



**COMMONWEALTH OF KENTUCKY
TRANSPORTATION CABINET**

Frankfort, Kentucky 40622
www.transportation.ky.gov/

Matthew G. Bevin
Governor

Greg Thomas
Secretary

October 11, 2018

Mr. Thomas Nelson
FHWA Division Administrator
330 West Broadway
Frankfort, KY 40601

Dear Mr. Nelson:

As per the October 2018 review comments from FHWA and FTA, we have finalized the Kentucky Transportation Cabinet's Fiscal Years 2019-2022 Statewide Transportation Improvement Program (STIP) for your approval. The 2018 STIP was developed in accordance with federal regulations. The implementation of the 2018 STIP will be in accordance with the FAST Act programs and guidelines, and will be conducted through the cooperative efforts of the KYTC, FHWA, and FTA to ensure that all federal-aid funding is utilized in accordance with federal guidelines and federal regulations.

The STIP contains listings of highway and transit projects within the 120 Kentucky counties and the District 99 Zvarious funding categories. Projects shown in the listing of STIP projects located within the Metropolitan Planning Organization (MPO) requiring MPO TIP actions are identified. The MPO TIP actions adding the identified projects, and adding future projects within the MPO areas not identified within the current MPO TIP will be processed through the corresponding MPO's TIP modification or amendment process. Upon completion of the MPO TIP modification or amendment, the modification or amendment will be added to the STIP via the STIP modification process prior to authorization of federal funding for the corresponding project.

We appreciate the assistance of FHWA and FTA, and look forward to implementation of the FY 2019-2022 Statewide Transportation Improvement Program (STIP).

Sincerely,

A handwritten signature in blue ink that reads "Ronald B. Rigney".

Ronald B. Rigney, P.E. & P.L.S.
Director, Division of Program Management

RBR:SAC

c: Greg Thomas, Secretary
Andy Barber, State Highway Engineer



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Kentucky's

Statewide Transportation Improvement Program for FY 2019-2022

The Kentucky Legislature enacted House Bill 201, House Bill 202 and House Joint Resolution 74 during the 2018 Regular Session of the General Assembly. House Bill 201 is the Biennial Budget for the Kentucky Transportation Cabinet and provides operating funds for FY 2019 and FY 2020. House Bill 202 is the Biennial Highway Construction Plan for FY 2019 and FY 2020 and House Joint Resolution 74 is the Highway Preconstruction Program Plan for FY 2021 through FY 2024. Collectively, HB 202 and HJR 74 make up the 2018 Highway Plan. The Transportation Cabinet's overall transportation program contained within the FY 2019-2022 STIP is consistent with the state and federal revenue estimates and assumptions and contains projects as identified within the 2018 Highway Plan.

<http://transportation.ky.gov/Program-Management/Pages/2019-Draft-STIP-Book.aspx>

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Statewide Transportation Improvement Program for FY 2019-2022

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STATEWIDE TRANSPORTATION IMPROVEMENT PROGRAM for FY 2019-2022

I. Introduction

The current Transportation Act, “Fixing America’s Surface Transportation Act” (FAST Act), was signed into law December 4, 2015 by President Barack Obama. This Act replaces the previous Act, Moving Ahead for Progress in the 21st Century Act (MAP-21). It is the first long-term surface transportation authorization enacted in a decade that provides long-term funding certainty for surface transportation.

The FAST Act funds surface transportation programs, including, but not limited to, federal-aid highways at over \$305 billion over fiscal years 2016 through 2020. This Act also establishes a National Multimodal Freight Policy that includes national goals to guide decision-making and establishes a National Highway Freight Program that provides \$6.3 billion in formula funds over five years for states to invest in freight projects on the National Highway Freight Network. Up to 10 percent of these funds may be used for intermodal projects.

Section 1201 “Metropolitan Transportation Planning,” Section 1202 “Statewide and Nonmetropolitan Transportation Planning,” Section 134 “Metropolitan Transportation Planning” and Section 135 “Statewide and Nonmetropolitan Transportation Planning” of Title 23, United States Code was amended. The amended language includes specific details pertaining to the development of the Long Range Statewide Transportation Plan (LRSTP), Statewide Transportation Improvement Program (STIP), and the development of Metropolitan Transportation Plans (MTPs) and Transportation Improvement Programs (TIPs) within areas served by Metropolitan Planning Organizations (MPOs), which perform transportation planning functions in urbanized areas with a population of 50,000 or greater.

The FAST Act states that “each State is required to carry out a continuing, cooperative, and comprehensive performance-based statewide multimodal transportation planning process, including the development of a long-range statewide transportation plan and STIP, that facilitates the safe and efficient management, operation, and development of surface transportation systems that will serve the mobility needs of people and freight (including accessible pedestrian walkways, bicycle transportation facilities, and intermodal facilities that support intercity transportation, including intercity bus facilities and commuter van pool providers) and that fosters economic growth and development within and between states and urbanized areas, and take into consideration resiliency needs while minimizing transportation-related fuel consumption and air pollution in all areas of the state, including those areas subject to the metropolitan transportation planning requirements of 23 U.S.C. 134 and 49 U.S.C. 5303.”

As required by Title 23, United States Code, section 135, paragraph (g) (1): Each state shall develop a statewide transportation improvement program for all areas of the state. Such program shall cover a period of 4 years and be updated every 4 years or more frequently if the Governor elects to update more frequently. The STIP is to be developed for all areas of the state in cooperation with MPOs and local officials, shall be deemed consistent with the applicable State Implementation Plan developed pursuant to the Clean Air Act (42 U.S.C. 7401 et seq.), shall contain

primarily those project phases for which funding can reasonably be expected, and shall reflect the statewide priorities for programming and funds expenditure. The STIP is to be a truly multimodal plan, and the public must be afforded the opportunity to comment on the proposed program. FHWA and FTA reviews the STIP and issues a Planning Finding in accordance with 23 CFR 450.220 as per the requirements of 23 USC 134 and 135 of 49 USC 5303-5305.

The FAST Act also states:

1. The transportation planning process is to improve the resiliency and reliability of the transportation system and reduce or mitigate stormwater impacts of surface transportation.

The KYTC's Division of Environmental Analysis is leading the effort for KYTC on infrastructure resiliency with support from the Kentucky Transportation Center at the University of Kentucky.

The process that they are going through is as follows:

- a) Assess the vulnerability of NHS assets to extreme weather and natural hazards, with an emphasis on flooding, earthquakes, sinkholes, and landslides. Other weather-related hazards are a secondary focus of the assessment.
- b) Identify those assets that are most vulnerable to these hazards.
- c) Represent the findings and results so they can be formulated from the vulnerability assessment into the Cabinet's ongoing decision-making for planning, design, operations and maintenance processes.

The output of these assessments will include a GIS-based data system compatible with existing Cabinet systems, and the extent of this project will continue the assessment of the NHS as defined by MAP-21. For this project, the scope of this assessment will be limited to NHS assets in KYTC Districts 2 through 12 (KYTC District 1 was completed as a pilot project to refine the assessment methodology) and are scheduled to be completed by December 2017.

2. Enhance travel and tourism.

Any improvements that the KYTC undertakes on the system that results in a safe, efficient, environmentally sound, fiscally responsible transportation system will enhance travel and tourism throughout the Commonwealth.

3. Integrate into the statewide transportation planning process, directly or by reference, the goals, objectives, performance measures, and targets per 23 CFR 450.206(c), in other State transportation plans and transportation processes, as well as any plans developed pursuant to chapter 53 of Title 49 by providers of public transportation in areas not represented by an MPO required as part of a performance-based program.

The KYTC Division of Planning is working to integrate performance measures into the Statewide Planning Process and targets as required per 23 CFR 450.206(c). KYTC is currently meeting or exceeding the schedule required by FHWA and USDOT. As state transportation planning documents are updated they will incorporate discussions regarding performance measures and targets as well as the appropriate elements of performance management once those elements are finalized by (rulemaking is completed by) USDOT.

It should be noted that Kentucky's transportation programs are developed and implemented under strict legislative oversight at the state level. In particular, the highway program is governed by a section of state law that requires multiple considerations in highway program development. It also requires in-depth reporting to the state legislature of many program events such as monthly program

authorizations, bid tabulations, construction project awards, change orders, and cost overruns. The KYTC's Highway Plan is updated biennially under these guidelines, and the first two years of the Plan, the "biennial element," is line-itemed into the state's enacted biennial budget. The STIP covers a period of four years (FY 2019-2022) and contains federally-funded projects. Regionally significant state-funded projects are also included in order to meet air quality conformity requirements.

Kentucky submitted its first formal STIP document in 1992. Since that time, the KYTC has been working with the Federal Highway Administration (FHWA), the Federal Transit Administration (FTA), MPOs, Area Development Districts (ADDs), and local governmental units to define and strengthen the cooperative processes put into practice by each Transportation Act. Requirements pertaining to management system implementation, public involvement in strategic planning, environmental justice, and statewide and metropolitan planning have all been carefully reviewed and processes identified to facilitate future transportation program development in Kentucky. These processes continue to evolve. This document demonstrates Kentucky's commitment to the development of a continuing planning process.

As noted, the FY 2019-2022 STIP contains all the federally-funded scheduled projects in Kentucky, including projects located within the metropolitan planning areas for the following urbanized areas: Bowling Green, Cincinnati-Northern Kentucky, Clarksville-Oak Grove, Evansville-Henderson, Huntington-Ashland-Ironton, Lexington, Louisville, Owensboro, and Radcliff-Elizabethtown. A project located within these metropolitan planning areas must be included in the appropriate MPO's TIP before it can be included in the STIP and before funding can be authorized. Each TIP must be approved by the MPO's Policy Board.

The following TIPs are incorporated by reference into this document:

- Bowling Green FY 2016-2020 TIP; approved September 2015
- Cincinnati-Northern Kentucky FY 2018-2021 TIP; approved April 2017
- Clarksville-Oak Grove FY 2017-2020 TIP; approved October 2016
- Evansville-Henderson FY 2018-2021 TIP; approved May 2017
- Huntington-Ashland-Ironton FY 2018-2021 TIP; approved April 2017
- Lexington FY 2017-2020 TIP; approved April 2016
- Louisville FY 2018-2021 TIP; approved August 2017
- Owensboro FY 2014-2019 TIP; approved October 2014
- Radcliff-Elizabethtown FY 2018-2022 TIP; approved September 2017

When new MPO TIPs or Federal Lands TIP are finalized or existing TIPs are amended, the changes will be incorporated into the STIP document directly or by reference through the STIP amendment or administrative modification process. The KYTC recognizes the role of the MPOs in regional planning and fully supports STIP contributions resulting from MPO decision-making processes.

The Planning and Research Annual Work Program is in compliance with the provisions of 23 CFR 420.111, and includes programs and operations for planning activities in the KYTC and the Kentucky Cooperative Transportation Research Program (KCTRP). The Division of Planning is responsible for recommending, advising, and assisting the chief administrators of the KYTC in the

development of the overall goals, policies, project priorities, and procedures relating to the total transportation program. The KCTRIP is concerned with the development and conduct of a comprehensive research program in cooperation with the U.S. Department of Transportation, Federal Highway Administration (FHWA) and is administered through the KYTC State Highway Engineer's Office.

In addition to research developed in cooperation with FHWA, the KCTRIP performs other services for the KYTC. The scope of these services includes activities such as research studies and special investigations of various engineering and operation activities. The Research Program and Implementation Advisory Committee (RPIAC), headed by the State Highway Engineer and coordinated through the Research Coordinator, gives direction to the research program.

II. STIP Development

Section 135 of Title 23, United States Code, includes a number of elements, which must be considered within a state's continuous transportation planning process. These planning process elements as outlined in Section 135 (d)(1)(A-J) ensure connectivity between transportation, land use, environmental issues, investment strategies, national energy goals, and other "big picture" components of a comprehensive planning process. The KYTC recognizes the planning process requirements outlined in Sections 135 (d) and (e), and is developing mechanisms for evaluating these items as it strives to implement Kentucky's transportation planning process.

Appendix A, Exhibit A-1, contains the state's certification letters, including a self-certification statement, which certifies that Kentucky's transportation planning process is being carried out in accordance with all applicable federal requirements. Copies of policies and acknowledgments regarding the following are on file in the Highway District Offices and the Central Office of Human Resource Management:

1. Political Activities
2. Conflict of Interest
3. Code of Ethics
4. Smoking
5. Drug-Free Workplace
6. Americans with Disabilities (ADA)
7. Workplace Violence
8. Work Performed Off the Rights-of-Way of State Maintained Roads and Highways
9. Anti-harassment/Anti-discrimination
10. Employee Dress
11. Internet and Electronic Mail Acceptable Use
12. Memo of Holidays for State Personnel
13. Kentucky Employee Assistance Program (KEAP)
14. Confidential and Sensitive Information

A. Planning Process Considerations

A-1. Agreements

To ensure that the statewide transportation planning process is carried out in coordination with other state and federal agency requirements, the KYTC has formalized agreements with the various transportation and resource agencies, and they are updated every 5 years. These agreements have defined the roles of these agencies and governments, and yield a stronger platform from which future STIPs will be developed. The KYTC hereby affirms its commitment to these agreements for the purpose of stabilizing the statewide planning process. Copies of the MPO agreements for the urban planning processes are included in the MPOs Unified Planning Work Programs submitted to FHWA annually. Copies of the agreements with the ADDs for the non-urban transportation planning process are maintained by the KYTC and available upon request.

A-2. Public Involvement Process

The KYTC works with the ADDs and MPOs to ensure that public involvement processes are utilized that provide opportunities for public review and comments at key decision points. See Exhibit A-2 for a complete detail description of the public involvement process.

A-3. Air Quality Considerations

Conformity

Projects contained in the FY 2019-2022 STIP and located in areas designated “nonattainment” or “maintenance” for air quality standards must be consistent with Kentucky’s State Implementation Plan (SIP) developed by the Kentucky Energy and Environment Cabinet’s Division for Air Quality (DAQ) pursuant to the Federal Clean Air Act. In the absence of a SIP, transportation conformity requirements still apply. Transportation plans involving areas designated as “nonattainment” and “maintenance” require a transportation conformity determination to ensure that planned projects will neither create nor contribute to violations of the National Ambient Air Quality Standards (NAAQS) and to ensure that the area will be able to meet the NAAQS in future years.

In metropolitan planning areas (MPAs), the transportation conformity determination is conducted for each new TIP or MTP and amendment for the applicable MPO’s MTP. If acceptable, the project list of the shorter-range metropolitan area TIP must also be determined to be consistent with the MTP and in conformance with the SIP. STIP projects for “nonattainment” and “maintenance” areas outside an MPA, KYTC conducts the conformity analysis to demonstrate transportation conformity. All plans, TIPs, and projects are evaluated as required for transportation conformity in each area. Once conformity has been evaluated, USDOT will make a conformity determination for each area. Additionally, project level conformity is required in areas that have been designated as “nonattainment” or “Maintenance” for Particulate Matter 2.5 to ensure that the project does not create, or contribute to, an air quality standard violation.

Designations

The 2015 8-hr Ozone Standard Final Rule was effective May 8, 2018, and the following apply to the following Kentucky counties:

- Boone, Campbell, and Kenton – designated as non-attainment for the 2015 8-hr Ozone Standard, and they must also show conformity for the 1997 8-hr Ozone Standard.
- Bullitt, Jefferson, Oldham – designated as non-attainment for the 2015 8-hr Ozone Standard, and they must also show conformity for the 1997 8-hr Ozone Standard

The 1997 fine particulate matter (PM_{2.5}) NAAQS standard was officially revoked for transportation conformity purposes on October 24, 2016, for all Kentucky areas that were “attainment” or “maintenance” as of that date. The planning requirement is still in effect. This meant the Kentucky counties of Boone, Boyd, Campbell, Kenton, and a portion of Lawrence were no longer required to do transportation conformity for the 1997 PM_{2.5} standard. Kentucky counties of Bullitt and Jefferson were “nonattainment” at the date of revocation, which meant the counties are still required to do transportation conformity until redesignated. On April 7, 2017, Bullitt and Jefferson counties were redesignated to “maintenance” for the 1997 PM_{2.5} standard. On the same date, KIPDA is no longer required to do transportation conformity for PM_{2.5} or Ozone. The planning requirements are still in effect. All 120 Kentucky counties are in “attainment” for the 2012 PM_{2.5} standard, which became effective April 15, 2015.

The 1971 SO₂ standard, which included Muhlenberg and a portion of Boyd Counties, was officially revoked in June 2010. At revocation, these counties had been redesignated from “nonattainment” to “maintenance.” In June 2010 the 2010 SO₂ standard was implemented, which included a portion of Campbell and Jefferson counties being designated as “nonattainment.” The portion of Campbell County has since been redesignated to “maintenance” for the standard, while Jefferson County still remains as “nonattainment.” No regional transportation conformity is required for the SO₂ pollutant. However, project level analysis may be needed.

A-4. Congestion Mitigation and Air Quality Improvement Program

The FY 2019-2022 STIP has been developed in full recognition of Title 23, which establishes a distinct funding source to address Congestion Mitigation and Air Quality (CMAQ) issues. FHWA sets aside funds for CMAQ. The funds are made available for projects within the identified designated air quality areas for the purpose of reducing traffic congestion and improving air quality. Funding for these projects is awarded through an application process and must be transportation related, must reduce emissions, and must be in an air quality nonattainment or maintenance area. Formerly designated areas are still eligible to apply for CMAQ funding. If the proposed project is located within an urbanized area, the sponsor submits applications to the MPO for their prioritization, which then forwards the applications and rankings to the KYTC’s Office of Local Programs. The

Governor selects eligible CMAQ projects to be funded as the federal CMAQ funding is available. FHWA makes an eligibility determination and the KYTC is responsible for the disbursement and management of the CMAQ funds. Application cycles may vary depending upon the availability of federal CMAQ funding. CMAQ projects are listed in Appendix A, Exhibit A-6.

A-5. Fiscal Constraint

In accordance with 23 CFR 450.216(a)(5), the STIP is required to be financially constrained by year, include sufficient financial information to demonstrate which projects are to be implemented using current revenues, and which projects are to be implemented using proposed revenue sources, while the system as a whole is being adequately operated and maintained. In addition, with the passage of the enabling legislation by the Kentucky General Assembly to use "Grant Anticipation Revenue Vehicles (GARVEEs)" bond funds, the fiscal constraint calculations include the debt service payments for GARVEE bonds (Table 1, page 13). The FY 2019-2022 STIP Fiscal Balance Worksheets show anticipated funding levels (apportionments) and compares them against planned outlays (obligations) for each of the next four fiscal years (FY 2019 through FY 2022). The anticipated federal-aid highway funding and anticipated federal transit funding apportionments for FY 2019-2022 are shown in Table 2 on page 14. The anticipated federal-aid highway funding and anticipated federal transit funding obligations for FY 2019-2022 are shown in Table 3 on page 15. And, the rolled up totals for each of the FAST Act federal-aid highway funding categories for "Anticipated Apportionments" vs "Planned Obligations" and "Projected End of Fiscal Year Advance Construction" are shown in Table 4 on page 16.

The planned federal obligations are based upon the estimated project phase costs in projected "Year of Expenditure" dollars by using the "Cost in Today's Dollars" and using a 4 percent yearly inflation factor for design, utility, and construction phases and using a 5 percent yearly inflation factor for the right-of-way phase (FHWA accepted Financial Plans inflation factors). The FY 2019-2022 STIP federal funding level forecasts are based on the current Transportation Act, "FAST Act," which was enacted by the United States Congress. The FAST Act was signed into law by President Barack Obama on December 4, 2015 to provide over \$305 billion for fiscal years FY 2016 through FY 2020.

For the purposes of this edition of the FY 2019-2022 STIP, the funding levels for FY 2019 through FY 2022 are in accordance with the summary of estimated apportionments under the conference report for H.R. 22 (FAST Act) provided to state DOTs. These state-specific levels of funding are broken down into individual program funding categories as determined by FAST Act application to Federal Highway Trust Fund formulas.

Kentucky's federal highway program will be matched with a combination of "toll credits" and "state funding". Toll credits are attributed to Kentucky by federal highway law in accordance with calculations that consider past levels of state fund investment, such as state-sponsored toll roads, in the federal highway system. Toll credits do not generate cash and cannot be accounted as such; however, they do permit the KYTC the flexibility to use 100% federal funding on federal-aid projects. By doing so, the KYTC can allocate more of its own state funding for state-funded projects, yielding increased cash management controls.

The federal funding target amounts used to fiscally balance the FY 2019-2022 STIP, based upon projected estimated apportionments of category-by-category federal funding expectations of total federal-aid dollars available during Fiscal Years 2019 through 2022 (straight line projection between FY 2020 – FY 2022), is anticipated to be approximately \$3.1 billion. Adding the carry-over federal funding from FY 2018, the total revenue expectation that supports projects in this edition of the STIP is approximately \$3.4 billion. The total of the scheduled federal-aid funding obligations for the FY 2019-2022 STIP is approximately \$3.2 billion. The ratio of the scheduled federal-aid obligations to the scheduled federal-aid apportionments is 0.92 (providing some flexibility to move eligible project activities between funding sources) for the planned projects listed in the FY 2019-2022 STIP. Thus, the FY 2019-2022 STIP is fiscally constrained.

It is possible that the final federal appropriation for any given year may change these estimates slightly, but these changes should not substantially alter the ability of the KYTC to deliver planned federal-aid highway projects. The anticipated apportionments scheduled in FY 2020, have been reduced by \$128 million as per the projected Congressional rescissions outlined in the FAST Act for FY 2020. As to planned obligations, the listing of projects in Exhibit A-5 contains “Bridge – Asset Management (BR)” and “Pavement Management (PM)” project phases. The funding source for these projects will be “NHPP” with state match for projects located on the National Highway System (NH) and “STP-BG” with state match for projects not located on NH system. Some construction phases may be listed as an “Illustrative Project” in the event that additional federal-aid highway funding or special financing mechanisms becomes available beyond the anticipated planned apportionments. Those projects may be moved into the fiscal constraint calculation in accordance with the process of the KYTC receiving new additional federal-aid highway funding or special financing mechanisms becomes available. Anytime the STIP is amended the KYTC conducts a “fiscal constraint” recalculation to compare the federal funding obligations to the planned obligations to assure that the federal program is “fiscally-constrained.”

It is important to note that Kentucky oftentimes utilizes federal pre-financing provisions in programming federal funding through FHWA, defined as “Advance Construction” (AC). The federal pre-financing AC process is defined as “Advance Construction of Federal-aid Projects,” whereby the state may request and receive approval from FHWA that the requested project phase meets federal-aid regulations as being eligible for federal-aid funding for reimbursement of project expenditures, but the state elects to defer the use of the current available federal-aid apportionments and obligation authority to a future time period based upon actual project expenditures. By using the AC funding mechanism, this provides Kentucky the ability to maximize the use of federal-aid funding, while at the same time accelerating many federal highway projects.

The KYTC’s Cash Flow Management Process for using the federal AC pre-financing process outlines that the goal of KYTC is keep the federal-aid highway program “Earned Unbilled” to less than \$50 million. The “Earned Unbilled” federal-aid highway funding amount is the amount of state dollars that have been used to pay vendors and project expenditures on federal AC pre-financed project phases. Through the AC conversion process, these projects will be converted to current federal-aid highway funding apportionments and obligation authority, and then a federal billing request will be sent to

FHWA for reimbursement of eligible project expenditures. Kentucky's current AC total is approximately \$465 million, and the current "Earned Unbilled" total for those projects, is under \$50 million. The AC conversion process is a continuous process throughout each fiscal year, to maximize the available state and federal-aid highway funds.

The projected end of fiscal year "advance construction" is \$384 million for FY 2019; \$556 million for FY 2020; \$521 million for FY 2021; and \$454 million for FY 2022. However, the amount of "advance construction" will depend upon several factors including the timing of the actual congressional release of yearly federal-aid highway funding obligation authority and the programming of federal-aid highway funded projects near the end of each federal fiscal year.

The KYTC continually monitors the "net cash balance" of these federal AC pre-financed projects, and these results are included within the month-to-month consideration of the federal-aid highway funding program's flexibility in the overall cash flow management procedures of the state and federally-funded programs. Through the "Cash Flow Management" procedures, using state funding from the state "Road Fund" cash balance until the federal share of these costs can be billed to the federal government, the KYTC can maximize the usage of both state road funds and federal-aid highway funding to deliver the overall state and federal funded transportation program.

It is also important to note that the KYTC utilizes innovative financing options permitted under federal transportation law. In particular, during the 2004 General Assembly's legislative session, House Bill 418 was passed, enabling the KYTC to pursue a specific group of interstate widening projects through an innovative financing technique known as "Grant Anticipation Revenue Vehicles (GARVEEs)." The General Assembly's enactment of House Bill 267 (Appropriations Bill) during the 2005 legislative session, provided to the KYTC, approval of \$150 million in appropriation authority in Fiscal Years 2004-2005 for GARVEE bond funds. In addition, during the 2006 General Assembly's legislative session the General Assembly provided within House Bill 380 approval to the KYTC an additional \$290 million in appropriation of authority in Fiscal Years 2006-2008 for GARVEE bond funds. The 2008 General Assembly made available the ability to use \$231 million of GARVEE bond funds to support the Louisville Bridges project within House Bill 410. Also, during the 2010 Extraordinary Session, the General Assembly made available the option to use an additional \$105 million of GARVEE bond funds to support the Louisville Bridges project within House Bill 3. In addition, the option to use \$330 million of GARVEE bond funds to support the construction of the two US 68/KY 80 bridges over Kentucky Lake and Lake Barkley was made available within House Bill 3. Therefore, the Kentucky General Assembly has provided the KYTC the ability to use \$1.1 billion in GARVEE bond funds, along with the approval of usage of federal-aid highway funding to provide debt service payments on the GARVEE bonds.

The GARVEE financing technique is permitted by federal law and involves the commitment of future federal-aid appropriations as leveraging for current year highway improvements. The primary benefit of such an arrangement is that major highway improvements can be purchased at today's prices and paid for with interest over a multi-year timeframe. The application of the GARVEE principle is very similar to home mortgage

financing, but is used to purchase major highway investments when “pay-as-you-go” is not the desirable course.

With the passage of the enabling legislation by the Kentucky General Assembly to use GARVEE bond funds, the KYTC has begun activities on the corresponding approved projects. The breakdown of the required federal-aid highway funding to cover the corresponding debt service for each of the GARVEE bond funded projects is shown under the “ZVarious” County item numbers as shown on Table 1, on page 13.

Each of these projects constitutes a necessary investment in Kentucky’s future. The need to accommodate both people movement and freight movement is critical to Kentucky’s economy in the years ahead. Without the GARVEE bond program, these highway projects would continue to be piecemealed over time, and likely not completed until beyond 2025. The innovative idea of GARVEE bonds, along with determined state leadership, will yield the kind of realistic solution necessary to reverse the “always behind” mentality of the past and help restore hope to Kentucky’s transportation program.

The federal funding for the construction phases identified within the GARVEE bond program will be programmed through FHWA as Advance Construct (AC) projects. Again, as explained previously, the AC process is defined as “Advance Construction of Federal-Aid Projects,” whereby the state may request and receive approval to construct federal-aid projects in advance of the apportionment of authorized federal-aid funds. The AC conversion of the federal funding for the GARVEE bond program will be distributed over a period of fourteen years, and will be in accordance with the GARVEE bond program Memorandum of Agreement (MOA). At the beginning of each federal fiscal year, federal programming documents for GARVEE bond projects AC conversions will be submitted to FHWA to use current federal-aid highway funding apportionments and current formula funding obligation authority. The total amount of the AC conversions will be the amount of federal funding required to cover the yearly debt service (principal, interest, and other costs incidental to the sale of eligible bond issue) as outlined within each of the approved GARVEE bond programs. The required NHPP and STP funding to cover the yearly debt service amount for the GARVEE bonds will be included in the end-of-year “Fiscal Constraint” determination, and will be included within the preparation of future STIPs and fiscal constraint calculations. The KYTC is setting aside the required amount of “toll credits” for the matching funds for the federal-aid highway funding to cover the GARVEE bond debt service payments through 2027.

As noted, the list of projects within the FY 2019-2022 STIP includes federally-funded projects and only the state-funded projects that are regionally significant to meet transportation air quality conformity requirements, including the projects within the MPO areas. The projects located within each of the MPO areas included within the STIP are subject to approval and inclusion within the respective MPO’s TIP and subsequent amendments for each of these MPO areas. In addition, like the FY 2019-2022 STIP, in accordance with 23 CFR 450.326(g) each MPO TIP is required to be financially constrained by year and include a financial plan that demonstrates which projects can be implemented using current revenues, and which projects are to be implemented using proposed revenue sources, while the existing transportation system is being adequately operated and

maintained. Each of the MPO's TIP financial plans are developed in cooperation with the KYTC and the transit operators, based upon projected estimates of available federal and state funds within the MPO areas. Based upon the financial plan, the MPOs TIPs contain only project phases that funding can be reasonably expected to be available for each of the project's identified phase, funding source, fiscal year schedule, and the estimated cost.

As evidenced by Table 3, Kentucky's STIP is fiscally-constrained for the next four years. For informational purposes, the STIP also contains several state-funded projects, shown in Appendix A, Exhibit A-5 C, which are critical for SIP compliance and conformity determinations. As future allocation of state road funds are being considered for funding authorizations, each of these state-funded projects that are critical for SIP compliance and conformity determinations, will be included in the KYTC prioritization process for the utilization of available state road funds. The authorization and programming of all state and federal funding for the transportation program will be accommodated through the KYTC's cash flow management program. When the planned obligations exceed estimated apportionments by program category, unobligated previous apportionments will be used, funds will be transferred between categories, or flexible funding such as "Minimum Guarantee" will be used to close the program-specific funding gap to the extent that air quality conformity for the region is not jeopardized.

To reiterate, the KYTC's goal is to fund the federal-aid highway program as outlined in the 2018 Enacted Highway Plan as approved by the 2018 Kentucky General Assembly, unless Congress and FHWA direct otherwise. The project phases listed in no way constitute an effort to denigrate the importance of any project to the community or region it serves. The KYTC will work diligently to implement all STIP projects as quickly as funding limitations will permit.

Shifting projects between fiscal years of the STIP may be conducted when determined essential to the effective use of federal-aid highway program dollars. It is expected that such changes would normally be "minor," for example; advancing a non-controversial project to replace a project not able to meet the assigned schedule, with respect to STIP activity. If such adjustments involve actions determined by the KYTC to be "major" in nature (e.g., acceleration of a controversial project), then a formal STIP amendment would be pursued.

The operation and maintenance of existing transportation facilities within the state is a primary concern among Kentucky citizens, and included within the FY 2019-2022 STIP are federally-funded system preservation projects. In addition to the federally-funded system preservation projects, Table 2 contains a line-item outlining the FY 2019-2022 scheduled state and local funding for none "Toll Credits" matching funds and for the KYTC's operations and maintenance program.

Included within each MPO's TIP is a financial plan that demonstrates how the TIP can be implemented, identifies funding resources from public and private sources, and identifies innovative financing techniques to finance projects and programs. The development of the projected estimates of funding resources is developed through cooperative efforts of the MPO, the KYTC, and Public Transportation Agencies. Also

included within the financial plan are grouped project line-items for projected funding and obligations for operations and maintenance activities for existing facilities. Again, the projected funding resources were prepared through cooperative efforts of the MPO, the KYTC, and Public Transportation Agencies by utilizing expenditures data from the KYTC Fiscal Year Audit Reports for actual operations and maintenance expenditures within the MPO areas. (See Appendix B-Metropolitan Planning Organization (MPO) Financial Plans).

TABLE 1

PROJECTED DEBT SERVICE (in millions)					
GARVEE PROJECT	FY 2019	FY 2020	FY 2021	FY 2022	TOTAL
Interstate 65, Interstate 75, and Interstate 64 Widening ZVarious 99-9050 Series	45	0	0	0	45
Louisville Bridges Project ZVarious 99-9659 Series	34	63	63	63	223
US 68/KY 80 Lake Barkley and Kentucky Lake Bridges ZVarious 99-9068 Series	18	18	18	18	72
TOTALS	97	81	81	81	340

TABLE 2

STATEWIDE TRANSPORTATION IMPROVEMENT PROGRAM FISCAL BALANCE SHEET
 FY 2019 - 2022 PLANNED FEDERAL-AID PROGRAM
 APPORTIONMENTS VERSUS PLANNED OBLIGATIONS

ESTIMATED APPORTIONMENTS \$(IN MILLIONS)										
SUBALLOCATED BY KENTUCKY GENERAL ASSEMBLY	2018 AVAILABLE CARRYOVER APPORTIONMENTS (SEE NOTE 1)	2018 CARRYOVER OBLIGATION AUTHORITY	ESTIMATED FY 2019 APPORTIONMENTS (SEE NOTE 2)	FY 2019 PLUS CARRYOVER	FY 2020 PLUS CARRYOVER	FY 2021 PLUS CARRYOVER	FY 2022 PLUS CARRYOVER	FY 2022 CARRYOVER	TOTAL STIP APPORTIONMENTS	TOTAL STIP APPORTIONMENTS
I. HIGHWAY FEDERAL FUNDS										
NH - BRIDGE REPLACEMENT (BR)	0.0	0.0	63	23	86	61	123	63	81.34	251
STIP - BRIDGE REPLACEMENT (BR)	4.0	0.0	45	49	45	0	45	0	0.00	183
NH - PAVEMENT MANAGEMENT (PM)	0.0	0.0	119	17	137	15	135	13	24.57	478
STIP - PAVEMENT MANAGEMENT (PM)	0.0	0.0	40	3	43	29	69	16	12.78	159
CONGESTION MITIGATION (CM)	23.5	0.0	17	30	45	34	52	37	40.84	90
PLANNING (SPR/L)	0.3	0.0	10	0	10	1	11	1	0.52	40
METRO PLANNING (PL)	2.6	0.0	3	6	6	6	9	7	8.84	16
NHPP - NATIONAL HIGHWAYS (NH)	38.8	0.0	175	214	114	0	268	0	0.00	664
NHPP - GARVEE BOND PAYMENTS (NH)	0.0	0.0	88	0	72	0	304	0	0.00	36
STIP - GARVEE BOND PAYMENTS (STIP)	0.0	0.0	9	9	9	0	9	0	0.00	36
RRP-RAILROAD HWY PROTECTIVE DEVICES	7.1	0.0	2	5	7	4	6	2	1.19	15
RRS-RAILROAD HWY CROSS HAZARD ELIMINATION	11.4	0.0	2	13	15	12	14	14	11.43	20
HSP - SAFETY (S&E) PROGRAM	4.3	0.0	42	9	53	22	69	31	40.73	185
STIP - SURFACE TRANSPORTATION (includes Statewide STIP (SEE NOTE 3))	104.8	0.0	68	181	38	0	106	0	0.00	426
Dedicated STIP SHN funding within Henderson MPO Area,	4.5	0.0	1	5	2	1	2	2	1.83	8
Dedicated STIP SLO funding within Louisville MPO Area,	43.1	0.0	23	66	24	0	24	0	0.00	49
Dedicated STIP SLX funding within Lexington MPO Area,	16.7	0.0	8	25	8	0	8	0	0.00	38
Dedicated STIP SNK funding within Northern Kentucky MPO Area,	26.4	0.0	9	36	9	0	9	0	0.00	12
Dedicated STIP SAM funding within Ashland MPO Area,	5.9	0.0	2	8	2	1	3	2	2.08	9
Dedicated TAP funding within Henderson MPO Area,	0.15	0.00	0.04	0	0.23	0	0.42	0	0.77	2
Dedicated TAP funding within Louisville MPO Area,	4.44	0.00	1.16	6	7	6	7	6	5.69	2
Dedicated TAP funding within Lexington MPO Area,	0.66	0.00	0.41	1	1.50	1	1.51	1	1.12	3
Dedicated TAP funding within Northern Kentucky MPO Area,	0.96	0.00	0.46	1	1.88	1	1.89	1	1.45	3
Dedicated TAP SAH funding within Ashland MPO Area,	0.31	0.00	0.08	0	0.47	0	0.47	0	0.39	1
TRANSPORTATION ALTERNATIVES (TAP) Statewide	19.05	0.00	15	34	33	22	37	26	41	30.69
TRANSPORTATION ENHANCEMENT (TE) Statewide	13.91	0.00	0	14	14	14	14	14	13.91	10
FEDERAL DEMONSTRATION PROJECTS (STATEWIDE HPP)	9.92	9.92	0	10	0	0	0	0	0.00	2
FEDERAL DISCRETIONARY PROJECTS (RYD)	1.77	1.77	0	2	0	0	0	0	0.33	9
FOREST HIGHWAY/PUBLIC LANDS (FH)	7.34	0.00	0.0	7	0	0	0	0	0.00	281
SUBTOTALS "HIGHWAY FEDERAL FUNDS"	352.0	11.7	742	1,402	785	231	1,085	238	1,104	3,435
II. STATE GARVEE FUNDS										
II. GARVEE BONDS (GMB)	0	0	0	0	0	0	0	0	0	0
GARVEE BONDS (GMB)	0	0	0	0	0	0	0	0	0	0
SUBTOTALS GARVEE BONDS	0	0	0	0	0	0	0	0	0	0
III. STATE AND LOCAL FUNDS										
STATE MATCHING FUNDS (SEE NOTE 4)	0	0	123	138	0	0	221	0	201	703
LOCAL MATCHING FUNDS (SEE NOTE 4)	0	0	54	13	0	0	15	0	15	97
STATE FUNDED OPERATIONS AND MAINTENANCE PROGRAM	0	0	342	342	342	0	342	0	342	1,368
SUBTOTALS STATE FUNDS TOTALS	0	0	519	513	513	0	578	0	558	2,168
HIGHWAY FUNDING TOTALS	352	11.7	742	1,622	1,298	1,622	1,673	1,662	1,662	5,603
IV. FAST FACT FEDERAL TRANSIT/STATE ASSISTANCE										
SECTION 5311 RURAL TRANSPORTATION										
SECTION 5310 SPECIALIZED PROGRAMS										
KENTUCKY SECTION 5307	19.82		19.82	20.72	20.72	21.67	21.67	22.66	22.66	84.87
KENTUCKY SECTION 5304	5.20		5.46	5.46	5.46	5.46	5.46	5.46	5.46	22.42
PUBLIC TRANSIT CAPITAL 5309	26.20		27.51	27.51	28.89	30.34	30.34	30.34	30.34	112.94
SUBTOTALS "TRANSIT FEDERAL FUNDS"	51.22		52.79	53.69	56.56	59.76	62.26	64.86	68.82	266.18
SECTION 5311 (STATE FUNDING)										
SECTION 5311 (LOCAL FUNDING)										
SECTION 5311 (CONREV & FAREBOX FUNDING)										
SECTION 5310 (STATE FUNDING)										
SECTION 5310 (LOCAL FUNDING)										
SECTION 5307 (LOCAL FUNDING)										
SECTION 5303 & 5304 (LOCAL FUNDING)										
PUBLIC TRANSIT CAPITAL 5309 (STATE MATCH)										
PUBLIC TRANSIT CAPITAL 5309 (LOCAL MATCH)										
SUBTOTALS "NON-FEDERAL TRANSIT FUNDS"	113.65		119.21	119.21	125.54	133.32	141.31	149.88	158.33	459.19
TRANSIT FUNDING TOTALS	164.87		172.90	172.90	184.88	193.08	204.14	214.74	227.19	725.37

STATEWIDE TRANSPORTATION IMPROVEMENT PROGRAM FISCAL BALANCE SHEET
 FY 2019 - 2022 PLANNED FEDERAL-AID PROGRAM
 APPORTIONMENTS VERSUS PLANNED OBLIGATIONS

TABLE 3

SUBALLOT BY KENTUCKY GENERAL ASSEMBLY	PROJECTED END OF FY 2018 ADVANCE CONSTRUCTION PROJECTS (SEE NOTE 5)	PLANNED OBLIGATION \$ (MILLIONS)										COMBINED APPORTIONMENTS AVAILABLE FOR AC CONVERSION FY 2018 THRU FY 2022	COMBINED AC TOTALS FY 2018 THRU FY 2022	PROJECTED AC TOTALS AT END OF FY 2022	PLANNED STP OBLIGATIONS	RATIO OF OBLIGATIONS TO APPORTIONMENTS		
		FY 2019 PLANNED OBLIGATIONS	END OF FY 2019 PROJECTED AC	FY 2020 PLANNED OBLIGATIONS	END OF FY 2020 PROJECTED AC	FY 2021 PLANNED OBLIGATIONS	END OF FY 2021 PROJECTED AC	FY 2022 PLANNED OBLIGATIONS	END OF FY 2022 PROJECTED AC	COMBINED AC TOTALS FY 2018 THRU FY 2022	PROJECTED AC TOTALS AT END OF FY 2022							
HIGHWAY FEDERAL FUNDS																		
HH - BRIDGE REPLACEMENT (BR)	0.0	39.9	0.0	24.8	0.0	63.6	0.0	44.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
HH - BRIDGE REPLACEMENT (BR)	0.0	89.3	(48.5)	(60.7)	0.0	31.3	(147.2)	39.3	(147.5)	0.0	(48.9)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
HH - PAVEMENT MANAGEMENT (PM)	0.0	102.2	0.0	121.4	0.0	52.6	0.0	108.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
STP - PAVEMENT MANAGEMENT (PM)	0.0	38.4	0.0	14.5	0.0	52.6	0.0	43.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CONGESTION MITIGATION (CM)	0.0	10.5	0.0	14.2	0.0	10.5	0.0	14.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PLANNING (SPR/PL)	0.0	9.6	0.3	10.0	0.0	10.0	0.0	10.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ME TRO PLANNING (PL)	0.0	0.0	0.0	3.2	0.0	2.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ME TRO PLANNING (PL)	(339.3)	171.3	(317.6)	(343.1)	0.0	264.3	(343.2)	222.5	(343.2)	0.0	(1661.3)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NIIPP - NATIONAL HIGHWAYS (NH)	0.0	88.0	0.0	72.0	0.0	72.0	0.0	9.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NIIPP - GARVEE BOND PAYMENTS (NH)	0.0	3.0	0.0	3.0	0.0	3.0	0.0	3.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RR - RAILROAD IMPROVEMENTS (STP)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RR - RAILROAD IMPROVEMENTS (STP)	0.0	3.6	0.0	3.6	0.0	3.6	0.0	3.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RR - RAILROAD IMPROVEMENTS (STP)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RR - RAILROAD IMPROVEMENTS (STP)	0.0	30.8	0.0	30.8	0.0	30.8	0.0	30.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RR - RAILROAD IMPROVEMENTS (STP)	(84.2)	83.2	0.0	76.9	0.0	93.1	(25.5)	97.1	(17.0)	0.0	(154.7)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
STP - SURFACE TRANSPORTATION (Includes Statewide STP, (SEE NOTE 3))																		
Dedicated STP SHH funding within Henderson MPO Area,	0.0	4.2	0.0	0.8	0.0	0.8	0.0	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Dedicated STP SLQ funding within Louisville MPO Area,	(0.9)	92.1	(26.8)	9.9	(13.2)	16.9	(6.5)	18.8	(1.9)	(48.3)	47.4	(1.9)	0.0	0.0	0.0	0.0	0.0	0.0
Dedicated STP SLX funding within Lexington MPO Area,	0.0	29.7	(6.0)	7.2	(3.0)	7.2	(1.9)	7.2	(0.9)	(8.9)	8.9	(0.9)	0.0	0.0	0.0	0.0	0.0	0.0
Dedicated STP SHK funding within Northern Kentucky MPO Area,	(3.6)	28.0	3.9	11.0	2.1	8.6	2.7	7.4	4.5	9.7	(5.2)	4.5	0.0	0.0	0.0	0.0	0.0	0.0
Dedicated STP SAA funding within Ashland MPO Area,	0.0	6.7	0.0	1.0	0.0	1.3	0.0	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Dedicated STP funding within Henderson MPO Area,	0.0	0.0	0.2	0.2	0.0	0.4	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Dedicated STP funding within Louisville MPO Area,	0.0	0.0	0.0	1.1	0.0	1.1	0.0	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Dedicated STP funding within Lexington MPO Area,	0.0	0.0	0.0	0.4	0.0	0.4	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Dedicated STP funding within Northern Kentucky MPO Area,	0.0	0.0	0.0	0.5	0.0	0.5	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Dedicated STP funding within Ashland MPO Area,	0.0	0.1	0.0	0.1	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TRANSPORTATION ALTERNATIVES (TAP) Statewide	0.0	11.9	0.0	11.0	0.0	10.2	0.0	10.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TRANSPORTATION ENHANCEMENT (TE) Statewide	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FEDERAL DEMONSTRATION PROJECTS (STATEWIDE (IPP))	0.0	9.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FEDERAL DISCRETIONARY PROJECTS (VD)	0.0	1.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FEDERAL HIGHWAY PUBLIC LANDS (FH)	0.0	7.3	0.0	0.0	0.0	0.0	0.0	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SUBTOTALS - HIGHWAY FEDERAL FUNDS*	(465)	864	(384)	725	(656)	823	(621)	757	(454)	(2381)	1927	(454)	0.0	0.0	0.0	0.0	0.0	0.0
IL GARVEE BONDS (IMS, LZ2)																		
IL GARVEE BONDS (IMS & LZ2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SUBTOTALS GARVEE BONDS																		
IL - STATE AND LOCAL FUNDING																		
STATE MATCHING FUNDING	0	122.7		198.2		228.7		281.1		281.1		281.1						
LOCAL MATCHING FUNDS	0	54.4		54.4		54.4		54.4		54.4		54.4						
STATE FUNDED OPERATIONS AND MAINTENANCE PROGRAM	0	342		342		342		342		342		342						
SUBTOTALS - STATE FUNDS	0	519		519		519		519		519		519						
HIGHWAY FUNDING OBLIGATION TOTALS	(465)	1383		1238		1400		1315		1165		937						
IV - FEDERAL TRANSIT STATE ASSISTANCE																		
SECTION 5311 RURAL TRANSPORTATION		18.83		18.83		20.72		21.89		21.89		21.89						
SECTION 5310 SPECIALIZED PROGRAMS		5.09		5.09		5.81		5.88		5.88		5.88						
KENTUCKY SECTION 5307		25.65		25.65		27.57		29.80		29.80		29.80						
KENTUCKY SECTION 5304 & 5304		0.87		0.87		0.95		0.99		0.99		0.99						
PUBLIC TRANSIT CAPITAL 5339		4.02		5.06		5.31		5.59		5.59		5.59						
SUBTOTALS - TRANSIT FEDERAL FUNDING OBLIGATIONS*		54.79		57.49		60.22		63.14		63.14		63.14						
SECTION 5311 (STATE FUNDING)		0.00		0.00		0.20		0.20		0.20		0.20						
SECTION 5311 (LOCAL FUNDING)		18.20		18.50		19.90		19.50		19.50		19.50						
SECTION 5311 (GARVEE & FAREBOX FUNDING)		84.00		80.00		79.00		79.00		79.00		79.00						
SECTION 5310 (STATE FUNDING)		0.87		0.87		0.70		0.74		0.74		0.74						
SECTION 5310 (LOCAL FUNDING)		0.84		0.87		0.70		0.70		0.70		0.70						
SECTION 5307 (LOCAL FUNDING)		9.08		9.54		10.02		10.52		10.52		10.52						
SECTION 5304 & 5304 (LOCAL FUNDING)		0.21		0.22		0.24		0.23		0.23		0.23						
PUBLIC TRANSIT CAPITAL 5338 (STATE MATCH)		0.60		0.63		0.66		0.70		0.70		0.70						
PUBLIC TRANSIT CAPITAL 5338 (LOCAL MATCH)		0.60		0.63		0.66		0.70		0.70		0.70						
SUBTOTALS - NON FEDERAL TRANSIT FUNDING OBLIGATIONS*		113.36		110.65		111.17		111.32		110.65		111.17						
TRANSIT FUNDING OBLIGATION TOTALS		168.75		168.29		171.39		174.45		168.29		171.39						
COMBINED AC TOTALS																		
COMBINED AC TOTALS FY 2018 THRU FY 2022																		
PROJECTED AC TOTALS AT END OF FY 2022																		
PLANNED STP OBLIGATIONS																		
RATIO OF OBLIGATIONS TO APPORTIONMENTS																		

TABLE 4

STATEWIDE TRANSPORTATION IMPROVEMENT PROGRAM FISCAL BALANCE SHEET
 FY 2019 - 2022 PLANNED FEDERAL-AID PROGRAM
 APPORTIONMENTS VERSUS PLANNED OBLIGATIONS

TYPE OF FUNDING	2018 AVAILABLE CARE-OVER APPORTIONMENTS	ANTICIPATED FISCAL YEAR 2019 APPORTIONMENTS	FY 2019 PLANNED OBLIGATIONS		END OF FY 2019 \$C. AMOUNT	FY 2020 PLANNED OBLIGATIONS		END OF FY 2020 \$C. AMOUNT	FY 2021 PLANNED OBLIGATIONS		END OF FY 2021 \$C. AMOUNT	FY 2022 PLANNED OBLIGATIONS		END OF FY 2022 \$C. AMOUNT
			RD, RC CONVERSIONS	RD, RC CONVERSIONS		RD, RC CONVERSIONS	RD, RC CONVERSIONS		RD, RC CONVERSIONS	RD, RC CONVERSIONS				
NH - BRIDGE REPLACEMENT (BR)	0	63	40	0	25	0	61	0	0	44	0	0	0	0
STP - BRIDGE REPLACEMENT (BR)	4	45	89	(40)	(16)	205	192	(147)	0	186	(142)	0	0	(142)
NH - PAVEMENT MANAGEMENT (PM)	0	119	102	0	0	121	0	0	0	108	0	0	0	108
STP - PAVEMENT MANAGEMENT (PM)	0	40	36	0	0	15	0	0	0	43	0	0	0	43
CONGESTION MITIGATION (CM)	23	17	10	0	0	10	0	0	0	14	0	0	0	14
PLANNING (SPRPL)	0	10	10	0	0	10	0	0	0	10	0	0	0	10
METRO PLANNING (PL)	3	0	0	0	0	3	0	0	0	2	0	0	0	2
NHPP - NATIONAL HIGHWAYS (NH)	39	175	531	(318)	(343)	457	611	(343)	0	566	(297)	0	0	(297)
NHPP - GARVEE BOND PAYMENTS (NH)	0	88	88	0	0	72	0	0	0	72	0	0	0	72
STP - GARVEE BOND PAYMENTS (STP)	0	9	9	0	0	9	0	0	0	9	0	0	0	9
RRP-RAILROAD HWY PROTECTIVE DEVICES	7	2	4	0	0	4	0	0	0	4	0	0	0	4
RRS-RAILROAD HWY CROSS HAZARD ELIMINATION	11	2	0	0	0	3	0	0	0	0	0	0	0	5
HSP - SAFETY (SAF) PROGRAM	4	42	37	0	0	31	0	0	0	38	0	0	0	38
STP - SURFACE TRANSPORTATION (Includes Statewide STP, (SEE NOTE 3))	105	68	177	0	(38)	76	131	(25)	0	123	(17)	0	0	(17)
Dedicated STP SHN funding within Henderson MPO Area,	5	1	4	0	0	1	0	0	0	1	0	0	0	1
Dedicated STP SLO funding within Louisville MPO Area,	43	23	93	(27)	(13)	37	30	(7)	0	25	(2)	0	0	(2)
Dedicated STP SLX funding within Lexington MPO Area,	17	8	29	(4)	(3)	11	10	(2)	0	9	(1)	0	0	(1)
Dedicated STP SNK funding within Northern Kentucky MPO Area,	26	9	32	4	2	7	6	3	0	5	4	0	0	4
Dedicated STP SAH funding within Ashland MPO Area,	6	2	7	0	0	1	1	0	0	1	0	0	0	1
Dedicated TAP funding within Henderson MPO Area,	0	0	0	0	0	(0)	0	0	0	0	0	0	0	(0)
Dedicated TAP funding within Louisville MPO Area,	4	1	0	0	0	1	1	0	0	1	0	0	0	1
Dedicated TAP funding within Lexington MPO Area,	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Dedicated TAP funding within Northern Kentucky MPO Area,	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Dedicated TAP SAH funding within Ashland MPO Area,	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TRANSPORTATION ALTERNATIVES (TAP) Statewide	19	15	12	0	0	11	10	0	0	10	0	0	0	10
TRANSPORTATION ENHANCEMENT (TE) Statewide	14	0	0	0	0	0	0	0	0	0	0	0	0	0
FEDERAL DEMONSTRATION PROJECTS (STATEWIDE HPP)	10	0	10	0	0	0	0	0	0	0	0	0	0	0
FEDERAL DISCRETIONARY PROJECTS (KYD)	2	0	0	0	0	0	0	0	0	0	0	0	0	0
FOREST HIGHWAY/PUBLIC LANDS (FH)	7	0	7	0	(0)	0	(0)	0	0	0	0	0	0	0
COMBINED TOTAL	352	742	1329	(364)	(556)	1110	1379	(521)	1278	(454)	0	0	0	0

NOTES FOR ITEMS WITHIN FY 2016 - 2018 STIP FISCAL BALANCE SHEET

(1) THE APPORTIONMENT BALANCES USED TO BEGIN THE FISCAL CONSTRAINT CALCULATIONS AND THE APPORTIONMENT BALANCES SHOWN ARE AS OF JULY 27, 2018.

(2) FEDERAL FUNDS FOR FY 2019, FY 2020, FY 2021, AND FY 2022 ARE BASED ON THE 2016 FAST ACT TRANSPORTATION BILL ANTICIPATED APPORTIONMENT TABLES FOR FY 2016 - FY 2020, AND STRAIGHT LINED FOR FY 2021 AND FY 2022.

(3) SURFACE TRANSPORTATION PROGRAM BALANCES INCLUDE MINIMUM GUARANTEE AND EQUITY BONUS LIMITATION ADJUSTMENT FUNDING. THE DEDICATED STP FUNDING FOR SHN, SLO, SLX, AND SNK FUNDING CATEGORIES, ALONG WITH OTHER FEDERALLY FUNDED PROJECTS WITHIN THE MPO AREA ARE FISCALLY CONSTRAINED WITHIN EACH OF THE CORRESPONDING MPO TIP'S FINANCIAL PLAN.

(4) TOLL CREDITS WILL BE USED FOR REQUIRED MATCHING FUNDS FOR NH, STP, HPP, KYD, RRP, RRS, AND HSP. STARTING IN FY 2021 KYTC WILL BEGIN USING STATE FUNDS AS MATCHING FUNDS FOR NH, STP, HPP, KYD, RRP, RRS, AND HSP FUNDING. LOCAL MATCHING FUNDS WILL BE REQUIRED FOR CM, TAP, AND DEDICATED STP FUNDS IN THE MPO AREAS FOR FY 2017 THRU FY 2020. THE REQUIRED 20 PERCENT STATE MATCHING FUNDS FOR THE BR NH, BR STP, PM NH, AND PM STP PROJECTS MAY BE INCREASED, REDUCING THE AMOUNT OF FEDERAL FUNDING TO BE USED ON THE PROJECT, DEPENDING UPON THE AVAILABLE FEDERAL-AID APPORTIONMENTS WITHIN EACH OF THE FEDERAL-AID HIGHWAY FUNDING CATEGORIES.

(5) IF PLANNED OBLIGATIONS ARE GREATER THAN THE ANNUAL APPORTIONMENTS IN A GIVEN FISCAL YEAR, THE DIFFERENCE WILL BE MANAGED USING THE FEDERAL "ADVANCE CONSTRUCTION" MECHANISM. THE GOAL OF THE KYTC IS TO MANAGE THE YEARLY TOTAL OF FEDERAL "ADVANCE CONSTRUCTION" THROUGH THE KYTC CASH MANAGEMENT PROCESS AND BY INCREASING THE AMOUNT OF STATE MATCHING FUNDS TO REDUCE THE AMOUNT OF REQUIRED FEDERAL FUNDING. THE AMOUNT OF FEDERAL "ADVANCE CONSTRUCTION" WILL DEPEND UPON SEVERAL FACTORS INCLUDING THE TIMING OF THE ACTUAL CONGRESSIONAL RELEASE OF YEARLY FEDERAL-AID HIGHWAY FUNDING OBLIGATION AUTHORITY AND THE PROGRAMMING OF FEDERAL-AID HIGHWAY FUNDED PROJECTS NEAR THE END OF EACH FEDERAL FISCAL YEAR.

Grouped Projects

Often times after the identification and scheduling process of transportation projects included within the approved STIP and approved MPO TIPs, new transportation needs arise. In order to address these new transportation needs, the STIP and the MPO TIPs include “Grouped Project” lists outlining categories of types of projects that can be added to the STIP and TIP an Administrative Modification.

Outlined within Exhibit A-5 Section B: “Federally-funded ZVarious” is a list of federal funding for various anticipated “Grouped Projects” transportation needs, available to break out individual project funding via the Administrative Modification process for projects throughout the Commonwealth and MPO areas to address these unforeseen and unscheduled project activities.

The following Table 5 illustrates estimated annual statewide obligations by general grouped project category as well as available funding sources for each category. KYTC is responsible for maintaining fiscal constraint for federal-aid highway funds, and works closely with each MPO receiving dedicated STP funding to monitor fiscal constraint within each MPO area.

TABLE 5

Grouped Projects	FY 2019 (MILLIONS)	FY 2020 (MILLIONS)	FY 2021 (MILLIONS)	FY 2022 (MILLIONS)	Total (MILLIONS)	ZVARIOUS GROUP PROJECT FUNDING SOURCES ITEM NUMBER SERIES
Air Quality Improvements	13.1	13.1	17.8	17.8	61.8	99-219 SERIES
Bicycle, Pedestrian, and Transportation Alternative Improvements	13.7	11.0	10.2	10.2	45.1	99-195 SERIES
Roadway and Bridge Preservation, Rehabilitation, and Replacement	25.5	8.2	84.1	55.1	172.9	99-65; 224; 327; 346; 388; 510; 514; 1063; 1074; 2700 SERIES
Roadway Operational Improvements	4.0	2.0	2.4	2.9	11.3	99-66; 333; 391 SERIES
Safety Improvements	35.4	35.4	42.3	42.3	155.4	99-352; 911; and 3011 SERIES
Total	91.7	69.7	156.8	128.3	446.5	

The listing of grouped project categories defined within each of the MPO TIPs are often more granular than the broad categories shown in the table and description of each of the categories. The following descriptions of “Grouped Projects” outlines the general grouped project categories and type of work within each of the categories.

Air Quality Improvements Air Quality Improvement projects consists of the construction congestion mitigation projects to help reduce congestion and improve air quality for areas that do not meet the National Ambient Air Quality Standards for ozone, carbon monoxide, or particulate matter (nonattainment areas) and for former nonattainment areas that are now in compliance (maintenance areas.) Projects that improve traffic flow, including efforts to provide signal systemization, streamline intersections, add turning lanes, improve transportation systems management and operations that mitigate congestion and improve air quality. Transit investments, including transit vehicle acquisitions and construction of new facilities or improvements to facilities that increase transit capacity. Alternative fuel projects including participation in vehicle acquisitions, engine conversions, and refueling facilities.

Bicycle, Pedestrian, Transportation Alternative Improvements Bicycle, Pedestrian, and Transportation Alternative Program Improvement projects consists of the construction/reconstruction of bicycle and pedestrian facilities, recreational trails, safe routes to school, community improvements such as historic preservation, and vegetation management, and environmental mitigation related to stormwater and habitat connectivity. Construction, planning, and design of on-road and off-road trail facilities for pedestrians, bicyclists, and other nonmotorized forms of transportation, including sidewalks, bicycle infrastructure, pedestrian and bicycle signals, traffic calming techniques, lighting and other safety-related infrastructure, and transportation projects to achieve compliance with the Americans with Disabilities Act. Construction, planning, and design of infrastructure-related projects and systems that will provide safe routes for non-drivers, including children, older adults, and individuals with disabilities to access daily needs. Conversion and use of abandoned railroad corridors for trails for pedestrians, bicyclists, or other nonmotorized transportation users. Construction of turnouts, overlooks, and viewing areas. Infrastructure-related projects.-planning, design, and construction of infrastructure-related projects on any public road or any bicycle or pedestrian pathway or trail in the vicinity of schools that will substantially improve the ability of students to walk and bicycle to school, including sidewalk improvements, traffic calming and speed reduction improvements, pedestrian and bicycle crossing improvements, on-street bicycle facilities, off-street bicycle and pedestrian facilities, secure bicycle parking facilities, and traffic diversion improvements in the vicinity of schools. SRTS projects must be within approximately two miles of a school for kindergarten through eighth grade as specified in SAFETEA-LU §1404. (23 U.S.C. 402 note)

Roadway and Bridge Preservation, Rehabilitation and Replacement Roadway and Bridge Preservation, Rehabilitation, and Replacement projects consists of the construction/reconstruction of roadways, resurfacing, restoration, rehabilitation, or preservation of roadways and bridges to extend the useful life of the existing facility, or replacement of existing facilities. Protection (including painting, scour countermeasures, seismic retrofits, impact protection measures, security countermeasures, and protection against extreme events) for bridges (including approaches to bridges and other elevated structures) and tunnels on public roads, and inspection and evaluation of bridges and tunnels and other highway assets.

Roadway Operational Improvement The Roadway Operational Improvement projects consists of design and construction of operational improvements and capital and operating costs for traffic monitoring, management, and control facilities and programs.

Safety Improvements The Safety Improvements projects consists of (A) any highway safety improvement project on any public road or publicly owned bicycle or pedestrian pathway or trail; (B) as provided in subsection 23 U.S.C. 148(g)(special rules for High-Risk Rural Road Safety and Older Drivers); or (C) any project to maintain minimum levels of retroreflectivity with respect to a public road without regard to whether the project is included in an applicable State strategic highway safety plan. Terms, including “highway safety improvement project” are defined in 23 U.S.C. 148.

A-6. Revisions to the LRSTP or STIP

On various occasions, revisions may be required to the LRSTP or STIP. Revisions to a LRSTP or STIP may involve a minor revision or a major revision. On a case-by-case basis, the KYTC, FHWA, and/or FTA determines whether the revision is minor or major as per definition of “Administrative Modification” and the definition of “Amendment” outlined in 23 CFR 450.104. The KYTC, FHWA, and FTA will utilize applicable requirements and classifications of projects that are not considered to be of appropriate scale for individual identification a given program year as outlined in 23 CFR 771.117 (c) and (d) and/or 40 CFR part 93.126 “Exempt Projects” and 93.127 “Projects Exempt from Regional Emissions Analysis.” These appropriately identified projects may be grouped by function, work type, and/or geographic area into the ZVarious programs and other program placeholders to determine if a STIP revision is required.

Administrative Modifications to STIP

Administrative modifications are minor revisions to the STIP that include minor changes to:

- Projects/project phase costs.
- Funding sources of previously included projects.
- Project phase initiation dates.
- The delineation of projects in program placeholders which include:
 - Congestion Mitigation and Air Quality (CMAQ) projects
 - Transportation Alternatives (TA) projects
 - High Cost Safety Improvement (HSIP-HCS) projects

An administrative modification is a revision that does not require:

- Public review and comment.
- Re-demonstration of fiscal constraint.
- A conformity determination (in air quality conformity nonattainment and maintenance areas).

For administrative modifications to the STIP, the official STIP mailing list will be utilized to distribute information pertaining to the revision. As STIP administrative modifications are made, each administrative modification will be posted on the KYTC web site. Each of these documents will be provided in an electronically accessible format with the means to search and print as appropriate.

Amendments to the STIP

Amendments are revisions to the STIP that include major changes to a project included in the STIP. This includes a major change in:

- Project cost.
- Project/project phase initiation dates.

- Design concept or design scope (e.g., changing project termini or the number of through traffic lanes or changing the number of stations in the case of fixed guideway transit projects).
- The addition or deletion of projects, except those types of projects not considered to be of appropriate scale for individual identification as outlined in 23 CFR 771.117 (c) and (d) and/or 40 CFR part 93.126 “Exempt Projects” and 93.127 “Projects Exempt from Regional Emissions Analysis,” which are the grouped projects listed in the ZVarious programs and other program placeholders such as the Transportation Alternatives (TA) and Congestion Mitigation and Air Quality (CMAQ).

An amendment is a revision that requires:

- Public review and comment.
- Redemonstration of fiscal constraint.
- A conformity determination (in air quality nonattainment and maintenance areas).

For STIP amendments that have not undergone public involvement through the MPO process or the Highway Plan process, a 15-day public review period will be provided and public notice advertisements will be placed in statewide, significant regional, and demographically targeted newspapers. Selected newspapers will be identified through assistance from the corresponding ADDs and MPOs. In addition, other possible public outreach efforts targeted to the specific region of the state directly affected by the proposed STIP amendment may be required and will be determined on a case-by-case basis.

The proposed amendment will be displayed at the KYTC Central Office as well as the appropriate Highway District, ADD, and MPO offices for public review and comment. KYTC will make available to the public the description of project, location of project, proposed project phases, proposed type of funding, and scheduled fiscal year of each phase that KYTC wants to amend into the STIP. Also, KYTC will revise the “Fiscal Constraint” tables outlined in the STIP to reflect the required funding for the proposed new project vs. available funding. KYTC will provide hard copies of the information and the information will be made available on the KYTC STIP web site. The public will be provided the means to submit written and electronic review comments on proposed STIP amendment.

At the conclusion of the 15-day review period, public comments will be addressed, additional public outreach may be conducted as necessary, and the final STIP amendment will be provided to FHWA and FTA for approval. For amendments to the STIP from areas within MPO boundaries, the public involvement process conducted for the respective MPO TIP will suffice as the required public involvement for the STIP.

As STIP amendments are approved, each amendment will be posted on the KYTC web site. Each of these documents will be provided in an electronically accessible format with the means to search and print as appropriate.

B. STIP Projects

The FAST Act advocates that transportation planning processes be broadened to include the intermodal aspects of the nation's transportation system. Each state is to establish a statewide transportation planning process that enhances the integration and connectivity of the transportation system, across, and between modes throughout the state, for people and freight. The KYTC has incorporated an intermodal planning process through the statewide and regional transportation planning process that identifies and assesses intermodal facilities and systems and highway access to these facilities on a continuous basis. The KYTC hopes to further develop its processes to use performance criteria and relevant data to determine the efficiency and effectiveness of these facilities and systems, and identify projects and strategies to improve the intermodal movement of people and freight.

The KY Freight Plan was published in September 2016 and amended in September 2017 with final FHWA approval in December 2017. This plan now contains specific projects since the completion of the amendment. Highway and multimodal projects were added with input from the Kentucky Freight Advisory Committee for Transportation (KY FACT) before the 2017 federal deadline in accordance with requirements of the National Highway Freight Program (NHFP) found in the FAST Act. The KYTC used 10% or approximately \$2 million per year of the NHFP for multimodal projects to improve the National Highway Freight Network. Specific activities the KYTC has undertaken to develop an intermodal planning process included integrating freight generator identification and modal access tasks into the Annual Work Program of the ADDs and identifying and discussing intermodal issues through the statewide transportation planning meetings. A four tiered KY Freight Highway Network was developed using a data-driven process with ADD, MPO, HDO, and freight peer input.

Specific activities that the KYTC has undertaken to develop this intermodal planning process included integrating freight movement and modal access tasks into the Annual Work Program of the ADDs, identifying and discussing intermodal issues through the statewide transportation planning meetings, the identification of intermodal access projects and the dedication of specific staff to the freight movement issues. Improvement projects and strategies resulting from the studies and prioritization process based on selected criteria, as well as the other pertinent data, will be considered for inclusion in the statewide transportation plan for future implementation. The FAST Act further required that (1) the plans and programs for each state provide for development of integrated management and operation of transportation systems that will function as an intermodal transportation system for the state, and an integral part of an intermodal transportation system for the United States, and (2) the process shall provide for consideration of all modes and be continuing, cooperative, and comprehensive.

The FAST Act requires that each State shall carry out a continuing, cooperative, and comprehensive statewide transportation planning process that provides for consideration and implementation of projects, strategies, and services that will support the economic vitality of the United States, the states, metropolitan areas, and nonmetropolitan areas, especially by enabling global competitiveness, productivity, and efficiency.

In accordance with the FAST Act requirements, the KYTC mission is "to provide a safe, secure, and reliable highway system that ensures the efficient mobility of people and freight, thereby

enhancing both the quality of life and economic vitality of the Commonwealth.” Simply stated, the KYTC’s goal is to provide “safe and reliable roads, roads that lead to jobs,” and the 2018 Enacted Highway Plan and FY 2019-2022 STIP have been developed in support of that goal.

B-1. Planned Highway Improvements

In developing the highway element of the FY 2019-2022 STIP, the KYTC relied heavily upon its ongoing project identification and scheduling mechanisms, particularly the long-range planning process. The KYTC projected federal and state funding levels were used in the development of the Recommended FY 2016-2022 Highway Plan submitted to the Kentucky General Assembly in January 2016. The Kentucky General Assembly by law has the right to remove, add to, or edit projects contained in the Recommended Highway Plan. The 2016 General Assembly approved Kentucky’s 2016 Highway Plan (FY 2016-2022) in April 2016. The 2016 Highway Plan is the primary basis for the federal-aid highway element of the FY 2019-2022 STIP. Included within the 2016 Highway Plan are projects shown as having HPP funding and KYD funding. These are projects that have been earmarked by Congress to be funded with special high priority (HPP) funding, or have been earmarked by Congress to receive federal discretionary (KYD) funding. Also, included within the 2016 Highway Plan are projects that are scheduled to use GARVEE bond funding as described within STIP Development; Section A-5: Fiscal Constraint.

To help achieve these goals, the identification of highway needs has been accomplished through in-house evaluations of highway performance and adequacy, meshed with input received from state legislators, local officials, MPO and ADD transportation committees, the general public, and from within our own agency’s Central Office and District Offices. Each of these sources yielded valuable input for consideration in the development of the state’s Long-Range Transportation Plan and the Highway Plan.

The KYTC considered technical data on the ability of candidate projects to improve safety, increase system reliability, and contribute toward enhancing regional economic attractiveness. Unfortunately, the needs of our highway system far outweigh available resources. The KYTC is working to improve the evaluation process for active and potential projects to ensure that every dollar we spend is used to address the most critical and cost effective improvements. In doing so, the KYTC can concentrate available funds on those projects that truly result in safer roadway conditions, better pavements and bridges, and improved local economies.

As the Highway Plan was developed, projects were selected using the new Strategic Highway Investment Formula for Tomorrow (SHIFT) scoring process. SHIFT uses a data driven process including public input, project identification, project sponsorship, data verification, project prioritization and project selection. Criteria considered are congestion, benefit-cost, safety, economic development, freight and asset management. The Cabinet’s long-range planning efforts have and will continue to maintain a stream of prioritized candidate projects for inclusion and advancement in Kentucky’s Highway Plan. As the federally-required long-range planning process matures, the Highway Plan and STIP documents will be strengthened by the focus on longer-range program management

considerations. It is expected that future editions of Kentucky's STIP will reflect a strategy for implementation resulting from more clearly defined longer-range transportation goals.

As outlined within the STIP Introduction, the FY 2019-2022 STIP is a planning document that covers a period of four years, and is updated every two years upon approval of the KYTC's Highway Plan by the Kentucky General Assembly. With the STIP being a planning document, the projects, schedules, and estimated costs identified within the FY 2019-2022 STIP are based upon the most current project information at the time of preparing the Highway Plan and STIP. As work progresses within each phase of the projects, the project team refines the project scope, schedules, and estimated costs to complete the project. The programming of project funding for project refinements will follow the STIP amendments/revisions process as described within STIP Development; Section A-6: Revisions to the LRSTP or STIP, along with the STIP end of fiscal year "fiscal constraint" recalculations.

The listing of FY 2019-2022 STIP projects is contained in Appendix A, Exhibit A-5. The KYTC will administer each of the projects listed unless clearly indicated in the project description as being handled otherwise. Included as part of the listing of projects, is the "Priority" column, which is a quick reference for project priority of the corresponding project. The project priority is listed as Safety, Reliability, New Routes, or Economic Development as defined by the following definitions:

Safety: Providing for the safety and security of motorized and non-motorized users who travel Kentucky's highways is the KYTC's highest priority. The FY 2019-2022 STIP includes several programs of projects that serve to address the safety needs on Kentucky's highways. In accordance with the FAST Act, Kentucky has developed a Strategic Highway Safety Plan (SHSP) that combines all statewide enforcement, engineering, education, and emergency response issues into a single coherent plan. The "engineering" element of the SHSP is primarily addressed through the Highway Safety Improvement Program (HSIP), which funds infrastructure-related safety improvements. The "educational" and "enforcement" elements of the SHSP are addressed in the Highway Safety Plan (HSP), which funds behavioral-related safety improvements.

Reliability: The condition of roads and highways in the state is a primary concern among Kentucky's citizens. Poor pavements detract from the driving experience, and road maintenance and resurfacing are the top transportation investment needs in our state. These issues certainly resonate with the KYTC, as we too see the value in protecting the infrastructure in which the public has entrusted to us.

New Routes: This is for the development of a roadway that does not currently exist.

Economic Development: This is for the reconstruction of major interchanges.

In an effort to provide a consistent, ongoing set of performance measurements for the maintenance condition of Kentucky's state-maintained highway system, the KYTC has developed a Maintenance Rating Program (MRP). The purpose of the MRP is to assess maintenance activities as they relate to customer expectations, provide data to support

needed performance improvements, ensure that the KYTC system preservation strategies are working, and to meet federal asset management requirements. Through the MRP, the KYTC has proposed some budgetary adjustments for the FY 2019-2022 STIP to increase funding for the maintenance and resurfacing programs in an effort to improve conditions on Kentucky's roadways. There has also been a concerted effort to include essential, major pavement reconstruction projects in the FY 2019-2022 STIP. The KYTC's desire is to improve overall pavement conditions and meet the public expectation that Kentucky's roads will be kept in the best possible shape.

According to the KYTC inventory data, approximately 73% of Kentucky's bridges are performing the function that they were designed to fulfill without presenting any particular problems. Of the remainder, 7% are classified as "structurally deficient" and 20% are classified as "functionally obsolete." The phrase "structurally deficient" implies that there is a structural problem that will eventually require attention. Many times, these structural problems are addressed by posting the bridge at a specific maximum loading to prolong the life of the structure. The phrase "functionally obsolete" implies that a bridge is too narrow to accommodate the traffic it carries. While the KYTC is concerned that Kentucky's bridges are functionally wide enough, our major emphasis is on those bridges that present structural condition issues. As the KYTC works to keep Kentucky's bridges safe, the focus of the federal and state bridge replacement programs is first to repair or replace those bridges that carry relatively heavy traffic volumes and present the most severe structural problems.

Economic Development: Kentucky's future economy and congestion concerns: Highway congestion and its impact on economic development in Kentucky is very much a "relative" issue. While Kentucky does not have the overly oppressive highway congestion found in many of the nation's very large cities, there are times when congestion in our urban centers is just as frustrating to Kentucky drivers. Morning and afternoon "rush hours" create traffic problems on many of our city streets, urban beltlines, and metro area interstate highway arteries. Additionally, "just in time" delivery schedules have created "rolling warehouses" on many of Kentucky's rural interstates, resulting in truck percentages of 50% in some instances. Such heavy truck volumes reduce levels of service on our major roadways, and create safety issues and driver frustration. As traffic and freight volumes increase in the years ahead, our existing highway network will become more and more constrained and potentially impact Kentucky's competitiveness in the global marketplace.

Each of the FY 2019-2022 STIP projects, whether identified with a purpose of safety, reliability, or economic development, truly has an effect on Kentucky's future economy and congestion concerns.

B-2. Highway Safety Improvement Program (HSIP)

The HSIP is a core Federal-aid highway program, the purpose of which is to achieve a significant reduction in fatalities and serious injuries on all public roads. The HSIP is a federally-funded, state administered program that is legislated under 23 U.S.C. 148, 23 U.S.C. 150, and 23 U.S.C. 130 and regulated by 23 CFR Parts 924 and 490.

23 CFR 924.5 states: Each State shall develop, implement, and evaluate on an annual basis an HSIP that has the objective to significantly reduce fatalities and serious injuries resulting from crashes on all public roads. HSIP funds shall be used for highway safety improvement projects that are consistent with the State's SHSP (Strategic Highway Safety Plan). HSIP funds should be used to maximize opportunities to advance highway safety improvement projects that have the greatest potential to reduce the state's roadway fatalities and serious injuries.

To be eligible for HSIP funds, all highway safety improvement projects must:

1. Address Strategic Highway Safety Plan (SHSP) priority,
2. Be identified through a data-driven process, and
3. Contribute to a reduction in fatalities and serious injuries.

In addition, all highway safety improvement projects are subject to general requirements under Title 23 of the United States Code.

In general, non-infrastructure projects that promote the awareness of the public and educate the public concerning highway safety matters or enforce highway safety laws are not eligible for HSIP funds. However, eligible non-infrastructure projects include road safety audits, improvements in the collection and analysis of data, or transportation safety planning activities.

Most projects are identified through emphasis area lists such as High Friction Surface, Cable Median Barrier, Guardrail Installation, Roadway Departure, Intersections, and Horizontal Alignment Signing. Systemic safety treatments are often implemented with the emphasis area projects but some systemic-only safety projects are implemented based on statewide trends observed in crash data.

Projects meeting the program's requirements listed above are submitted to FHWA for review and approval into the program. Upon approval of the identified projects, funding for the projects are initiated based upon statewide priorities for activities that are most likely to reduce the number of, or potential for, fatalities and serious injuries and upon available funding. An annual report is submitted to FHWA that describes the progress being made, assesses the effectiveness of the improvements, and describes the extent to which the improvements funded contribute to the safety goals.

As part of the HSIP report, the state must report annually on these categories:

1. Number of fatalities;
2. Rate of fatalities;
3. Number of serious injuries;
4. Rate of serious injuries; and
5. Number of non-motorized fatalities and non-motorized serious injuries.

Each safety performance measure is based on a 5-year rolling average that accounts for regression to the mean.

Railway-Highway Crossings Program

This program funds safety improvements to reduce the number of fatalities, injuries, and crashes at public grade crossings. The railway-highway crossing program will be conducted in accordance with regulations as outlined in the corresponding section of the FAST Act, Section 1108; and 23 USC 130.

The railway-highway crossings program funding level determined for each state is set aside from the state's HSIP amount. Activities funded under this program are also eligible for funding under the broader HSIP eligibilities. The federal-aid highway funding anticipated apportionments and planned obligations for the Railway-Highway Crossings railroad protective devices (RRP) and the railroad separation (RRS) projects are included within the HSIP – Safety categories in the Fiscal Constraint tables.

Highway Safety Plan (HSP)

The purpose of the Highway Safety Plan (HSP) is to identify problem areas of the state regarding the behavioral aspects of highway safety, develop performance goals and objectives, and establish programs and projects to reduce fatalities and serious injuries on Kentucky's highways. The federal funding is a combination from FHWA and the National Highway Traffic Safety Administration (NHTSA). The HSP is an integral part of Kentucky's overall Strategic Highway Safety Plan (SHSP) as required by the FAST Act. Emphasis areas are as follows:

- a. Impaired Driving
- b. Occupant Protection
- c. Police Traffic Services
- d. Planning and Administration
- e. Motorcycle Safety
- f. Non-motorized transportation
- g. Crash Investigation
- h. Roadway Safety
- i. Traffic Records
- j. Data Incentives

Grants Management

Grants are a significant part of the HSP for law enforcement, communities, research and data. It takes a cooperative effort by many agencies to reduce fatalities and serious injuries on our highways. Both FHWA and NHTSA provide federal funding that is dispersed to various agencies based upon the identified problem areas. Three national law enforcement mobilizations are conducted each year to specifically draw attention to safety belt usage and drunk driving. These are "Click It or Ticket," U Drive, U Text, U Pay," and "Drive Sober or Get Pulled Over." Our summer-driving state initiative is "Blue Lights Across the Bluegrass," which focuses on speeding but also encompasses other emphasis areas.

Highway Safety Education Program

The Highway Safety Education Program (Education Branch) was created in 1994 as the educational arm of the Cabinet's Safety Corridor Program. The Education Branch is now one of the two branches under the Division of Highway Safety Programs. Funding for these programs has come primarily from FHWA. The Education Branch focuses heavily on schools and communities to target the newest and youngest drivers to get them started in the right direction. There are many programs, including simulators that focus attention on different problem areas regarding highway safety. Below is a listing of these.

- a. Monitoring FHWA grantees executing non-law enforcement grants
- b. Active in local highway safety committees
- c. Ghost Out
- d. Mock Crash
- e. Judgement Day
- f. Fatal Vision Goggles
- g. D2 Distracted Driving Simulator
- h. 3D Drunk and Drugged Driving Simulator
- i. Motorcycle Safety events
- j. Mature driving presentations

All of these programs focus on targeted areas of the state where there are unusually high fatalities and injuries, low safety belt usage, and high incidences of drunk or drugged driving.

B-3. Intelligent Transportation System (ITS)

The KYTC has a variety of Intelligent Transportation System (ITS) programs both operational and under construction throughout Kentucky. The Cabinet has operational freeway traffic management systems in Northern Kentucky (Ohio TMC) and Metro Louisville (TRIMARC). The City of Lexington operates an independent operation center. The Cumberland Gap Tunnel (CGT) Center provides traffic management, as well as other tunnel-related services. The Cumberland Gap Tunnel Authority operates for KYTC, but is independent from the State Transportation Operations Center (TOC). The TOC in Frankfort provides support to those facilities, and provides traffic management services to the rural areas of Kentucky.

The KYTC has implemented ITS projects in the Lexington, Elizabethtown, Bowling Green, Paducah, and Ft. Campbell areas. These projects include Dynamic Message Signs (DMS), cameras, and roadway sensors. Obsolete DMS and cameras are being replaced within the Northern Kentucky and Elizabethtown areas, and Speed Data services are available statewide. Our ITS Architecture was updated in 2015.

The TRIMARC system has been expanded within the Louisville Metro area as part of the Ohio River Bridges project. KIPDA is using the reporting capabilities of TRIMARC. Other operational systems include the Road Weather Information Stations (RWIS) in 39 locations to provide Highway District Maintenance personnel, as well as others, with vital roadway weather information for critical purposes such as snow and ice maintenance.

On a statewide level, the KYTC has an operational Freeway Service Patrol (SAFE Patrol) which provides motorist assistance and Incident Management services on Kentucky's interstates and parkways. Because of the requirements of 23 CFR 511 and compliance with the Real Time System Management Information Program (RTSMIP), the KYTC has implemented a new real time Roadway Advisory Map to process and publish data. The partnerships with the Cabinet's District Offices, Transportation Operations Center in Frankfort, Division of Maintenance, Kentucky Vehicle Enforcement, WAZE, and Kentucky State Police ensures the highest level of information provided to the traveling public.

B-4. Maintenance and Traffic Operations

The KYTC is responsible for ensuring that the State Road System is maintained and operated in such a manner as to ensure the safest and most reliable roadways possible. The Cabinet's goal is to provide the highway user maximum safety and comfort with minimum travel interruptions. Table 2 contains a line-item outlining the FY 2019-2022 scheduled state funding for the KYTC's operations and maintenance program, and Appendix B contains the MPOs Financial Plans, which includes a line-item outlining the operations and maintenance program within each MPO area.

The annual state-funded Maintenance and Traffic Operations Programs are comprised of four major sub-programs: Roadway Maintenance, Bridge Maintenance, Rest Area and Weigh Station Maintenance, and Traffic Operations. The Roadway Maintenance unit is responsible for maintenance of the highways in the State Road System. This unit is responsible for routine upkeep such as pavement repairs, ditch cleaning, mowing, litter pickup, snow and ice removal, and maintenance relating to drainage, shoulders, signs, markings, delineation, and guardrails on the approximately 27,629 miles of highways in Kentucky.

The Bridge Maintenance Program performs activities on bridges such as inspections, load ratings, painting, deck repair, and structural work on the Commonwealth's 9,000 total state-maintained structures. The Rest Area Maintenance Program provides upkeep and janitorial services at 22 rest area facilities and 4 truck rest havens across the state, along with the maintenance and upkeep of the various truck weight stations located throughout the Commonwealth. All of these sites are maintained through contracts with private vendors.

The Traffic Operations Program is responsible for the installation and maintenance of traffic signals, flashing beacons, school flashers, roadway lighting, navigational lighting, and aviation obstruction lighting on state-maintained highways. This program includes the administration of the Highway Safety Improvement Program (HSIP). Traffic Operations is also responsible for the establishment and maintenance of coordinated traffic signal systems to support the efficient movement of traffic.

In addition to the ongoing highway maintenance and traffic operations programs, the KYTC also budgets annual funding to resurface roads on the state road system. These funds are in addition to the monies funneled through the Cabinet's Rural and Municipal-aid Programs for improvements to county roads, city streets, and the state rural-secondary road

system. Each of the rural and municipal-aid program components is accomplished through an ongoing dialogue with Kentucky's city and county governmental entities.

B-5. Transportation Alternatives Program (TAP)

Section 1122 of MAP-21 established TAP in 23 U.S.C. 213. The program was eliminated by the FAST Act in name only. The FAST Act replaced TAP with a set-aside of Surface Transportation Block Grant (STBG) funding. These set-aside funds include all projects and activities that were previously eligible under TAP, encompassing a variety of smaller-scale transportation projects such as pedestrian and bicycle facilities, conversion of abandoned rail corridors to trails, and community improvements such as historic preservation of transportation facilities, vegetation management, and environmental mitigation related to stormwater and habitat connectivity. The former Safe Routes to School Program (SRTS) activities are now eligible under this program, with the same 20% match requirement as other TAP awards.

Funding for a state's Recreational Trails Program is taken off the top of the state's TAP apportionment unless the Governor opts out. 50% of a state's TAP funds are sub-allocated to urbanized areas with populations over 200,000, urban areas with populations of 5,001 to 200,000, and areas with population of 5,000 or less. The remaining 50% may be used in any area of the state. The funding sub-allocated to areas with populations over 200,000 is awarded through a competitive application process within the MPO area and managed by the area's MPO. The MPO selects the projects that are then administered through the Office of Local Programs (OLP). The other funding categories are awarded through a statewide competitive selection process and also administered by OLP. All TAP projects require a 20% match. Application cycles are typically held each year but are dependent on the availability of funds. As new project selections are made, the new projects will be incorporated into the STIP thru the STIP Administrative Modification process.

Transportation Alternatives Program (TAP) Projects are listed in Appendix A, Exhibit A-7.

Transportation Enhancement (TE), National Scenic Byways and Highways (NSB), Transportation Community and System Preservation (TCSP), and Safe Routes to School (SRTS) Programs

Dedicated funding for the following programs was eliminated with the passage of MAP-21:

- Transportation Enhancements (TE)
- National Scenic Byways and Highways (NSB)
- Transportation Community and System Preservation (TCSP)
- Safe Routes to School (SRTS)

States with balances of TE and SRTS funds are still allowed to spend the remaining dollars apportioned to their state. Since NSB and TCSP projects were awarded at a federal

level, any state with an open NSB or TCSP project may finish out the project. However, no new federal funding will be provided for these programs.

Transportation Enhancements (TE) (see Appendix A, Exhibit A-7).
Safe Routes to School (SRTS) (see Appendix A, Exhibit A-8).

B-6. Recreational Trails Program

The Recreational Trails Program provides funds to develop and maintain recreational trails for motorized and non-motorized recreational trail users. Funds are apportioned under 23 U.S. Code 206 (d). Funds may be used to provide and maintain trails, trailside, and trailhead facilities, including provisions to facilitate access for people with disabilities. Funds may also be used to acquire easements or land for trails. Trail uses are for hiking, walking, biking, mountain biking, skating, equestrian, access to canoeing, and ATVs.

The Governor of a state designates an agency to administer the program, which may be an agency other than the State Department of Transportation. The Kentucky Recreational Trails Program is administered by the Governor's Office, Department for Local Government (DLG).

Planned Recreational Trails Projects are included in Appendix A, Exhibit A-9.

B-7. Planned Public Transportation (Transit) Projects

The Federal Transit Law (49 U.S.C. Chapter 53), is the basis for the federally-assisted public transportation programs. Program funds included for the rural portion of the state (Section 5311), for the small urban and urbanized portions of the state (Section 5307), for seniors and persons with disabilities in the state (Section 5310), for technical assistance and transit planning (Section 5303 & Section 5304), training for rural transit operators (RTAP), for capital bus and bus facilities (Section 5339) and have included discretionary capital (Section 5309) grants that include Veterans and Livability grants. Projects that go beyond the Americans with Disabilities Act (ADA) and that provide transportation for the low income to work and training are included under the Section 5311, 5307 and 5310 programs. Local coordinated plans are required.

Section 5311 program funds are used for planning, capital, and operating assistance by local public bodies, nonprofit organizations, and operators of public transportation services. These funds are used to give people access to health care, shopping, employment, education opportunities, public services, recreation, etc. Public transportation systems in rural areas assume the responsibility of meeting these needs. Kentucky utilizes 15% of these funds for provision of intercity bus services.

Section 5307 program funds are used by transit operators in urbanized areas. The KYTC has approval authority for operating, planning and capital funding for operators in areas of 50,000 to 200,000 populations. These funds do not flow through the Cabinet for all areas, but the allocation is done by the Governor. Areas larger than 200,000 are allocated a specific grant amount by the FTA.

Section 5303 program funds are used for planning purposes by the MPOs and the KYTC. MPO funds are formula allocated by the KYTC and are identified for use in urbanized area unified planning work programs. Statewide transit planning for the rural areas is also funded with Section 5304 funds.

Section 5309 has evolved into a formula capital program that provides capital for three primary activities: new fixed-guideways or extensions to fixed-guideways, bus rapid transit projects operating in mixed traffic, and projects that improve capacity on an existing fixed-guideway system. State of Good Repair Grants provide capital assistance for maintenance, replacement, and rehabilitation projects of existing high-intensity fixed guideway and high-intensity motorbus system to maintain a state of good repair.

Section 5310 program funds are used primarily for capital purposes. Vans and other equipment critical to providing transportation services for seniors and individuals with disabilities are purchased through this program. Up to 45% of these funds may also be used for public transportation projects that exceed the requirements of the ADA, that improved access to fixed-route services and decrease reliance on complementary paratransit, and/or utilize alternatives to public transportation that assist seniors and individuals with disabilities. This funding can be operating or capital.

The Section 5339 program is a formula capital program that replaces, rehabilitates, and purchases buses and related equipment and constructs bus-related facilities for rural or urbanized public transportation systems.

The Rural Transit Assistance Program (RTAP) is designed to provide training, technical assistance, research, and other related support services for rural transit operators.

Low or No Emission Vehicle Deployment Program (LoNo Program) is funding that is to deploy the cleanest and most energy efficient U.S.-made transit buses that have been largely proven in testing and demonstrations but are not yet widely deployed in transit fleets. It provides funding for transit agencies for capital acquisitions and leases of zero emission and low-emission transit buses, including acquisition, construction, and leasing of required supporting facilities such as recharging, refueling, and maintenance facilities.

In general, the KYTC receives applications from areas and agencies for the FTA program funds. These applications describe the needs for public transit funds (type of service needed, etc.), the funding required, and local matching sources. The KYTC allocates the money based on several factors including potential ridership, area to be served, availability of services, etc. Each agency is accountable to the Cabinet for the allocated funds. Required monthly report submissions, site visits and compliance reviews, vehicle inspections, drug and alcohol testing, timely invoicing, and audits are among the monitoring activities the Cabinet performs.

With regard to transit project identification, the KYTC advertises annually for competitive proposals for Sections 5310, 5311, 5303, 5304, 5307 (where KYTC is the designated recipient) and 5339, as well as relying heavily upon past experience to develop the transit element of the FY 2019-2022 STIP. Since the passage of MAP-21 and under the

current authorization, Fixing America's Surface Transportation Act (FAST Act), the KYTC has been cognizant of the many opportunities for combining highway and transit funding for individual projects and programs, and fully expects to take advantage of these opportunities in the future. Kentucky's MPOs are seriously studying transit options for addressing metropolitan traffic issues, and are engaged in the project prioritization efforts, which truly represent a multimodal approach to overcoming urban congestion.

Planned transit improvements are listed in Appendix A, Exhibit A-10.

B-8. Human Service Transportation Delivery Process

Welfare reform legislation has greatly influenced changes in the Human Service Transportation Delivery (HSTD) process. This process/program utilized combined transportation resources of the Health and Family Services Cabinet and the Education Cabinet's Vocational Rehab and the Department of the Blind to provide a coordinated network of transportation providers to provide safe, efficient, and accessible transportation for Kentucky's health, human service, and workforce program clients.

Medicaid, Vocational Rehabilitation, and Department for the Blind funds will flow from the two human service Cabinets to the KYTC for operating funds for providers and administrative funds for the KYTC to manage the program.

The Commonwealth is divided into fifteen Human Service Transportation Delivery Regions. This division was based upon items such as operating authority, fleet sizes and capacities of existing providers, and historical transportation utilization.

Through the use of a financial consultant, the Cabinets developed a "capitated rate" payment system, essentially a flat rate (a fee paid per member, per month). This will reward providers for operating efficiency, discourages over utilization, and significantly reduces fraud and abuse. Some parts of the program will be paid on a fee-for-service basis.

There will be one broker per region who will be responsible for securing transportation from private and public transportation subcontractors in order to guarantee transportation to non-emergency medical services for eligible recipients. The Kentucky Finance Cabinet will secure and contract with the transportation brokers on behalf of all the programs. The KYTC will monitor all other service requirements of the brokers. A Coordinated Transportation Advisory Committee (CTAC) includes representatives of each of the different programs and will monitor the programs' interests in the network. The KYTC staff will monitor the brokers to make sure they operate as CTAC agrees. Details of each trip will be recorded by the broker and will be used to report program results to state and federal agencies.

In order to fully implement this program, two accomplishments were needed. One was getting legislation passed (HB 468 and HB 488) which requires brokers and subcontractors to meet safety standards, and the other was getting emergency regulations signed so this initiative could begin operation. This legislation has been passed and the emergency regulations are signed.

The KYTC's Office of Transportation Delivery receives funding from the Department of Medicaid to finance the transportation brokerage for Human Service Transportation Delivery non-emergency medical transportation. The Department of the Blind and Vocational Rehab reimburse the transportation broker at the local level, and funding does not flow through the Transportation Cabinet. Each funding stream meets the respective program requirements. Public Transit, Vocational Rehab, Department of the Blind, and non-emergency medical trips are coordinated at the transportation broker level. Non-Emergency Medical Transportation ridership is over \$3.6 million annually.

B-9. Planned Aviation Improvements

The Airport Improvement Program (AIP) was established by the Airport and Airway Improvement Act of 1982 (Title V of the Tax Equity and Fiscal Responsibility Act of 1982, Public Law 97-248), and amended by the Airport and Airway Safety and Capacity Expansion Act of 1987, (Public Law 100-223), and the Wendell H. Ford Aviation Investment and Reform Act for the 21st Century of 2000 (AIR-21). Current legislation supports and provides funding for the following: (1) airport planning, (2) noise compatibility planning, and (3) noise compatibility programs as set forth in the Aviation Safety and Noise Abatement Act of 1979, (Public Law 96-193).

The funds for the AIP are distributed in accordance with provisions contained in the 2000 Act, as amended. In grant parlance, funds distributed by formula for use at a specific airport or in a specific state or insular area are referred to as apportionment funds. The remaining funds are for use at the discretion of the Secretary of the U.S. Department of Transportation, and are known as discretionary funds.

The estimated federal apportionment level for Kentucky is \$3.2 million for FY 2018 and \$3.2 million for FY 2019. The location and amount of spending using the federal apportionment money in Kentucky is unknown at this time. This decision is made at the FAA district level and these projects are typically not identified until late in the federal fiscal year. At present, there is no way to estimate the level of federal discretionary funding that may be made available during the upcoming biennium. Both federal apportionment and federal discretionary funding will be matched using a 90% federal, 5% state, 5% local ratio.

FY 2018 current projects are identified in Appendix A, Exhibit A-11.

B-10. Kentucky's "Mega Projects"

As the 2018 Highway Plan was developed, strong consideration was given to the funding needs associated with two (2) "Mega Projects" located in Kentucky. The two (2) "Mega Projects" in Kentucky are (1) the Interstate 71/75 Brent Spence Bridge project in northern Kentucky, and (2) the proposed Interstate 69 Ohio River Crossing project between Henderson, Kentucky and Evansville, Indiana. The combined cost of these two projects is \$3.7 billion, with Kentucky's share of the combined cost being \$1.88 billion. Each of these projects are expensive projects, beyond the current financial means of KYTC without special financing mechanisms.

The Interstate 71/75 Brent Spence Bridge Project

KYTC completed the Brent Spence Bridge Strategic Corridor Study in December 2017, which concluded that the Brent Spence Bridge Project and improvements to the I-275 interchange with I-71/I-75 are needed to relieve critical congestion along the corridor. Currently, the Highway Plan does not include funding for any phases of the project. Kentucky's share of the estimated cost of the Brent Spence Bridge Project is estimated at \$1.3 billion in current year dollars. The Plan does include funding for painting the existing Brent Spence Bridge in FY 2019. In addition, the construction phase of the project is listed in (Exhibit A-5) as an "Illustrative Project" in the event that additional federal-aid highway funding or special financing mechanisms becomes available beyond the anticipated planned apportionments.

In addition, the Brent Spence Bridge Strategic Corridor Study identified the need to continue the study of an eastern bypass alternative from an economic development perspective. The Plan includes \$2 million of funding to conduct a detailed study of alternatives.

Interstate 69 Ohio River Crossing Project

KYTC is working closely with Indiana to develop an approach to funding the new I-69 bridge over the Ohio River between Henderson and Evansville. The Plan includes funding of \$500,000 in FY 2019 to continue work on the design phase of the project, \$19 million of funding in FY 2021 for the right-of-way phase, and \$8 million of funding in FY 2022 for the utility phase of the project. It is expected that a combination of tolls, federal grants and state funds will be required to complete the project. In 2017 dollars, the current project estimate is nearly \$1.1 billion with KY's share of those costs being approximately \$715 million (65%). Inflation, financing and interest will significantly increase these costs. The environmental process is scheduled for completion in the fall of 2019 making the project eligible for federal funds toward design, right of way activities and construction. The construction phase of the project is listed in (Exhibit A-5) as an "Illustrative Project" in the event that additional federal-aid highway funding or special financing mechanisms becomes available beyond the anticipated planned apportionments.

B-11. FAST Act Grants

Advanced Transportation and Congestion Management Technologies Deployment (ATCMTD)

As outlined in the FAST Act funding fact sheets, "the Advanced Transportation and Congestion Management Technologies Deployment Program is to provide competitive grants for the development of model deployment sites for large scale installation and operation of advanced transportation technologies to improve safety, efficiency, system performance, and infrastructure return on investment." For a complete detailed description and eligible activities, please see the following link to the FHWA FAST Act website: <http://www.fhwa.dot.gov/fastact/factsheets/advtranscongmtfs.cfm>

Fostering Advancements in Shipping and Transportation for the Long-Term Achievement of National Efficiencies (FASTLANE) Grants

As outlined in the FAST Act funding fact sheets, “the Nationally Significant Freight and Highway Projects (NSFHP) program to provide financial assistance—competitive grants, known as FASTLANE grants, or credit assistance—to nationally and regionally significant freight and highway projects.” For a complete detailed description and eligible activities, please see the following link to the FHWA FAST Act website:

<http://www.fhwa.dot.gov/fastact/factsheets/fastlanegrantsfs.cfm>

Surface Transportation System Funding Alternatives Program (STSFA)

As outlined in the FAST Act funding fact sheets, “the Surface Transportation System Funding Alternatives Program is to provide grants to States or groups of States to demonstrate user-based alternative revenue mechanisms that utilize a user fee structure to maintain the long-term solvency of the Highway Trust Fund.” For a complete detailed description and eligible activities, please see the following link to the FHWA FAST Act website: <http://www.fhwa.dot.gov/fastact/factsheets/surftransfundaltfs.cfm>

B-12. Performance Measures

Moving Ahead for Progress in the 21st Century Act (MAP-21) established and the Fixing America’s Surface Transportation (FAST) Act continued performance measurement and reporting requirements associated with safety, asset management, system performance, and Congestion Mitigation and Air Quality (CMAQ) performance. KYTC reported initial targets in May 2018 for all non-safety targets (safety targets are reported through the Highway Safety Plan submitted to NHTSA by June 30 each year and the HSIP Annual Report submitted to FHWA by August 31 each year starting in 2017).

The summary below includes performance measures for asset management, system performance, and congestion mitigation and air quality (CMAQ). The subject performance measures have been coordinated with the nine Metropolitan Planning Organizations as various times through the past year.

Asset Management	Target	
<i>Pavement Performance</i>	2 Yr	4 Yr
% Good Interstate	50.0%	50.0%
% Poor Interstate	2.0%	2.0%
% Good Non-Interstate NHS	35.0%	35.0%
% Poor Non-Interstate NHS	4.0%	4.0%
<i>NHS Bridge Performance</i>		
% Good Condition by Deck Area	35.0%	35.0%
% Poor Condition by Deck Area	3.7%	3.2%
System Performance	Target	
<i>Level of Travel Time Reliability (LOTTR)</i>	2 Yr	4 Yr
% Reliable Interstates	93.0%	93.0%
% Reliable Non-Interstate NHS		82.5%
<i>Truck Travel Time Index (TTTR)</i>	1.190	1.190
Congestion Mitigation and Air Quality (CMAQ)		
OKI Regional Council of Governments		
Peak Hours of Excessive Delay (PHED-hrs)		12.0
Non-Single Occupancy Vehicles (SOV) Travel	17.4%	17.4%
Emissions Measure		
VOC	100	200
NOx	100	200

Safety

The safety performance metrics include five measures – number of fatalities, fatality rate per 100 million vehicle miles traveled (VMT), number of serious injuries, serious injury rate per 100 million VMT, and number of non-motorized fatalities and non-motorized serious injuries. Each metric is measured using a five-year rolling average and are reported through both the National Highway Traffic Safety Administration (NHTSA) and the Federal Highway Administration (FHWA).

Asset Management

The asset management performance metrics include pavement condition and bridge condition for the National Highway System (NHS). Both metrics require 2- and 4- year targets. Each metric reports the percentage of the system in “Good” and “Poor” condition with minimum condition levels for both bridge and pavement condition.

System Performance

Targets required to be set at the state level include Level of Travel Time Reliability (LOTTR) and Truck Travel Time Index (TTTI). LOTTR measures the percent of reliable occupancy-weighted vehicle-miles traveled on Interstates and non-Interstate National Highway System routes. TTTI indicates the additional factor of time beyond the average travel time that freight movers must factor into delivery times to ensure on-time delivery 95% of the time. Both metrics require 2- and 4- year targets.

Congestion Mitigation and Air Quality (CMAQ)

MPOs with an urbanized area population greater than 1 million that are in maintenance or non-attainment for air quality must report per-capita Peak Hours of Excessive Delay (PHED), percent non-SOV travel and CMAQ funded emissions reductions. Currently the only area in Kentucky subject to this requirement is the Cincinnati-Northern Kentucky urbanized area; the designated MPO for this area is the Ohio-Kentucky-Indiana Regional Council of Governments (OKI). In addition to the statewide targets, some targets are specific to the urbanized area and are reported by each state (Kentucky and Ohio).