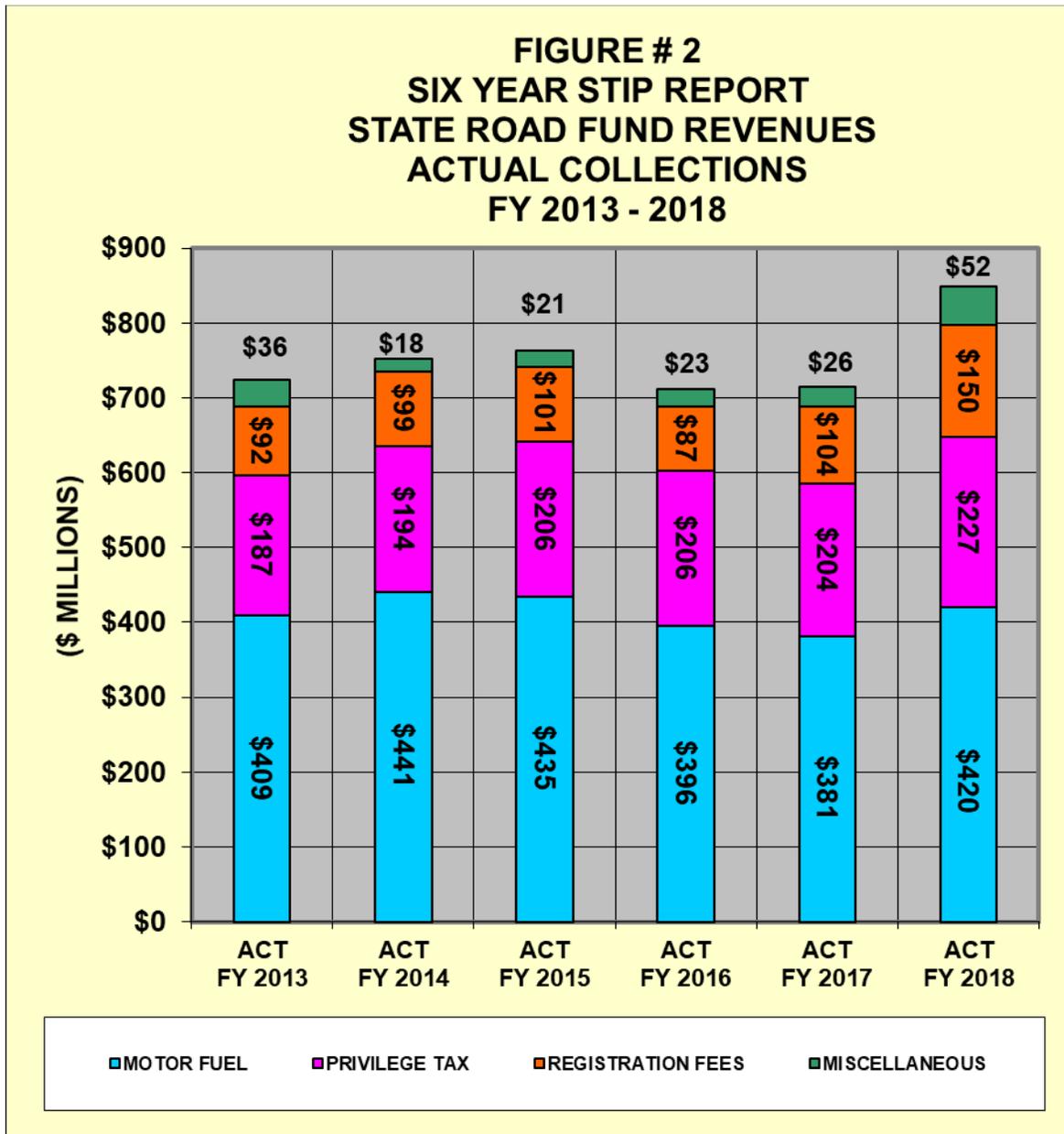
In addition to the recurring transfers of funds, mentioned above other one-time initiatives have been pursued legislatively to bolster the Agency's budget in a given year. In FY 2010, in an effort to stabilize the Agency's paving program, which had been impacted by a severe economic downturn, the Legislature transferred \$27.3 million from the Motor Fuel Shortfall Reserve Fund to the State Road Fund. As a result of the mandated funding transfers, the amount of Miscellaneous Revenue collected increased by \$10.7 million from FY 2009 to FY 2010. In FY 2011, there were no such supplementary transfers; however, in FY 2012 the Legislature transferred \$15 million from the Lottery Revenue to the State Road Fund to once again bolster the Agency's paving program. As such, in FY 2012, Miscellaneous Revenue was significantly higher than the preceding year and accounted for \$45.8 million of the State Road Fund's

West Virginia 2020-2025 STIP

revenue. In FY 2013 there were no supplementary transfers and Miscellaneous Revenue decreased to \$36.1 million, of which the transfer of sales taxes for highway construction materials accounted for \$11.3 million of total FY 13 Miscellaneous Revenue. In FY 2014, the Agency experienced a reversal of fortune. As mentioned previously, the variable rate portion of the States Motor Fuel Tax increased from CY 2012 to 2014 due to higher energy prices as the economy rebounded from the Great Recession, which helped stabilize the State Road Fund. However, despite the uptick in the economy the State's General Fund had not fared as well as the State Road Fund. As such, in FY 2014, the annual mandated transfer of Sales Taxes was supposed to be postponed to FY 15 but was ultimately abandoned altogether. The revenue woes of the State's General Fund continued for the following three consecutive fiscal years and during each year (FY 2015, FY2016, FY 2017) the mandated annual transfer was forestalled. Despite the lack of these funds, the Miscellaneous Revenue Component of the State Road Fund continued to increase to (\$21.0, \$23.0, and \$26 million), in those respective years. The increases were due in large part to contributions from natural gas companies to partially offset damage done to State roads during their pipeline and well construction associated with Marcellus and Utica Shale. Due in large part to the economic boom in natural gas extraction, the State Road Fund recovered, and the mandated transfer of funds was permitted to proceed. This resulted in Miscellaneous Revenues increasing sharply in FY 2018 to \$52.5 million.

The net effect of the adjustments and legislative actions discussed above on the State Road Fund over the last six fiscal years is shown below (see Figure #2). As can be seen, overall revenue increased steadily from FY 2013 to 2015 with collections of \$724.5, 752.s and \$763.0 million. This was followed by a significant drop to \$712 million in FY 2016, which remained virtually unchanged at \$715 million in FY 2017. Revenue rebounded in FY 2018 to \$849.5 million, due to the flurry of legislative actions in CY 2017, Again, the information presented above, is intended to demonstrate how difficult it is to predict with any high degree of certainty the amount of revenue that will be available for highway construction initiatives over a six-year period as is federally mandated.

West Virginia 2020-2025 STIP



3.2 STATE REVENUE PROJECTIONS

The foundation of the STIP is available revenue, both federal and, more importantly, State. A review of Figures #1 and #2 indicates that State revenues from four components (Motor Fuel Tax, Privilege Tax, Registration Fees, and Miscellaneous) contributed \$849.5 million to the State Road Fund in FY 2018. When comparing collections in FY 2013 to FY 2018, collections rose roughly 17%. However, if the six-year revenue stream is looked at as a whole, total

West Virginia 2020-2025 STIP

revenue collected was only 3.8% higher than if revenue had remained constant at FY 2014 values.

In order to develop estimates of future deposits into the State Road Fund, the WVDOT relies on the expertise of individuals at the West Virginia State Tax Department, as well as internal staff, for the development of its short-range revenue forecasts. Revenue forecasts are predicated on a number of underlying factors and assumptions. Some of the most important assumptions deal with the anticipated cost and consumption of oil and motor fuel and, to a lesser extent, their impact on human behavior (e.g., if fuel costs remain high, will individuals continue to buy larger more expensive cars or will they buy smaller more fuel efficient vehicles, will they carpool or will they continue to drive alone, will they utilize public transit more, etc.). Ideally, the underlying factors for developing State revenue projections would not fluctuate dramatically; however, the conditions for projecting the State's transportation revenues has been far from ideal in recent years. Relatively recent changes in the cost of oil and motor fuel coupled with legislative issues surrounding the components of the State Road Fund has made the development of reliable long-range and even short-range forecasts nearly impossible. At the time of this report's preparation the "official" revenue estimates for the FY 2020 Budget, had just become available and are the basis for this document.

As discussed previously, a portion of the State's Motor Fuel Tax is variable and contingent on the wholesale price of fuel. From CY 2005 to CY 2010, steep increases and decreases in the purchase price of oil translated into volatile wholesale fuel costs. While large swings have been somewhat mitigated by increasing the floor value of the variable component and placing limitations on the amount that the rate can change from year to year, estimating the value with much certainty is still difficult. The most recent official forecasts available predicted that revenue would increase approximately \$24.3 million from FY 2018 to FY 2019 to \$443.9 million. The higher rate reflects the first full fiscal year of revenue generated by raising the floor value of the variable component. After the initial boost, estimated revenue from Motor Fuel is projected to remain relatively unchanged, but trend lower over time from FY 2019 through 2024, averaging \$439.5 million over the six-year period. The static nature of the estimates would reflect that any increase in consumption will be more than offset by gains in the fuel efficiency of the vehicle fleet. Between FY 2019 and FY 2024 Motor Fuel Taxes are anticipated to generate \$2.6 Billion for the State Road Fund.

Like Motor Fuel, the Agency has opted to assume that revenue from the other components will be virtually static over the six-year period. Registration Fees are predicted to drop slightly in FY 2019 from \$150 million in FY 2018 to \$143.9 million, which on the surface is counterintuitive given the recent increase. The reason for the drop was due to the flurry of activity by residents to purchase two-year registrations before the price increased creating a

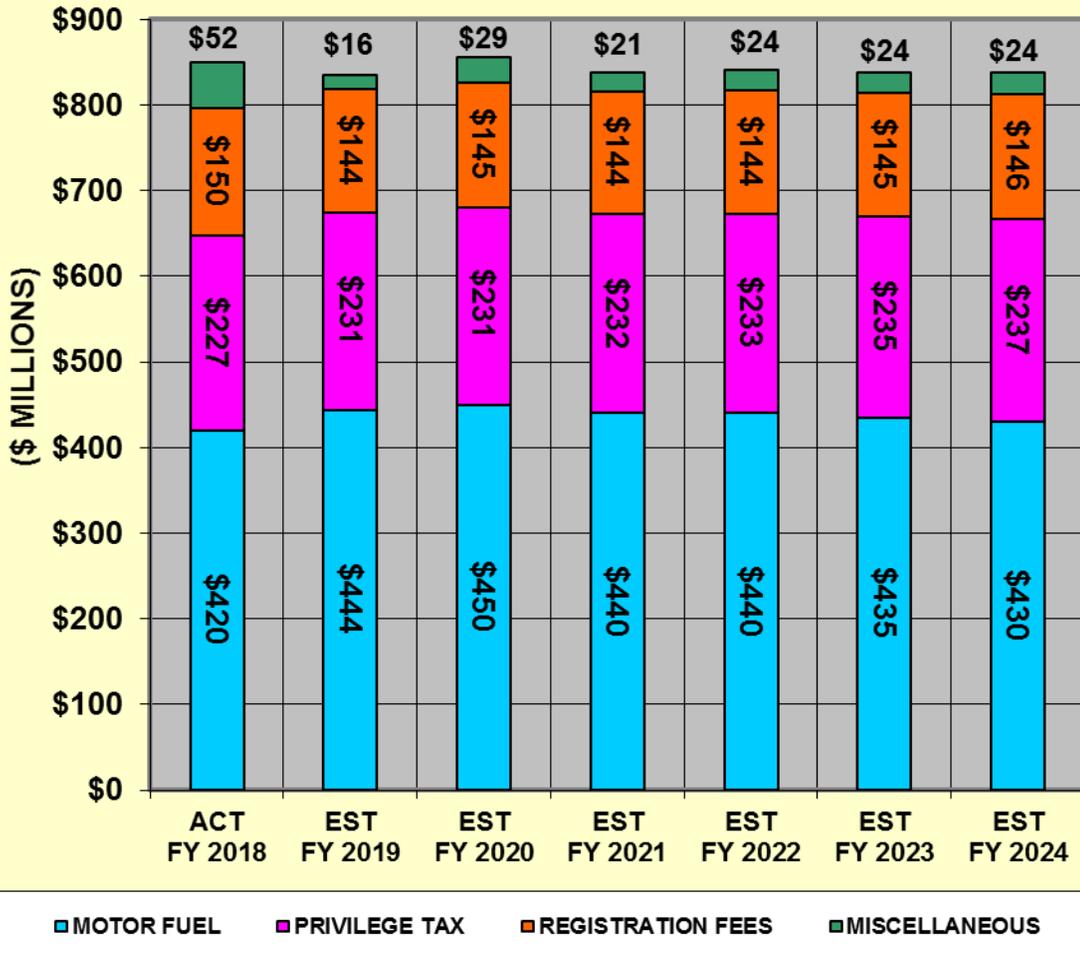
West Virginia 2020-2025 STIP

bubble. As those registrations expire, the current forecast reflects the higher values. Registration Fees are estimated to remain relatively constant averaging \$144.8 million per year for the six-year period. Likewise, conservatively flat revenue projections have been assumed for the Privilege Tax, which was recently raised from 5 to 6% and has an indirect inflationary component, since it is tied directly to the cost of a vehicle. It is reasonable to use flat values for the Privilege Tax until it can be determined if the increase in the rate of tax has any real impacts on the purchasing habits of individuals. As such, it is assumed that the Privilege Tax will grow at roughly 1% per year and average \$233.2 million per year from FY 2019 to 2024.

Projections for revenue derived from Miscellaneous Sources is being affected by the eventual decline in contributions from natural gas companies as the construction work surrounding the Marcellus and Utica Shale economic boom gradually wanes. Furthermore, ongoing concerns regarding the size and consistency of legislative transfers from the State's General Fund dictate that lower rather than higher estimates be used to avoid potential shortfalls. Miscellaneous Revenues are projected to fluctuate somewhat over the six-year period and average \$23.2 million per year. Figure #3 and Table #1 show the breakdown of actual and projected State Road Fund revenue from FY 2018 through FY 2024.

West Virginia 2020-2025 STIP

**FIGURE # 3
SIX YEAR STIP REPORT
STATE ROAD FUND REVENUES
(ACTUAL & PROJECTED
FY 2018 - 2024 (Nominal \$'s)**



West Virginia 2020-2025 STIP

TABLE # 1
STATE REVENUES ACTUAL & FORECAST FY 2018 - FY 2024

REVENUE SOURCE	ACTUAL FY 2018	EST FY 2019	EST FY 2020	EST FY 2021	EST FY 2022	EST FY 2023	EST FY 2024	EST FY 19-24
MOTOR FUEL TAX	\$419.6	\$443.9	\$450.0	\$440.0	\$440.0	\$435.0	\$430.0	\$2,638.9
PRIVILEGE TAX	\$227.4	\$230.9	\$231.1	\$232.3	\$233.4	\$234.6	\$236.9	\$1,399.2
REGISTRATION FEES*	\$150.0	\$143.9	\$145.4	\$144.2	\$144.1	\$145.0	\$146.4	\$869.0
MISCELLANEOUS REVENUE	\$52.5	\$16.5	\$29.0	\$21.5	\$24.0	\$24.0	\$24.2	\$139.2
TOTAL RECEIPTS	\$849.6	\$835.2	\$855.5	\$838.0	\$841.6	\$838.6	\$837.6	\$5,046.4

VALUES AS OF JANUARY 2019

Note: * REGISTRATION FEES INCLUDE LITTER CONTROL FEE

A review of Table #1 and Figure #3 indicates that under the current forecast, State revenues into the State Road Fund would average \$841.1 million per year and equal \$5.0 billion over the six-year period. While it is true that revenues of the State Road Fund increased significantly from FY 2017 to FY 2018 (roughly \$132 million or 18%), as a result of legislative action, current projections for the next six years reflect essentially no additional growth in revenue. Current estimates project that revenue in FY 2024 will be essentially identical in nominal terms to that of FY 19. While the recent infusion of revenue has enabled the Agency to commence work on a number of backlogged projects, the lack of any continued growth will make it difficult for the WVDOH to continue moving forward with needed projects. The lagging revenue growth will be exacerbated when the impact of inflation on purchasing power is taken into account.

As of December 2007, federal guidelines required all project costs contained in the STIP to be shown in year-of-expenditure dollars. In order to adjust capital costs to year-of-expenditure dollars, it was necessary to develop a yearly project adjustment/inflation factor. While numerous indexes exist for calculating inflation, staffs of the WVDOT and FHWA agreed to use a 20-year rolling average of the composite index of FHWA's Price Trends for Federal-Aid Highway Construction. Unfortunately, the FHWA ceased producing the index data after 2006. In the absence of national data, the WVDOH has developed a highway construction index using its Average Unit Bid Prices Based on Contracts Awarded documents. In order to continue to calculate a 20-year rolling average, assumed FHWA values were developed that are equivalent to the change in the WVDOH index.

The methodology for indexing project costs for inflation was reviewed during the development of West Virginia's Multi-Modal Statewide Transportation Plan to determine if a new index or enhancements to the existing methodology were appropriate. Due to the broad nature of the responsibilities of the WVDOT and the Divisions that it is comprised of, it was determined that a blended index would be more appropriate than any single index available. The blended index consists of weighted portions of West Virginia's Highway Construction Price Index,

West Virginia 2020-2025 STIP

which specifically focuses on the cost of highway construction, and secondly the broader Consumer Price Index (CPI) for the South Urban Region, which would be more reflective of other non-construction specific items (i.e. costs associated with purchasing rolling stock, acquiring right-of-way, facility maintenance and those of employee benefits). The yearly blended index is calculated by prorating the two existing indexes on an 82% (WVHCPI) and 18% (CPI South Urban Region) basis. As was the case before, a 20-year rolling average was used to generate a yearly inflation factor to help mute the impact of sharp spikes or downturn in costs. The new value is typically calculated annually. However, due to multiple changes in the Agency’s hardware and software, which impact not only general accounting but also specifically analysis of contract bids, the value has not been updated since January 2017, but is still relevant for planning purposes. The current 20-year rolling average of the blended index is 5.04% per year for the 1997 to 2016 period. FHWA has recently started producing a new National Highway Construction Cost Index, which is similar to the index that was suspended in 2006. At the time of this document’s preparation, it was not determined whether or not the WVDOT would cease producing it’s own index or rely on the new national index.

The impact that inflation has on purchasing power when State revenues are projected to be virtually stagnant is significant. Table #2 below demonstrates how the purchasing power of the State Road Fund will be impacted over time. During the six-year period inflation will have the impact of reducing the Agency’s purchasing power by approximately \$782 million. In constant 2018 dollars, State revenues would average only \$711 million per year. These calculation help demonstrate why even after revenue was boosted recently, the Agency continues to struggle to meet its obligations to the citizens of West Virginia and the traveling public at large. The Agency continues to search for internal efficiencies to curb the impact of inflation. However, only so much can be done in that regard and in order to remain fiscally sound the Agency has been forced to reduce services and the amount of work being done. By FY 2022, the Agency’s purchasing power will be less than it was in FY 2017 (\$715 million), before legislative action.

**TABLE #2
STATE REVENUES ACTUAL & FORECAST FY 2018 - FY 2024 (CONSTANT 2018 \$'s)**

	ACTUAL FY 2018	EST FY 2019	EST FY 2020	EST FY 2021	EST FY 2022	EST FY 2023	EST FY 2024	EST FY 19-24
MOTOR FUEL TAX	\$419.6	\$422.6	\$407.9	\$379.7	\$361.4	\$340.2	\$320.1	\$2,231.9
PRIVILEGE TAX	\$227.4	\$219.8	\$209.4	\$200.4	\$191.7	\$183.5	\$176.4	\$1,181.3
REGISTRATION FEES*	\$150.0	\$137.0	\$131.8	\$124.4	\$118.4	\$113.4	\$109.0	\$734.0
MISCELLANEOUS REVENUE	\$52.5	\$15.7	\$26.3	\$18.5	\$19.7	\$18.8	\$18.0	\$117.0
TOTAL RECEIPTS	\$849.6	\$795.2	\$775.3	\$723.0	\$691.3	\$655.8	\$623.6	\$4,264.2

VALUES AS OF JANUARY 2019

Note: * REGISTRATION FEES INCLUDE LITTER CONTROL FEE

West Virginia 2020-2025 STIP

3.3 STATE ROAD FUND – FEDERAL-AID REIMBURSEMENT

The federal government has long recognized the need for an efficient and effective national highway network. To help satisfy this need, the federal government authorizes the expenditure of federal funds for various activities that it has deemed to be of national importance. Rather than trying to own, operate, and maintain the highway infrastructure across the nation, the federal government makes funds available to state and local governments having jurisdiction over important transportation facilities to accomplish these tasks. While not specifically owning these assets, FHWA and FTA maintain an “interest” in the assets subject to federal requirements. The activities and/or the network of roads and bridges in which the federal government will participate in their renovation, improvement, and construction are termed “federal-aid-eligible”.

The federal government primarily uses the national highway functional classification system of roadways as the basis for determining which facilities are eligible for federal-aid. Due to the national focus on these roadways, except under special circumstances, roads that are functionally classified as Rural Minor Collector, Rural Local Service, or Urban Local Service are not eligible for federal-aid. Throughout the State, only 27% (10,477 miles) of West Virginia’s certified public highway mileage (38,854 miles) are traditionally eligible for federal-aid. The remaining 73% (28,377 miles) must be funded entirely by the governmental entity having jurisdiction over those highways. In West Virginia, where the WVDOH has statutory responsibility for nearly all roads (i.e. 34,598 miles, or 89% of the certified mileage, which excludes 1,324 miles of roadways classified as Primitive), all maintenance, improvements, and construction initiatives on the 24,484 miles of Non-FA-Eligible roadways are funded with 100% State revenues. In addition to the previously listed classifications, the federal government also prohibits use of federal-aid funds for specific activities. This is of paramount importance because federal funds may not be typically used to pay for the mandated priorities of the WVDOH (Administrative Support and Routine Maintenance expenditures). As a result, not only are the majority of roadways under the WVDOH jurisdiction not eligible for federal assistance, but neither are its mandated priorities.

As mentioned previously, Congress typically authorizes a specific total amount of federal-aid highway funds for a multi-year period and prescribes methods for apportioning or allocating those funds to the individual states for various transportation purposes. Furthermore, in order to assure that specific types of highway needs are addressed, Congress identifies various highway programs or sub-allocations and will then set the eligibility criteria, matching fund requirements (most federal funds must be matched on an 80/20 federal-to-state ratio), and the funding levels to be made available. The federal legislation that makes these funds available to the states is twofold in nature. First, when multi-year authorizing legislation (like MAP-21

West Virginia 2020-2025 STIP

and FAST) is in place, formulas are established to dictate how much of those funds will be apportioned among the states, on a yearly basis, over the life of the legislation. This allows transportation agencies to set long-range priorities. Second, in previous years a significant amount of discretionary or earmarked funds was made available as part of the authorizing legislation. These funds were appropriated and allocated per the wording contained in the legislation or through the award of competitive grants. The exact amount of earmarked or discretionary funds was impossible to predict and came in the form of line items for specific projects (i.e., the funds can be used only for the initiative described in the legislation or for which a grant was requested). MAP-21 eliminated the appropriation of new earmarks (existing earmarks will be used until they are spent), but significantly expanded the size and number of competitive grants, for which the WVDOT has no assurances it will be awarded. This policy has continued and even expanded under the FAST Act.

In addition to the apportionments described above, obligation limitations must also be factored. These are caps placed on federal-aid highway funding to control highway program spending in response to economic and budgetary conditions. In short, obligation limitations have the impact of generally reducing a state's federal-aid apportionments and allocations. While it is possible for Obligation Authority (OA) to be greater than the apportionment or the appropriation amounts, historically it has been between 90% to 95% of those levels. While some apportionments get obligation authority that can only be used for projects that meet those requirements, much of the obligation authority the Agency receives comes in block form that can be applied to multiple apportionment categories. This mechanism provides states with the flexibility to apply more or less of their obligation authority to a specific federal program in a given year, as long as it does not exceed the unobligated balance available for that program.

In FFY 2018, the obligation authority did actually exceed the 100% threshold and was equivalent to 108% of the annual apportionment. This was due, to the State receiving \$75 million in supplemental OA as part of the August redistribution process. Without the addition of the discretionary OA, the state's value would have been roughly 91% for FFY 2018. Since the FAST Act will expire on September 30, 2020, for the purposes of this document, an assumed 98% obligation level will be applied uniformly to all Core federal programs over the six-year period.

When the federal-aid component, which is predominantly derived from FHWA, of the State Road Fund is examined, it should be noted that the federal funds are, in fact, reimbursements. FHWA does not provide funds directly to the states. However, the states are allowed to obligate available federal highway funds based upon the amount of OA they will receive. The obligations serve as commitments for the federal government to reimburse a state for the federal share of the highway initiatives' eligible costs. As indicated previously, most programs

West Virginia 2020-2025 STIP

are matched by a state on an 80% federal/20% state share basis. When expenditures are incurred on a project that is federally eligible and has been authorized, they are initially paid for by the state and then a reimbursement is requested from FHWA. Once a request is made, it typically takes ten business days for the FHWA to reimburse the state. This information is important because, while the amount of funds that can be obligated by the State in a given year can be predicted with some degree of certainty when a multi-year federal highway authorization is in place, the timing of when the required matching funds will be needed to cover expenditures cannot be predicted as easily. In FY 2018, federal-aid reimbursements to the WVDOH totaled \$391.1 million, which was down from FY \$442.1 million in FY 2017 and \$396.4 million in FY 2016, but higher than the \$349.7 million received in FY 2015. The increases above the FY 2015 value are reflective of higher levels of federal funding that were made available in FAST above those available in MAP-21. The year to year fluctuations are a function not only the size and type of projects being advanced by the WVDOH, but also of the delivery mechanism used and financing structure. It should be noted that the process described above reflects the way FHWA programs work not FTA. FTA has blanket pre-award authority and obligates formal funds to State and Transit Agencies and is not constrained by obligation authority.

During the time period described, the Agency experimented with a myriad of non-traditional delivery and financial tools on high dollar projects to see if they could be delivered faster in a cost-effective manner. As an example, the WVDOH pursued the use of Design/Build/Finance arrangements for some of the Agency's large multi-year initiatives, such as the Coalfields Expressway, the expansion of US 35, construction of the Wellsburg Bridge, and a portion of Corridor H. Design/Build/Finance arrangements are one example of a Public-Private-Partnership (PPP) and an extension of the Design/Build concept, which has been used by the Agency for a number of years to accelerate delivery of infrastructure projects. Under the Design/Build/Finance arrangements used by the WVDOT, the contractor is given the task of securing short term or gap funding for the awarded project and then is paid for the project in equal monthly installments over a specified duration. The objective of these arrangements is to both accelerate the delivery of critical infrastructure and to enable better financial planning by the Agency. Financial planning is enhanced by replacing monthly construction progress voucher estimates, which can vary widely over the course of the project depending on the type of activity being performed, with a known monthly value. While these arrangements do provide an element of certainty, they are by no means a panacea for eliminating financial risk. The fact remains that these projects are being implemented as Advance Construction (AC) initiatives by the State and the federal government is only committed to reimburse the Agency for funds actually obligated. The risk remains that the WVDOH is obligated to pay the monthly installments regardless of any future federal participation or lack thereof. In addition, since

West Virginia 2020-2025 STIP

the federal government operates on a reimbursement basis, until progress achieved on the project meets or exceeds payments, the WVDOH cannot seek reimbursement. As such, the State Road Fund must have sufficient capacity and resiliency to carry those expenditures until reimbursement can be pursued.

4. FINANCIAL GOALS AND POLICIES

With nearly 39,000 miles of public roadways, West Virginia is one of only four states (Delaware, North Carolina, and Virginia are the others) in which there is no county and/or township ownership of highways. As a result, the WVDOH has statutory authority for the construction, improvement, and maintenance for the lion's share of nearly all public highway miles (34,598 miles or 89%) in the State, which is one of the highest percentages in the nation. Furthermore, despite its relatively small size, the WVDOH is responsible for the sixth-largest state-maintained highway network in the nation.

While WVDOH goals and policies contained in the State's long-range transportation plan are the driving force behind the projects contained in the Six-Year STIP, the time, type, location, and extent of highway renovation, improvement, and construction initiatives are dependent on available funding. Some of the more pertinent goals and policies contained in West Virginia's Multi-Modal Statewide Transportation Plan (2010-2034), which will dictate where and how its financial resources are directed are:

- Preserve past investments by maintaining the existing system,
- Support West Virginia's economic development goals with multi-modal access to markets in West Virginia, the United States, and overseas,
- Support the health and well-being of West Virginians, as well as the environment and overall quality of life, with a range of mobility options, and
- Promote efficient use of resources, especially in light of diminishing revenues.

In order to transform these goals and policies into reality, the Agency must do the following:

- Pay debt service;
- Pay operating expenses;
- Perform routine maintenance;
- Match all available federal-aid;
- Renovate or replace highway bridge and pavement infrastructure;
- Address safety, operations and congestion issues; and
- Continue progress on major transportation corridors.

West Virginia 2020-2025 STIP

The extent to which these goals can be achieved in any given year depends on the nature of the highway problems being addressed and funds available for their implementation. Some highway needs when met provide only short-term effects (e.g., snow removal will only suffice until the next snowstorm), whereas others may provide near-permanent solutions (e.g., the removal of a roadside obstruction to improve safety). Identified highway needs represent problems that need to be addressed by the WVDOH, which responds by developing and funding programs that solve those problems. Analysis conducted during the development of the State's long-range transportation plan indicated that highway needs exceeded the funding available to meet those needs. The cost associated with some of the identified needs, such as fixing all deficient bridges, could consume all available State highway funds in a given year. Furthermore, the Agency is mandated to address the financial obligations associated with Debt Service, Administrative Support and Maintenance before undertaking other initiatives. A more detailed discussion of needs-assessment, funding allocations, and program development is contained later in this document.

4.1 DEBT SERVICE

The first mandated priority of the WVDOH is Debt Service. Debt Service payments are analogous to paying a mortgage on a house. Few citizens would dispute the value of owning a home, yet few would have the financial wherewithal to purchase a home on a cash basis. Similarly, long-term financing of major highway initiatives is warranted at times to maximize the benefits to citizens when interest rates are favorable.

The WVDOH must use incoming revenue to pay the principal and interest due on State bonds issued for prior highway initiatives. The WVDOH and its predecessor agencies, with public approval, have engaged in the practice of selling road bonds to expedite highway improvements since 1920. Most recently, in October 2017, citizens approved the Roads to Prosperity Amendment to the State's Constitution that authorizes the sale of up to \$1.6 Billion in General Obligation Road Bonds (GO Bonds) between July 1, 2017 and June 30, 2021. The first \$800 million of these bonds were sold in May 2018. As structured, the WVDOH will be required to make annual payments of \$55.4 million for twenty-five years from FY 2019 to FY 2043 to pay for debt (\$1.39 Billion) associated with the first issuance of Roads to Prosperity Road Bonds. At the time of this document's preparation, the remaining \$800 million in GO Bonds had not been issued and the timing and value of the remaining sales had not been finalized. For the purposes of this report it was assumed that the Agency would move forward with three remaining issuances of GO Bonds (i.e. \$400 million, \$200 million and \$200 million) and interest rates and debt service on the subsequent amounts is structured similar to the first installment of GO Bonds. If these assumptions are used, the WVDOH will need to phase in added debt service payments of \$27.7 million, \$13.85 million and \$13.85 million per year in future budgets. In addition to the Debt Service associated with Roads to Prosperity, in 1996

West Virginia 2020-2025 STIP

citizens approved the Safe Road Amendment authorizing the sale of \$550 million GO Road Bonds for highway initiatives. The WVDOH has issued refunding bonds (akin to refinancing a mortgage) several times, since the original bonds were issued to take advantage of more favorable interest rates. As a result of the refinancing of those bonds, as of June 30, 2018, there was still outstanding debt of \$162.4 million still on those bonds that would not be fully retired until 2025. As such, even though the WVDOH is in the waning years of retiring the debt associated with the prior bond referendum, the WVDOH will be required to make annual payments of approximately \$23.2 million through FY 2025 to pay off the remaining debt associated with the 1996 referendum. So as currently planned, the debt associated with the Safe Road Bonds will not be fully retired before the full amount of Road to Prosperity Bonds are issued. Debt Service payments from the State Road Fund were \$24.9 million in State FY 2018. Based upon the draft FY 2020 budget information that was available at the time of this report's preparation, Debt Service payments over the next six years from FY 2019 to FY 2024, will vary from \$89 million to \$154 million.

While Set-Asides are not specifically part of Debt Service, they are Legislative mandates that require monies from the State Road Fund to be diverted to other agencies to cover "highway-related" activities. The net result is that a portion of State Road Fund monies shown in revenue estimates will not be available for highway infrastructure projects and need to be removed from consideration. In FY 2018, \$44.3 million in State Road Fund monies were used to pay for Set-Asides. The largest Set-Aside has consistently been for the operation of West Virginia Division of Motor Vehicles (WVDMV). In FY 2018, \$39.3 million in State Road Fund monies was used to pay for WVDMV operations. In addition to supporting WVDMV operations, State Road Fund monies are used to cover the cost of administrative hearings and legal claims against the WVDOH and WVDMV. The WVDOH is also legislatively required to transfer funds from the State Road Fund to the Industrial Access Road (IAR) Fund. While the monies transferred to the IAR Fund are not available to the WVDOH for general purposes, they are available for the construction of roads to industrial access facilities throughout the State. Despite this fact, since the emphasis in this report is primarily on monies available in the State Road Fund, IAR transfers are treated as a Set-Aside. Beginning in FY 2011, a portion of State Road Fund revenue was redirected to cover the costs associated with the newly created Office of Administrative Hearings. The functions of this office were previously contained within the WVDMV, but the Legislature has now established it as a standalone entity. In FY 2018, \$3 million was transferred from the State Road Fund to the IAR Fund, \$1.4 million was needed for the Office of Administrative Hearings and \$0.6 million was needed for legal claims. From FY 2019 to FY 2024, the total cost of all Set-Asides is estimated to range from \$50 to \$52 million annually.

West Virginia 2020-2025 STIP

As discussed above, the WVDOH will be required to make Debt Service payments between \$89 and \$154 million per year over the next six-year period. Those Debt Service payments are needed to complete the retirement of debt associated with the \$550 million in general obligation bonds approved by voters in 1996, as well as begin covering the debt associated with the first issuance (\$800 million) of Roads to Prosperity GO Bonds and subsequent planned issuances of the remaining \$800 million approved by voters in 2017. In addition to these items, there are other ongoing debt related initiatives being pursued in an overall attempt to kickstart the State's economy that will only partially impact the State Road Fund, but will directly affect the FFY 2020-2025 STIP, those being the issuance of Special Obligation Notes and the sale of Turnpike Toll Revenue Bonds by the West Virginia Parkways Authority.

The WVDOH has recently conducted multiple issuances of Special Obligation Notes to expedite construction work as part of the overall Roads to Prosperity initiative being pursued by the current Administration. In 2017, the Agency issued \$220 million in Special Obligation Notes to pay for a portion of 31 separate projects statewide, which at the time of this report's preparation are at various stages of completion. These projects consisted primarily of pavement reconstruction projects on the Interstates in West Virginia and a number of bridge replacements. Proceeds received from the sale of those Notes was not deposited into the State Road Fund, but into a separate standalone bond fund. When the 31 projects were awarded, the proceeds from the Notes were only sufficient to cover approximately 95% of the projected construction costs. At present, all funding needed for these projects above what is available in the standalone bond fund is being paid for out of the State Road Fund.

The WVDOH, in cooperation with the FHWA, is using two financing tools to pay the ongoing Debt Service associated with those notes. First, by utilizing a Grant Anticipation Revenue Vehicle (GARVEE), the WVDOH was able to use future federal-aid funds to pay approximately 80% of the Debt Service associated with the notes. Second, by utilizing a combination of "toll credits" and "bridge credits" that the State has accumulated as a soft match for the State's portion (20%) of the Debt Service, the Debt Service payments will essentially be paid with 100% federal funds. The downside to this arrangement is that the federal-aid portion of the WVDOH's improvement program in future years will be reduced by an amount equal to the Debt Service payments during those years, which was determined to be \$295.7 million based on twelve annual payments of \$24.6 million annually through FFY 2029. Since the payments do not technically flow through the State Road Fund, these payments are not reflected as one of the WVDOH's mandated priorities (e.g., Debt Service), but are reflected as a reduction in available federal-aid funds for new improvements. The upside of this arrangement is the ability to advance critical infrastructure projects sooner than would be possible on a pay-as-you-go basis, thus obtaining lower construction costs and the ability to begin accruing the transportation benefits.

West Virginia 2020-2025 STIP

In similar fashion, in 2018, the Agency issued an additional \$78.8 million in Special Obligation Notes to expedite and pay for the construction of 36 more projects statewide. Unlike the prior issuance these projects consisted of predominantly small to mid-size bridge replacements and initiatives to correct drainage problems (i.e. pipes and inlets) on expressway facilities around the State. The debt associated with these Notes is \$114.4 million. Debt service payments of \$7.6 million per year for fifteen years from FFY 2019 to 2033 will be needed to retire the debt associated with these Notes. As was the case with the Notes issued in 2017, the Agency utilized the GARVEE mechanism to pay the debt service and utilizing a combination of bridge and toll credits to make the payments essentially 100% federally funded. As such, over the next six years covered by the STIP, if no new GARVEE's are issued, the Agency will need to dedicate \$32.2 million per year (\$193.2 million) of future federal funding to pay for these initiatives. It should also be mentioned, that the bond covenants associated with the sale of those Notes require the WVDOH to utilize the first eligible obligation authority it receives during the FFY to cover those commitments. Primarily, the WVDOH has used a combination of National Highway System/National Highway Performance Program (NHS/NHPP) and Surface Transportation Block Grant Program (STBG) funds for this purpose. Even when multi-year federal highway legislation like MAP-21 and FAST are in place, yearly values must be approved in the federal budget. When either multi-year piece of legislation expires or annual budgets are delayed, the federal-aid program generally operates under of a Continuing Resolution. In these instances, the Agency, receives its OA in piecemeal fashion and it may take a few months to build up enough STBG and NHS/NHPP funds to make our required GARVEE obligations. Since the bond covenants specify that the first eligible obligation authority must be used for GARVEE, the WVDOH has avoided the potential problem of delaying new highway projects by obligating the funds for GARVEE early (i.e. at the end of the prior FFY).

Again, as part of the overall strategy to improve the State's economy by investing in highway construction projects, the Legislature acted in 2017, to continue and increase tolls on the West Virginia Turnpike. Revenue generated from the increased toll revenue was intended to allow the West Virginia Parkways Authority to issue up to \$500 million in new Turnpike Toll Revenue Bonds to finance road, highway and bridge projects located on and off the West Virginia turnpike. In July 2018, the Parkways Authority issued the first installment of Toll Revenue Bonds (\$166.37 million). The proceeds generated by the sale (\$172 million), have been deposited into a standalone fund and are available for use by the WVDOH for construction projects. Although the projects undertaken with these funds will not impact the State Road Fund or the STIP directly, they will have secondary impacts. First, all regionally significant transportation projects must be listed in the STIP regardless of funding source. Second, while the construction phases of those projects are being funded with the bond

West Virginia 2020-2025 STIP

proceeds, much of the engineering and right of way costs associated with them is either being funded in the STIP or by the State Road Fund. Third, projects developed with these bonds will affect the State's performance measures, which is discussed later in this document.

4.2 OPERATING EXPENSES

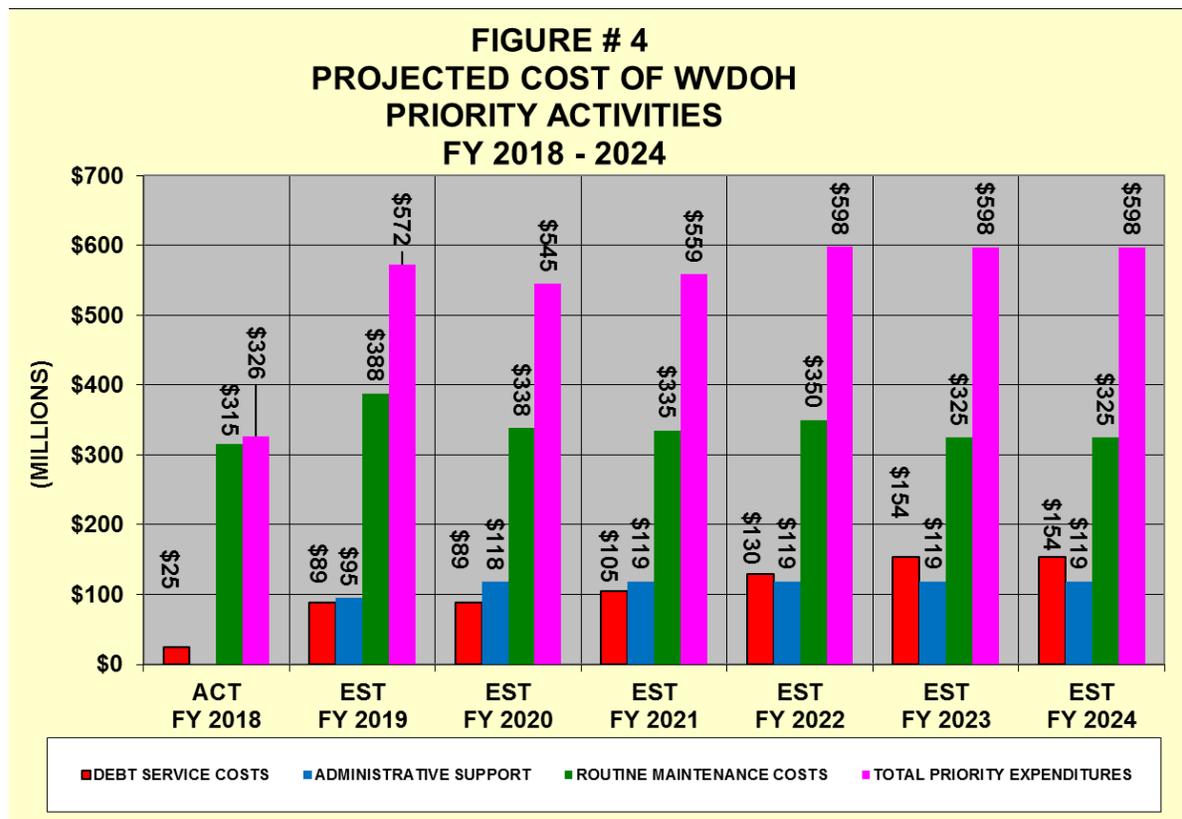
The second mandated priority is the payment of Administrative Support expenses of the WVDOH's operations. In order to effectively meet its statutory responsibility for maintenance, improvement, and construction of its vast infrastructure, the WVDOH has an in-house quota of approximately 5,000 individuals who are principally dedicated to highway maintenance, improvement, and construction activities. As in any firm of this size, a number of individuals are needed to perform tasks of a support nature (executive, finance, legal, human resources, information technology, etc.). Without these support functions in place, the WVDOH could not operate. In addition to these support personnel, costs associated with the WVDOH inventory and equipment (snowplows, mowers, trucks, etc.) also are considered a support expense. Before even basic maintenance activities can start, the WVDOH must meet its daily financial obligations (insurance, salaries, pensions, etc.) for the facilities and staff related to these functions and must pay for the equipment needed to accomplish basic functions. Unlike Debt Service payments, Administrative Support costs are not fixed, but fluctuate depending on a variety of factors which include, but are not limited to, the number of employees, changes in benefits costs and changes in equipment costs. Oddly, due to a scheduled payroll distribution occurring at the beginning of FY 2019 instead of at the end of FY 2018 Administrative Support expenses were negative \$14.6 million. Administrative Support costs are anticipated to increase steadily from \$94.8 million in FY 2019 to \$118.5 million in FY 2024.

4.3 ROUTINE MAINTENANCE

Once Debt Service and Administrative Support expenses are covered, funds are expended on the third mandated priority - Routine Maintenance of the WVDOH's roadways. The WVDOH has facilities, equipment and workers in all 55 counties dedicated to Routine Maintenance of the highways and bridges under its jurisdiction. Routine Maintenance includes such activities as snow removal, brush cutting, bridge inspection, litter collection, pothole patching, and ditch cleaning, to name a few. If the WVDOH did not perform these fundamental tasks, these roadways would rapidly become unusable to the traveling public. While maintenance embodies all functions performed by the WVDOH that serve to preserve, as near as possible, the State's infrastructure in its present condition, for the purposes of this report, activities such as renovation, resurfacing, and bridge repair are considered improvements rather than maintenance expenditures. Like Administrative Support expenses, Routine Maintenance does not historically remain fixed. Akin to Administrative Support expenses, Routine Maintenance costs tend to fluctuate but overall they will trend higher over time, depending on a number of

West Virginia 2020-2025 STIP

factors such as weather, improvements in surface type, traffic volume, fuel, material, and personnel costs to name but a few. Routine Maintenance costs of the WVDOH exclusive of Renovation Improvements were \$315 million in FY 2018. It should be noted that until recently, the Maintenance Appropriation Line for the WVDOH was comprised of both true routine maintenance and renovation activities (i.e. slide repair, small bridges, etc.). This made accurately tracking expenditures difficult. As part of the restructuring of the Agency’s budget, new renovation work is being directed to the Non-Federal Improvements budget line, which is more appropriate. The switch will likely cause some accounting discrepancies in the short run as old projects are completed and future projects come on line. As a result of the move, forecasted expenditures for Maintenance fluctuate. Routine Maintenance costs are predicted to decrease slightly over time from \$338.1 million in FY 2020 to \$325 million in FY 2024 as capital projects are phased out of the Maintenance appropriation line. The change in costs of the Agency’s mandated priorities over time is shown below (See Figure #4).



West Virginia 2020-2025 STIP

4.4 OTHER GOALS AND POLICIES

The other goals and policies are actually handled in the program itself. Matching federal-aid, replacing and rehabilitating infrastructure, and improving safety are all part of the programming function.

Typically, a reasonable estimate of State funds available to the WVDOH for improvements would be determined by subtracting the cost of the Agency's mandated priorities and Set-Asides from the State revenue components of the State Road Fund as shown in Figure # 5. However; the Agency, as described previously in this document, is currently in the midst of the Roads to Prosperity initiative to kickstart the State's economy by investing in transportation. As originally conceived, the State would initiate \$2.6 Billion in capital projects by selling various types and amounts of bonds over a four year period. The program was intended to consist of \$1.6 Billion in General Obligation Road Bonds (GO Bonds), \$500 million in Turnpike Revenue Bonds, and \$500 million in Grant Anticipated Revenue Vehicle (GARVEE Bonds). Due to the massive size of this program and development time needed to get projects ready, the program will by necessity be delivered in waves over multiple fiscal years.

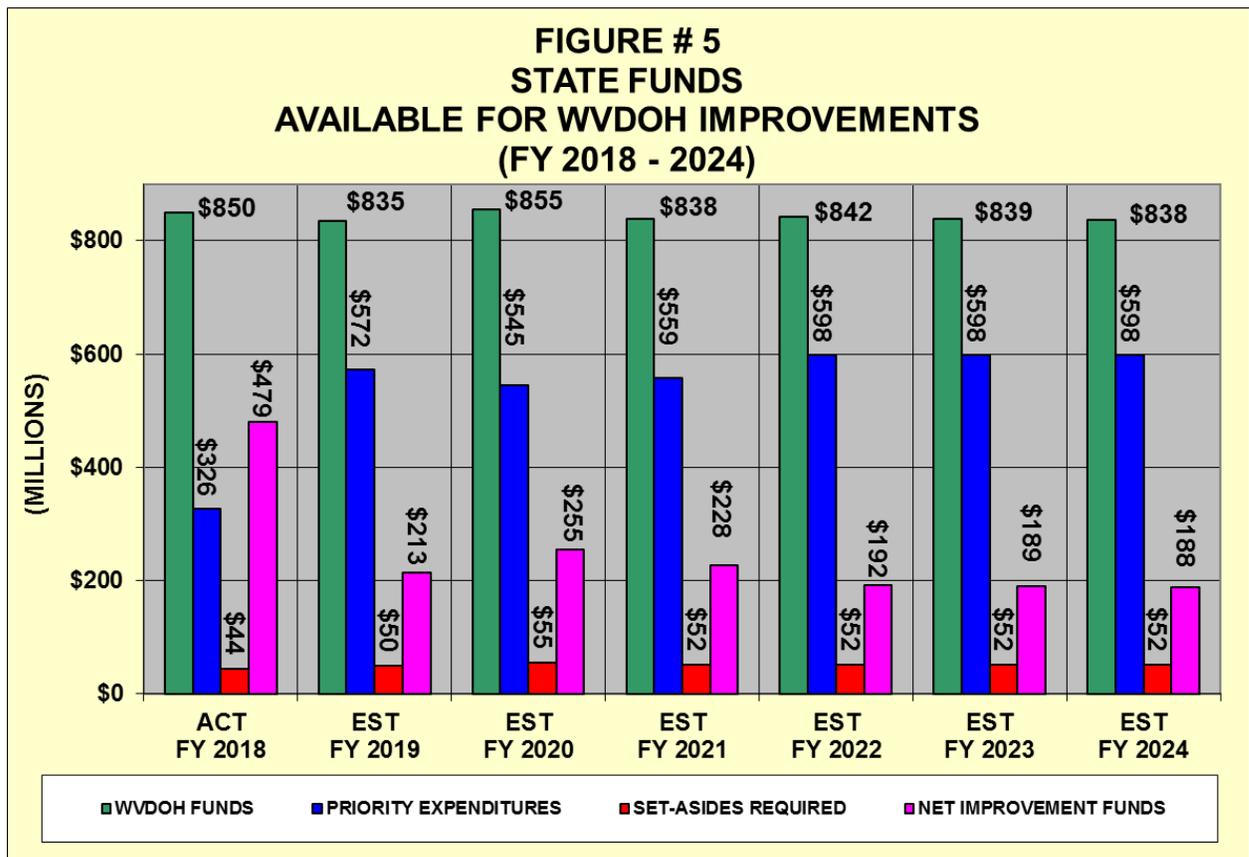
As of January 2019, the State has issued \$800 million in GO Bonds, which yielded proceeds of roughly \$913.4 million, \$166.4 million in Turnpike Revenue Bonds that generated \$172 million in proceeds, and two separate GARVEE issues, one for \$220 million that generated \$259.9 million and one for \$78.8 million that generated \$91 million in proceeds. The additional funding provided by these infusions will have varying impacts on the transportation program moving forward. Any additional sale of GARVEE notes will directly impact the STIP as a reduction of federal funding available for new and ongoing initiatives. Currently, the Agency will need to dedicate \$32.2 million per year over the six years covered by the STIP to pay for the two GARVEE issuances that have already taken place. The sale of additional Turnpike Revenue Bonds will have no financial impact on the STIP per se, but will affect the performance measures and project mix included in the STIP. The Turnpike Bond Projects, consisting of several projects focused on operational improvements to WV 10 in Mercer and Wyoming Counties, a corridor expansion project on the King Coal Highway in Mercer County, and multiple bridge replacement projects targets such performance measures relating to the reduction of the number of fatalities and serious injuries and the Percentage of Pavements of the Non-Interstate NHS in Good Condition. The sale of the remaining GO bonds will directly impact the State Road Fund in that future state revenues will be required for debt service related to those issues as opposed to address any future issues that arise.

This document is primarily focused on what initiatives the State will pursue with the federal funds assumed to be available to it over the FFY 2020 to FFY 2025 period. At present, with

West Virginia 2020-2025 STIP

the exception of GARVEE payments, federally reimbursable projects are being funded initially with State Road Fund monies not Turnpike Revenue or General Obligation Bonds. As such, while there are a host of other capital initiatives ongoing. This document will focus only upon the amount of State Road Fund dollars available for improvements and the federal-aid anticipated to be available for new initiatives as well.

As can be seen from Figure #5, due in large part to increases in Debt Service, the amount of State Road Funds available for highway improvements is anticipated to trend downward over the forecast period. Despite the lackluster forecast, it is reasonable to assume that after the WVDOH meets its mandated priorities and covers required legislatively required Set-Asides, sufficient funds will remain for matching federal funding anticipated to be available during the next six years. The next section of this document briefly describes the types of federal-aid highway funds anticipated to be available for the FFY 2020 to FFY 2025 STIP.



5. PERFORMANCE BASED PLANNING REQUIREMENTS

The Moving Ahead for Progress in the 21st Century (MAP-21) Act passed by Congress in 2012, and subsequently in 2015, the Fixing America’s Surface Transportation (FAST) Act established a number of performance and asset related requirements that states were required to implement in

West Virginia 2020-2025 STIP

order to be eligible for future federal-aid highway and transit funds. Many of the requirements established under MAP-21 had phase in dates established that were after MAP-21 was set to expire. As such, many states (including West Virginia) were hesitant to devote a significant amount of resources to these endeavors until they were sure they were going to be continued in subsequent transportation legislation. With the enactment of the FAST Act and its reaffirmation of a performance-based transportation program, the WVDOT began working in earnest on meeting the necessary requirements.

The precursor for the performance-based requirements for the recipients of federal-aid transportation funds was two-fold. First, the establishment of seven (7) National Transportation Goals:

- Safety-to achieve a significant reduction in traffic fatalities and serious injuries on all public roads
- Infrastructure Condition- To maintain the highway infrastructure asset system in a state of good repair
- Congestion Reduction- To achieve a significant reduction in congestion on the National Highway System.
- System Reliability- To improve the efficiency of the surface transportation system
- Freight Movement and Economic Vitality- to improve the National Highway freight Network, strengthen the ability of rural communities to access national and international trade markets, and support regional economic development.
- Environmental Sustainability- To enhance the performance of the transportation system while protecting and enhancing the natural environment.
- Reduced Project Delivery Delays- To reduce project costs, promote jobs and the economy, and expedite the movement of people and goods by accelerating project completion through eliminating delays in the project development and delivery process, including reducing regulatory burdens and improving agencies' work practices.

Second, requirements established in MAP-21 for the United States Department of Transportation (USDOT) to establish national performance measures (associated to the National Goals) to assess performance/condition and used to carry out several federal-aid highway programs (National Highway Performance Program, Highway Safety Improvement Program, Congestion Mitigation and Air Quality Program, and the National highway Freight Program). Given the complexity of the issues, the rule-making associated with developing the required performance measures took several years to come to fruition. The performance measures adopted by the USDOT were as follows:

West Virginia 2020-2025 STIP

1. Percentage of Pavements of the Interstate System in Good Condition
2. Percentage of Pavements of the Interstate System in Poor Condition
3. Percentage of Pavements of the Non-Interstate NHS in Good Condition
4. Percentage of Pavements of the Non-Interstate NHS in Poor Condition
5. Percentage of NHS Bridges Classified in Good Condition
6. Percentage of NHS Bridges Classified in Poor Condition
7. Percent of Person-Miles Traveled on the Interstate System That Are Reliable
8. Percent of Person-Miles Traveled on the Non-Interstate NHS That Are Reliable
9. Truck Travel Time Reliability (TTTR) Index
10. Total Emission Reductions: PM2.5
11. Total Emission Reductions: PM10
12. Number of Fatalities
13. Rate of Fatalities
14. Number of Serious Injuries
15. Rate of Serious Injuries
16. Number of Non-motorized Fatalities and Non-motorized Serious Injuries
17. Total Emissions Reductions: CO
18. Total Emissions Reductions: NOX
19. Total Emissions Reductions: VOC

In addition to the performance measures identified above, which deal with the federal-aid highways, other performance and asset related requirements were developed for public transit. Those items will be discussed in the Transit portion of the STIP. Once the USDOT formally adopted performance measures outlined above, states were required to establish baseline values, set performance targets and begin reporting the information to FHWA. It should be noted that not all performance measures were adopted at the same time and as such, base line years will differ. A discussion of West Virginia's overall efforts in this regard and the status at the time of this document's preparation follows.

5.1 PERFORMANCE MEASURES AND TARGETS

The requirements for states and other entities to identify their baseline information and report their conditions and targets have varied depending on when the USDOT formally adopted a performance measure. The WVDOT has been working diligently to meet the phase-in dates associated with the various requirements. Figure 5A below outlines the status of the nineteen highway related measures identified above, as of September 30, 2018. It is not the intent of this document to regurgitate the performance data and information contained in the 2018 Baseline

West Virginia 2020-2025 STIP

Performance Report, but rather to discuss in broad generalities the impact they will have on future iterations of the STIP.

FIGURE 5A
Summary of Performance Measures and Targets
(as of 9/30/18)

Performance Measures	Baseline	2-Year Target	4-Year Target
Percentage of Pavements of the Interstate System in Good Condition	NR	NR	75.0%
Percentage of Pavements of the Interstate System in Poor Condition	NR	NR	4.0%
Percentage of Pavements of the Non-Interstate NHS in Good Condition	57.1%	40.0%	45.0%
Percentage of Pavements of the Non-Interstate NHS in Poor Condition	7.2%	5.0%	5.0%
Percentage of NHS Bridges Classified as in Good Condition	13.9%	14.0%	16.0%
Percentage of NHS Bridges Classified as in Poor Condition	11.9%	10.0%	10.0%
Percent of the Person-Miles Traveled on the Interstate That Are Reliable	99.8%	98.0%	96.0%
Percent of the Person-Miles Traveled on the Non-Interstate NHS That Are Reliable	NR	NR	87.0%
Truck Travel Time Reliability (TTTR) Index	1.21	1.25	1.3
Total Emission Reductions: PM2.5	0.092	0.092	0.092
Total Emission Reductions: PM10	0.0	0.0	0.0
Number of Fatalities (5 yr rolling average) 2017 Base Year	288.6	274.2	259.8
Rate of Fatalities (2017 Base year)	1.517	1.450	1.457
Number of Serious Injuries (5-yr rolling average) 2017 Base Year	1283.2	1188.3	1093.5
Rate of Serious Injuries (2017 Base year)	6.742	5.877	5.252
Number of Non-motorized Fatalities & Non-Motorized Serious Injuries (2017 Base Year)	94.4	85.1	75.7
Total Emission Reductions: CO	NR	NR	NR
Total Emission Reductions: NOx	NR	NR	NR
Total Emission Reductions: VOC	NR	NR	NR

Note: NR = Not Required for 10/1/2018 submittal

West Virginia 2020-2025 STIP

A review of Figure #5A, indicates that the first six performance measures deal with the condition of pavement and bridges on the National Highway System. The performance measures associated with pavement are further sub-divided by the Interstate System and the remainder of the NHS. Much of the information regarding these performance measures is currently in flux, since the WVDOT has only recently completed its final Transportation Asset Management Plan (TAMP). The final version of the TAMP had to be submitted by June 30, 2019 to avoid penalties outlined in MAP-21. The initial TAMP outlined items that the Agency was lacking in order to have a compliant final TAMP. The major deficiencies were the need for a Bridge Management System and a more robust Pavement Management System, that would allow the Agency to perform life cycle cost analyses to determine the impact of alternative investment strategies. The final TAMP required an investment strategy to be identified that will be monitored yearly by FHWA to ensure that it is to the extent possible being adhered to. The timing associated with the approval of a new STIP will necessitate that assumptions be made initially regarding the size of investments to be made in the STIP regarding pavement and bridges. It is currently assumed that the Agency will rely heavily on placeholders in the outer years of the STIP, especially for bridge projects that will need to be vetted through the new Bridge Management System. Likewise, specific pavement restoration projects are highly dependent on annual reviews of their condition and deterioration after winter and are not generally identified beyond the first one or possibly two years. Based on the results of the analysis and the investment strategy selected by management, it is likely that an Amendment of the new STIP will be required shortly after its approval to make any required revisions in the size and scope of the State's resurfacing and bridge program.

The next two performance measures deal with System Reliability. Travel time reliability concerns in West Virginia are traditionally associated with weather, work zones, incidents, or special events. Recurring interstate reliability concerns are limited to corridors within the Charleston, Beckley, Martinsburg and Morgantown regions. Non-Interstate NHS reliability concerns are more widespread, primarily in Charleston, Huntington, Morgantown, and Parkersburg regions. Safety trends in WV show an overall decline in the number and rate of fatalities and serious injuries, indicating the potential for less reliability issues associated with incidents. Increasingly, the impact of more widespread work zones associated with the significant amount of construction as part of the Roads to Prosperity program, may have the most significant impact on reliability over the next 4-years. A review of figure #5A indicates that reliability of the Interstate System in West Virginia is not a serious problem with 2-year and 4-year target of 98% and 96%, respectively. While construction associated with regular federal-aid and roads to Prosperity will impact Reliability in the short run, they will ultimately allow the State to maintain an extremely high reliability level on the Interstates.

Similar to the drop off in performance associated with pavements on the Non-Interstate NHS facilities, West Virginia's reliability on those facilities is lower as well (91.9% in 2017). The

West Virginia 2020-2025 STIP

influx of funding associated with Roads to Prosperity and the construction projects they generate will have a transitory effect of reducing reliability on those facilities over the next four year with an anticipated target of (87%). As these projects are completed, it is anticipated overall reliability on the facilities will increase over time.

The next performance measure (i.e. Truck Travel Time Reliability Index or TTTR), is specifically geared toward addressing freight needs. Within WV, there are limited Interstate segments with truck travel time reliability at 1.5 or greater, including I-64 west of Charleston, I-77 near Bluefield/E. River Mountain Tunnel, I-79 near Bridgeport/Clarksburg. These locations and others are typically associated with interchange spacing, access to intermodal or manufacturing facilities, toll plazas, or interstate geometry and terrain. Increasingly, the impact of more widespread work zones associated with the significant amount of construction as part of the Roads to Prosperity program, may have the most significant impact on reliability in the next 4-years. The baseline measure of TTTR in West Virginia was 1.21. As with the prior performance measures, it is anticipated that the TTTR will degrade over the next four years (1.25 and 1.30 for the 2-year and 4-year targets, respectively). The degradation is due not only to construction initiatives on major freight facilities in the State, but also due to external factors including truck volume growth, shifting logistics patterns and economic development. More detailed information regarding the State's freight network and infrastructure needs can be found in the West Virginia's State Freight Plan. As will be discussed below, federal-aid highway funds apportioned under the National Highway Freight Program, will be targeted to address the State's most critical freight needs. West Virginia's State Freight Plan can be found at https://transportation.wv.gov/highways/programplanning/Documents/WV_Freight_Plan_2018.pdf.

The next two performance measures shown in Figure #5A deal with emissions reductions. Federal-aid highway projects to address emissions reduction are typically funded using Congestion Mitigation and Air Quality (CMAQ) funds, which will be explained in more detail below. Due to the general lack of significant air quality issues in West Virginia, most CMAQ funds provide to the State are flexible and can be used in any portion of the State. The WVDOT, through collaboration with the applicable MPOs, developed 2-year and 4-year target emission reductions. The maintenance areas and applicable pollutants are – PM 2.5 for Charleston and Steubenville/Weirton maintenance areas and PM10 for the Weirton maintenance area. For PM 2.5, the baseline value is 0.092 kilograms per day. West Virginia anticipates that its program of improvements will allow that value to remain constant over the 2-year and 4-year period. The baseline performance and targets were established on a limited set of quantified PM2.5 emission reduction CMAQ projects, therefore the targets are set equal to the baseline estimate until more project data is available. At this time, the WVDOT does not anticipate make any reductions in PM 10, since there were no projects established for specifically addressing the issue.

West Virginia 2020-2025 STIP

The next five performance measures shown in Figure #5A address Safety associated with the transportation network. In compliance with requirements of 23 CFR Part 490 FHWA recently established Safety Performance Management Measures (SPMs) for all states and metropolitan planning organizations (MPO). These SPMs require the development of specific safety targets for the number and rate for fatalities, the number and rate of serious injuries, and the number of fatalities for non-motorized users (pedestrians and bicyclists). Additionally, NHTSA was required to establish similar Safety Performance Management Measures for state Highway Safety Offices (HSO, in this case the Governor's Highway Safety Program). They established twelve SPMs for state HSOs. It is further required that the State Department of Transportation (DOT) and the (HSO) must have identical targets for three of those numbers (the number and rate for fatalities and the number of serious injuries). MPOs may develop their own safety targets or adopt what the state has developed. West Virginia's MPOs were actively involved in the Strategic Highway Safety Plan (SHSP) update process either as members of the Safety Management Task Force (SMTF) or as reviewers of the SHSP. This helps ensure coordination including what type of projects may be included in the Statewide Transportation Improvement Program (STIP) and local Transportation Improvement Programs (TIP). Continued coordination of SPMs among these agencies will be reported in the Governor's Highway Safety Program and Highway Safety Improvement Program annual reports. Continued coordination of SPMs among these agencies will be reported in the Highway Safety Improvement Program and Governor's Highway Safety Program annual reports submitted to FHWA and NHTSA respectively.

SHSP goals are not the same as these safety targets. However, guidance from the FHWA urges states to look at the SHSP process as an opportunity to establish longer-term goals and objectives that can align with the annual targets. SHSP goals span multiple years and can be more aspirational in nature such as West Virginia's Zero Fatalities. To ensure consistency, FHWA recommends individuals involved in setting the annual targets also be involved in establishing the SHSP goals and objectives which was the case in West Virginia. West Virginia will not only strive to reduce fatalities by 50 percent by 2030, but also achieve a 66 percent reduction in serious injuries by 2030. Furthermore, it is anticipated that with the judicious use of West Virginia's federal-aid apportionments of Highway Safety Improvement Program (HSIP), the State will continue to see a steady decline in the Number of Non-motorized fatalities and injuries statewide. Projects that will affect this safety performance measure that are funded with HSIP safety funds are considered not groupable in the STIP and thus are listed as separate projects.

The final three performance measures shown in Figure #5A are also related to emissions reductions. However, For the first performance period, these performance measures only apply to urbanized areas with more than 1 million people or areas that are classified as no-attainment areas for ozone, carbon monoxide, or particulate matter. The population threshold changes to

West Virginia 2020-2025 STIP

more than 200,000 in the second performance period. West Virginia has no population centers of 1 million and as such has opted not to track these performance measures at the present time.

6. FEDERAL STIP FUNDING

Given the small size of the State's population, the terrain, and the vast highway network that the WVDOH must maintain, it is clear that the State relies heavily on federal funding to maintain its roads and bridges. It is not surprising that one of the State's goals is to capture any and all available federal funding. As indicated previously, the federal government's financial participation in highway construction is generally governed by multi-year highway authorization legislation. As discussed previously, the current multi-year authorization is FAST, which was enacted on December 5, 2015 and without legislative action will expire on September 30, 2020. The Fast Act replaced the preceding multi-year authorization and its extensions (MAP-21). As such, federal participation in highway and transit related programs is only guaranteed through FFY 2020. While it must be stressed that there is no guarantee of federal participation in highway construction beyond September 30, 2020, the likelihood of the federal government divesting itself entirely from such an integral part of the nation's economy is extremely remote. Lacking any authorizing legislation for most of the period covered by the STIP and realizing that the long term viability of the primary federal funding mechanism for highways and transit - the Highway Trust Fund (HTF) – has been an ongoing concern at the national level, WVDOT personnel believe projections of future federal-aid funding should be relatively conservative.

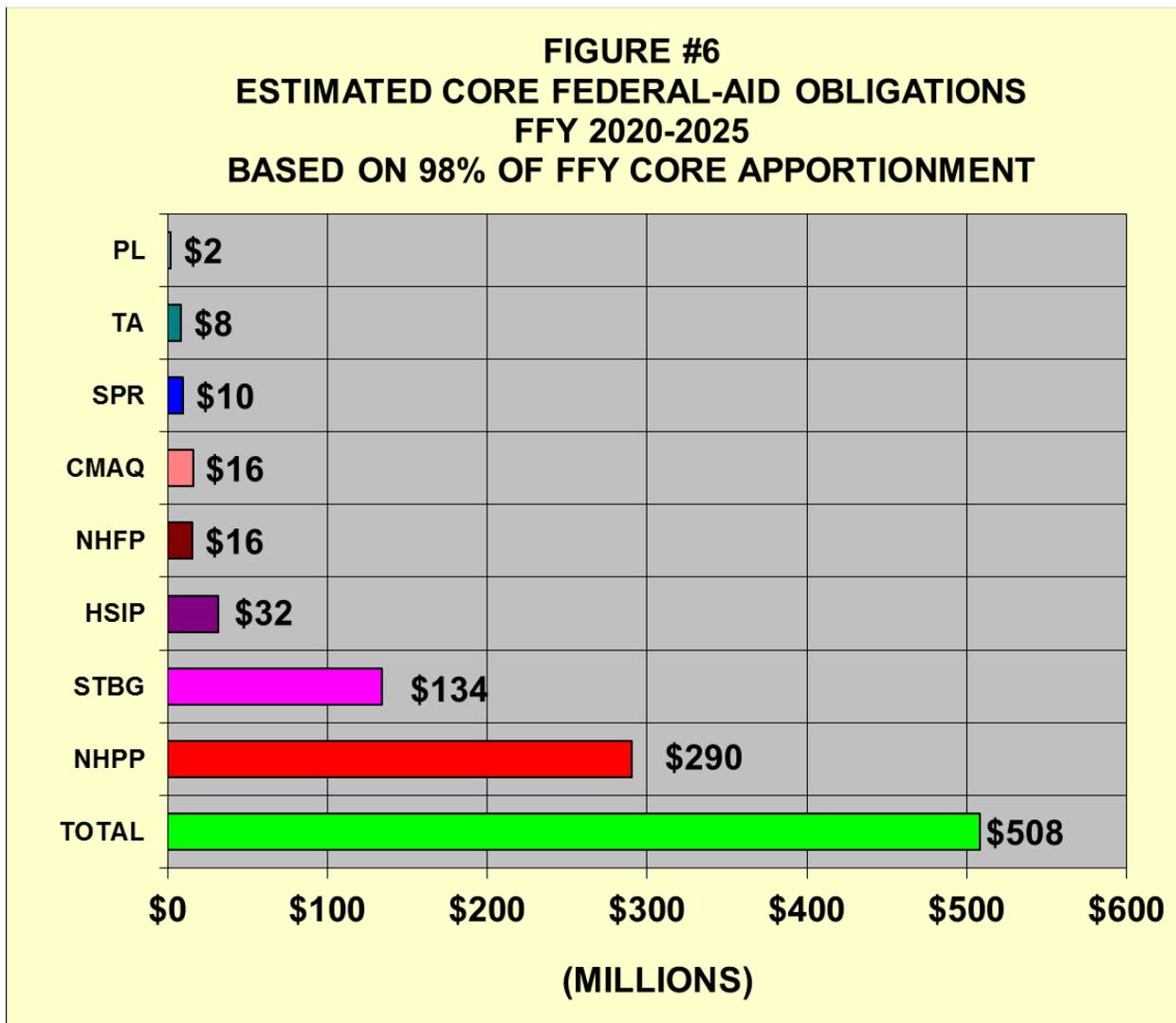
Even though FAST guarantees federal participation through FFY 2020, tight funding at the federal level and balances in the HTF have dictated that the amount of available federal funding in FFY 2020 for transportation, will be lower than in FFY 2019. Without legislative action at the federal level, FHWA will be required to rescind \$7.6 billion in previously apportioned unobligated funds nationally. Although the value will continue to fluctuate until September 30, 2019, West Virginia's estimated share of the rescission (at the time of this reports preparation) is estimated to be roughly \$120 million of which \$106.2 million would come from Core Federal Funds and the remainder from NHPP Exempt funds. The pending rescission will definitely impact the Agency's overall transportation program, but given that the rescinded funding will be taken from unobligated balances that exist as of September 30, 2019 and the rescindable values will not be known until July 1, 2020, the Agency is assuming the rescindable funds will be reduced to \$0 and are shown as thus on the FFY 2020-2025 Financial Chart. Therefore, the Agency is assuming the 2020 apportionments of funding will be what is available to be spent against. Any updates to the rescission values will be addressed in future amendments as necessary. For the purposes of the highway component of this report, the Agency has decided to use the overall funding growth experienced in the FAST Act in conjunction with estimated values for FFY 2020 apportionments

West Virginia 2020-2025 STIP

as the basis for the FFY 2020-2025 funding levels. During the FAST Act overall funding available at the national level grew at an average rate of 2.36% per year. The Agency is assuming that action at the federal level after FAST expires would continue at that rate over the FFY 2020-2025 time period.

Traditionally, to build added conservatism into future estimates, the WVDOT has applied a straight percentage reduction to its apportionment to reflect the fact that OA is usually less than 100% of apportionment. The Agency intends to continue in this regard and will assume that OA will be equivalent to 98% of apportionment. In addition, for the purposes of this document, the values, as discussed for each funding program, represent the potential obligation levels and are assumed to be reflective of the values that remain after any “takedowns” and penalties are applied. Using the assumptions outlined above Core Federal-aid funding for the FFY 2020-2025 STIP would average \$508 million per year and total \$3.04 billion (see Figure #6).

West Virginia 2020-2025 STIP



Unlike the situation when MAP-21 replaced the previous multi-year legislation (SAFETEA-LU) and significantly altered major funding categories and policies on how federal funds would be distributed, the FAST Act generally built upon the groundwork laid by its predecessor. FAST continues to limit the number of funding categories and expand their eligible uses to give states more flexibility in addressing their particular needs. FAST also continues to place emphasis on performance driven investment and funding to address transportation needs. Figure #6 shows a general composition of Core funding provided to West Virginia annually for highways. As will be discussed later in this document, the categories are the federal governments means of ensuring that states, in the delivery of their transportation program, specifically address certain priority items. While, in some instances, the federal government directs the sub-allocation of funding for specific purposes or in a specific manner, (such as for the improvement of railway-highway crossings or distributing funding based on population), these directives continue to be fewer than under

West Virginia 2020-2025 STIP

authorizing legislation prior to MAP-21 and allow states more overall flexibility. Rather than creating additional funding categories that required States to use their apportionments for specific types of projects or facilities (i.e. bridges or Interstates), MAP-21 and FAST required various performance measures to be established. As long as a can state meet the performance goals, as established, it will continue to have the flexibility as to how it can invest its apportioned funds. If performance measures are not met, MAP-21 and FAST dictated that some of the funds apportioned to the state are sequestered for specific purposes until the performance goals are reached. For the purposes of the FFY 2020-2025 STIP, it is assumed that funding categories established under FAST will remain unchanged.

If all funds were expended in the year they were obligated, the WVDOT would anticipate the need for matching funds of approximately \$127 million per year based upon the typical 80/20 matching requirement. On virtually every federal-aid eligible project, there are individual activities and items that are deemed ineligible for federal-aid reimbursement. As such, the State's share of funds required to complete federal projects is almost always greater than the amount that was projected. Individually the impact of ineligible charges would have a negligible effect on the State's federal-aid program, but as a group this disparity can significantly alter the amount of State matching funds required on an annual basis. Conversely, the decision by the Agency to use Toll Credits and Bridge Credits as the soft match on projects (as has been described for GARVEE debt service payments) will ultimately reduce the amount of State funds needed annually.

A description of the major funding programs contained in the FAST Act and the average amount of funding West Virginia anticipates having available to use annually, during the six-year period, follows:

NATIONAL HIGHWAY PERFORMANCE PROGRAM (NHPP)

With the Interstate System nearing completion nationwide in 1991, the federal government sought to identify a larger network of roadways of national significance that should receive dedicated, federal-aid funds. The network, as envisioned, would consist of over 160,000 miles of major roads throughout the United States. The NHS, which was designated in 1996, encompassed all of the Interstate System and a large percentage of the nation's highways that are functionally classified as a Principal Arterial. MAP-21 expanded the scope to encompass all Principal Arterials not previously designated as part of the NHS. The Enhanced NHS consists of approximately 220,000 miles of roadway nationally. The change simply increases the amount of roadway mileage on the NHS in the state and are hence eligible for NHS funding and reduces the amount of roadway mileage on the Surface Transportation Program (STP) system. For the remainder of this report no distinction is made between the original and enhanced NHS. A large majority of the non-Interstate roadways that make up the NHS are in

West Virginia 2020-2025 STIP

need of major improvement in order to meet current highway design standards. Upgrading NHS roadways has been a major focus of the nation's highway improvement initiatives.

West Virginia's NHS roadways total over 1,985 miles, of which 555 miles are Interstate roadways. The West Virginia Parkways Authority (WVPA), rather than the WVDOH, is responsible for 86 of the State's Interstate miles. As of February 18, 2019, a total of 7,228 public vehicular bridges were identified in West Virginia, of which 1,294 are located on the NHS network. The WVDOH is responsible for 1,194 of the 1,294 bridges located on the NHS. The WVPA is responsible for 97 and Other entities are responsible for 3. Figure #6A below shows and overall breakdown of West Virginia's public bridges owner and the federal-aid highway system they are located on. A quick review of Figure #6A indicates that the WVDOH is responsible for the preponderance (96.8%) of public bridges in the State. Upkeep on these facilities for the safety of the traveling public requires significant investment on the part of the Agency.

BRIDGE PENALTY

Due to the analysis of the 2017, 2018 and 2019 National Bridge Inventory data sets of the WV bridges showing the percent deck area structurally deficient to be greater than 10%, FHWA has determined starting in FFY 2020, a portion of NHPP funds will be set aside for bridges. This amount is approximately \$36, 623,066.

West Virginia 2020-2025 STIP

FIGURE # 6A
BREAKDOWN OF WEST VIRGINIA'S PUBLIC VEHICULAR
BRIDGES BY OWNER/FEDERAL-AID HIGHWAY SYSTEM
AS OF February 18, 2019

OWNER*	#	FEDERAL-AID SYSTEM		
		NHS	STP	OFF-SYSTEM**
WVDOH	6,999	1,194	2,177	3,628
WVPA	99	97	0	2
OTHER***	130	3	18	109
TOTAL	7,228	1,294	2,195	3,739

* BRIDGES ARE GROUPED BY OWNERSHIP OR MAINTENANCE RESPONSIBILITY

** OFF-SYSTEM SIGNIFIES BRIDGES LOCATED ON ROADWAYS NOT TRADITIONALLY ELIGIBLE FOE FEDERAL-AID HIGHWAY FUNDS; HOWEVER, BRIDGES ON THESE FACILITIES RECEIVE DEDICATED FEDERAL FUNDING (STP/STBG OFF-SYSTEM BRIDGE FUNDS) AND MAY ALSO BE FUNDED WITH OTHER STP/STBG FUNDS

*** OTHER ENTITIES INCLUDE BUT ARE NOT LIMITED TO CITIES, RAILROADS, OTHER STATE AGENCIES, OR PRIVATE ENTITIES

Many people believed that the designation of the original NHS signaled a renaissance of federal-aid highway construction. Many DOTs across the nation initiated numerous planning and design projects for NHS facilities in their states in anticipation of major increases in federal transportation funding. It was thought that the NHS program would be pursued with the same vigor that the Interstate System had been. Unfortunately, these expectations were proven false. While dedicated federal funding has been made available for NHS routes, the levels have been inadequate for major progress. Despite the fact that many of the roughly 1,430 miles of non-Interstate roadways that are part of the NHS in West Virginia are in need of major improvement to conform to modern design criteria, federal-aid funds dedicated to those efforts have been limited.

The NHPP provides funding eligibility for a project from an amalgam of funding categories contained in SAFETEA-LU legislation and its predecessors (Interstate Maintenance, Bridge Replacement, National Highway System, Surface Transportation Program and Appalachian Development Highway System). The NHPP is intended to provide funding to support the condition and performance of the NHS and for the construction of new facilities on the NHS

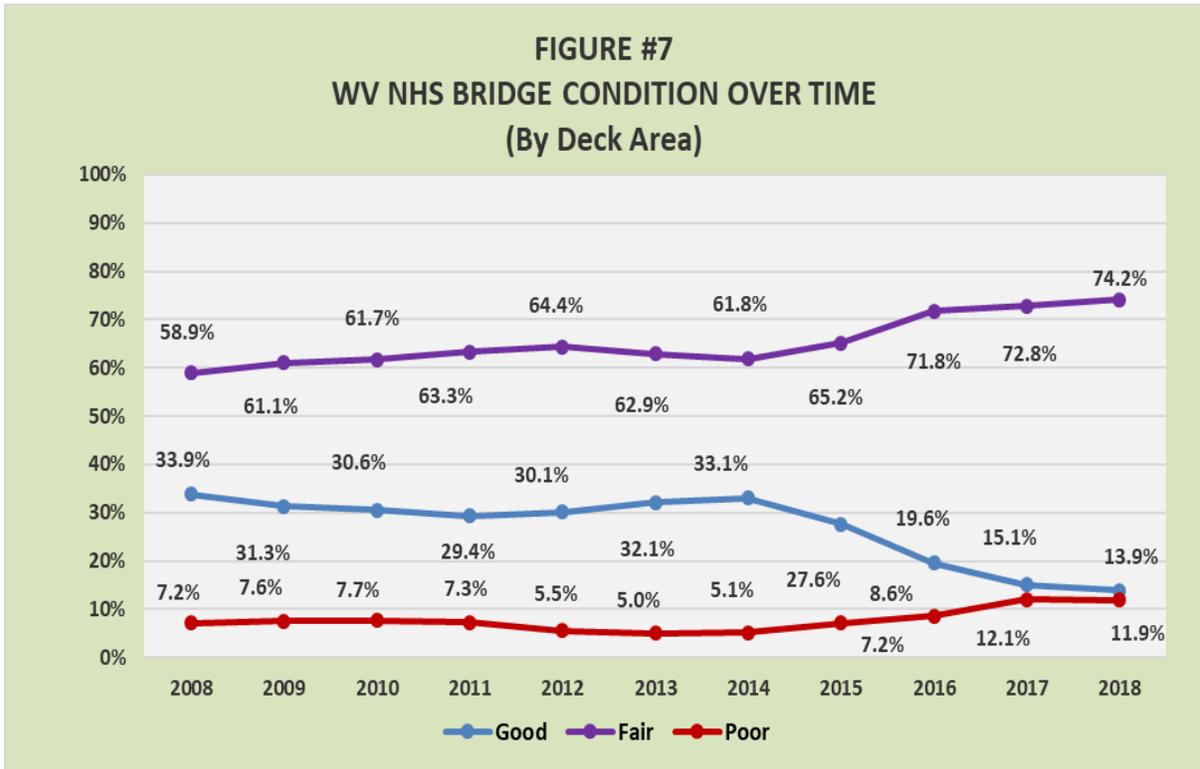
West Virginia 2020-2025 STIP

(such as the Appalachian Development Highway System (ADHS)). Under this program states have the ability to fund projects to resurface or add capacity to Interstates, replace bridges on all NHS routes, resurface or upgrade non-Interstate NHS routes and continue the construction of West Virginia's portion of the ADHS. The disparate nature of the projects eligible for NHPP funding requires the WVDOT to balance investments between preservation and performance/expansion activities across both bridge and roadway asset classes on its highest priority roadways.

To ensure that the preservation aspect of this program is not ignored, states are required to develop asset management plans (TAMPs) for the NHS and establish minimum performance conditions for Interstate pavements and bridges on the NHS. The requirement for having a TAMP originated in MAP-21, but the specific details of them have been debated for many years. The final rule on state asset management plans was issued on October 24, 2016. West Virginia has been and is currently working diligently to implement the requirement of that rule. In an effort to meet federal requirements, the WVDOH completed its initial TAMP in September 2018, which covers pavements and bridges on the NHS. At the time of this document's preparation, the WVDOH's final TAMP had not been completed or submitted for approval, but the Agency fully intends to meet the June 30th, 2019 deadline.

In order to meet the requirements of the final TAMP, the WVDOH is in the process of enhancing its current pavement management system (PMS) and implementing a bridge management system (BMS). These two initiatives will allow for a robust analysis of bridge and pavements performance and conditions to ensure scarce resources are maximized. One of the findings of the initial TAMP indicated that the state is not meeting the national target for NHS bridges, which is to have less than 10% of the deck area rated as poor (See Figure #7). Currently, 11.9% of West Virginia's NHS bridges by deck area are rated as poor. While the difference is small, the results will impact the STIP in several ways, which will be described later. Conversely, the performance of West Virginia's Interstate pavement is significantly better (only 0.5 % currently rated as poor) than federally required (less than 5% of Interstate pavement rated as poor) (See Tables #3A and 3B). The overall condition of pavements drops off significantly when the non-Interstate NHS pavement is analyzed. Currently, 1.2% of non-Interstate NHS pavement is rated as being in poor condition; however, the portion rated as currently in good condition is only 41% compared to the Interstate, which is currently over 73%.

West Virginia 2020-2025 STIP



West Virginia 2020-2025 STIP

**TABLE #3A
WV INTERSTATE NHS
PAVEMENT CONDITION OVER TIME**

	2014	2015	2016	2017
GOOD	74.58%	80.56%	85.20%	73.41%
FAIR	23.36%	15.10%	14.67%	23.76%
POOR	2.06%	1.21%	0.20%	0.05%

**TABLE #3B
WV NON-INTERSTATE NHS
PAVEMENT CONDITION OVER TIME**

	2014	2015	2016	2017
GOOD	54.62%	44.09%	49.72%	40.80%
FAIR	42.58%	52.80%	49.06%	55.84%
POOR	1.58%	1.65%	0.64%	1.20%

During the next six years West Virginia anticipates receiving an average of \$290 million annually in NHPP funds that are typically matched on an 80% federal and a 20% state basis. However, under the provisions of FAST, funds obligated for the completion of the ADHS can be matched on a 100% federal basis. To further aid states in addressing their specific areas of needs, a State may transfer up to 50% of any apportionment to another formula program except no transfers are permitted of Metropolitan Planning funds or funds sub-allocated to areas based on population. The WVDOH has made significant use of the transferability of funds over the last few years. Specifically, transferring NHPP funds to the STP to allow for greater flexibility in programming and funding projects. However, since the deck area of West Virginia's NHS bridges no longer meets the 10% threshold transfers from that program are currently prohibited.

Given the fact that FAST, like its predecessor, MAP-21 allows for 100% federal funding for development of ADHS corridors, a little background is warranted. The ADHS is a network of high-speed roadways throughout a 13-state region of the United States that is intended to provide highway service to areas with the potential for economic development where commerce and communication have been inhibited by lack of adequate access. All of the State's ADHS highways are part of the NHS. Prior to MAP-21, ADHS funds were apportioned each year among the states located within the Appalachian Region (as defined by Congress)

West Virginia 2020-2025 STIP

based on the federal share of the cost to complete each state's portion of the system in relation to the total cost to complete the system of roads. Under the last year of SAFETEA-LU the federal government made \$32 million available for ADHS facilities on an 80/20 matching basis. West Virginia received significantly larger apportionments in earlier years of SAFETEA-LU than the last year. However, the percentage that each state received has been based on its share of the cost to complete the overall ADHS system nationally. While SAFETEA-LU was in place, a corridor in Alabama was added to the ADHS, which dramatically reduced West Virginia's overall share of the total cost and, as a result, its annual apportionment level was reduced.

Historically, West Virginia has received a large portion of the total ADHS funds primarily because it is the only state wholly within the Appalachian Region and has a larger portion of uncompleted miles. Since ADHS's inception in 1965, the WVDOH has been working toward the completion of the State's six corridors (D, E, G, H, L, and Q), which total 425 miles. Five of the corridors (D, E, G, L and Q), totaling 291.2 miles, have been completed. Corridor H, the longest corridor in the State at approximately 132 miles, is roughly 77% complete with 101 miles open to traffic and more currently under construction. The remaining 31 miles to be constructed traverse some of the most difficult terrain in the State; as the result, it is anticipated that it will cost over a billion dollars to complete.

In addition to the ADHS corridors, the NHPP also incorporates a number of initiatives that previously received special or "earmarked" funding through the High Priority Corridors and High Priority Project designation. Facilities, including the Coalfields Expressway, King Coal Highway, Tolsia Highway, New River Parkway, WV 10 Upgrade, US 35 Upgrade and a new Ohio River Bridge near Wellsburg, did not receive any "earmarked" funding under MAP-21 or FAST and will need to compete for limited monies that are available for projects of this nature or secure additional funding via various grant programs that are available (Build, INFRA, etc.). Funding for these projects is not guaranteed, but rather competitive nationally and hinge on a number of factors. While West Virginia has successfully secured a number of these grants recently for initiatives like the Berkeley Springs Bypass and placing paving on ADHS Corridor H, they should not be factored into the Agency's forecasted program of available funding. Receiving grants of this nature will have the impact of accelerating some projects and potentially free up funding for others.

Despite the fact that approximately 57% of the state's annual apportionment is directed to the NHPP, given the high cost associated with improving and constructing these roadways and the fact that performance measures established for the program emphasize preservation activities, the WVDOH will be able to make only modest headway on plans to improve these facilities.

West Virginia 2020-2025 STIP

It is the lack of significant amounts of federal and State funding coupled with the overarching need to preserve existing infrastructure that has left the WVDOH in the unenviable position of having to place many of the highway improvement initiatives desired by the public on hold while waiting for sufficient funding.

SURFACE TRANSPORTATION BLOCK GRANT (STBG) PROGRAM

STBG funds, are essentially a renaming of the former STP funds are very flexible because they may be expended on any of the 10,477 miles of roadway, which are typically considered federal-aid-eligible (i.e. any road that is not functionally classified as a Rural Local, Urban Local or Rural Minor Collector). If needed, a portion of the state's STBG apportionment can be transferred to other less flexible funding categories like the NHPP. While STBG funds may be expended for projects on NHS routes in the State, they serve as the principal federal-aid funding mechanism for the remaining 8,492 miles of federal-aid-eligible roadway and 5,934 bridges statewide that are not part of the NHS. As such, the WVDOH has typically done the opposite (i.e. transferred NHPP funds to STBG funds). However, as mentioned previously the WVDOH cannot do this at the present time, because the State has fallen below the required performance level on NHS bridges.

The WVDOH anticipates receiving an average of \$134 million in obligations for all STBG purposes. Out of those funds, roughly \$12 million (9%) per year must be set aside for a subset of the 5,934 bridges (as of February 18, 2019) statewide that are not located on NHS roadways. Throughout the State, 3,739 bridges are located on roads termed "off-system". Those bridges are located on roadways functionally classified as Rural Local, Urban Local or Rural Minor Collector. Highway projects on these facilities are generally not eligible for federal-aid; however, because of the potential for loss of life associated with a bridge failure, a small portion of STBG funds (i.e. 9%) are set aside for bridges on those facilities. The remaining \$122 million is further sub-allocated by geography and population, with roughly \$50 million of the remaining funds able to be used anywhere in the State and the other \$72 million divided into three separate population categories (TMAs, >5,000 and <5,000). Per the 2010 census, West Virginia's total population was 1,852,994, of which 112,268 (6.06%) people resided within the newly created TMA. As such, approximately \$4 million of the State's STBG funds would be sub-allocated to the KYOVA TMA. Areas of West Virginia with populations > 5,000 and < 5,000 would receive \$31 million and \$37 million, respectively. Like most federal-aid funds, STBG funds must be matched at an 80% federal and a 20% state basis.

HIGHWAY SAFETY IMPROVEMENT PROGRAM (HSIP)

MAP-21 significantly increased funding for the HSIP and the FAST Act built upon those increased funding levels, to emphasize the ongoing commitment to improving the safety

West Virginia 2020-2025 STIP

elements of the transportation network. The objective of HSIP is to achieve a significant reduction in traffic fatalities and serious injuries on all public roads. This program is subject to set-aside railway/highway crossing programs, which are currently estimated to be 7% of the state's base HSIP funding. While projects typically will require a 90/10 matching ratio, some activities are eligible for 100% federal funding. For the purposes of this document, embedded within the HSIP program is the Highway-Rail Grade Crossings Program. FAST continues the overarching requirement that HSIP funds be used for safety projects that are consistent with the state's Strategic Highway Safety Plan (SHSP) and that correct or improve a hazardous road location or feature or address a highway safety problem. West Virginia's current SHSP covers calendar years 2017 to 2021. The plan identifies strategies for improving transportation safety in West Virginia, not specific projects. West Virginia anticipates receiving approximately \$32 million annually in safety related obligations during the forecast period.

As with other funding programs, the FAST Act continued the provisions of MAP-21 which eliminated some specific set-asides and replaced them with performance measures. In the case of the HSIP, the set-aside for High Risk Rural Roads was eliminated; however, if West Virginia's fatality rate increases on its rural roads the state will be required to target \$1.6 million of its HSIP funding to specifically address this issue.

As part of the ongoing initiative for transportation investments to be driven by performance measures, West Virginia has established (see Table #4) performance measures, goals and targets for fatalities, fatality rate, serious injuries and serious injury rates. While virtually every type of federal funding could be directed to improving safety components of the state's transportation network, HSIP are intended to specifically address this need. The projects in the FFY 2020-2025 STIP that are funded with HSIP Funds help the State reach the safety-related performance measures and targets established. To achieve this result, each of these projects must go through a cost/benefit process and be able to verify that fatalities are being reduced over time. The performance measures that these projects are targeting include the following:

- Number of Fatalities (5 year Rolling Average) 2017 Base Year
- Rate of Fatalities (2017 Base Year)
- Number of Serious Injuries (5 year Rolling Average) 2017 Base Year
- Rate of Serious Injuries (2017 Base Year)
- Number of Non-Motorized Fatalities & Non-Motorized Serious Injuries (2017 Base Year)

West Virginia 2020-2025 STIP

Example project types and their anticipated effects on the targets mentioned above include:

- Lighting Projects, that through better visibility in high-traffic areas and intersections, fatalities and serious injuries may be reduced
- Safety Improvement Projects, that address pedestrian safety, run of the road departures, guardrail deficiencies, and other safety concerns that would reduce fatalities and serious injuries
- Signing Projects, that through better communication to all motorists, fatalities and serious injuries may be reduced
- Striping Projects to better show motorists proper horizontal vehicle and lane control will reduce fatalities and serious injuries
- Traffic Signal Projects to provide motorists with better communication and proper vehicle transfer guidance through intersections will reduce fatalities and serious injuries

**TABLE #4
WEST VIRGINIA'S SAFETY PERFORMANCE MEASURES**

Safety Performance Measure	Goal	Tracking Items	FIVE-YEAR ANALYSIS PERIOD						
			2005 to 2009	2009 to 2013	2013 to 2017	2017 to 2021	2021 to 2025	2025 to 2029	2026 to 2030
Fatalities & Fatality Rate	50% Reduction by 2030 (from 2009)	Actual Annual Number	390	336	289				
		Target to Reach Goal		337	289	260	231	202	195
		Avg Fatality Rate	1.98	1.78	1.52				
		Avg Target Fatality Rate		1.78	1.48	1.46	1.28	1.06	1.01
Serious Injuries & Serious Injury Rate	66% Reduction by 2030 (from 2013)	Actual Annual Number	5,084	2,000	1,283				
		Target to Reach Goal			1,392	1,093	904	714	667
		Avg Serious Injury Rate	25.74	10.60	6.74				
		Avg Target Serious Injury Rate			6.82	5.25	4.20	3.25	3.01

Note: Rates are calculated per 100 million vehicle miles traveled

NATIONAL HIGHWAY FREIGHT PROGRAM

The FAST Act established a new Core funding program that needs to be accounted for in the STIP. The National Highway Freight Program (NHFP) provides funding to improve the efficient movement of freight on the National Highway Freight Network (NHFN). Interestingly, the NHFN did not exist prior to FAST. FAST required the establishment of a NHFN, which was required to consist of the following components: The Primary Highway Freight System (PHFS), Critical Rural Freight Corridors, Critical Urban Freight Corridors and any portion of the Interstate System not designated as part of the PHFS. Furthermore, FAST required each state to develop a State Freight Plan that is consistent with Title 49 of United

West Virginia 2020-2025 STIP

States Code 70202. West Virginia completed their required State Freight Plan in September 2018. In West Virginia, 2,139 miles of roadway has been designated as part of the State's freight network, which is comprised of the Interstate and ADHS routes in the State as well several other routes designated as critical rural or urban freight facilities. The WVDOT proposes to direct future apportionments of NHFP funds to aid in the acceleration of ADHS Corridor H to improve freight flows through the central part of the State. NHFP funds have an 80/20 matching ratio. For the purposes of this document, the WVDOT anticipates receiving \$16 million annually in NHFP funds.

CONGESTION MITIGATION AND AIR QUALITY IMPROVEMENT (CMAQ) PROGRAM

The Congestion Mitigation and Air Quality Improvement (CMAQ) Program provides federal funding to qualifying transportation projects that provide an air quality benefit by reducing congestion. These funds assist areas that have been designated as non-attainment or maintenance areas according to the national ambient air quality standards for ozone and carbon monoxide emissions under the Clean Air Act Amendments of 1990. While West Virginia is fairly rural and does not typically experience the traffic congestion problems prevalent in major metropolitan areas, it does have some air-quality non-attainment problems. Use of CMAQ funding is not restricted to specific roadways, but to projects or programs that solve air quality problems. Examples of eligible CMAQ projects are those that improve traffic flow, improve signalization, and improve intersections.

MAP-21 and subsequently FAST requires states that have particulate matter (PM 2.5) non-attainment areas, which West Virginia does, to specifically target 25% of their CMAQ funding towards addressing that issue. According to the current air quality standards, at present, none of the state's counties are considered in non-attainment; however, four of the state's fifty-five counties (Kanawha, Putnam, Brooke and Hancock) are considered as a PM 2.5 maintenance area, and thus eligible for the 25% set aside. After the takedown for PM 2.5 is applied (approximately \$4 million), because the rest of the state is currently considered in attainment, the remaining CMAQ funds (approximately \$12 million) may be used anywhere in the state and may be used for projects that would also be eligible for STBG funds. During the next six years, the WVDOT anticipates receiving approximately \$16 million annually in CMAQ funding. CMAQ Program funds are matched at an 80/20 federal to state ratio.

STATEWIDE PLANNING & RESEARCH (SPR)

Realizing that adequate planning is essential to the development of an efficient and effective transportation network, the federal government has for some time mandated that states follow a cooperative, continuous and comprehensive process, known as "3C", for making transportation investment decisions. In addition, the federal government has also recognized

West Virginia 2020-2025 STIP

the ongoing need for a research component to the national highway program. To this end, federal legislation requires a 2% set-aside from each state's apportionments of the NHPP, STBG, CMAQ and HSIP to fund the State Planning and Research (SPR) Program. Unless a state requests an exception, federal provisions dictate that not less than 25% of SPR funds must be expended on research, development and technology (RD&T) transfer activities with the remaining funds used for statewide, metropolitan and other planning activities. SPR funds have the standard 80/20 matching ratio. West Virginia anticipates receiving \$10 million annually for all statewide planning activities.

TRANSPORTATION ALTERNATIVES (TA)

The Transportation Alternatives Program (TAP) was new program created under MAP-21 that essentially provides funding for projects that were previously eligible for funding under Transportation Enhancement, Recreational Trails and Safe Routes to Schools Programs contained in SAFETEA-LU. Under FAST, the name was modified to eliminate the word "program", but eligibility remains essentially unchanged. Under MAP-21, TAP was funded as a 2% takedown of other programs (NHPP, STBG, HSIP, CMAQ and Metropolitan Planning) prior to apportionment. Under FAST, funding is a set aside from STBG funds available nationally. TA funds are apportioned to each state based upon their ratio of FFY 2009 Transportation Enhancement Funds. TA funds are sub-allocated by population in exactly the same manner STBG funds are, with roughly 50% being able to be used anywhere in the State and the remaining 50% being distributed into three population thresholds:

- >200,000 (TMAs),
- >5,000 but <200,000; and,
- <5,000.

Under FAST, West Virginia had the option of not continuing with a standalone Recreational Trails (RT) Program. However, since West Virginia did not opt out of the RT Program, \$1.3 million per year of West Virginia's TA funds are redirected to a standalone RT Program. For the purposes of this report, RT funds are not reflected separately and are considered to be embedded into the state's TA apportionment. An additional nuance of the sub-allocated portion of TA funds is that TMAs are required to develop their own competitive application process for TA funding that is sub-allocated to a TMA. TA projects have an 80/20 matching ratio, with the local sponsor providing the 20% non-federal portion. West Virginia anticipates receiving \$8 million, per year, for these initiatives, of which, \$2.2 million, annually, will be made available for recreational trail facilities, and the remainder (\$5.8 million) will be made available for other TA initiatives. Of the \$5.8 million, roughly \$200,000 per year will be sub-allocated to the Huntington, WV-KY-OH TMA, which will in turn be further sub-divided between the KYOVA and RIC MPO's.

West Virginia 2020-2025 STIP

METROPOLITAN PLANNING (PL) PROGRAM

Prior to MAP-21, the amount of Metropolitan Planning (PL) funds available to a state was calculated similar to SPR funding (i.e. as a percentage takedown of other programs), with a floor or minimum apportionment established. With SAFETEA-LU, West Virginia was considered a minimum apportionment state for PL funds; however, under MAP-21 and FAST, PL funds are apportioned by a formula, like the other core programs (NHPP, STBG, HSIP, NHFP and CMAQ). PL funds are used to pay for planning requirements that are specific to Metropolitan Planning Organizations (MPOs), urbanized areas with populations in excess of 50,000. Despite West Virginia's relatively small population, it currently has eight MPOs. As a result of the last census, the Beckley/Oak Hill area was identified as a new MPO region. Furthermore, as mentioned previously, a portion of the State has been designated as a TMA. Planning issues and requirements associated with the TMA will be jointly addressed by the two MPO's (KYOVA and RIC) with planning boundaries within the TMA.

PL funds are required to be distributed to the various MPOs based on a formula, which at a minimum must be based on population. PL funds have an 80/20 federal to state matching ratio. Unlike most federal funds, the WVDOT requires local governments to provide half of the required match. As such PL funds are matched on an 80/10/10 basis - federal, state and local, respectively. West Virginia anticipates receiving nearly \$2 million annually in PL funding.

MISCELLANEOUS PROGRAMS

The obligation levels associated with the list of programs discussed previously represent the lion's share of Core federal highway funds that the WVDOH can anticipate on a yearly basis. While West Virginia may receive annual federal-aid funds for other smaller initiatives such as Local Technical Assistance Program, Redistributed OA, Direct Federal funding for forest highways, and Other Allocated Funds, these programs are not considered in this document.

DISCRETIONARY OR "SPECIAL" FEDERAL-AID FUNDS

Beyond the sources of federal-aid that the WVDOH can predict with relative certainty, in the past it has received additional "special" or discretionary federal-aid funds on a one-time basis. Unlike the program funds described above, the receipt of "special" federal-aid cannot be predicted. In the past, these funds typically came in the form of "earmarks" contained in yearly federal appropriations bills (which can be used by the WVDOH only for the specific project described) or from competitive grants in which all states compete. Matching ratios for discretionary funds frequently are specified in legislation or under the grant application guidelines. In the past, much of the discretionary funding received by the WVDOH required no state match (i.e., 100/0 matching ratio); however, more recent funding has required the standard 80/20 match. More recently, the funds have come in the form of discretionary grants

West Virginia 2020-2025 STIP

(i.e. TIGER, INFRA, BUILD, etc....) received by the State through a competitive process. These funds cannot be predicted with any certainty. Therefore, until they are actually received and available for obligation, they are not included in funding calculations.

One caveat to these assumptions, is NHPP exempt Funding. In addition, the NHPP funding received above, which is impacted by the OA provided to the State each year, the State receives an “allocation” of NHPP Exempt funds. These funds may be used for exactly the same purposes as Core NHPP funds with the distinction that they come with their own OA. NHPP Exempt funds allocated annually under FAST have been approximately 2.6% of the state’s Core NHPP apportionment. In FFY 2019, \$6.9 million in NHPP Exempt funds was allocated to West Virginia. Since these annual allocations have continued for numerous years, West Virginia is including them in their estimate of future funds available to the state. For the purposes of this report NHPP Exempt funds are anticipated to average \$7.5 million per year.

TOLL CREDITS

Although not a federally funded program similar to those aforementioned, Toll Credits are a beneficial financing tool that can be used to offset potential cash management issues. In essence, a state that collects toll revenue on a federal-aid eligible facility and expends those revenues for capital improvements on a federal-aid eligible facility can earn a credit for those expenditures as long as the state sustains an adequate Maintenance of Effort (MOE) on its infrastructure. The credit, in turn, can be used in place of state matching funds on future federal-aid eligible projects. As such, even if state revenues declined significantly in the short run, the Agency could potentially continue on with the federal-aid portion of its program by using Toll Credits in place of state matching funds. In so doing, any project to which Toll Credits were applied would be 100% federally funded thus eliminating the need for the state match. However, since the federal-aid program operates on a reimbursable basis, the State must have sufficient funds on hand to pay for the project and await a 100% reimbursement. Furthermore, since the credits do not provide actual cash for projects their application may be limited, especially for FTA projects.

A review of Figures #8A and #8B shows that as of December 5, 2017 the Agency had a balance of \$23.6 million in Toll Credits at its disposal. Furthermore, it is apparent that while the Agency has been unable to meet maintenance of effort requirements consistently in recent years and therefore does not earn any Toll Credits, numerous projects have been added during the same period drawing the Agency’s available balance lower. It is likely that the uptick in capital investments occurring from the influx of funds from the Roads to Prosperity initiative, will help the Agency meet maintenance of effort thresholds in future years and therefore earn additional Toll Credits. Until that happens however, it will be difficult for the Agency to continue using Toll Credits at the same pace as it has in recent years. In response to lower Toll

West Virginia 2020-2025 STIP

Credit balances, the Agency is now relying on the use of a similar financing tool (i.e. Bridge Credits), which will be explained in the next section, to provide soft matching funds for eligible projects.

**FIGURE #8A
TOTAL TOLL CREDITS EARNED AND ISSUED
WEST VIRGINIA DIVISION OF HIGHWAYS
AS OF DECEMBER 5, 2017**

Section 1044 of ISTEA --- Toll credits	
FFY 1992 Toll Credit	\$17,350,559.00
FFY 1994 Toll Credit	\$14,496,004.00
FFY 1995-2000 Toll Credits	\$83,887,259.00
FFY 2001 Toll Credits	\$17,021,349.00
FFY 2002 Toll credits	\$14,987,443.00
FFY 2007 Toll Credits	\$11,034,483.00
FFY 2009 Toll Credits	\$21,229,347.00
FFY 2010 Toll Credits	\$7,794,758.00
FFY 2011 Toll Credits	\$0.00 *
FFY 2012 Toll Credits	\$31,041,366.00
FFY 2013 Toll Credits	\$0.00 *
FFY 2014 Toll Credits	\$0.00 *
FFY 2015 Toll Credits	\$0.00 *
FFY 2016 Toll Credits	TBD
FFY 2017 Toll Credits	TBD
Total Toll Credits Earned as of 12/5/2017	= <u>\$218,842,568.00</u>
Toll Credits Allocated as of 12/5/2017	= <u>\$195,253,033.05</u>
Toll Credits Balance as of 12/5/2017	= <u>\$23,589,534.95</u>
NOTE: * Insufficient capital investment (i.e. maintenance of effort) by Agency to qualify for toll credits.	

West Virginia 2020-2025 STIP

**FIGURE #8B
TOTAL TOLL CREDITS PROJECT LISTING
WEST VIRGINIA DIVISION OF HIGHWAYS
AS OF DECEMBER 5, 2017**

LIST OF PROJECTS REQUESTING TOLL CREDITS	Toll Credits Applied	Total Federal Participating Cost Of Proj.	Approval Date
Huntington Intermodal	\$5,256,074.00	\$5,256,074.00	4/14/1999
BHJ MPO	\$10,000.00	\$10,000.00	8/4/1999
BHJ MPO	\$18,750.00	\$18,750.00	5/22/2000
BHJ MPO	\$9,358.50	\$9,358.50	1/9/2002
Corr H N Co 8 - S Baker I/C	\$3,262,673.80	\$16,313,369.00	6/8/2000
Corr H Co 23/4 - S Co 8	\$2,362,761.51	\$11,813,807.56	6/8/2000
Clifford Hollow Br	\$4,576,050.60	\$22,880,253.00	6/8/2000
W 7th St - E Co 50/2	\$5,109,766.00	\$25,548,830.00	6/8/2000
Corr H Cr 23/8	\$3,539,645.40	\$17,698,227.00	NO LETTER
Corr H Baker I/C Br #4273	\$6,313,319.60	\$31,566,598.00	NO LETTER
FTA Weirton Transit Corp Planning Study	\$15,600.00	\$78,000.00	11/16/2004
FTA Eastern Panhandle Tranist Auth Route Ana	\$19,750.00	\$98,750.00	11/16/2004
WV 34 - Hurricane Cr Rd	\$1,436,509.86	\$7,182,549.28	8/3/2006
Crooked Cr WV 34	\$6,395,254.42	\$31,976,272.09	2/13/2007
Hurricane Cr - Co 15	\$5,168,621.80	\$25,843,109.00	2/13/2007
Co 15 - WV 869 I/S	\$5,622,485.30	\$28,112,426.51	2/13/2007
WV 34 - Hurricane Cr Rd	\$9,411,860.69	\$47,059,303.43	4/18/2007
Co 27 - Co 17/1	\$10,453,257.10	\$52,266,285.48	
Co 40 - Co 27	\$7,644,132.53	\$38,220,662.67	
PLANTATION RD-BEECH HILL-RESURFACE, ETC.	\$2,149,351.40	\$10,746,757.00	8/4/2011
Transferred to a new state #	\$0.00		NA
FRANKLIN-WOODLANDS RD- UPGRADE TO 4 LANES	\$2,444,184.80	\$12,220,924.00	8/4/2011
DICK HENDERSON BRIDGE -- REPLACE	\$72,885.00	\$364,425.00	8/4/2011
DICK HENDERSON BRIDGE -- REPLACE	\$7,718,852.28	\$26,616,732.00	8/4/2011
Beckley Intermodal Gateway Public Transit	\$2,733,000.00	\$2,733,000.00	4/6/2009
Colonial Intermodal Center Bluefield Public Transit	\$150,000.00	\$150,000.00	3/1/2012
New Freedom Public Transit	\$345,956.00	\$345,956.00	
SOUTH OF MADISON- NORTH DAVY BRANCH--GRADE/DRAIN	\$10,732,116.80	\$53,660,584.00	8/21/2012
GUYANDOTTE RIVER BRIDGE -- CONSTRUCT BRIDGE	\$4,389,047.07	\$21,945,235.33	8/21/2012
GUYANDOTTE RIVER BRIDGE -- CONSTRUCT BRIDGE	\$808.06	\$4,040.30	8/21/2012
SOUTH CHESTNUT STREET 4--RETAINING WALL	\$105,414.40	\$527,072.00	8/21/2012
BRUCETON-HAZELTON ROAD -- RESURFACE	\$486,659.00	\$2,433,295.00	8/21/2012
Davison Run - Clarksburg	\$852,199.60	\$4,260,998.00	8/21/2012
MT NEBO-HUGHES BR RD	\$401,671.00	\$2,008,355.00	8/21/2012
BIG OTTER-SERVIA ROAD	\$219,340.90	\$2,193,409.00	8/21/2012
CLENDENIN-AMMA -- RESURFACE	\$929,860.90	\$9,298,609.00	8/21/2012
I-70, EB & WB -- RESURFACE	\$1,407,791.20	\$7,038,956.00	8/21/2012
JANE LEW-HARRISON COUNTY LINE -- RESURFACE	\$314,360.90	\$3,143,609.00	8/21/2012
SAULSBURY-MINERAL WELLS--RESURFACE	\$165,001.00	\$1,650,010.00	8/21/2012
SERVIA-FRAMETOWN ROAD -- RESURFACE	\$285,637.40	\$2,856,374.00	8/21/2012
YEAGER BRIDGE-WERTZ AVE--RESURFACE, ETC	\$473,506.60	\$4,735,066.00	8/21/2012
GASTON CAPERTON RD-HOLDEN -- RESURFACE	\$507,081.34	\$2,535,406.68	12/18/2012
HICO - MILLER RIDGE	\$695,660.00	\$3,478,300.00	12/18/2012
MERCER MALL-GREEN VALLEY -- RESURFACE	\$328,381.00	\$1,641,905.00	12/18/2012
Green Valley Did Not Go To Contract	\$0.00		12/18/2012
US 22 CONCRETE JOINT REPAIR	\$556,119.40	\$2,780,597.00	12/18/2012
BUCKHANNON-ELKINS ROAD -- RESURFACE	\$504,564.00	\$2,522,820.00	12/18/2012

West Virginia 2020-2025 STIP

**FIGURE #8B Continued
TOTAL TOLL CREDITS PROJECT LISTING
WEST VIRGINIA DIVISION OF HIGHWAYS
AS OF DECEMBER 5, 2017**

LIST OF PROJECTS REQUESTING TOLL CREDITS	Toll Credits Applied	Total Federal Participating Cost Of Proj.	Approval Date
Buckhannon - Elkins Rd (Barbour)	\$179,654.80	\$898,274.00	12/18/2012
Weston - Buckhannon Rd	\$357,600.80	\$1,788,004.00	12/18/2012
LEWISBURG-HARTS RUN RD--RESURFACE	\$191,971.30	\$1,919,713.00	12/18/2012
AIRPORT BRIDGE-KATES MTN--RESURFACE	\$103,655.10	\$1,036,551.00	12/18/2012
PLEASANT HILL-SILVERTON--RESURFACE, ETC	\$211,907.70	\$2,119,077.00	12/18/2012
VAN METRE FORD BRIDGE	\$766,163.44	\$3,830,817.22	3/28/2013
KIRBYTON BRIDGE -- REPLACE	\$286,839.60	\$1,434,198.00	3/28/2013
SERVIA REST AREA CONST RESTROOMS,REN FAC	\$0.00	\$0.00	3/28/2013
US 22 CONCRETE JOINT REPAIR	\$588,050.57	\$2,780,597.00	3/28/2013
COLLIERS WAY BRIDGE - REPLACE	\$1,018,251.40	\$5,091,257.00	3/28/2013
PENNSYLVANIA AVE--SWK, PVMNT, DRAINAGE	\$1,039,643.20	\$5,198,216.00	3/28/2013
E.BANK RETAINING WALL--REPL PILE/LAGGING	\$399,197.60	\$1,995,988.00	3/28/2013
I-79 BURNSVILLE REST AREA IMP	\$601,114.60	\$3,005,573.00	3/28/2013
COUNTY LINE BRIDGE--REPLACE, ETC	\$436,937.31	\$2,184,686.55	3/28/2013
WAR VETERANS MEMORIAL BR	\$262,580.00	\$1,312,900.00	3/28/2013
R J MARKET BRIDGE -- REPLACE	\$213,200.00	\$1,066,000.00	3/28/2013
WV 2 Wheeling funding deauthorized	\$0.00		3/28/2013
KRUGER STREET -- WIDEN ROAD, ADD TURN LANE	\$263,450.40	\$1,317,252.00	3/28/2013
HOSPITAL BRIDGE PHASE II -- C & P	\$958,676.00	\$4,793,380.00	3/28/2013
QUICK -- RELOCATE CURVE/ DRAIN/GRADE/PAVE/GDRL	\$250,591.40	\$1,252,957.00	3/28/2013
NUTTER FARM BRIDGE -- I/S IMPROVEMENT	\$106,079.60	\$530,398.00	3/28/2013
RODNEY STATION BR DESIGN BLD--REPL DECK	\$893,818.82	\$4,469,094.11	3/28/2013
I-68 LONG LIFE PVMNT MARKINGS	\$240,780.00	\$2,407,800.00	3/28/2013
D2 AND D3 LANE DEPARTURE	\$104,265.90	\$1,042,659.00	3/28/2013
S/W INTERSTATE STRIPING	\$233,911.80	\$2,339,118.00	3/28/2013
S/W APD STRIPING	\$554,637.40	\$2,773,187.00	3/28/2013
SHEPHERDSTOWN PATH-- CONSTRUCT MULTI USE PATH	\$20,000.00	\$100,000.00	2/28/14 email
SMITH ST STREETScape withdrawn	\$0.00		2/28/14 email
RUPERT SIDEWALK IMPROVEMENT CONST SIDEWALK	\$6,875.00	\$34,375.00	07/08/14 Letter
PR LEWISBURG FEAMSTER ROAD SIDEWALKS 2013	\$11,800.00	\$59,000.00	07/08/14 Letter
PR MOOREFIELD SIDEWALKS 2013- TOLL CREDITS WERE NOT USED ON THE PROJE CT	\$4,000.00	\$20,000.00	07/08/14 Letter
WEST MILFORD SIDEWALK IMPROVEMENTS	\$11,580.00	\$57,900.00	07/08/14 Letter
BRIDGEPORT RT 58 PEDESTRIAN WALKWAY--CONSTRUCT	\$27,706.40	\$138,532.00	07/08/14 Letter
PR SHINNSTON US 19 SIDEWALK & PIPE TOLL CREDITS WERE NOT USED ON THE PROJECT	\$2,276.80	\$11,384.00	07/08/14 Letter
LOGAN STRATTON STREET SIDEWALKS (ALSO TOLL CREDITS)	\$16,917.60	\$84,588.00	07/08/14 Letter
MERCER ELEM SCHOOL SAFE RT 2013 REPL SIDEWALK	\$4,280.20	\$21,401.00	07/08/14 Letter
Gilbert SIDEWALKS PHASE II DESIGN SIDEWALK Terminated	\$12,000.00	\$60,000.00	07/08/14 Letter
Hurricane Connor St SW Withdrawn	\$0.00		07/08/14 Letter
HURICANE CITY PARK PEDESTRIAN BRIDGE--DESIGN	\$11,225.00	\$56,125.00	07/08/14 Letter
ELKINS BAXTER STREET PED BR -- CONST	\$19,800.00	\$99,000.00	07/08/14 Letter
HARRISVILLE SIDEWALK IMPROVEMENT--CONSTRUCT	\$10,600.00	\$53,000.00	07/08/14 Letter
SISTERSVILLE STREETScape 2013 (TOLL CREDITS)	\$7,192.83	\$35,964.17	07/08/14 Letter
ELIZABETH SCHOOL VIEW STREET SIDEWALKS 2013	\$8,900.00	\$44,500.00	07/08/14 Letter
PARKERSBURG AVERY STREET--DESIGN STREETScape ENHANCEMENTS	\$20.00	\$100.00	07/08/14 Letter
PARKERSBURG PONS RUN TRL & BR -- DESIGN	\$15,774.60	\$78,873.00	07/08/14 Letter
West Liberty University Trail Withdrawn	\$0.00		07/08/14 Letter
Shinnston Trail Reloc Withdrawn	\$0.00		04/12/16 letter
KRODEL PARK WELLNESS TRAIL DESIGN	\$8,695.80	\$43,479.00	04/12/16 letter

West Virginia 2020-2025 STIP

**FIGURE #8B Continued
TOTAL TOLL CREDITS PROJECT LISTING
WEST VIRGINIA DIVISION OF HIGHWAYS
AS OF DECEMBER 5, 2017**

LIST OF PROJECTS REQUESTING TOLL CREDITS	Toll Credits Applied	Total Federal Participating Cost Of Proj.	Approval Date
Star City Trail Connector Withdrawn	\$0.00		04/12/16 letter
MARTINSBURG TRN STA CORR 2014 CONST SIDEWALK	\$8,600.00	\$43,000.00	04/12/16 letter
HUNTINGTON PATH IMPROVEMENTS BIKE AND PED IMP	\$25,800.00	\$129,000.00	04/12/16 letter
Kingwood SW 2014	\$4,165.20	\$20,826.00	04/12/16 letter
CAIRO SIDEWALK IMPROVEMENTS DESIGN PLANS	\$8,078.40	\$40,392.00	04/12/16 letter
TUCKER COUNTY ROCKS! -- DESIGN	\$7,356.00	\$36,780.00	04/12/16 letter
PINEVILLE RIVER DRIVE SIDEWALKS -- DESIGN	\$10,800.00	\$54,000.00	04/12/16 letter
Lewisburg Elem 2014 Withdrawn	\$0.00		04/12/16 letter
LEWISBURG FEAMSTER RD 2014 CONST SIDEWALK	\$10,800.00	\$54,000.00	04/12/16 letter
WHITE SULPHUR SPRINGS WEST END STREETSCAPE 2014-DESIGN (TC)	\$13,760.00	\$68,800.00	04/12/16 letter
LOST CREEK DEPOT RENO 2014 LOST CRK DEPOT IMPRVMT	\$2,800.00	\$14,000.00	04/12/16 letter
ST ALBANS STREETSCAPE 2014 -- DESIGN	\$13,050.00	\$65,250.00	04/12/16 letter
PLEASANT VALLEY SIDEWALKS 2014	\$9,113.00	\$45,565.00	04/12/16 letter
St Marys SW Improvement	\$8,400.00	\$42,000.00	04/12/16 letter
POCA SIDEWALKS 2014 -- DESIGN OF STREETSCAPE	\$6,771.40	\$33,857.00	04/12/16 letter
VIENNA GRAND CENTRAL AVE STREETSCAPE--DESIGN	\$7,194.00	\$35,970.00	04/12/16 letter
CONFEDERATE CEMETERY/ELEMENTARY SCHOOL TRAIL-DESIGN (TC)	\$5,717.60	\$28,588.00	04/12/16 letter
Rainelle Rec Corridor Withdrawn	\$0.00		04/12/16 letter
PR COLLINS FERRY CONNECTOR TRAIL-- TOLL CREDITS WERE NOT USED ON THE PROJECT	\$3,800.00	\$19,000.00	04/12/16 letter
Deckers Crk Trail Repair	\$8,808.60	\$44,043.00	04/12/16 letter
PR FOUNDRY STREET LINKAGE TRAIL -- TOLL CREDITS WERE NOT USED ON THE PROJECT	\$1,029.60	\$5,148.00	04/12/16 letter
MASON SIDEWALKS 2014 DESIGN --	\$9,798.80	\$48,994.00	04/12/16 letter
RUPERT SIDEWALKS 2014 DESIGN --	\$6,400.00	\$32,000.00	04/12/16 letter
HUNTINGTON OLD MAIN CORRIDOR- DESIGN SIDEWALKS	\$18,300.00	\$91,500.00	04/12/16 letter
Teays Valley SW	\$13,474.20	\$67,371.00	04/12/16 letter
GOLF COURSE RIDGE TRAIL DESIGN	\$3,600.00	\$18,000.00	04/12/16 letter
HOWARDS CRK HIKE/BIKE TRL & PED BR CONST BR	\$20,000.00	\$100,000.00	04/12/16 letter
BEECH BOTTOM SIDEWALK IMPROVEMENTS -- DESIGN	\$9,000.00	\$45,000.00	04/12/16 letter
CP SHINNSTON AREA RAIL TRAIL TOLL CREDITS WERE NOT USED ON THE PROJECT	\$4,000.00	\$20,000.00	04/12/16 letter
MORGANTOWN DECKERS CREEK PEDESTRIAN BRIDGE 2013	\$19,600.00	\$98,000.00	04/12/16 letter
CP SISTERSVILLE FERRY	\$26,240.00	\$131,200.00	04/12/16 letter
PR SISTERSVILLE FERRY	\$10,826.80	\$54,134.00	04/12/16 letter
CRAWLEY CREEK-CANEY BRANCH -- RESURFACE	\$813,470.20	\$4,067,351.00	04/12/16 letter
HURRICANE REST AREA(EB) CONST RESTROOMS,REN FAC	\$300,000.00	\$3,000,000.00	04/12/16 letter
HURRICANE REST AREA(WB) CONST RESTROOMS,REN FAC	\$300,000.00	\$3,000,000.00	04/12/16 letter
TOWN OF BATH - STREETSCAPE TOLL CREDITS WERE NOT USED ON THIS PROJECT	\$163,398.00	\$816,990.00	04/12/16 letter
TOWN OF BATH - STREETSCAPE SIDEWALKS TOLL CREDITS WERE NOT USED ON THIS PROJECT	\$47,080.00	\$235,400.00	04/12/16 letter
DAVES AUTO ARCH +2 -- REPLACE BRIDGE	\$556,647.20	\$2,783,236.00	04/12/16 letter
BUZZARD BRIDGE -- REPLACE	\$564,921.00	\$2,824,605.00	04/12/16 letter
S MADISON BRCH-GUYANDOTTE BR	\$1,575,909.20	\$7,879,546.00	04/12/16 letter
S MADISON BRCH-GUYANDOTTE BR PAVING	\$5,123,618.00	\$25,618,090.00	04/12/16 letter
INWOOD BYPASS--WIDEN; CONSTRUCT 4 LANE BYPASS	\$2,792,120.00	\$13,960,600.00	04/12/16 letter
Mullens Conn - E Co 12/1	\$9,726,500.00	\$48,632,500.00	04/12/16 letter
GREEN SULPHUR SPRINGS- DAWSON RD	\$221,370.00	\$2,213,700.00	04/12/16 letter
SALTWELL-BOOTHESVILLE RD -- RESURFACE	\$244,478.90	\$2,444,789.00	04/12/16 letter
I-81 ULTRA THIN HMA	\$253,860.66	\$2,538,606.58	04/12/16 letter
GREEN VALLEY-MOUNT HOREB ROAD -- RESURFACE	\$219,580.00	\$1,097,900.00	04/12/16 letter

West Virginia 2020-2025 STIP

**FIGURE #8B Continued
TOTAL TOLL CREDITS PROJECT LISTING
WEST VIRGINIA DIVISION OF HIGHWAYS
AS OF DECEMBER 5, 2017**

LIST OF PROJECTS REQUESTING TOLL CREDITS	Toll Credits Applied	Total Federal Participating Cost Of Proj.	Approval Date
HATFIELD CEMETERY TRAIL--DESIGN	\$63,000.00	\$315,000.00	04/12/16 letter
Mt Hope Streetscape	\$5,469.20	\$27,346.00	letter not found
LOGAN SIDEWALK IMPROVEMENTS--DESIGN	\$17,717.60	\$88,588.00	letter not found
ELKINS SYCAMORE STREET SIDEWALKS --DESIGN TO REPLACE (TC)	\$13,000.00	\$65,000.00	letter not found
BUCKHANNON GATEWAY WEST -- DESIGN SIDEWALKS	\$19,550.00	\$97,750.00	letter not found
LEWISBURG US 219 SOUTH SIDEWALKS -- DESIGN	\$15,550.00	\$77,750.00	letter not found
WHITE SULPHUR SPRINGS MAIN STREET SIDEWALKS-DESIGN	\$18,750.00	\$93,750.00	letter not found
PENNSBORO STREETScape -- DESIGN	\$9,800.00	\$49,000.00	letter not found
THOMAS RIVERFRONT TRAIL BRIDGE -- DESIGN	\$16,000.00	\$80,000.00	letter not found
PR MARTINSBURG TRAIN STATION STREET	\$19,800.00	\$99,000.00	letter not found
MT HOPE STREETScape COMPL DESIGN CONST STREETScape	\$6,600.00	\$33,000.00	letter not found
HARRISON CO SOUTHERN RAIL TRL DESIGN CONST RAIL TRL	\$24,800.00	\$124,000.00	letter not found
CEDAR GROVE SIDEWALKS DESIGN SIDEWALK	\$12,000.00	\$60,000.00	letter not found
FARMINGTON SIDEWALKS PHASE IV DESIGN/CONST SIDEWALK	\$5,200.00	\$26,000.00	letter not found
PLEASANT VALLEY SIDEWALKS DESIGN CONST SIDEWALK	\$10,363.20	\$51,816.00	letter not found
WHITE HALL US 250 SIDEWALK DESIGN / CONST SIDEWALK	\$6,425.00	\$32,125.00	letter not found
BATH STREETScape-- DESIGN OF SIDEWALKS	\$34,800.00	\$174,000.00	letter not found
WINFIELD DOWNTOWN STRTScape DESIGN/.CNST SIDWALK	\$25,287.60	\$126,438.00	letter not found
Wayne SW	\$11,600.00	\$58,000.00	letter not found
ELIZABETH SW IMPRV PHASE IV DESIGN SW	\$12,500.00	\$62,500.00	letter not found
Dunbar 17th St Streetscape	\$11,067.20	\$55,336.00	letter not found
Deckers Crk Trail Withdrawn	\$0.00		letter not found
CHARLESTON SIDEWALKS -- DESIGN	\$12,563.80	\$62,819.00	letter not found
RONCEVERTE US 219 & MAIN ST DESIGN SIDEWALK	\$16,250.00	\$81,250.00	letter not found
SHINNSTON DWNTWN SW withdrawn	\$0.00	\$0.00	letter not found
Charleston Slack Plaza	\$130,440.00	\$652,200.00	letter not found
CHARLESTON GREENBRIER ST DESIGN MULTI-MODAL PROJECT	\$30,000.00	\$150,000.00	letter not found
Princeton Thorn St Streetscape	\$20,000.00	\$100,000.00	letter not found
PRINCETON MAIN ST SIDEWALK DESIGN / CONST SIDEWALK	\$11,000.00	\$55,000.00	letter not found
BERKELEY SPRGS TRAIN DEPOT RENOVATE INTERIOR	\$12,500.00	\$62,500.00	letter not found
ST MARY'S DOWNTOWN STREETScape -- DESIGN	\$15,800.00	\$79,000.00	letter not found
TEAYS VALLEY SIDEWALK -- DESIGN, ETC	\$13,474.20	\$67,371.00	letter not found
HARRISVILLE SIDEWALK IMPROVEMENT PHASE III--DESIGN	\$12,000.00	\$60,000.00	letter not found
ALUM CAVE TRAIL TRL RESTORATION (PE ONLY)	\$9,600.00	\$48,000.00	letter not found
SMITH ST STREETScape	\$305,857.60	\$1,529,288.00	letter not found
Rock Crk Dev Pk	\$12,434,917.67	\$62,174,588.33	08/23/16 letter
Rock Crk Dev Pk	\$3,020,000.00	\$15,100,000.00	08/23/16 letter
SMITHBURG-MORGANS -- RESURFACE	\$452,101.40	\$2,260,507.00	03/15/17 letter
CORRIDOR H -- ASPHALT PAVING	\$111,440.80	\$557,204.00	03/15/17 letter
OAKWOOD ROAD-WV 61 -- RESURFACE	\$385,895.80	\$1,929,479.00	03/15/17 letter
Princeton Ambrose Lane	\$452,790.20	\$2,263,951.00	03/15/17 letter
Trace Fork - Gaston Caperton	\$643,564.80	\$3,217,824.00	03/15/17 letter
Hookersville - Powells Mtn	\$933,875.20	\$4,669,376.00	03/15/17 letter
MARRTOWN - 7TH ST -- RESURFACE	\$262,577.00	\$1,312,885.00	03/15/17 letter
DALLISON - DEERWALK -- RESURFACE	\$248,588.80	\$1,242,944.00	03/15/17 letter
I-81 VA LINE-REST AREA -- ASPHALT PAVING	\$189,230.20	\$1,892,302.00	03/15/17 letter
MARRTOWN - 7TH ST -- RESURFACE	\$0.00	\$1,312,885.00	03/15/17 letter

West Virginia 2020-2025 STIP

**FIGURE #8B Continued
TOTAL TOLL CREDITS PROJECT LISTING
WEST VIRGINIA DIVISION OF HIGHWAYS
AS OF DECEMBER 5, 2017**

LIST OF PROJECTS REQUESTING TOLL CREDITS	Toll Credits Applied	Total Federal Participating Cost Of Proj.	Approval Date
DALLISON - DEERWALK -- RESURFACE	\$0.00	\$1,242,944.00	03/15/17 letter
WINCHESTER AVE - KING ST-- RESURFACE	\$69,489.10	\$694,891.00	03/15/17 letter
Lewisburg Rd	\$341,976.40	\$3,419,764.00	03/15/17 letter
Institute - Nitro	\$215,653.60	\$2,156,536.00	03/15/17 letter
BELLE - CAPITOL STREET -- RESURFACE	\$37,553.10	\$375,531.00	03/15/17 letter
BIG CHIMNEY-ELKVIEW -- RESURFACE	\$224,740.90	\$2,247,409.00	03/15/17 letter
PRICKETTS FORT-WEIGH STATION -- RESURFACE	\$198,766.00	\$1,987,660.00	03/15/17 letter
UFFINGTON - WESTOVER -- RESURFACE	\$167,841.40	\$1,678,414.00	03/15/17 letter
I-70 WB RESURFACE	\$14,500.00	\$145,000.00	03/15/17 letter
I-70 EB RESURFACE	\$16,200.00	\$162,000.00	03/15/17 letter
AIRPORT RD-GLAD CR BR -- REPAIR SLAB	\$472,317.30	\$4,723,173.00	03/15/17 letter
MINERAL WELLS - STAUNTON -- RESURFACE	\$109,655.30	\$1,096,553.00	03/15/17 letter
NA not used	\$0.00	\$0.00	NA
N BERK RAIL TRAIL	\$320,000.00	\$1,600,000.00	letter not found
Elkins Rail Trail	\$436,527.60	\$2,182,638.00	09/25/17 letter
North Bend Rail Trail	\$148,842.80	\$744,214.00	09/25/17 letter
ELIZABETH SIDEWALKS 2012	\$40,423.80	\$202,119.00	
2017 GARVEE BOND (interstate portion only)	\$22,267,163.00	\$236,539,848.00	10/23/17 letter
DUNBAR DOWNTOWN STREETScape DESIGN STREETScape	\$70,303.80		
Great Teays Blvd SW PE	\$12,000.00		12/1/17 letter
Great Teays Blvd SW CN	\$42,000.00		12/1/17 letter
Hurricane SW PE	\$10,000.00		12/1/17 letter
Hurricane SW CN	\$4,000.00		12/1/17 letter
LINWOOD ALIVE PROJECT DESIGN SIDEWALK	\$10,000.00		12/1/17 letter
SISTERSVILLE DOWNTOWN STRScAPE DESIGN SIDEWALK	\$10,000.00		12/1/17 letter
BRADSHAW SIDEWALK REHAB DESIGN CONST SIDEWALK	\$7,500.00		12/1/17 letter
GILBERT SIDEWALKS PHASE II DESIGN SIDEWALK	\$12,000.00		12/1/17 letter
IAEGER SIDEWALK REHAB DESIGN & CONST SIDEWALK	\$7,500.00		12/1/17 letter
IAEGER SIDEWALK REHAB DESIGN & CONST SIDEWALK	\$22,500.00		12/1/17 letter
RANSON 5TH AVE COMPLETE ST PROJ DESIGN CONST SIDEWALK	\$12,500.00		12/1/17 letter
BARRACKVILLE PHASE 7 PUBLICWALKS REPL SIDEWALK	\$5,600.00		12/1/17 letter
CLAY SIDEWALK CONST SIDEWALK	\$10,800.00		12/1/17 letter
CLAY SIDEWALK CONST SIDEWALK	\$39,200.00		12/1/17 letter
WEST MILFORD SCHOOL ST SIDEWALK CONST SIDWALK	\$6,200.00		12/1/17 letter
BRUCETON MILLS SIDEWALK REPLACE SIDEWALK	\$7,560.00		12/1/17 letter
JANE LEW MAIN ST STREETScape CONST SIDEWALK	\$10,800.00		12/1/17 letter
NITRO 2ND AVE STREETScape DESIGN SIDEWALK	\$10,000.00		12/1/17 letter
WOOD CO COMM PIKE ST TRL DESIGN PATH	\$1,600.00		12/1/17 letter
SALEM SIDEWALK PHASE I DESIGN SIDEWALK	\$10,000.00		12/1/17 letter
GRANTSVILLE MAIN ST SS DESIGN CONST SIDEWALK	\$17,500.00		12/1/17 letter
GRANTSVILLE MAIN ST SS DESIGN CONST SIDEWALK	\$52,500.00		12/1/17 letter
GRAND CENTRAL AVE SS DESIGN SIDEWALK	\$15,000.00		12/1/17 letter
RAYON DR SW DESIGN AND CONST ADA SIDEWALK	\$15,000.00		12/1/17 letter
RICHWOOD SIDEWALK DESIGN DESIGN SW	\$18,750.00		12/1/17 letter
RAINELLE - KANAWHA AVE SS DESIGN DESIGN STREETScape	\$15,000.00		12/1/17 letter
BARBOURSVILLE PEDESTRIAN BIKE PATH DESIGN PED BIKE TRAIL	\$25,000.00		12/1/17 letter
MORGANTOWN MULTI USE PATH DESIGN CONST TRAIL	\$25,000.00		12/1/17 letter

West Virginia 2020-2025 STIP

FIGURE #8B Continued
TOTAL TOLL CREDITS PROJECT LISTING
WEST VIRGINIA DIVISION OF HIGHWAYS
AS OF DECEMBER 5, 2017

LIST OF PROJECTS REQUESTING TOLL CREDITS	Toll Credits Applied	Total Federal Participating Cost Of Proj.	Approval Date
GUYANDOTTE WATER TRAIL ACCESS DESIGN CONST TRL ACCESS	\$3,750.00		12/1/17 letter
GUYANDOTTE WATER TRAIL ACCESS DESIGN CONST TRL ACCESS	\$21,250.00		12/1/17 letter
BABCOCK STATE PARK TRL EQUIPMENT EQUIPMENT PURCHASE	\$7,540.00		12/1/17 letter
BABCOCK STATE PARK - SEWELL TRL RESTORE RAILWAY	\$7,500.00		12/1/17 letter
BABCOCK STATE PARK - SEWELL TRL RESTORE RAILWAY	\$22,500.00		12/1/17 letter
WHITE OAK RAIL TRL LIGHTING DESIGN INSTALL LIGHTING	\$12,000.00		12/1/17 letter
WHITE OAK RAIL TRL LIGHTING DESIGN INSTALL LIGHTING	\$28,800.00		12/1/17 letter
ROMNEY MAIN ST SW DESIGN CONST SIDEWALK	\$10,000.00		12/1/17 letter
ROMNEY MAIN ST SW DESIGN CONST SIDEWALK	\$30,000.00		12/1/17 letter
MADISON STATE ST STREETScape DESIGN AND CONST SIDEWALK	\$20,050.20		12/1/17 letter
MADISON STATE ST STREETScape DESIGN AND CONST SIDEWALK	\$60,150.60		12/1/17 letter
MULLENS SIDEWALKS DESIGN CONST SIDEWALK	\$12,500.00		12/1/17 letter
MULLENS SIDEWALKS DESIGN CONST SIDEWALK	\$37,500.00		12/1/17 letter
OAK HILL MAIN CENTRAL CONNECTOR DESIGN BIKE LANE	\$12,000.00		12/1/17 letter
PIONEER EXPANSION NORTH CONN DESIGN PATH	\$12,500.00		12/1/17 letter
BERKELEY SPRG ST PARK IMPR DESIGN SIDEWALK	\$9,600.00		12/1/17 letter
HARPERS FERRY HIGH ST 2016 DESIGN SIDEWALK	\$16,000.00		12/1/17 letter

BRIDGE CREDITS

Akin to Toll Credits, in CY 2010 the WVDOH was made aware that according to Title 23, Section 144(m) of the U.S. Code of Federal Regulations, a State may also earn Bridge Credits for conducting capital improvements on federal-aid eligible bridges with state and local funds. Similar to Toll Credits, once earned, Bridge Credits can be used in place of the required State Matching funds on future federal-aid bridge projects. WVDOH staff worked with FHWA personnel to formulate a methodology for determining the eligibility of bridge projects and tracking their use in subsequent years. As of June 30, 2017, the WVDOH had officially earned \$52.057 million in Bridge Credits. Prior to FY 2018, the WVDOH had never requested to use any of the Bridge credits accumulated. However, in FY 2018, the WVDOH issued \$220 million special obligation notes that would be financed as a GARVEE. In order to make the debt service (\$295.72 million) associated with the notes essentially 100% federal, the WVDOH opted to use a combination of Bridge and Toll Credits available to the state to make up the

West Virginia 2020-2025 STIP

state's match. Based on the WVDOH's initial calculations, \$11.35 million in Bridge Credits needed to be reserved for this purpose. Furthermore, the WVDOH has calculated that it accumulated \$3.85 million in Bridge Credits during FY 2018. The net result is an estimated Bridge Credit balance of \$44.57 million as of July 1, 2018. The information presented for the FY 2018 estimate of the State's Bridge Credits is shown in Figure #9. At the time of this report's preparation, the July 1, 2019 State's Bridge Credits has not been submitted to FHWA for approval. As new calculations are finalized, and approvals are obtained from FHWA, they will be incorporated into future updates of the STIP.

West Virginia 2020-2025 STIP

**FIGURE #9
NEW BRIDGE CREDITS EARNED FROM JULY 1, 2017 AS OF JUNE 30, 2018**

ST FY	Project Number	ST/BR/RD Name	Type of Work	ADV/AUTH Date (Y/M/D)	Const End Date (Y/M/D)	Const Phase Dollars	WORK CODE	STATUS CODE	PRE-REPL CONDITION			POST-REPL CONDITION			QUALIFYING BRIDGE PROJECT (Y/N)
									SUFFICIENCY RATING	STRUC DEF OR FUND OBS (Y/N)	20' + LENGTH (Y/N)	SUFFICIENCY RATING >80 (Y/N)	STRUC DEF OR FUND OBS (Y/N)		
2010	S330 3 5 17400	FAY'S CASH & CARRY BR	REPL (30X132 SSPG)	080918	100115	\$2,035,665	73	11	17	Y	Y	Y	Y	N	Y
				FY 2010 SUB TOTAL =		\$2,035,665									
2014	S321 3325 07900	JOHN ST	REPL (24.5 X 43.75)	131119	140627	\$194,082	73	11	46.8	Y	Y	Y	Y	N	Y
				FY 2014 SUB TOTAL =		\$194,082									
2015	S307 7 6 49500	APPLE FARM BR	REPL (16 X 150)	140108	150128	\$1,019,573	73	11	21.8	Y	Y	Y	Y	N	Y
2015	S317 17 12400	ORAL LAKE RD	REPL (27 X 52) SCBB	131107	150121	\$896,013	73	11	25.4	Y	Y	Y	Y	N	Y
				FY 2015 SUB TOTAL =		\$1,915,586									
2017	S323 7 34400	GONE FORK PLANK BEAM	REPL (26 X 42) SGNB	141030	161228	\$278,026	73	11	24.0	Y	Y	Y	Y	N	Y
2017	S324 5212 03700	SWITCHBACK ARCH BR	REPL(21 X 52) SCBB	150408	161027	\$309,792	73	11	30.0	Y	Y	Y	Y	N	Y
				FY 2017 SUB TOTAL =		\$587,818									
2018	S330 925 01200	JOHNSON HOLLOW BRIDGE	REPL(18.25 X 25)SAPA	161006	171228	\$82,910	73	11	18.0	Y	Y	Y	Y	N	Y
				FY 2018 SUB TOTAL =		\$82,910									
				GRAND TOTAL OF EXPENDITURES =		\$4,816,061									
				NEW BRIDGE CREDITS EARNED AS OF 6/30/18 = (\$4,816,061)*(80%) =		\$3,852,849									
				BRIDGE CREDITS PREVIOUSLY EARNED THRU 6-30-2017		\$52,047,301									
				BRIDGE CREDITS USED FROM 7-1-2017 TO 6-30-2018**		\$11,352,742									
				TOTAL BRIDGE CREDITS AVAILABLE AS OF 7-1-2018		\$44,547,408									

NOTE* ADDITIONAL BRIDGE CREDITS WILL BE EARNED FOR EXPENDITURES IN FISCAL YEARS 2010 THRU 2018 SECOND THOSE SHOWN, AS PROJECT AUTHORIZATIONS ARE FINALIZED AND CLOSED. ADDITIONAL VALUES WILL BE COMPUTED AT THE END OF FY 19 AND IN SUBSEQUENT YEARS UNTIL ALL PROJECTS ARE COMPLETED IN A FISCAL YEAR ARE FINALIZED.
** project information of Bridge Credits used through 6/30/18 on attachment C

West Virginia 2020-2025 STIP

STIP PROGRAMS AND GROUPABLE PROJECTS:

The narrative above outlined the various types of federal-aid funds that are anticipated to be available to West Virginia for highway and transit purposes over the next six years. The WVDOT is required to remain fiscally constrained based upon the individual fund types. As mentioned above these funds have specific limits on what they can be used for and in some cases where they can be used. While this information is very important, it does not typically resonate well with the public regarding what the Agency is doing with the funds available to it. People want to know how much the Agency is going to spend on items like Resurfacing, Slides, New Road Construction, Bridges, Signals, etc. rather than what funds are being used to fund them. To help better inform and educate the public, the STIP, for presentation and discussion purposes, is divided into eight individual programs with various sub-programs. The eight programs of the STIP are as follows:

- Bridge Program
- Resurfacing Program
- Traffic Program
- Community Development and Connectivity Program
- Localized Mobility Program
- Regional Mobility Program
- Planning and Workforce Development Program; and the
- Transit Program

These eight programs are not only easier to conceptualize, but also align better with the federal performance measures that the Agency must report on. Furthermore, realizing that the needs associated with transportation always exceed funding available to meet those needs, these Programs help to communicate how the Agency plans to utilize its scarce resources and ultimately how the performance of the transportation network will change over time. The eight programs and their associated sub-programs are described in detail later in this report.

Lastly, it should be noted that in a departure from prior STIP's, where all federally funded projects and phases were listed individually, the WVDOT intends to use the opportunity created by the development of the new STIP, to implement the concept of "groupable" projects, where applicable, into the planning process.

Grouping of projects allows flexibility and reduces paperwork for programming minor projects. Highway Projects that are not considered to be of appropriate scale for individual identification in a given program year may be grouped by function, work type, and/or

West Virginia 2020-2025 STIP

geographic area using the applicable classifications under 23 CFR 771.117(c) and (d) and/or 40 CFR part 93 or for FTA projects CFR 771.118 . In nonattainment and maintenance areas, project classifications must be consistent with the “exempt project” classifications contained in the EPA's transportation conformity regulations (40 CFR part 93, subpart A).

In addition, projects proposed for funding under title 23 U.S.C. Chapter 2 that are not regionally significant may be grouped in one-line item or identified individually in the STIP. The WVDOT, FHWA and FTA have administratively concurred that projects with an estimated phase (engineering, right-of-way, or construction) cost of less than \$10 million is of appropriate scale to consider for grouping. For air quality non-attainment/maintenance areas, only projects that are exempt from conformity requirements may be grouped.

Essentially, for a project to be initially “grouped” in the STIP, it would have to have individual phase costs (Engineering, Right of Way and Construction) of less than \$10 million, be assumed to meet all requirements of a Categorical Exclusion under the NEPA Process and not add capacity potentially affecting air quality (i.e. the addition of through lanes or the creation or extension of a highway facility). Given the limiting factors identified, it is assumed that some portion of the eight individual programs listed above could be “grouped”. As part of the STIP development process, the WVDOT intends to screen existing and proposed projects of the various aspects of the eight Core Programs for potential grouping. As the STIP is developed and the size and composition of the eight Core Programs is determined, allocations will be established as placeholders for financial constraint. Using the guidelines and assumptions above, where individual projects have not been identified, the allocations will be assumed to consist of groupable projects.

The “groupable bucket” sizes established by the Agency, based on trends in projects in the past 10 years, are as follows:

- Bridge Program: bridge rehabilitation, bridge replacement, inspections, overlays, and clean and paint. \$85,000,000
- Resurfacing Program: pavement restoration, rehabilitation, reconstruction \$100,000,000
- Traffic Program: striping, signing, lighting, railroad crossings, replacement or upgrade of existing traffic signals. Safety projects and new traffic signals are not considered groupable and therefore don't fall into this group. \$25,000,000
- Community Development and Connectivity Program: transportation alternatives (sidewalks, bike trails, recreational trails, etc.) \$8,200,000
- Localized Mobility Program: slide corrections, auxiliary lanes and road/curve improvements. \$7,000,000

West Virginia 2020-2025 STIP

- Regional Mobility Program: due to the scope and size of the expansion projects that typically fall into this category, they are considered not groupable.
- Planning and Workforce Development Program: statewide planning and research program, metropolitan planning program, workforce development, training and misc. studies. \$15,200,000
- Transit: due to the nature of this program, none of these projects are considered groupable.

Projects that fit the groupable criteria may be added or removed from the STIP by adjustment, unless the projects change the bucket size by more than 10%. If a 10% change in bucket size occurs an amendment is required.

In conjunction with the development of the new STIP, the Agency will be working with Metropolitan Planning Organizations, Federal Highway Administration and Federal Transit Agency staff to simultaneously update the STIP operating procedures to not only reflect the proposed changes associated with groupable projects, but also to clarify what will trigger future Amendments and Adjustments.

STATE STIP AND IMPROVEMENT FUNDING

Like Congress, the WVDOH has developed a menu of improvement programs within the State Road Fund to address specific problems or concerns. When all of these initiatives are combined and added to the improvements conducted with non-State Road fund monies, they constitute the WVDOH's Total Highway Program. Since federal legislation funds specific programs and mandates how and where those funds can be utilized, the WVDOH's various highway programs somewhat mimic those of the federal government. The WVDOH has historically categorized capital projects into thirteen major umbrella improvement programs, which are divided between federal-aid (FA)-eligible projects and non-federal-aid (NF)-eligible projects, from the State Road Fund:

- FA Interstate Improvement;
- FA Interstate Renovation;
- FA ADHS Expansion and Improvement;
- FA ADHS Renovation;
- FA 3R (Resurfacing and Slides);
- FA Other Bridge;
- FA Other;
- NF Improvement;

West Virginia 2020-2025 STIP

- NF Contract Paving;
- NF Bridge (Category 6);
- NF Other Bridge;
- NF Renovation; and
- NF Miscellaneous.

Examination of the above programs indicates they are a blend of facility-specific and activity-specific initiatives. The diversity of the programs indicates that in order for the WVDOH to meet its statutory obligations within the confines of federal and State funding limitations, it must pursue a balanced program of improvements. Rather than just utilizing the larger NF programs identified above, the WVDOH has developed a number of sub-allocation programs to ensure that some specific types of needs are addressed. Specific projects have been programmed for these sub-program allocations and the list can be found in Appendix C: Non-Federal Aid Project Listings (State Funded Projects). A brief description of some of those sub-programs is as follows:

A09-099 (Resurfacing Discretionary - Potential future AC conversion): This is an allocation that designates resurfacing projects for asphalt and surface treated roadways that will be “banked” for potential future Advanced Construction (AC) conversion. Funding for this sub-program is not distributed by formula and is irrespective of geographic location. Statewide priorities are established by the Commissioner of Highways based on input from various organizations within the WVDOH. The WVDOH is not currently using this allocation actively.

A10-099 (Resurfacing Discretionary): This is an allocation for the resurfacing of asphalt and surface treated roadways. Funding for this sub-program is not distributed by formula and is irrespective of geographic location. Statewide priorities are established by the Commissioner of Highways based on input from various organizations within the WVDOH.

A13-xxx (Asphalt Resurfacing): This is an allocation for the resurfacing of asphalt roadways. Funds are allocated twice during the state fiscal year for the implementation of a spring and a summer paving program. A percentage of the total funding available for this sub-program is distributed to each District based on the ratio of District-paved highway miles to the statewide total amount of paved miles. Each District is responsible for establishing their project priorities.

A15-xxx (Pavement Preservation): This is an allocation for the use of pavement preservation strategies other than strictly resurfacing on roadways. District personnel will work with the Materials Control, Soil and Testing Division to determine project specific pavement preservation techniques such as micro-surfacing, cold-in-place recycling, joint repair, etc.

West Virginia 2020-2025 STIP

Funds are allocated twice during the state fiscal year for the implementation of a spring and a summer program. A percentage of the total funding available for this sub-program is distributed to each District based on the ratio of District-paved highway miles to the statewide total amount of paved miles. Each District is responsible for establishing their project priorities. Currently, Pavement Preservation activities are being limited to federal-aid eligible projects and the use of A15 funding has been suspended.

A20-xxx (Surface Treatment Resurfacing): This is an allocation for the resurfacing of surface treated roadways or for stone stabilization initiatives. Funds are allocated once during the state fiscal year for the implementation of a spring and summer paving program. A percentage of the total funding available for this sub-program is distributed to each District based on the ratio of District-paved highway miles to the statewide total amount of paved miles. Each District is responsible for establishing their project priorities.

B09-099 (Renovation-Variou s - Potential future AC conversion): The B09 allocation designates initiatives to renovate and maintain existing roadway facilities that will be “banked” for potential future Advanced Construction (AC) conversion. Funding for this sub-program is not distributed by formula and is irrespective of geographic location. Statewide priorities are established by the Commissioner of Highways based on input from various organizations within the WVDOH. The WVDOH is not actively using this allocation.

B10-099 (Renovation-Variou s): The B10 allocation is established to renovate and maintain existing roadway facilities. Funding for this sub-program is not distributed by formula and is irrespective of geographic location. Statewide priorities are established by the Commissioner of Highways based on input from various organizations within the WVDOH.

B11-xxx (Renovation-Guardrail): This is an allocation for the replacement of damaged or inadequate guardrail. Funds are allocated twice during the state fiscal year for the implementation of a spring and a summer program. Each District receives an equal share of the total sub-program funding available and is responsible for establishing their priorities.

B13-090 (Renovation-Parks & Forests): This allocation is for the repair of State Park & Forest routes maintained by the WVDOH. Funds are allocated on a yearly basis for projects of this nature. The West Virginia Division of Natural Resources is responsible for establishing the project priorities, while the District in which the project is located is responsible for its development.

West Virginia 2020-2025 STIP

B18-xxx (Road to Prosperity): This allocation is truly just a sub-set of the B10-099 allocation established for tracking purposes. Shortly, after the Legislature in 2017 raised a number of fees that added revenue to the State Road Fund and voters subsequently approved the Roads to Prosperity Amendment, WVDOH management realized that it would take time to prepare projects for the GO Bonds to be sold. It was determined that the best course of action for the Agency to take in the interim was to use the increased revenue to address a huge backlog of work on lower volume roads that were not typically eligible for federal-aid. Since then, the WVDOH continues to commit large amounts of funding to the initiatives to cover everything from slides, bridges to resurfacing under this allocation as opposed to simply increasing the existing allocations established for the same purposes.

B20-xxx (Secondary Road Program): This allocation is for the skip paving of lower volume roadways by state forces. Funds are allocated twice during the state fiscal year for the implementation of a spring and a summer paving program. A percentage of the total funding available for this sub-program is distributed to each District based on the ratio of District-paved State Local Service highway miles to the statewide total amount of paved SLS miles. Each District is responsible for establishing their project priorities.

B30-xxx (Renovation-Slides by State Forces): This allocation is established to provide funding for slide repairs on a district-wide basis. Unlike most other allocations, funding for this category is limited to work that is only conducted by WVDOH employees. Each District receives an equal share of the total sub-program funding available and is responsible for establishing their project priorities.

B31-xxx (Renovation-Slides by Contract): This allocation is established to provide funding for slide repairs on a district-wide basis. Unlike most other allocations, funding for this category is limited to work that is only conducted using contractors. Each District receives an equal share of the total sub-program funding available and is responsible for establishing their project priorities.

C09-099 (Bridge-Variou s - Potential future AC conversion): The C09 allocation designates bridge projects (such as repair work that is not typically considered rehabilitation or routine maintenance; superstructure replacement; major rehabilitation; extensive structural repair; deck replacements; and complete bridge replacements) that will be “banked” for potential future Advanced Construction (AC) conversion. Funding for this sub-program is not distributed by formula and is irrespective of geographic location. Statewide priorities are

West Virginia 2020-2025 STIP

established by the Commissioner of Highways based on input from various organizations within the WVDOH. This allocation is not being actively used by the Agency.

C10-099 (Bridge-Variou)s: The Category C10 allocation is established to perform various types of work ranging from repair work that is not typically considered rehabilitation or routine maintenance to extensive work such as complete replacement, replacement of a superstructure on existing substructure, major rehabilitation or extensive structural repair and deck replacements. Funding for this sub-program is not distributed by formula and is irrespective of geographic location. Statewide priorities are established by the Commissioner of Highways based on input from various organizations within the WVDOH.

C23-xxx (Bridge-Category 3B-Minor Renovation): The Category 3B allocation is established to conduct bridge repair work that is not considered rehabilitation or routine maintenance on structures less than 100 feet in length. Funding for this sub-program is distributed once annually to each District on a percentage basis, which is equivalent to their share of the State's structures that are less than 100 feet in length. Each District is responsible for establishing their project priorities from the pool of eligible structures.

C23-061 (Bridge-Category 3A-Major Renovation): The Category 3A allocation is established to conduct bridge repair work that is not typically considered rehabilitation or routine maintenance on structures greater than 100 feet in length. Funding for this sub-program is not distributed by formula and is irrespective of geographic location. Statewide priorities, established by the Maintenance Division, are based on the condition level of all bridges meeting the length requirement that are in need of repairs.

C26-xxx (Bridge-Category 6-Replacement): The Category 6 allocation is established to conduct extensive work on bridges less than 100 feet in length. The types of work covered in this allocation include: complete replacement, replacement of superstructure on existing substructure, major rehabilitation or extensive structural repair and deck replacements. Funding for this sub-program is distributed once annually to each District on a percentage basis, which is equivalent to their share of structures less than 100 feet in length that have been recommended for permanent improvement by bridge inspection staff.

C26-xxx (Bridge-Category 6M-Major Replacement): The Category 6 Major allocation is established to conduct extensive work on bridges greater than 100 feet in length. The types of work covered in this allocation include: complete replacement, replacement of superstructure, major rehabilitation or extensive structural repair and deck replacements. Funding for this sub-program is not distributed by formula and is irrespective of geographic location. Statewide

West Virginia 2020-2025 STIP

priorities, established by the Maintenance Division, are based on the condition level of all bridges meeting the length requirement that are in need of repairs.

C27-061 (Bridge-Category 7-Central Forces): The Category 7 allocation is established to cover bridge repair and renovation work that will be conducted by the WVDOH's Central Bridge Forces. Funding for this sub-program is not distributed by formula and is irrespective of geographic location. Statewide priorities, established by the Maintenance Division, are based on the condition level of all bridges needing repairs.

C28-xxx (Bridge-Category 8B-Clean & Paint): The Category 8B allocation is established to conduct spot painting and cleaning of all bridges regardless of length. The work is typically conducted under a statewide spot painting contract. Funding for this sub-program is distributed once annually to each District on a percentage basis. The percentage each District receives is equivalent to its share of total bridge area measured in square feet compared to the total bridge area maintained statewide. Each District is responsible for establishing their project priorities.

C28-061 (Bridge-Category 8A-Major Clean & Paint): The Category 8A allocation is established to conduct total repainting of all bridges regardless of length located on the State's Trunkline, Feeder and State Local Service Systems. Funding for this sub-program is not distributed by formula and is irrespective of geographic location. Statewide priorities, established by the Maintenance Division, are based on the condition level of all bridges that are in need of repainting.

C28-090 (Bridge-Category 8C-Expressway Clean & Paint): The Category 8C allocation is established to conduct total repainting of all bridges regardless of length located on the State's Expressway System. Funding for this sub-program is not distributed by formula and is irrespective of geographic location. Statewide priorities are established by the Commissioner of Highways based on input from the Districts.

C30-090 (Bridge-Category 10-LMC Overlays): The Category 30 allocation is established to conduct Latex Modified Concrete overlays on structures. Funding for this sub-program is not distributed by formula and is irrespective of geographic location. Statewide priorities are established by the Commissioner of Highways based on input from the Districts. Currently, LMC Overlays activities are being limited to federal-aid eligible projects and the use of C30-090 funding has been suspended.

N09-099 (Improvement-Variou s - Potential future AC conversion): The N09 allocation designates initiatives to construct new roadway facilities, conduct general roadway

West Virginia 2020-2025 STIP

improvements or conduct preliminary engineering studies that will be “banked” for potential future Advanced Construction (AC) conversion. Funding for this sub-program is not distributed by formula and is irrespective of geographic location. Statewide priorities are established by the Commissioner of Highways based on input from various organizations within the WVDOH. This allocation is not actively being used.

N10-099 (Improvement-Variou)s: The N10 allocation is established to construct new roadway facilities, conduct general roadway improvements or conduct studies that are prerequisite to those improvements. Funding for this sub-program is not distributed by formula and is irrespective of geographic location. Statewide priorities are established by the Commissioner of Highways based on input from various organizations within the WVDOH.

7. CASH FLOW

7.1 GENERAL

The prior section emphasized the allocation of funds that will be available for programming purposes. Since each of the development phases (engineering, right-of-way, and construction) of the larger State and federal-aid road and bridge projects can take several years, actual expenditures relating to a project may not all occur in the year in which they were originally programmed. While longer development schedules spread expenditures over time and generally lessen the cash requirements of the State at a given time, the converse can also be true. For various reasons, it is possible for numerous projects that had started at different times to finish simultaneously. This can require the State to expend more or less funds in a month or year than were actually programmed for the period. As the result, the amount of federal-aid funds projected to actually be expended during the six-year period is less than the amount the WVDOH actually expects to obligate during the period.

Since the timing of actual expenditures is different from that when the funds are committed, the WVDOH must ensure that sufficient monies are in the State Road Fund to cover highway expenditures (a minimum of \$50 million and preferably \$80 to \$100 million during summer construction season). To accomplish this task, the Budget Division, in conjunction with the Program Administration Division, conducts a cash flow analysis. The analysis projects future revenues and expenditures on a month-by-month basis to determine the impact on the State Road Fund’s cash balance. Project-specific expenditures contained in the analysis include not only those for all currently authorized or awarded projects, but also for all projects on which the WVDOH expects to work during the forecast period.

West Virginia 2020-2025 STIP

The WVDOH currently prepares an adjusted cash flow analysis monthly. Initially, expenditures are projected under the assumption that all schedules are met and all cost estimates prepared for projects are perfect. After reviewing the expenditures that would be required in this utopian situation, the expenditures are adjusted either up or down to reflect the impacts of weather, project specific information (legal challenges, environmental issues, etc.) and historical trends. No agency responsible for such varied work could possibly meet every schedule, but the WVDOH continues to place emphasis on setting realistic schedules and meeting them. As the implementation of the six-year STIP continues to unfold, WVDOH personnel will be held more accountable for the projects in their charge and will be expected to provide valid reasons why a schedule cannot be met. As WVDOH personnel become more familiar with these processes, it is anticipated that fewer schedules will be missed, and there will be less need to revise project listings.

Since monthly State Road Fund expenditures can vary by as much as \$70 million during a given fiscal year, the cash flow information provided by the Budget Division is by necessity developed for a one-year period on a monthly basis. Given the number of assumptions used in the development of a STIP covering six years (four mandatory and two illustrative), a monthly cash flow breakdown over the 72-month period is unrealistic. Instead, cash flow projections for the STIP were developed on a fiscal year basis. The cash flow developed for the first year of the STIP should be virtually identical to the monthly cash flow report for the same period. Cash flows for the later years of the program should be used as a tool for future decisions, not to state definitively what will happen. The STIP will be dynamic and by necessity will need to be revised to continually cover a six-year planning horizon and to account for amendments and revisions. It is anticipated that the full narrative for the STIP will only be updated annually and that more frequent amendments presented for public comment will only provide a brief discussion of the changes specific to that document.

7.2 DEVELOPMENT

The official State revenue estimates, cost of projected Set-Asides, and the projected cost of the WVDOH's priority expenditures developed earlier, in conjunction with the current cash balance of the State Road Fund, form the foundation of the cash flow projections. Since the WVDOH has little control over revenue generation, legislative Set-Asides, or the requirements of its mandated priorities, these items were assumed unalterable. After assembling this information, expenditure schedules and federal-aid reimbursement rates were developed for the recommended program of improvement projects. All revenue and expenditure data were then combined on a State fiscal year basis to determine the overall impact on the cash position of the State Road Fund (i.e., does the recommended program allow the WVDOH to maintain a cash balance of at least \$50 million?).

West Virginia 2020-2025 STIP

The end of the State fiscal year is an appropriate time to examine the cash balance. It generally marks the beginning of the busiest part of the State's construction season. Due to heavy construction expenditures, the WVDOH usually spends more than it takes in during the months of July through October. The State Road Fund needs to be in a strong position at that point to avoid any shortfalls in State funds.

The cash flow analysis shown in Figure #10 reflects the expenditure data associated with the program of improvement projects contained in this document. The projected expenditure information is based on a combination of current budgets, ongoing projects, planned projects that are part of the recommended STIP and future NF projects to be defined at a later date. A review of Figure #10 indicates that with the revenues projected to be available the WVDOH will attempt to support a program of project improvements that averages \$726 million per year between FY 2019 and FY 2024 in nominal terms. The program as set forth indicates that the SRF would not meet its goal of having a cash balance of at least \$50 million in FY 2021 and beyond. Cash balances of over \$100 million can be maintained from an operating standpoint if the Agency continues to curtail the size and scope of its capital program. As stated previously, this forecast is highly dependent on the amount of federal funding that will be available and is thus rife with uncertainty. The effect of inflation will further erode the true value of any projected expenditures. The lack of significant growth in federal funding and State revenues will ultimately make it more difficult for the Agency to pursue desired expansion and improvements. Instead the Agency will be forced to spend ever increasing amounts of its revenue for preservation projects.

West Virginia 2020-2025 STIP

Figure #10

WEST VIRGINIA DEPARTMENT OF TRANSPORTATION PROJECTED STATE ROAD FUND REVENUES AND EXPENDITURES SIX-YEAR STIP AS OF JANUARY 2019

		FY2018	FY2019	FY2020	FY2021	FY2022	FY2023	FY2024
		ACTUAL						
1	CASH BALANCE - START OF FY	\$58,603	\$143,697	\$116,267	\$54,962	\$25,473	\$5,085	(\$12,793)
2	TAX REVENUES	800,088	821,743	829,462	819,460	820,561	817,571	840,404
3	MISCELLANEOUS REVENUES	52,471	16,495	28,995	21,495	23,995	23,995	24,235
4	TOTAL NON FEDERAL (STATE) REVENUES	\$852,559	\$838,238	\$858,457	\$840,955	\$844,556	\$841,566	\$864,639
5	FEDERAL REIMBURSEMENT	391,058	\$471,500	\$467,400	\$479,700	\$479,700	\$479,700	\$479,700
6	TOTAL RECEIPTS	\$1,243,617	\$1,309,738	\$1,325,857	\$1,320,655	\$1,324,256	\$1,321,266	\$1,344,339
	EXPENDITURES:							
7	STATE ROAD FUND SET ASIDES							
8	DMV *	\$39,348	\$43,479	\$46,078	\$46,078	\$46,078	\$46,078	\$46,078
9	OFFICE OF ADMINISTRATIVE HEARINGS *	\$1,430	1,952	2,066	2,066	2,066	2,066	2,066
10	INDUSTRIAL ACCESS ROADS	3,000	3,000	3,000	3,000	3,000	3,000	3,000
11	CLAIMS (against DOH & DMV)	556	1,500	4,250	500	500	500	500
12	TOTAL SET ASIDES	\$44,334	\$49,931	\$55,394	\$51,644	\$51,644	\$51,644	\$51,644
13	WVDOH PRIORITY EXPENDITURES (NF)							
14	DEBT SERVICE	\$24,961	\$89,000	\$89,000	\$105,000	\$129,500	\$154,000	\$154,000
15	ADMIN SUPPORT (GEN OP+EQUIP+INV)	(14,064)	94,795	118,163	118,500	118,500	118,500	118,500
16	MAINTENANCE (ROUTINE+LITTER) W/O RENOVATION	315,046	388,105	338,105	335,000	330,000	325,000	325,000
17	TOTAL PRIORITY EXPENDITURES (NF)	\$325,943	\$571,900	\$545,268	\$558,500	\$578,000	\$597,500	\$597,500
18	CASH BALANCE AFTER SET ASIDES AND PRIORITY NF EXPENDITURES	\$931,943	\$831,604	\$841,462	\$765,473	\$720,085	\$677,207	\$682,402
19	FEDERAL AID-ELIGIBLE EXPENDITURES (includes federal & state matching funds)							
20	INTERSTATE	\$82,113	\$95,000	\$90,000	\$90,000	\$90,000	\$90,000	\$90,000
21	APPALACHIAN CORRIDORS	97,441	110,000	100,000	100,000	100,000	100,000	100,000
22	OTHER FEDERAL AID PROJECTS	386,715	370,000	370,000	370,000	370,000	370,000	370,000
25	TOTAL FA-ELIGIBLE EXPENDITURES	\$566,269	\$575,000	\$560,000	\$560,000	\$560,000	\$560,000	\$560,000
26	CASH BALANCE AFTER FEDERAL AID-ELIGIBLE EXPENDITURES, SET ASIDES, & PRIORITY NF EXPENDITURES	\$365,674	\$256,604	\$281,462	\$205,473	\$160,085	\$117,207	\$122,402
27	NF IMPROVEMENT EXPENDITURES							
28	NF IMPROVEMENTS	\$218,344	\$156,500	\$221,500	\$175,000	\$150,000	\$125,000	\$125,000
29								
30	OTHER NF EXPENDITURES							
31	COURTESY PATROL	\$3,633	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000
31A								
33	TOTAL NF IMPROVEMENT EXPENDITURES	\$221,977	\$161,500	\$226,500	\$180,000	\$155,000	\$130,000	\$130,000
34	CASH BALANCE - END OF FY	\$143,697	\$116,267	\$54,962	\$25,473	\$5,085	(\$12,793)	(\$7,598)

West Virginia 2020-2025 STIP

8. THE SIX-YEAR STIP

West Virginia’s Statewide Transportation Improvement Program (STIP) is designed to meet the requirements outlined in the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) and carried forward under the Transportation Equity Act for the 21st Century (TEA-21), the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy For Users (SAFETEA-LU), the Moving Ahead for Progress in the 21st Century (MAP-21) act, Fixing America's Surface Transportation Act, as well as, the “Statewide Planning; Metropolitan Planning; Final Rule (23 CFR Part 450, 49 CFR Part 613)” as provided by the Federal Highway Administration (FHWA) and the Federal Transit Administration (FTA). The STIP includes transit projects to be undertaken with federal funds under Sections 5304 (Statewide Transportation Planning Program), 5307/5340 (Urbanized Area Formula Grants), 5310 (Enhanced Mobility of Seniors and Individuals with Disabilities), 5311 (Rural Area Formula Program), 5329 (Safety Oversight Program), 5337 – WVU/PRT (State of Good Repair), and 5339 (Bus and Bus Facilities).

For simplicity purposes, a project listing of all highway projects that have received or have not yet received federal authorization is shown in Appendix A. Each project phase includes a sufficient description, estimated cost, federal fund type and amount, and anticipated obligation date. Non-federal-aid projects are shown in Appendix C. Each project phase includes a sufficient description, estimated cost, state fund program and amount, and anticipated obligation date. Financial constraint is demonstrated for federally funded projects with this document and every subsequent amendment to the program.

8.1 STIP DEVELOPMENT

The West Virginia Department of Transportation (WVDOT) is a decentralized agency consisting of a Central Office (along with Aeronautics Commission; Public Port Authority; Parkways Authority; Divisions of Highways, Motor Vehicles, Public Transit) in Charleston, and the State Rail Authority located in Moorefield.

Projects in the STIP are consistent with the Multi-Modal Statewide Transportation Plan and are developed in cooperation with the MPOs and each non-metropolitan area (local officials and tribal governments) with responsibility for transportation in the State. In developing the STIP, the Governor provides citizens, affected public agencies, representatives of transportation agency employees, as well as other interested parties a reasonable opportunity to comment on the proposed STIP.

SAFETEA-LU, MAP-21, and continued in FAST, has mandated that Regionally Significant projects are to be identified individually in the STIP. Other projects, that are not determined to be Regionally Significant, can be either grouped into one line item or individually identified.

West Virginia 2020-2025 STIP

Per minimum federal guidelines, the STIP need only show projects receiving federal funds or affecting air quality in non-attainment or in maintenance areas. The projects listed are in conformance with the applicable State air quality implementation plan (www.dep.wv.gov/daq), developed pursuant to the Clean Air Act Amendment.

The WVDOH is in the process of updating the current approved STIP/TIP operating guidelines (7/11/2017) to provide more detailed guidance into what projects are considered groupable; as well as the STIP/TIP amendment and adjustment processes for groupable projects.

8.2 STIP AMENDMENTS/ADMINISTRATIVE ADJUSTMENTS

The STIP is a dynamic document; therefore, after FHWA and FTA approval, oftentimes there is a need to make necessary changes. The changes can either be in the form of an amendment or an administrative adjustment. The STIP shall be amended/adjusted as deemed necessary or desirable by the WVDOT in cooperation with the MPOs and consistent with state/local consultation procedures. The proposed STIP and/or amendments shall be made available for a public review/comment period. Legal advertisements announcing the availability of such STIP amendments are placed in the Charleston daily newspapers which are distributed statewide. Additionally, press releases are mailed to all general circulation newspapers throughout the State. Copies of the STIP and/or amendments are available for public review at:

- The WVDOT's headquarters in Charleston, West Virginia (Programming Division);
- The ten regional WVDOH District offices (see *List of Contacts*, Appendix H);
- Each MPO (see *List of Contacts*, Appendix H);
- Each of the eleven Regional Planning and Development Offices, statewide (see *List of Contacts*, Appendix H);
- Each County Commission;
- Each County's main Library;
- Tribes;
- On the web at www.transportation.wv.gov.

Comments pertaining to the STIP amendments should be made in writing and mailed to: Ryland W. Musick, P.E., Deputy State Highway Engineer - Planning & Programming, West Virginia Division of Highways; Building 5, Room A-148; 1900 Kanawha Boulevard, East; Charleston, West Virginia 25305-0430.

West Virginia 2020-2025 STIP

After comments generated in the review period are considered, a finalized STIP amendment is prepared and forwarded to the FHWA and/or the FTA for review/approval.

With the new 2020-2025 STIP, the WVDOH has created “Groupable Buckets” which most projects will fall into. Projects with a phase cost larger than \$10,000,000, Safety projects, new traffic signal projects, new lane additions, new roads or new bridges, expansion projects that add capacity and projects that affect air quality are considered not groupable. All other projects will be considered groupable under the new STIP/TIP operating guidelines. More information on the groupable bucket programs can be found in Appendix E.

Under groupable projects, an amendment is a major change in the approved STIP/Transportation Improvement Program (TIP). It is defined as follows:

- Adding, deleting or moving across federal fiscal years a number of projects with a sum cost greater than 10% of the bucket size, which is found in Appendix E; or
- A major change of project scope, such as a change that is inconsistent with the National Environmental Policy Act (NEPA) documentation or will change the NEPA determination, or a change that affects the approved Air Quality conformity finding; examples include changing the number of through lanes, adding/deleting non-motorized facilities, changing mode (FTA – rolling stock or facility type), changing capital category (FTA), and may include changing termini which changes the project from groupable to not groupable; or
- Any change requiring a new regional air quality conformity finding which changes the project from groupable to not groupable; or
- A greater than \$10,000,000 cost increase or cost decrease in a phase of a project listed in the current STIP/TIP which changes the project from groupable to not groupable.

For projects considered not groupable, an amendment is any major change in the approved STIP/Transportation Improvement Program (TIP). It is defined as follows:

- Adding or deleting any safety project; or
- Adding or deleting any project that adds new traffic signals; or
- Adding or deleting any project that affects air quality; or
- Adding or deleting any project that changes traffic capacity of a road or bridge; or
- Adding or deleting any expansion project; or
- Adding or deleting any regionally significant, non-federal aid project; or
- Major change in scope of work or cost changes greater than \$2,000,000 or 10%; whichever is greater.

West Virginia 2020-2025 STIP

Amendments may be made to the STIP/TIP at any time during the life of the STIP/TIP and require federal approval by FHWA and/or FTA. The amendment, when required, must be consistent with 23 CFR 450 including public involvement procedures, air quality conformity and fiscal constraint.

An administrative adjustment is a minor change in the approved STIP/TIP. Adjustments may be made to the STIP/TIP at any time during the life of the STIP/TIP and do not require federal approval, but will be submitted to FHWA and/or FTA for informational purposes. The administrative adjustment is to meet requirements of the 23 CFR 450 and is defined as follows:

- A minor change in project description that does not change the Air Quality conformity finding in maintenance and nonattainment areas or change the project scope; or
- Shifting programmed funds between projects (i.e., funding sources and projects already identified in the STIP/TIP); or
- Moving programmed projects from year to year within an approved STIP/TIP, except those that cross Air Quality horizon years; or
- A cost change to a groupable project that is less than \$10,000,000 and doesn't change the groupable bucket size by more than 10%; or
- A change to a project that is considered groupable as long as the change does not make it not groupable.

8.3 GUIDANCE

When referring to the STIP document, information from the following sources may be used:

- Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA)
- Transportation Equity Act for the 21st Century (TEA-21)
- Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy For Users (SAFETEA-LU)
- Moving Ahead for Progress in the 21st Century (MAP-21)
- Fixing America's Surface Transportation Act (FAST)
- U.S. Department of Transportation "Statewide Planning; Metropolitan Planning; Rule"
- The TIPs for each MPO in West Virginia
- West Virginia's Multi-Modal Statewide Transportation Plan
- Local Government Comprehensive and/or Transportation Plan(s)
- STIP Operating Procedures

West Virginia 2020-2025 STIP

8.4 HOW TO “READ” THE STIP

The purpose of this section is intended to give guidance to someone reviewing the proposed STIP during the “public reviewing period”. It will address WHAT is contained in the proposed STIP; the relationship between the STIP and Metropolitan Planning Organization’s (MPO’s) Transportation Improvement Program (TIP); and what “grouped” projects include.

The federally funded portion of the STIP identifies:

- **TRANSIT SECTION (APPENDIX F):** Included are all transit projects to be undertaken with federal funds under Sections 5304 (Statewide Transportation Planning Program), 5307/5340 (Urbanized Area Formula Grants), 5310 (Enhanced Mobility of Seniors and Individuals with Disabilities), 5311 (Rural Area Formula Program), 5329 (Safety Oversight Program), 5337 – WVU/PRT (State of Good Repair), and 5339 (Bus and Bus Facilities). These projects are identified in Appendix F.
- **HIGHWAYS SECTION (APPENDICES A & B):** Included are all projects (MPO and Non-MPO) that are expected to be federally authorized, for the time period covered. These projects are identified in Appendix A and are depicted, graphically, (Construction phase only) in Appendix B.

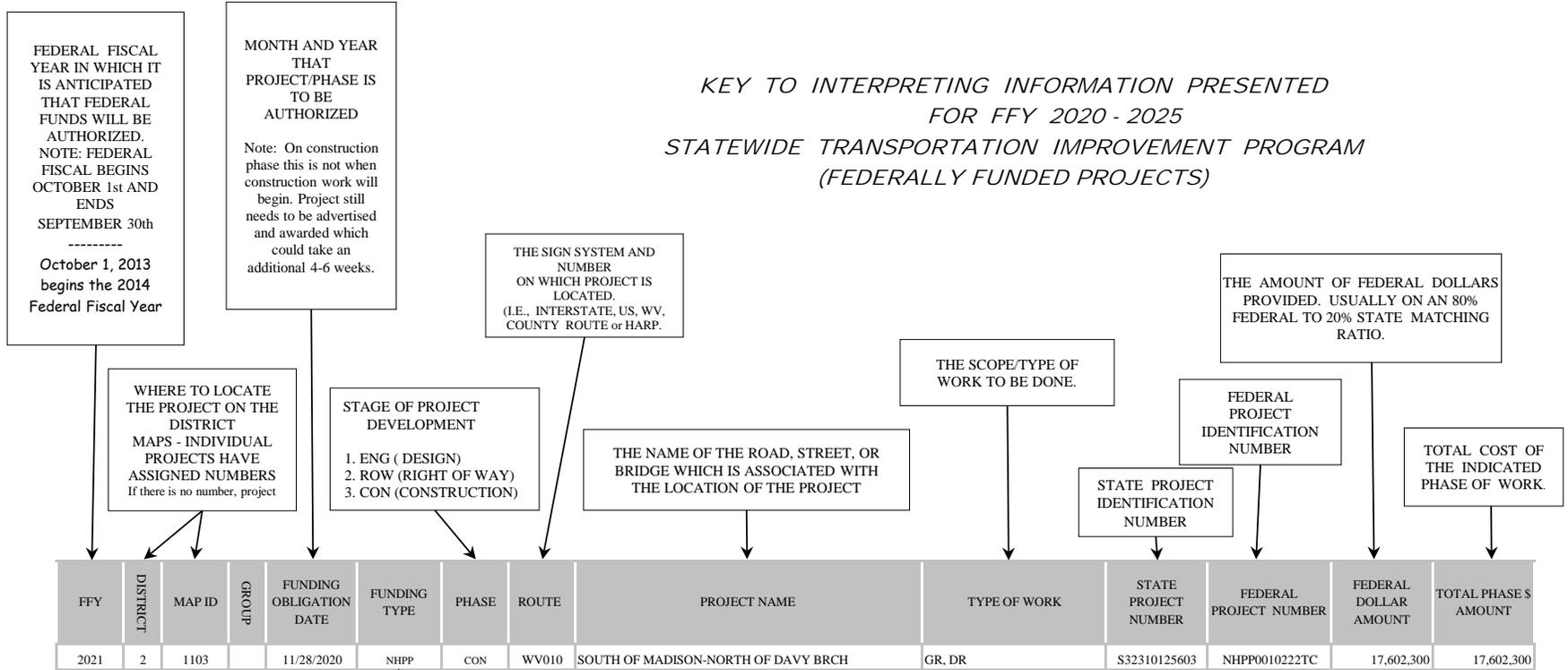
Spreadsheets, by project name and federal fiscal year, are provided in Appendix A. Refer to the explanations below.

- **FFY** - Federal fiscal year in which federal funds are anticipated to be authorized.
- **DISTRICT** - The WVDOH has 10 districts. See Appendix B for maps of the districts with the construction projects depicted.
- **MAP ID** - Location of the project on district map. Go to the corresponding district map and find the number shown on map ID to find project location. If no number is shown, the project has not been located. If D.W. is displayed, the project is considered district wide.
- **GROUP** - If projects can be grouped there is a “G” shown in the box. If projects are located within a Metropolitan Planning Organization’s boundary the acronym “MPO” is shown. If neither applies, the box is left blank.
- **FUNDING OBLIGATION DATE** - The date in which the project is scheduled to be authorized for federal funding. Once federal funding is authorized, the project becomes eligible to begin phase work.
- **FUND TYPE** - Source of federal funds (see Page 47 for funding abbreviations).
- **PHASE** – ENG (Design), ROW (Right-of-Way), or CON (Construction).

West Virginia 2020-2025 STIP

- ***ROUTE*** - If on a route, this column will indicate the Interstate, US, WV, County (example: “CO060/72” stands for County Route 60/72) or HARP Route Number.
- ***PROJECT NAME*** - The name by which the project is identified.
- ***TYPE OF WORK*** – Scope/Type of work to be done. See *Abbreviation Identification Chart* for explanations of abbreviations.
- ***STATE PROJECT NUMBER*** - Number assigned for identifying projects.
- ***FEDERAL PROJECT NUMBER*** - Number assigned for identifying projects.
- ***FEDERAL DOLLAR AMOUNT*** - Total amount of federal funds to be used.
- ***TOTAL PHASE \$ AMOUNT*** - Total dollar amount of phase.
- ***COUNTY*** (lower right-hand corner of the page) - The County where the project is located (alphabetical listing).

KEY TO INTERPRETING INFORMATION PRESENTED
FOR FFY 2020 - 2025
STATEWIDE TRANSPORTATION IMPROVEMENT PROGRAM
(FEDERALLY FUNDED PROJECTS)



- TYPE OF FUNDS TO BE UTILIZED FOR THE PROJECT, ABBREVIATED AS FOLLOWS:
- CMAQ - CONGESTION MITIGATION & AIR QUALITY
 - DF - DIRECT FEDERAL
 - EARMARK/GRANT - EARMARKS, HI PRIORITY, AND OTHER DELEGATED PROJECTS
 - HSIP - HIGHWAY SAFETY IMPROVEMENT PROGRAM
 - NHFP - NATIONAL HIGHWAY FREIGHT PROGRAM
 - NHPP - NATIONAL HIGHWAY PERFORMANCE PROGRAM
 - NHPP-ADHS - NATIONAL HIGHWAY PERFORMANCE PROGRAM - APPALACHIAN DEVELOPMENT
 - NHPP-EXEMPT - NATIONAL HIGHWAY PERFORMANCE PROGRAM - EXEMPT
 - NRT - NATIONAL RECREATIONAL TRAILS
 - OTHER - EXISTING BR, EB, ENH, IM, SRTS FUNDS
 - RR/HWY XING - R/H CROSSING AND PROTECTIVE DEVICES
 - SPR/PL - STATEWIDE PLANNING AND RESEARCH
 - STP - SURFACE TRANSPORTATION PROGRAM
 - STP-OFF - SURFACE TRANSPORTATION PROGRAM - OFF SYSTEM BRIDGES
 - STP-TMA - SURFACE TRANSPORTATION PROGRAM - TMA
 - TAP - TRANSPORTATION ALTERNATIVES PROGRAM
 - TAP-TMA - TRANSPORTATION ALTERNATIVES PROGRAM - TMA

*WEST VIRGINIA DEPARTMENT OF TRANSPORTATION
2020 - 2025 STATEWIDE TRANSPORTATION IMPROVEMENT PROGRAM (STIP)
ABBREVIATION IDENTIFICATION CHART*

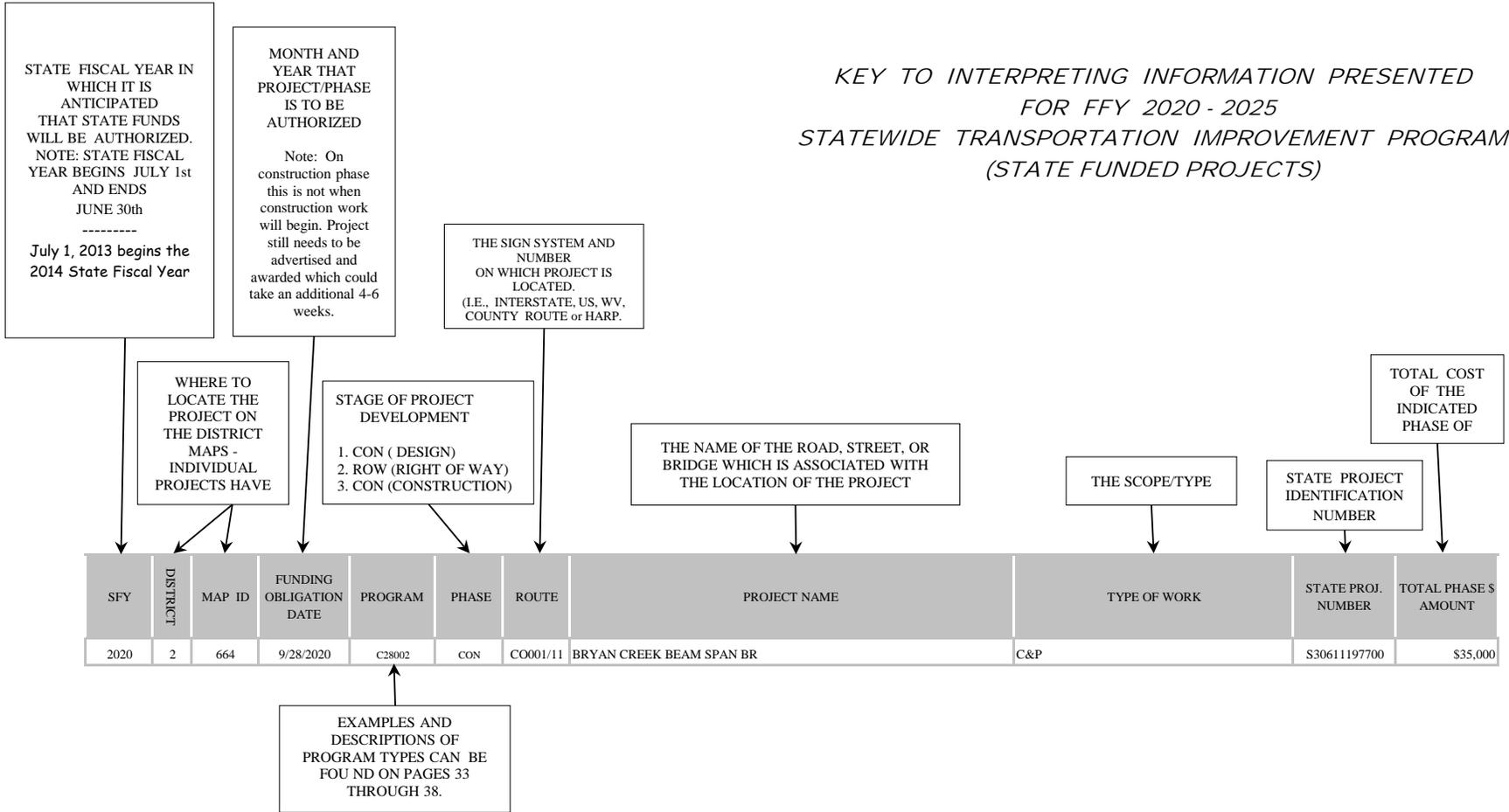
/	- With, Over	HM	- Hot-Mix Asphalt (another name for HLBC)	SCS	- Soil Conservation Service
A	- Actual (for dates)	HS	- High School	S&D	- Shoulders & Ditches
ABUT	- Abutment	HWY	- Highway	SF	- State Forces
ACC	- Access	I/C	- Interchange	SFTY	- Safety
ADJ	- Adjacent	IMPR	- Improve, Improvement	SGL	- Single
ADT	- Average Daily Traffic	IND	- Industrial	SHL	- Shoulder(s)
ALIGN	- Alignment	INST	- Install, Installation, Instruct	SIG	- Signal(s)
ALT	- Alternate	INTMT	- Intermittent	SLS	- State Local Service
APD	- Appalachian Development Highway	I/S	- Intersection	SP	- State Park
APL	- Appalachian Local Access Road	JCT	- Junction	SRM	- Secondary Road Maintenance
APPR	- Approach	JTS	- Joints	S&S	- Saw & Seal
APT	- Apartment	L	- Length, Left, Landscaping	SST	- Single Surface Treatment
ASB	- Asbestos	LI	- Line	ST	- Street, Stone, State
AT-GR	- At Grade	LF	- Lineal Feet	STA	- Station
ATT	- Attenuators	LMC	- Latex Modified Concrete(Overlay)	STAB	- Stabilize, Stabilization
AUX	- Auxiliary	LN	- Lane(s)	STD	- Standard
AVE	- Avenue	LNDSCL	- Landscaping	STL	- Steel
BARR	- Barrier	LOC	- Location	SUB	- Substructure
BC	- Base Course	LT	- Left Turn	SUBST	- Substructure
BLDG	- Building	LWC	- Low Water Crossing	SUPER	- Superstructure
BLVD	- Boulevard	MATLS	- Materials	SURF	- Surface
BR	- Bridge	MED	- Median	SW	- Southwest, Sidewalk
BRCH	- Branch	MOD	- Modify, Modification	SYS	- System
BX	- Box	MON	- Monitor	TE	- Traffic Engineering
C-C	- Curb to Curb	MP	- Milepost	TEMP	- Temporary
CATH	- Cathodic	MSC	- Micro-Silica Concrete	TER	- Terrace
CF	- Central Special Forces	MT	- Mountain, Mount	TN	- Turn
CHAN	- Channelize, Channelization	MVMT	- Movement	TPK	- Turnpike
CHG	- Charge, Change	N	- North	TPL	- Triple
CIR	- Circle	NA	- Not Applicable	TR	- Treat, Treated (Timber)
CK	- Check	NB	- Northbound	TRAF	- Traffic
CL	- Clear, Corridor Location, Corp Line	NBL	- Northbound Lane(s)	TREAT	- Treatment
CMP	- Corrugated Metal Pipe	NCL	- North Corporation Line	TRK	- Truck
CN	- Construction(Project Phase)	NF	- Non-Fed (i e State funds)	TST	- Triple Surface Treatment
CO	- County, Company	NO	- Number	UPGR	- Upgrade
CONC	- Concrete	OBST	- Obstacle	US	- Upstream
CONN	- Connector	OH	- Overhead	VAR	- Various
CONST	- Construct, Construction	O/L	- Overlay	VOC	- Vocational
COR	- Corridor	O/P	- Overpass	W	- West, Wide, With
CORR	- Correct, correction	OT	- Other	WAT	- Water
C&P	- Clean & Paint	PCA	- Partial Controlled Access	WB	- Westbound
CP	- Contract Plans	PCB	- Prestressed Concrete Beam	WBL	- Westbound Lane(s)
CR	- Creek	PCC	- Portland Cement Concrete	WC	- Wheel Chair(Ramps)
XOVER(S)	- Crossover(s)	PE	- Preliminary Engineering	WCL	- West Corporation Line
C&S	- Crack & Seal	PED	- Pedestrian	WID	- Widen, Width
CT	- Contract, Center-Turn Lane	PK	- Park, Pike	XING	- Crossing
CUL	- Culvert	P&L	- Patch & Level	XOVER(S)	- Crossover(s)
CUL-DE-SAC	- Dead-End/Turn-Around Provisions	PO	- Post Office	XTF	- Expressway/Trunkline/Feeder
CUR	- Current, Curve	PROT	- Protection, Protective		
DBL	- Double	PROV	- Provide		
DELIN	- Delineators	PS&E	- Plans, Specifications & Estimates		
DEMO	- Demolish, Demonstration	PVMT	- Pavement		
DES	- Design (as in Design Report)	R	- River, Right		
DET	- Detour	RAD	- Radius		
DEV	- Devices, Development	RD	- Road		
DF	- District Special Forces	RDWY	- Roadway		
DIV	- Divided	RECONST	- Reconstruct, Reconstruction		
DR	- Drainage, Design Report, Drive	REINF	- Reinforce		
DS	- Downstream	REL	- Relocate, Relocation		
DSR	- Damage Survey Report	RELOC	- Relocate, Relocation		
DST	- Double Surface Treatment	REM	- Remove, Remaining		
E	- East	REN	- Renovate, Renovation		
EB	- Eastbound	REP	- Repair		
EBL	- Eastbound Lane(s)	REPL	- Replace, Replacement		
ECL	- East Corporation Line	RESTAB	- Restabilize, Restabilization		
EIS	- Environmental Impact Statement	RESURF	- Resurface		
ENT	- Entrance	RET	- Retaining		
EX	- Existing	RI	- River		
EXP	- Expansion, Expressway	RT	- Right Turn, Route		
EXP	- Expansion	RN	- Run		
EXT	- Extension, Extend	ROW	- Right-of-way		
FA	- Federal-Aid, Force Account	RPM	- Raised Pavement Markers		
FACIL	- Facility	RPT	- Report		
FAP	- Federal-Aid Primary	RR	- Railroad		
FAS	- Federal-Aid Secondary	RW	- Right-of-way(Project Phase)		
FCA	- Full Controlled Access	R&I	- Renovation & Improvement		
FK	- Fork	S	- South		
FL	- Flasher, Flashing, Floor	SB	- Southbound		
GDRL	- Guardrail	SBL	- Southbound Lane(s)		
GR	- Grade, Guardrail	SCH	- School		
HIST	- Historic	SCL	- South Corporation Line		
HLBC	- Hot Laid Bituminous Concrete	SCR	- Screen		

West Virginia 2020-2025 STIP

The state funded portion of the STIP document identifies:

- **Highways Section (Appendices C & D):** Included are all projects that currently are expected to be state funded, for the time period of SFY 2020-2025. These projects are identified in Appendix C by project name and state fiscal year and are depicted, graphically, (Construction phase only) in Appendix D. Refer to the explanations below.
 - **SFY** - State fiscal year in which it is anticipated that state funds will be authorized.
 - **DISTRICT** - The WVDOH has 10 districts. See Appendix D for a map of the districts with the construction projects depicted.
 - **MAP ID** - Location of the project on district map. Go to the corresponding district map and find the number shown on map ID to find project location. If no number is shown, the project has not been located. If D.W. is displayed, the project is district wide.
 - **FUNDING OBLIGATION DATE** - The date the project is scheduled to receive approval of state funding. Once state funding is approved, the project becomes authorized to begin that phase of work.
 - **PROGRAM** - Source of state funds.
 - **PHASE** - Design (Engineering), Right-of-Way, or Construction.
 - **ROUTE** - If on a route, this column will indicate the Interstate, US, WV, County (example: “CO060/72” stands for County Route 60/72) or HARP Route Number.
 - **PROJECT NAME** - The name by which the project is identified.
 - **TYPE OF WORK** – Scope/Type of work to be done. See *Abbreviation Identification Chart* for explanations of abbreviations.
 - **STATE PROJ. NUMBER** - Number assigned for identifying projects.
 - **TOTAL PHASE COST** - Total dollar amount of phase.
 - **COUNTY** (lower right-hand corner of the page) - The County where the project is located (alphabetical listing).

KEY TO INTERPRETING INFORMATION PRESENTED
FOR FFY 2020 - 2025
STATEWIDE TRANSPORTATION IMPROVEMENT PROGRAM
(STATE FUNDED PROJECTS)



West Virginia 2020-2025 STIP

9. FINANCIAL TABLES AND INFORMATION

The following section contains information related to the projects listed in the Four-Year STIP. Since West Virginia typically updates and redistributes its STIP on an annual basis, projects are shifted and updated to insure financial constraint. Projects are adjusted within the FFY to insure a balanced delivery of the program over the year. The goal is to have 90% of the program distributed evenly over the first ten months of the federal year, with the exception of December, and no more than 10% of the program delivered in the final two months of the federal year. This helps insure that our resources are not over programmed in one particular month, helps manage cash flow throughout the year and prepares for the possibility of an “August Redistribution”. The “August Redistribution” shown in the chart is not used in the chart calculations, it is a placeholder until August/September when the State requests/is awarded August Redistribution money. The “August Redistribution” column shows what funds the State expects the August Redistribution funded projects to be funded with. The projects’ costs are included in the calculations for the “FY ## Scheduled” column.

The following charts display the monthly and cumulative layout for federal fiscal year 2020 while the subsequent pages display a list of the Advanced Construction Projects for the 2020-2025 STIP. Advanced Construction (AC) is a technique which allows a State to initiate a project using non-federal funds while preserving eligibility for future federal-aid funds. Eligibility means that FHWA has determined that the project technically qualifies for federal-aid; however, no present or future federal funds have been committed to the project. After an AC project is authorized, the State may choose to convert the project to regular federal-aid funding provided that there are federal funds available for the project. This technique typically occurs:

- a) during the last few months of the federal fiscal year;
- b) during the first quarter of the next federal fiscal year when the obligation authority is low;
- c) when the State Road Fund drops to a certain level;
- d) when a project’s construction phase occurs over multiple years.

An AC project must meet the same requirements and be processed in the same manner as a regular federal-aid project. All phases of a project must meet federal requirements for the National Environmental Policy Act (NEPA), Uniform Relocation Assistance and Real Property Acquisition Policies Act (Uniform Act), etc., if federal-aid funds are to be used. The “A.C. Payback” column in each year of the Financial chart shows the total amount planned to spent on AC projects in that year. The AC Payback column is for informational purposes only, the costs of the projects that make up these are included in the “FY ## Scheduled” column.

West Virginia 2020-2025 STIP

The STIP financial chart financial constraint is calculated by adding the “Estimated Carryover (Unobligated Balance)” column and the “Available 2020 Funds” columns. This total should be more than the “FY 2020 Scheduled + Supplemental” column amount. The carryover column plus the available fund columns from each year total into the “Projected Total Funding Available” column. The total scheduled projects from each year totals into the “Total Scheduled” column.

Also, this chapter contains a Financial chart for the “Groupable Buckets”, list of demonstration projects with descriptions and balances along with the financial chart which depicts financial constraint for the 2020-2025 STIP.

West Virginia 2020-2025 STIP

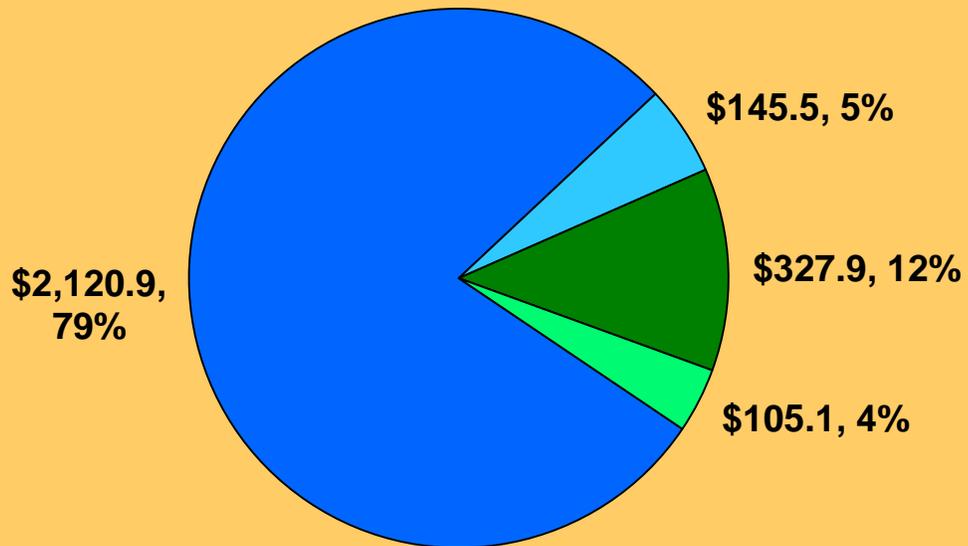
Updated 9/19/2019

PROGRAM GROUP	GROUPABLE "BUCKET" SIZE		FY 2020 SCHEDULED		CUMULATIVE SUPPLEMENTAL SPENDING FY 2020	FY 2020 SCHEDULED+SUPPLEMENTAL	FY 2021 APPORTIONMENT	FY 2021 SCHEDULED	FY 2022 APPORTIONMENT	FY 2022 SCHEDULED	FY 2023 APPORTIONMENT	FY 2023 SCHEDULED	FY 2024 APPORTIONMENT	FY 2024 SCHEDULED	FY 2025 APPORTIONMENT	FY 2025 SCHEDULED
GROUPABLE - BRIDGE	\$1.0	73.3	73.3	73.3	0.0	73.3	85.0	50.0	\$1.0	\$1.8	\$1.0	90.2	\$1.0	\$1.0	\$1.0	\$1.0
GROUPABLE - COMMUNITY DEVELOPMENT	8.2	11.6	0.0	11.6	0.0	11.6	8.2	8.2	8.2	8.0	8.2	8.0	8.2	8.0	8.2	8.0
GROUPABLE - LOCALIZED MOBILITY IMPROVEMENT PROGRAM	7.0	7.4	0.0	7.4	0.0	7.4	7.0	7.0	7.0	9.1	7.0	7.0	7.0	7.0	7.0	7.0
GROUPABLE - PLANNING AND WORKFORCE DEVELOPMENT	13.2	13.5	0.0	13.5	0.0	13.5	15.2	15.2	13.2	15.2	13.2	15.2	15.2	15.2	13.2	15.2
GROUPABLE - RESURFACING	100.0	\$3.2	0.0	\$3.2	0.0	\$3.2	100.0	97.3	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
GROUPABLE - TRAFFIC	23.0	29.9	0.0	29.9	0.0	29.9	23.0	19.4	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0
Total Groupable Funds:	240.4	218.8	0.0	218.8	0.0	218.8	240.4	197.3	240.4	239.0	240.4	245.4	240.4	240.2	240.4	240.2

STIP - 2020-2023 FINANCIAL NUMBERS
2024-2025 INFORMATIONAL LISTING

West Virginia 2020-2025 STIP

BREAKDOWN OF ANTICIPATED REVENUE SOURCES FOR FINAL STIP (FFY 2020 - 2023)



■ FEDERAL-AID HIGHWAY

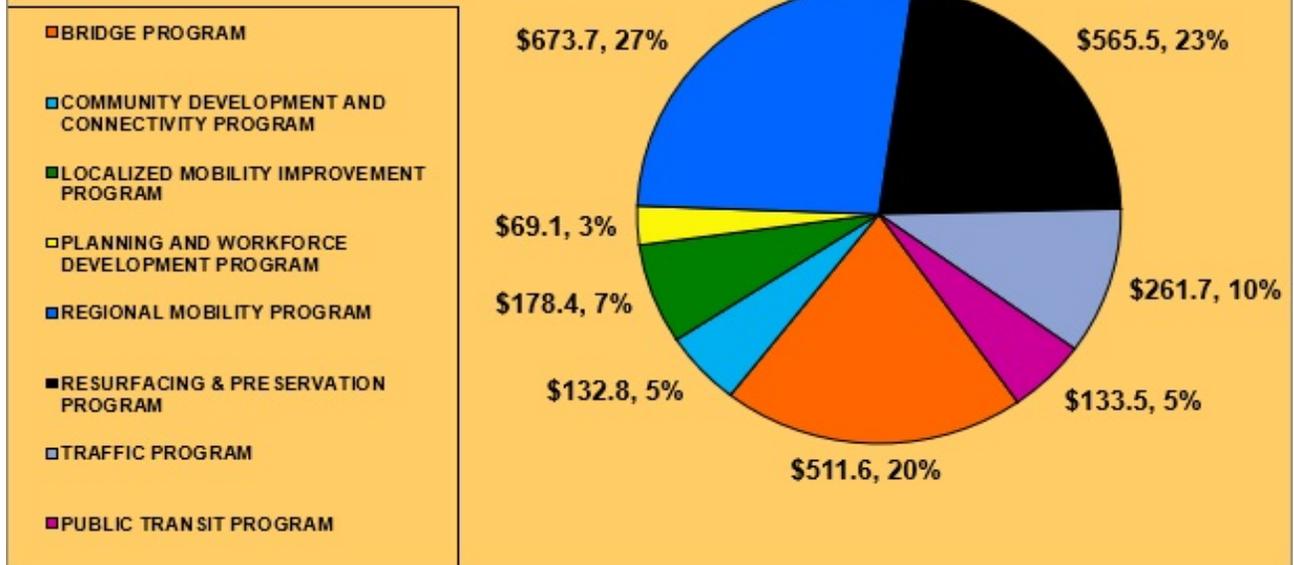
■ FEDERAL-AID TRANSIT

■ STATE/LOCAL MATCH (HIGHWAY)

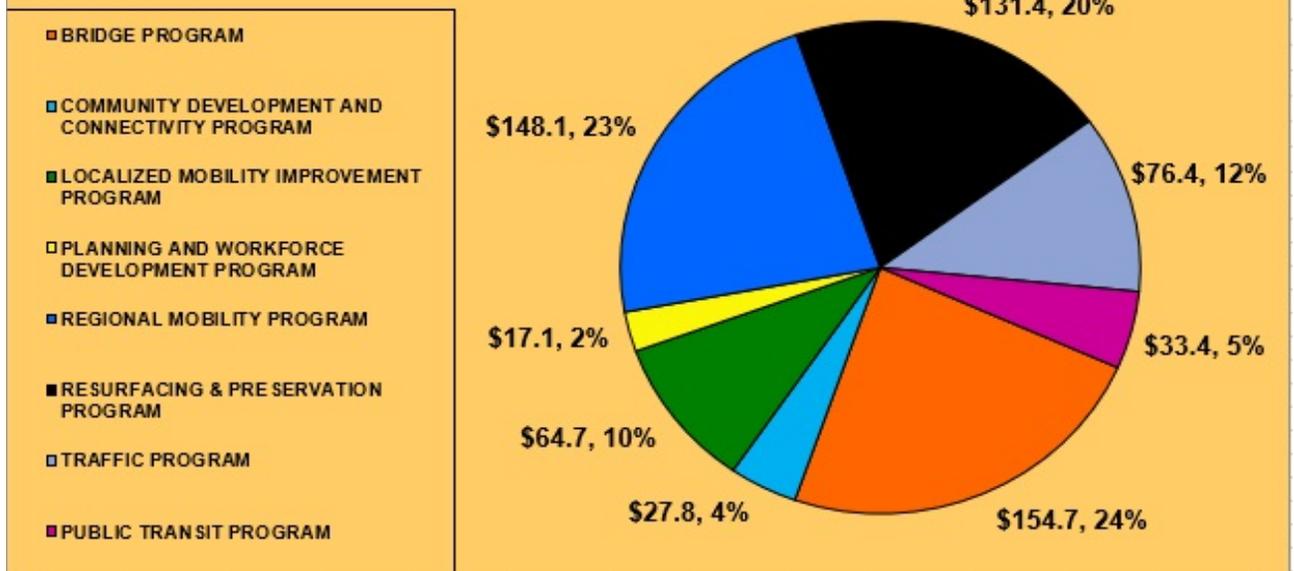
■ STATE/LOCAL MATCH (TRANSIT)

West Virginia 2020-2025 STIP

**BREAKDOWN OF PLANNED OBLIGATIONS
FOR FINAL STIP (FFY 2020 - 2023) BY PROGRAM TYPE**
(VALUES IN MILLIONS)



**BREAKDOWN OF PLANNED FFY 2020 OBLIGATIONS (FED, STATE, LOCAL)
FOR FINAL 2020-2023 STIP BY PROGRAM TYPE**
(VALUES IN MILLIONS)



West Virginia 2020-2025 STIP

WEST VIRGINIA DEPARTMENT OF TRANSPORTATION FFY 20 – 25 STATEWIDE TRANSPORTATION IMPROVEMENT PROGRAM (STIP) COUNTY IDENTIFICATION CHART

County No.	County Name	District No.
1	Barbour	7
2	Berkeley	5
3	Boone	1
4	Braxton	7
5	Brooke	6
6	Cabell	2
7	Calhoun	3
8	Clay	1
9	Doddridge	4
10	Fayette	9
11	Gilmer	7
12	Grant	5
13	Greenbrier	9
14	Hampshire	5
15	Hancock	6
16	Hardy	5
17	Harrison	4
18	Jackson	3
19	Jefferson	5
20	Kanawha	1
21	Lewis	7
22	Lincoln	2
23	Logan	2
24	McDowell	10
25	Marion	4
26	Marshall	6
27	Mason	1
28	Mercer	10

County No.	County Name	District No.
29	Mineral	5
30	Mingo	2
31	Monongalia	4
32	Monroe	9
33	Morgan	5
34	Nicholas	9
35	Ohio	6
36	Pendleton	8
37	Pleasants	3
38	Pocahontas	8
39	Preston	4
40	Putnam	1
41	Raleigh	10
42	Randolph	8
43	Ritchie	3
44	Roane	3
45	Summers	9
46	Taylor	4
47	Tucker	8
48	Tyler	6
49	Upshur	7
50	Wayne	2
51	Webster	7
52	Wetzel	6
53	Wirt	3
54	Wood	3
55	Wyoming	10

West Virginia 2020-2025 STIP

10. PUBLIC INVOLVEMENT

As part of the development of a new FFY 2020- 2025 STIP, the WVDOT conducted extensive public involvement. The WVDOT posted the Preliminary Draft STIP project listing, the associated funding tables and charts as well as a STIP informational video on its website on March 29th. the WVDOT also set up information tables at the 10 District headquarters around the state for the public to go in, view the information, ask questions or leave comments. There were also flash drives containing the information available to take. To help heighten public awareness regarding the formulation of a new Draft STIP and gather input on its content, the WVDOT conducted a series of 8 Public Workshops throughout the State between April 1st and April 8, 2019. Individual workshops were held in both metropolitan and non-metropolitan areas of the State at the following locations: Parkersburg, Beckley, Martinsburg, Wheeling, Logan, Huntington, Morgantown and Charleston. During the course of the 8 Public Workshops, a total of 52 individuals registered the attendance sheets provided. During these workshops individuals were provided one-on-one opportunities to discuss with WVDOT personnel their issues. Notification of these meetings was conducted through not only traditional Legal Notices, but also supplemental press releases and posts to the agency's social media sites via the Communications Division of the West Virginia Secretary of State's office. Public comments could be submitted at the Public Workshops, via standard mail after the meeting, via e-mail or phone call. During the comment period, which extended to May 15th, the WVDOH received a total of 16 written public comments regarding the content of the Preliminary Draft STIP.

- Seven of the comments received were specifically directed at having the Engineering, Right of Way and Construction phases be added to the program to address alignment and safety issues on WV 9 west near Hedgesville. The subject project is currently in the Design Report phase (U202-9-11.40), and at the time of the Preliminary Draft STIP's development the 300 series project had not been programmed. Preliminary findings from the Design Report were presented to the public on October 3, 2018. The Draft report proposed adding a left turn lane based on a traffic flow study conducted in 2018. A town council meeting on December 6, 2018 was held and the Hedgesville Town Council voted on a proposed by-pass road instead of the left turn lane. While it is fully anticipated that the 300 series project will be programmed, a design study would need to be performed to consider any additional alternatives that the Executive Management of the WVDOH would deem appropriate.
- One comment was sent to Engineering Division regarding the Beckley Z-Way project.
- The remaining 8 comments covered a variety of topics relating to state funded maintenance or workshop communication. Requests for additional information submitted as part of the

West Virginia 2020-2025 STIP

public comment process or as action items from the Public Workshops were either addressed by central office staff or forwarded to District staff if more appropriate.

The Agency believes the program of projects contained in the Preliminary Draft STIP adequately addresses roadway surface conditions through a significant investment in pavement preservation. Much of the pavement preservation work that will be conducted from FFY 2020-2025 remains unidentified at this time and in the form of allocations. Projects will continue to be identified and added to the program on an ongoing basis. Comments received endorsing the Agency's proposed mix of projects required no further action.

11. PLANNING FINDINGS

11.1 GENERAL

West Virginia's FFY 2016 – 2021 STIP was approved by FHWA and FTA on April 22, 2016. The joint approval letter from FHWA and FTA also contained a series of planning findings that identified a number of items for improvement and enhance by the next STIP update.

- The WVDOT should update the STIP/TIP Operating Guidelines to reflect changes to Federal code, and State policy and procedures. [The WVDOH is in the process of updating the STIP/TIP Operating Guidelines to reflect changes to Federal code, State policy and procedure and incorporate more detail about groupable projects.](#)
- The WVDOT should work with the MPO's in identifying appropriate performance targets to focus the planning framework and to guide the State's future plans and updates. Performance-based planning, which was introduced as part of MAP-21 is now a requirement under the FAST Act. [The WVDOH and MPOs continue to work together on this task.](#)