



**Clarksville Urbanized Area
Metropolitan Planning
Organization
Final FY2020-FY2023
Transportation Improvement
Program**



**Prepared by: Clarksville Urbanized Area MPO
329 Main Street
Clarksville, TN 37040
<http://www.cuampro.com/>**

This report has been prepared in cooperation with or with financial assistance from all or several of the following public entities: Federal Transit Administration; Federal Highway Administration; Kentucky Transportation Cabinet; Oak Grove, Kentucky; Christian County, Kentucky; City of Clarksville, Tennessee; Tennessee Department of Transportation; Montgomery County, Tennessee.

This financial assistance notwithstanding, the contents of this report do not reflect the official views or policies of the funding agencies. Accuracy of the information presented herein is the responsibility of the Clarksville MPO, based upon project information submitted by sponsoring agencies.

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ACRONYMS

3(R)	RESURFACING, REHABILITATION OR RESTORATION
SAFETEA-LU	SAFE, ACCOUNTABLE, FLEXIBLE, AND EFFICIENT TRANSPORTATION EQUITY ACT-A LEGACY FOR USERS
AC	ADVANCE CONSTRUCTION
ADA	AMERICANS WITH DISABILITIES ACT
CAA	CLEAN AIR ACT
CDR	CONFORMITY DETERMINATION REPORT
CFR	CODE OF FEDERAL REGULATIONS
CMAQ	CONGESTION MITIGATION & AIR QUALITY IMPROVEMENT PROGRAM
CMP	CONGESTION MANAGEMENT PROCESSES
CONST	CONSTRUCTION
CTS	CLARKSVILLE TRANSIT SYSTEM
E+C	EXISTING PLUS COMMITTED
EJ	ENVIRONMENTAL JUSTICE
EPA	ENVIRONMENTAL PROTECTION AGENCY
FAST ACT	FIXING AMERICA'S SURFACE TRANSPORTATION ACT
FHWA	FEDERAL HIGHWAY ADMINISTRATION
FLAP	FEDERAL LANDS ACCESS PROGRAM
FTA	FEDERAL TRANSIT ADMINISTRATION
FY	FEDERAL FISCAL YEAR (OCTOBER 1 – SEPTEMBER 30)
HPP	HIGH PRIORITY PROJECTS
HSIP	HIGHWAY SAFETY IMPROVEMENT PROGRAM
ITS	INTELLIGENT TRANSPORTATION SYSTEMS
KY	KENTUCKY
KYD	KENTUCKY DISCRETIONARY PROGRAM
KYTC	KENTUCKY TRANSPORTATION CABINET
LEP	LIMITED ENGLISH PROFICIENT
MAP-21	MOVING AHEAD FOR PROGRESS IN THE 21 ST CENTURY
MPA	METROPOLITAN PLANNING AREA
MPO	METROPOLITAN PLANNING ORGANIZATION
MTP	METROPOLITAN TRANSPORTATION PLAN
NEPA	NATIONAL ENVIRONMENTAL POLICY ACT
NHPP	NATIONAL HIGHWAY PERFORMANCE PROGRAM
NHS	NATIONAL HIGHWAY SYSTEM
PE	PRELIMINARY ENGINEERING
PHSIP	PENALTY HIGHWAY SAFETY IMPROVEMENT PROGRAM
PM	PERFORMANCE MEASURES
PP	PARTICIPATION PLAN
ROW	RIGHT OF WAY
SP	STATE CONSTRUCTION PROGRAM - KY
SPPR	STATE PRIMARY PAVEMENT REHABILITATION – KY
SPR	STATE PLANNING AND RESEARCH
SR	STATE ROUTE
SRTS	SAFE ROUTES TO SCHOOL
STIP	STATE TRANSPORTATION IMPROVEMENT PROGRAM
STBG	SURFACE TRANSPORTATION BLOCK GRANT (L-LOCAL OR S-STATE)
SHSP	STRATEGIC HIGHWAY SAFETY PLAN
TAP	TRANSPORTATION ALTERNATIVES PROGRAM
TCC	TECHNICAL COORDINATING COMMITTEE
TDOT	TENNESSEE DEPARTMENT OF TRANSPORTATION
TIP	TRANSPORTATION IMPROVEMENT PROGRAM
TN	TENNESSEE
TSM&O	TRANSPORTATION SYSTEMS MANAGEMENT AND OPERATIONS
UPWP	UNIFIED PLANNING WORK PROGRAM
UROP	URBAN OPERATING ASSISTANCE PROGRAM
ULB	USEFUL LIFE BENCHMARK
USC	UNITED STATES CODE
VMT	VEHICLE MILES TRAVELED
VOC	VOLATILE ORGANIC COMPOUND

SECTION 1. PROGRAM NARRATIVE AND TEXT

1.0 **INTRODUCTION:**

The Clarksville Urbanized Area Metropolitan Planning Organization (MPO) is federally mandated to carry out the planning and programming of federally funded and regionally significant transportation activities within the cities of Clarksville and Oak Grove, Montgomery County, portions of Christian County and portions of the City of Hopkinsville. The MPO has prepared the following FY2020 through FY2023 (October 1, 2019 through September 30, 2023) Transportation Improvement Program (TIP) for the Clarksville area.

Under federal law, the TIP:

- Is developed by the MPO in cooperation with the States and public transit operators,
- Must be consistent on a project level with the approved metropolitan transportation plan,
- Must include all regionally significant projects and those funded with federal transportation funds,
- Must include a financial plan demonstrating how the approved TIP can be implemented with existing and anticipated revenue,
- Must be incorporated directly, without change, into the Statewide Transportation Improvement Program (STIP), and
- Must include performance measures and the anticipated effects of the TIP on achieving those targets.

The FY2020 - FY2023 TIP is a product of the ongoing transportation planning process of the Clarksville MPO. The TIP identifies the timing and funding of all highway, bridge, transit, bicycle, pedestrian and other surface transportation projects scheduled for implementation over the next four years that are regionally significant and/or that use federal transportation funds. This document identifies planned transportation projects and projected revenues during the time period of FY2020 to FY2023 and ensures coordination of transportation improvements by local, state, and federal agencies.

1.1 **PROGRAM APPROVAL:**

The TIP must be fully updated and approved at least every four years by the MPO, the Governor of Tennessee and the Governor of Kentucky. The approval signature from the MPO's Executive Board is the signed Resolution 2019-06 on the next page.

RESOLUTION 2019-06

**APPROVING THE FINAL FY2020-2023 TRANSPORTATION IMPROVEMENT
PROGRAM AND ASSOCIATED CONFORMITY DETERMINATION REPORT OF THE
CLARKSVILLE URBANIZED AREA
METROPOLITAN PLANNING ORGANIZATION
(MPO)**

WHEREAS, the Transportation Improvement Program is prepared on a four year basis, with amendments prepared on an as needed basis. This process is in place to document the cooperatively developed program of projects recommended by the Technical Coordinating Committee for selection by the Executive Board to be advanced during the program period; and

WHEREAS, a proposed Final Transportation Improvement Program for FY2020-FY2023 and the associated Conformity Determination Report (CDR) consisting of federally funded and/or regionally significant transportation improvement projects within the metropolitan area has been prepared and distributed to the general public, participating State and Federal Agencies, members of the Technical Coordinating Committee and Executive Board; and

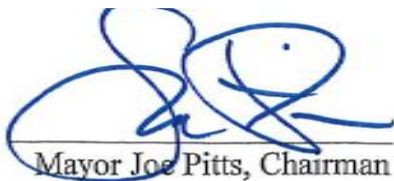
WHEREAS, Transportation Planning in the Clarksville Urbanized Area is based on the established planning factors and is hereby certified by the Clarksville Metropolitan Planning Organization as being in compliance with the requirements of 23 CFR part 450; and

WHEREAS, the locally developed Public Participation Plan has been followed in the development of the Transportation Improvement Program. This 30-day public review period began on September 30, 2019 and ended October 30, 2019. Said document was made available for review; and

WHEREAS, members of the Technical Coordinating Committee did recommend approval of the Final FY2020-FY2023 TIP and the associated CDR to the Executive Board;

NOW, THEREFORE, BE IT RESOLVED, that the Clarksville Urbanized Area Metropolitan Planning Organization's Executive Board recommends approval of the Final FY2020-FY2023 Transportation Improvement Program and the associated Conformity Determination Report of the Clarksville Urbanized Area Transportation Study.

Resolution Approval Date: October 31, 2019



Mayor Joe Pitts, Chairman

Clarksville Urbanized Area MPO

1.2 **FEDERAL LEGISLATION AND REGULATIONS:**

1.2a Federal Legislation:

The Fixing America's Surface Transportation (FAST) Act, was signed into law on December 4, 2015, and is the federal transportation legislation that replaces "Moving Ahead for Progress in the 21st Century Act" (MAP-21). Through the FAST Act, federal funding was provided for transportation programs for FY 2016 through FY 2020. The act continues to focus on performance based planning methods established in MAP-21. Certain funding programs were created or modified as a part of the FAST Act. For instance, Transportation Alternatives Program (TAP) funding was replaced by a set-aside of the Surface Transportation Block Grant (STBG) program funding for transportation alternatives (TA), and a new funding category has been created to advance major freight initiatives, the National Highway Freight Program (NHFP).

On December 4, 2015, President Obama signed into law the Fixing America's Surface Transportation Act, or "FAST Act." It was the first law enacted in over ten years that provides long-term funding certainty for surface transportation, meaning States and local governments can move forward with critical transportation projects, like new highways and transit lines, with the confidence that they will have a Federal partner over the long term. The law also makes changes and reforms to many Federal transportation programs, including streamlining the approval processes for new transportation projects, providing new safety tools, and establishing new programs to advance critical freight projects. The FAST Act requirements are codified in Title 23 of the United States Code (U.S.C.) and the implementing regulatory authority is reflected in Title 23 of the Code of Federal Regulations (CFR).

1.2b Statutes and Regulations:

Title 23, United States Code (U.S.C.): Establishes United States transportation laws governing the Federal-Aid Highway System.

Section 134 – Requires the designation of a metropolitan planning organization for each urbanized area with a population of 50,000 or more and that the metropolitan area have a continuing, comprehensive and cooperative (3Cs) transportation planning process.

Title 23, Code of Federal Regulations (CFR): Implements the provisions of federal law established under 23 U.S.C. relating to the administration of federal aid for highways.

Part 450 – Planning Assistance and Standards: Establishes the procedures for implementing the provisions of *23 U.S.C. 134*, including the development of plans and programs that must consider all transportation modes and support metropolitan community development and social goals.

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Title 49, United States Code: Creates the U.S. Department of Transportation and establishes its powers and duties along with the responsibilities of FHWA and FTA.

Section 5303 – Metropolitan Planning: Stipulates that the 3Cs transportation planning process required by *23 U.S.C. 134* be conducted in coordination with mass transportation operators to ensure that transportation plans and programs provide for the consideration of all modes of transportation, particularly mass transit, walking and bicycling.

Title 49, Code of Federal Regulations: Establishes and codifies the federal rules, regulations, requirements and provisions of *Title 49, U.S.C.*, including the federal transportation funds and funding programs administered by FHWA and FTA.

Part 613 – Planning Assistance and Standards: Establishes parallel metropolitan and statewide transportation planning and programming standards for FTA that mirror those established for FHWA in *23 CFR, Part 450*; and requires that the regulations in *23 CFR 450* be followed in the administration of FTA transportation planning and program funds.

1.2 **SELF-CERTIFICATION:**

The MPO and TDOT certifies, at least every four years, that the metropolitan planning process of the MPO is being carried out in accordance with all applicable requirements, per 23 CFR 450.334. On the next page is the self-certification of the MPO and TDOT, and is signed by the MPO's Executive Board Chairman and for TDOT, Ronnie Porter, Director of Program Development and Administration Division. On page 6 is the KYTC certification and is signed by the Kentucky Transportation Secretary.

**METROPOLITAN TRANSPORTATION PLANNING
PROCESS CERTIFICATION**

In accordance with 23 CFR 450.336, the Clarksville Urbanized Area Metropolitan Planning Organization and the Tennessee Department of Transportation hereby certify that the metropolitan transportation planning process is addressing major issues facing the Clarksville, TN-KY urbanized area, and is being carried out in accordance with the following requirements:

- I. 23 U.S.C. 134 and 135, 49 U.S.C. 5303 and 5304 (Highways and Transit).
- II. Title VI of the Civil Rights Act of 1964, as amended (42 U.S.C. 2000 d-1) and 49 CFR part 21.
- III. 49 U.S.C. 5332, prohibiting discrimination on the basis of race, color, creed, national origin, sex, or age in employment or business opportunity.
- IV. Section 1101 (b) of the FAST-ACT (Pub. L 114-357) and 49 CFR part 26 regarding the involvement of disadvantaged business enterprises in USDOT-funded projects.
- V. 23 CFR part 230, regarding the implementation of an equal employment opportunity program on Federal and Federal-aid highway construction contracts.
- VI. Provisions of the Americans with Disabilities Act of 1990 (42 U.S.C. 12101 et seq) and 49 CFR parts 27, 37, and 38.
- VII. In nonattainment and maintenance areas, sections 174 and 176 (c) and (d) of the Clean Air Act, as amended, 42 U.S.C. 7504, 7506 (c) and (d), and 40 CFR part 93.
- VIII. The Older Americans Act, as amended (42 U.S.C. 6101), prohibiting discrimination on the basis of age in programs or activities receiving Federal financial assistance.
- IX. Section 324 of Title 23 U.S.C. regarding the prohibition of discrimination based on gender.
- X. Section 504 of the Rehabilitation Act of 1973 (29 U.S.C. 794) and 49 CFR part 27 regarding discrimination against individuals with disabilities.

Signature: 
Print Name: Mayor Joe Pitts
Title: MPO Executive Board Chairman

Date: 10-31-19


Ronnie Porter
Director, TDOT Program Development &
Administration Division

Date: 10/30/19


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Transportation Planning Process Certification


In accordance with 23 CFR 450.334, Clarksville Metropolitan Planning Organization and the Kentucky Transportation Cabinet hereby certify that the transportation planning process is addressing the major issues in the metropolitan planning area and is being conducted in accordance with all applicable requirements:

(a) The State and MPO shall certify at least every four years that the metropolitan transportation planning process is being carried out in accordance with all applicable requirements including:

- (1) 23 U.S.C. 134, 49 U.S.C. 5303, and this sub-part;
- (2) Title VI of the Civil Rights Act of 1964, as amended (42 U.S.C. 2000d-1) and 49 CFR part 21;
- (3) 49 U.S.C. 5332, prohibiting discrimination on the basis of race, color, creed, national origin, sex, or age in employment or business opportunity;
- (4) Section 1101(b) of the FAST ACT (Pub. L. No. 114-94) and 49 CFR part 26 regarding the involvement of disadvantaged business enterprises in USDOT funded projects;
- (5) 23 CFR part 230, regarding implementation of an equal employment opportunity program on Federal and Federal-aid highway construction contracts;
- (6) The provisions of the Americans with Disabilities Act of 1990 (42 U.S.C. 12101 et. seq.) and 49 CFR parts 27, 37, and 38;
- (7) In States containing nonattainment and maintenance areas, sections 174 and 176 (c) and (d) of the Clean Air Act, as amended (42 U.S.C. 7504, 7506 (c) and (d)) and 40 CFR part 93;
- (8) The Older Americans Act, as amended (42 U.S.C. 6101), prohibiting discrimination on the basis of age in programs or activities receiving Federal financial assistance;
- (9) Section 324 of title 23 U.S.C., regarding the prohibition of discrimination based on gender; and
- (10) Section 504 of the Rehabilitation Act of 1973 (29 U.S.C. 794) and 49 CFR part 27 regarding discrimination against individuals with disabilities.


Mayor Joe Pitts, Chairman
Clarksville Urbanized Area MPO

10.31.19
Date


Greg Thomas
Secretary of Transportation

11/26/19
Date

1.3 STATEMENT OF NON-DISCRIMINATION:

The Clarksville MPO assures that no person shall on the grounds of race, color, national origin, or sex as provided by Title VI of the Civil Rights Act of 1964, and the Civil Rights Restoration Act of 1987 be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under any program or activity that receives federal assistance. The Clarksville MPO planning process includes compliance with the Americans with Disabilities Act (ADA) of 1990 which mandates equal opportunity for, and prohibits discrimination against, individuals with disabilities. The CUAMPO office is an Americans with Disabilities Act (ADA) of 1990 compliant building and on a transit route which is also ADA compliant. The MPO does provide accommodations to those with disabilities. The Clarksville MPO further assures every effort will be made to ensure nondiscrimination in all of its programs and activities, whether these programs or activities are federally funded or not. The Clarksville MPO will include Title VI nondiscrimination language in all written agreements and will monitor for compliance any governmental entity or contractor with which the MPO contracts and/or to which federal assistance funds are distributed.

The Americans with Disabilities Act (ADA) of 1990 requires transit systems to offer accessible fixed route service for people with disabilities. The ADA mandates that transit systems provide complementary paratransit service for those who cannot use accessible fixed route service because of their disability. In addition to CTS's fixed route transit service, which has been 100% accessible since 2004, special services for elderly and disabled persons are offered by CTS. CTS "The Lift" provides origin to destination demand responsive paratransit service and CTS goes beyond the ADA regulations by providing trips to people with disabilities that may live outside of the regular $\frac{3}{4}$ mile access zone surrounding fixed route services.

Executive Order 12898, Federal Action to address Environmental Justice (EJ) in minority and low-income populations, requires the US Department of Transportation (DOT) and the Federal Transit Administration (FTA) to make EJ part of the MPO's transportation planning mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of our programs, policies and activities on minority populations and/or low-income populations (collectively "EJ populations"). EJ includes incorporating environmental justice and non-discrimination principles into the Clarksville MPO's transportation planning and decision-making processes.

Executive Order 13166, "Improving Access to Services for Persons with Limited English Proficiency" requires government agencies to examine the services they provide, identify any need for services to those with limited English proficiency (LEP), and develop and implement a system to provide those services so LEP persons can have meaningful access to them. The MPO has a four-factor LEP plan to assist in communicating with all that want or need assistance. The MPO hired Language Line to interpret for the MPO and provides language cards to identify the language required. The MPO also has access to interpreters through the Clarksville Police department and sign language through the First Baptist church. The MPO follows the LEP guidance to ensure that the programs and activities normally provided in English are accessible to LEP persons and do not discriminate on the basis of national origin.

The Clarksville MPO Title VI Coordinator is Jill Hall. She can be reached at her email address: jill.hall@cityofclarksville.com. The Clarksville MPO Title VI Program can be found electronically at: <http://www.cuampo.com/files/Revised011019Clarksville%20MPO%20Title%20VI%20Plan.pdf>.

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1.4 NATIONAL GOALS:

The national goals of the Federal-aid highway program are prescribed in section 150 of title 23, United States Code, as follows:

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

The goal of the MPO is to strive to have a safe, reliable, well-maintained and sustainable, multimodal roadway system that provides access to freight and economic opportunities while protecting and enhancing the environment, and reducing emissions and congestion. This goal is achieved through performance-based planning and programming, studies, project prioritization, data collection, and travel demand model runs; along with upgrading traffic control features and ITS type projects.

1.5 FEDERAL PLANNING FACTORS:

The Clarksville MPO's transportation planning process takes into consideration the Federal planning factors in 23 U.S.C. Section 134 and Section 135. The metropolitan transportation planning process is carried out through a 3-C (continuous, cooperative, and comprehensive) planning process and provide for consideration and implementation of projects, strategies and services. There are ten factors that must be considered as part of this planning process for all metropolitan areas. These factors are consulted throughout the development of projects that are included in the

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Clarksville MPO's TIP. The ten factors that are to be considered in the metropolitan planning process, more specifically in the TIP development are:

- a. Support the economic vitality of the United States, the States, nonmetropolitan areas, and metropolitan areas, especially by enabling global competitiveness, productivity, and efficiency;
- b. Increase the safety of the transportation system for motorized and non-motorized users;
- c. Increase the security of the transportation system for motorized and non-motorized users;
- d. Increase the accessibility and mobility of people and freight;
- e. Protect and enhance the environment, promote energy conservation, improve the quality of life, and promote consistency between transportation improvements and State and local planned growth and economic development patterns;
- f. Enhance the integration and connectivity of the transportation system, across and between modes throughout the State, for people and freight;
- g. Promote efficient system management and operation;
- h. Emphasize the preservation of the existing transportation system.
- i. Improve the resiliency and reliability of the transportation system and reduce or mitigate storm water impacts of surface transportation; and
- j. Enhance travel and tourism.

The FAST Act continues to focus on performance-based planning established in MAP-21. The statewide and metropolitan planning process incorporates a more comprehensive performance - based approach to decision-making to support the national goals. Utilizing performance targets assists states and metropolitan areas in targeting limited resources on projects that will improve the condition and performance of their transportation assets. The MPO incorporates performance measures in their planning as they are set by TDOT and KYTC. The MPO uses and reviews data on crashes with serious injuries and fatalities, vehicle miles travelled and travel times as performance measures for safety and congestion. The MPO has requested assistance from TDOT to perform roadway safety audits based on these performance measures.

1.6 Regional Planning Priorities:

The planning priorities for the region are intended to facilitate the development, management and operation of an integrated, intermodal transportation system that enables the safe, efficient, and economical movement of people and goods. They are listed below:

- a. Implementation of the FAST Act:
 1. *Performance-based planning* – the development and implementation of a performance management approach to transportation planning and programming that supports the

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achievement of transportation system performance outcomes. The MPO incorporates performance management into its planning process through data collection and modeling and has chosen to support TDOT and KYTC performance measure targets.

2. *Expand Committees or Boards* – to include public ports and private transportation providers in the planning process. The MPO's TCC includes a representative from RJ Corman, a railroad group and Ft. Campbell Military Installation. All meetings are open to the public, and private stakeholders are encouraged to attend.
3. *Consider Climate Change in Planning Process* – consider projects/strategies to improve resilience and reliability of transportation system to mitigate storm-water and to enhance travel and tourism. The MPO works with the Regional Planning Commission and City and County engineers to coordinate land use and roadway development. The MPO promotes transportation policies, plans and programs for the reduction of climate- changing greenhouse gas emissions through air quality public awareness campaigns and supporting multimodal initiatives for transit, rail, car-pooling and alternate fuels.

b. Regional Models of Cooperation:

Ensure a regional approach to transportation planning by promoting cooperation and coordination across transit agency, MPO and state boundaries.

1. *Incorporate Joint Goals* – Incorporate goals for project delivery, congestion management, safety, freight, livability and commerce that are common to Transit, MPO and State into planning process. The MPO is a member of the Freight Advisory Board in Tennessee and a member of the Southeast Diesel Collaborative for air quality and congestion issues.
2. *Planning Agreements* – to ensure that effective processes for cross-jurisdictional communication exist. The MPO works cooperatively with the Nashville MPO on regional transportation issues in Middle Tennessee; working with TDOT and KYTC on a Bi-State MOA; and shares information and attends meetings with the Pennyrlie Area Development District (PADD) in Hopkinsville, KY.
3. *ITS Architecture* – Updated in 2015 and collaborated with partners (States, Transit, MPO) to ensure compatibility. ITS assist in monitoring traffic, responding quickly to accidents by dispatching emergency services and informing travelers about travel conditions. The ITS helps to alleviate traffic congestion and reduce accidents, pollution and carbon-dioxide emissions. The ITS is consistent with the federal planning factors as it improves safety, security, mobility, accessibility and promotes efficient system management and operations.

c. Ladders of Opportunity:

Access to essential services (employment, health care, schools/education and recreation) as part of the transportation planning process and identify transportation connectivity gaps of these essential services.

1. *Identify Criteria* – for underserved populations (low income, minorities, elderly, LEP, disabled) and essential services (health care, schools, supermarkets, employment centers, voting/polling places, courthouses, recreational areas, motor vehicle depts.). This was provided in the development of the 2045 MTP.

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2. *Map existing connectivity.* This was provided in the development of the 2045 MTP.
3. *Identify gaps in connectivity and create solutions* – develop and implement analytical methods to identify gaps in connectivity in existing and developing transportation system and potential solutions. This was provided in the development of the 2045 MTP.
4. *Participation Plans* – evaluate the effectiveness of Participation Plans for engaging disadvantaged communities in the decision making process. This is evaluated yearly for any needed changes to the Plan to better serve our disadvantaged communities.
5. *Coordinated Human Service Public Transportation Plan* – evaluate the effectiveness of the coordinated plan for meeting the transportation needs of individuals with disabilities, older adults, and individuals with limited incomes. This was developed through a consultant hired and funded by TDOT for the Clarksville MPO and Nashville MPO.
6. *Bike/Pedestrian Facilities* – assess the safety and condition of bike/pedestrian facilities. The MPO performed a sidewalk study and assessed the connectivity and needs throughout the MPO area.
7. *ADA Transition Plans* – evaluate compliance with ADA, particularly around schools, concentrations of disadvantaged populations, social services, medical, and transit facilities. The MPO encourage municipalities in its planning area to develop an ADA Transition Plan.
8. *EJ and Title VI* – evaluate the funding spent and the number of projects in these areas for planning documents. The Transit system has all of its routes reviewed to ensure that the EJ areas are reached. An EJ assessment, using the 2010 Census data, was made to identify the demographics of the MPO area in order to recognize potential communities of concern. An evaluation was done on the distribution of projects and their impacts to these communities so that neither the minority nor low-income populations in the MPO area will experience disproportionate impacts due to the projects proposed within the 2045 MTP. The majorities of MPO projects are state routes, safety concerns or congested main thoroughfares.

1.7 PERFORMANCE MEASURES:

A key feature of MAP-21 was the establishment of a performance- and outcome-based program, the objective of which is to invest resources in projects that collectively will make progress toward national goals. MAP-21 requires state Departments of Transportation, Metropolitan Planning Organizations and transit authorities to set coordinated targets, report on a required set of performance measures, and prioritize projects using a coordinated performance-based planning process. The FAST Act, signed into law in 2015, continues MAP-21's overall performance management approach.

In accordance with 23 CFR 450.326, the MPO, in cooperation with State(s) and affected public transit operators, shall develop a transportation improvement program (TIP) for the metropolitan transportation area. A TIP shall include, to the maximum extent practicable, a description of the anticipated effect of the TIP toward achieving the performance targets identified in the metropolitan

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Transportation plan, linking investment priorities to those performance measures. Five Transportation Performance Management final rules have been released by the Federal Highway Administration and the Federal Transit Administration and are in effect. Each final rule lists the required measures, data sources, and calculation procedures. The final rules include:

- Highway Safety Improvement Program, known as PM1 (81 FR 13881, 23 CFR 490) establishes safety performance measure requirements for the purpose of carrying out the Highway Safety Improvement Program (HSIP) and to assess fatalities and serious injuries on all public roads.
- Assessing Pavement Condition for the National Highway Performance Program and Bridge Condition for the National Highway Performance Program, known as PM2 (82 FR 5886, 23 CFR 490)
- Assessing Performance of the National Highway System, Freight Movement on the Interstate System, and Congestion Mitigation and Air Quality Improvement Program (CMAQ), known as PM3 (82 FR 5970, 82 FR 22879, 23 CFR 490)
- Transit Asset Management (81 FR 48889, 49 CFR 625, 49 CFR 630)
- Public Transportation Agency Safety Plan (PTASP) Rule (49 CFR Part 673)

Federal performance measure final rules establish deadlines for target setting and reporting for each of the required performance measures. For the measures identified in each final rule, MPOs are required to include adopted targets, baseline performance measures, and progress toward the targets in TIPs adopted two years after the effective date of the final rule. The five performance measure final rules currently effective were established at different times; and therefore, have different target-setting and implementation deadlines, as seen in Figure 1. All five performance targets were amended and/or adjusted into the previous TIP. Performance measures also played an integral role in project selection and prioritization in the development of the 2045 MTP. Federal regulations mandate that projects and programs in the FY2020-FY2023 TIP must be in the 2045 MTP. The performance measures presented in this section are discussed throughout the 2045 MTP. This demonstrates how the performance measures apply to and are integrated into the planning processes and project selection efforts, and the MPO's commitment to a performance-based transportation planning process. The MPO chose to support the performance targets set by TDOT and KYTC.

Figure 1: Federally Required Performance Measure Implementation Schedule

Final Rule Effective		Target Setting Deadlines			Required to be Included in TIPs
	Date	Provider	State	MPO	
Safety (PM1)	4/14/2016	N/A	8/31/2017	2/27/2018	4/14/2018
Pavement and Bridge Condition (PM2)	5/20/2017	N/A	5/20/2018	11/16/2018	5/20/2019
System Performance/Freight/CMAQ (PM3)	5/20/2017	N/A	5/20/2018	11/16/2018	5/20/2019
Transit Asset	10/01/2016	01/01/2017	10/01/2017	12/27/2017	10/01/2018
Public Transportation Agency Safety Plan (PTASP)	07/19/2019	07/20/2020	07/20/2020	07/20/2020	07/20/2020

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Adopted Performance Measures:

- Safety (PM1)

The Safety performance measure final rule includes five measures related to the safety of the transportation system. The measures are all five-year rolling averages:

1. The number of fatalities
2. The rate of fatalities per 100 million vehicle miles traveled
3. The number of serious injuries
4. The rate of serious injuries per 100 million vehicle miles traveled
5. The number of non-motorized fatalities and non-motorized serious injuries

The MPO agrees that even one death on the transportation system is unacceptable. Subsequently, the MPO staff plan to work with regional and State partners to develop projects, programs, and policies that assist in eliminating serious injuries and fatalities across all modes of travel. That being said, the MPO recognizes the need to set realistic targets needed to work toward the ultimate goal of zero fatalities. To this end, the MPO plans to work closely with the TDOT and KYTC to support annual targets for each of these measures. The MPO prioritizes projects and makes financial investments for projects based on its planning, modeling and analysis of data in the MPO area, and monitoring the planning efforts in order to support the performance measure targets.

One desired outcome of performance-based planning is constant quality improvement in project selection and delivery with respect to meeting national goals. If a particular project did not help the plan meet its stated goals, or was more effective than originally thought, that information can inform future decision-making. Done properly, performance-based planning not only improves project selection and prioritization, it also establishes the importance of the work performed and the information and data provided in the 2045 MTP.

All projects utilizing federal funding in the TIP are sourced from the 2045 MTP. These projects were subject to a project selection criteria ranking system, through utilization of a variety of quantitative measures, modeling, evaluation of state performance targets, as well as staff analysis. Safety and Security is a primary evaluation category for projects evaluated by the MPO and included in both the MTP and TIP. Additionally, the safety criterion is intended to measure the potential improvements to public safety that the proposed project will provide. Information required for scoring projects under this criterion includes crash rates, crash severity, safety design, pedestrians and bicycle safety, and other general safety problems in accordance with TDOT and KYTC policies and procedures. The greater the potential improvement to overall transportation safety is, the higher the score for the potential project. Based on this, the program of projects and investment priorities included in the TIP prioritize a reduction in serious and fatal crashes in the MPO planning area. The impacts of the TIP program support achievement of the state's safety performance measures targets, and can contribute to a further reduction of fatalities and serious injuries by prioritizing a reduction in these averages throughout the MPO region. When the data shows a safety concern along a roadway or intersection, the MPO request a roadway safety audit from TDOT to be performed. Through cooperation between TDOT, local agencies and the MPO safety projects receive funding.

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Figure 2: PM1 Safety Performance Measure Targets: FY 2020

SAFETY PERFORMANCE MEASURES	KYTC Baseline 2014- 2018	KYTC 2020 Target	TDOT Baseline 2014-2018	TDOT 2020 Target
Number of Fatalities	754.6	754	1,006.2	1,043.4
Fatality Rate	1.541	1.5	1.294	1.256
Number of Serious Injuries	3039.0	2,706	6988.8	6352.4
Serious Injury Rate	6.211	5.4	9.016	7.690
Number of Non-motorized Fatalities and Serious Injuries	287.6	287	499.0	527.2

- **Bridge and Pavement (PM2)**

Existing federal statutes and regulations now require that each state Department of Transportation (DOT) and each MPO establish performance targets to assess and monitor the condition of pavements and bridges on the National Highway System including the Interstate System. The MPO has chosen to support TDOT's and KYTC's performance targets for PM2. The bridge and pavement targets place greater emphasis on transportation system preservation and asset management. Asset management can generally be defined as a strategic process to maintain and replace assets in a desired state of good repair over their lifecycles at a minimum practicable cost. The City and County work to maintain and preserve the roadways through paving and preventive maintenance of the roadway and bridges. TDOT's state routes in the MPO area are on a rotational scheduling for paving. Each of these efforts strives to reach the performance measure targets.

Figure 3: PM2 Bridge and PM2 Pavement Performance Measures Targets:

Pavement Performance	TDOT Baseline	TDOT 2 year Target	TDOT 4 year Target	KYTC Baseline	KYTC 2 year Target	KYTC 4 year Target
% Good Interstate	75.6%	N/A	60.0%	N/A	N/A	50.0%
% Poor Interstate	0.14%	N/A	1.0%	N/A	N/A	3.0%
% Good Non-Interstate NHS	44.8%	42.0%	40.0%	78.9%	35.0%	35.0%
% Poor Non-Interstate NHS	3.24%	4.0%	4.0%	4.3%	6.0%	6.0%
NHS Bridge Performance						
% Good Condition by Deck Area	39.5%	36.0%	36.0%	34.8%	35.0%	35.0%
% Poor Condition by Deck Area	4.9%	6.0%	6.0%	3.8%	3.7%	3.2%

The national performance measures for pavement established in the final rule are the percentage of pavements of the Interstate System and the Non-Interstate NHS in "good" or "poor" condition as defined in the regulations. Pavement conditions will be assessed based on the International Roughness Index, cracking, rutting, and faulting using established Highway Performance Management System methodologies. The regulations have also established a minimum level that stipulates that the percentage of lane miles on the Interstate System in "poor" condition cannot exceed 5 percent. If the

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Federal Highway Administration (FHWA) makes a determination that a state DOT has not made "significant progress" toward meeting the minimum level or its adopted targets for NHS pavement conditions, the state DOT may be subject to fiscal penalties that would require it to obligate and transfer portions of its federal aid highway apportionments to meet these performance requirements.

The national performance measures for bridges (including ramps and culverts) established in the final rule are the percentage of NHS bridges classified in "good" or "poor" condition as defined in the regulations. Bridge conditions will be classified using established National Bridge Inventory ratings for the bridge deck (also referred to as the road bed, but may also include walkway and rail crossings) and the bridge support system (also referred to as the bridge superstructure and substructure). Federal regulations have also established a "minimum level" that stipulate that not more than 10 percent of the total deck area of the NHS bridges in a state can be classified as structurally deficient (i.e., poor or worse condition). If FHWA makes a determination that a state DOT has not made "significant progress" towards meeting the "minimum level" or its adopted targets for NHS bridge conditions, the state DOT may be subject to penalties that would require it to obligate and transfer portions of its federal-aid highway apportionments to meet these performance requirements.

- System Performance (PM3)

Observing the current performance of the roadway system is an important component of assessing the system's needs and planning for its future. Despite efforts to reduce roadway congestion, the region's rapid growth and increasing population and limited transportation funding may make congestion worse despite the improvements being recommended in the 2045 MTP and the projects listed in the 2020-2023 TIP as well as future TIPs. While all congestion has social, economic, and environmental impacts, congestion that is inconsistent and difficult to predict has greater impacts than congestion that can be readily anticipated. With this in mind, federal performance final rules related to congestion have tended to focus on the reliability and predictability of travel as opposed to absolute measures of congestion. Reliability is a measure of the variability of travel times. When a system is reliable, it means people and goods get to their destinations on-time, nearly every time and are addressed by the following required measures:

1. Percent of person miles traveled on the Interstate System that are reliable
2. Percent of person miles traveled on the Non-Interstate National Highway System that are reliable

Both measures are primarily calculated using the National Performance Management Research Dataset (NPMRDS).

The PM3 rulemaking also directly addresses freight movement with a required Truck Travel Time Reliability Index measure in the System Performance (PM3) rulemaking. As with the Interstate/Non-Interstate Reliability measures, this measure is primarily calculated using the NPMRDS.

Three of the performance measures required by the PM3 performance measure final rule evaluate the effectiveness of the Congestion Mitigation and Air Quality Improvement Program, including:

1. Annual Hours of Peak Hour Excessive Delay Per Capita
2. Percent of Non-Single Occupant Vehicle (SOV) Travel
3. Total Emissions Reductions

Peak Hour Excessive Delay measure recognizes that excessive congestion can have a detrimental impact on air quality. As with the travel time reliability and freight measures, this measure is primarily calculated using travel time data from the NPMRDS. As defined in the final rule, excessive delay is extra time spent in congested conditions where speed thresholds are lower than a normally

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expected delay threshold. The MPO chose to support TDOT's and KYTC System Performance (PM3) targets. The PM3 targets are listed in Figure 4 below:

Figure 4. PM3 System Performance Measures Targets:

Measure:	TDOT Baseline	TDOT 2 year Target	TDOT 4 year Target		KYTC 2 year Target	KYTC 4 year Target
Interstate Travel Time Reliability	87.7%	85.3%	83.0%		93.0%	93.0%
Non-Interstate NHS Travel Time Reliability	N/A	N/A	87.5%		N/A	82.5%
Truck Travel Time Reliability Index	1.35%	1.35%	1.33%		1.25%	1.25%
Peak Hours Excessive Delay (PHED) Per Capita	N/A	N/A	18.81%		N/A	12.0%
% Non-SOV Travel	16.6%	16.5%	16.5%		17.4%	17.4%
Total Emissions Reduction	VOC=230.025 CO=530.282 NOx=363.399 PM2.5=2.897	VOC=30.698 CO=75.000 NOx=62.840 PM2.5=0.120	VOC=61.396 CO=150.000 NOx=125.680 PM2.5=0.240		VOC= 100 NOx= 200	VOC= 200 NOx= 200

On October 18, 2018, the Executive Board of the Clarksville MPO voted unanimously to support the PM2 Pavement and Bridge performance targets, and PM3 System Performance measure targets established by the Tennessee Department of Transportation and the Kentucky Transportation Cabinet for each state's respected portion of the metropolitan planning area. This action fulfilled the aforementioned requirements related to PM2 and PM3 performance measure target setting established under MAP-21 and the FAST Act. These targets are found in Figure 3 and Figure 4 above.

By agreeing to support each state's PM2 and PM3 targets, the Clarksville MPO agrees to:

- Plan and program projects so that they contribute towards the accomplishment of each State's PM2 and PM3 targets.
- Work with each State to address areas of concern on the infrastructure/roadway system within the metropolitan planning area.
- Coordinate with the State and include the PM2 and PM3 targets in the MTP.
- Integrate into the metropolitan transportation planning process, the goals, objectives, performance measures and targets PM2 and PM3.
- Include a description in the TIP of the anticipated effect of the TIP toward achieving PM2 and PM3 targets in the MTP, linking investment priorities in the TIP to those PM2 and PM3 targets (Shown in Section 4 for all performance measures).

- Transit Asset Management

Public transportation provides thousands of people in the Clarksville MPO's planning area with daily access to life-essential resources and opportunities. It is critical to have well maintained, reliable transit assets to help ensure safe, dependable, and accessible transit services. Transit asset management (TAM) is a business model that prioritizes funding based on the condition of transit assets to achieve or maintain transit networks in a state of good repair. TAM supports a series of practices to achieve a

transit state of good repair including, but not limited to:

- Regular maintenance
- Inspections

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- Tracking asset condition over time
- Planning for maintenance and replacement costs
- Replacing each asset at the appropriate time

Based on the federal performance measure final rule on TAM issued in July 2016, MPOs are required to coordinate with transit providers to set performance targets, and integrate individual transit providers' performance targets and TAM plans into planning documents.

The MPO coordinated with the Clarksville Transit System (CTS) during the development of their respective TAM plans. CTS chose to use the FTA's default useful life benchmark (ULB) for FY2019. CTS will evaluate whether to use FTA defaults for ULB or set their own ULB for future years. CTS has concerns with the default ULB for the Cutaways and Vans due to their high mileage.

CTS submitted agency-level targets to the MPO staff. Their targets reflect the agency's most recent data available on the number, age and condition of their assets, and their expectations and capital investment plans for improving these assets in FY2019. The MPO staff used the CTS TAM targets as their targets, and agrees to plan and program projects that contribute toward the accomplishment of the transit agency's targets.

Broader coordination efforts will be undertaken between the MPO staff and CTS to inventory and monitor the condition of their transit assets and to evaluate progress made during FY2020 with respect to performance targets. The MPO staff worked with CTS, TDOT and KYTC to establish methods and identify data needed for the MPO to examine transit funds that are proposed for programming in the TIP in the context of TAM targets. The goal of these processes is to generate information to support the MPO's TIP. The Clarksville MPO anticipates meeting the identified TAM targets with a variety of transit projects included in the FY2020-FY2023 TIP.

Figure 5. CTS TAM Performance Measure Targets:

Asset Class/ ULB	NTD REPORTING YEAR FY- 2018			PERFORMANCE TARGET YEAR FY- 2019		
	Number of Assets in State of Good Repair (Current Year)	Number of Assets in SGR Backlog	Percent of Assets in State of Good Repair Backlog	Assets in State of Good Repair (Target Year)	Assets in SGR Backlog (Target Yr)	Performance Target (% in Backlog)
Rolling Stock State of Good Repair (SGR)						
BU Bus/ 14 years	12	0	0.00%	12	0	0.00%
CU Cutaway/ 10	4	0	0.00%	7	0	0.00%
MV Minivan / 8 years	2	0	0.00%	2	0	0.00%
RT Rubber-tired vintage trolley/8	0	0	0.00%	0	0	0.00%
VN Van/ 8 years	7	0	0.00%	7	0	0.00%
Facilities:						
Admin-Maintenance /40yrs	4	0	0.00%	4	0	0.00%
Transit Station/40yrs	1	0	0.00 %	1	0	0.00%
Equipment State of Good Repair (Support Vehicles Only)						
AO Automobile/8yrs	11	6	35.29%	13	4	23.53%

CTS reviewed and ranked their assets based on the useful life benchmarks listed in Figure 6. In Figure 7 each transit asset is listed by its ID# and its ranking to better understand the future needs for CTS.

Figure 6. Ranking Criteria for CTS Assets:

Scoring	Ranking Criteria for Transit Assets	
ULB	Useful Life Benchmark	
5	Excellent	No visible defects, new or near new condition, still under warranty
4	Good	Good, but no longer new, may have slight defects or deteriorations, but is overall functional
3	Adequate	Moderately defective or deteriorated, but has not exceeded useful life
2	Marginal	Defective or deteriorated, in need of replacement, exceeded useful life
1	Poor	Critical damage or in need of immediate repair, well past useful life

Figure 7. CTS Assets and Condition based on the ULB:

Figure 1: Assets and Condition based on the UBL

FACILITIES TYPE:		CONDITION		ID#	ROLLING STOCK VEHICLE TYPE	CONDITION
Administrative/Maintenance	Adequate	709		BU Bus	Poor	
Administrative/Maintenance	Adequate	719-724		BU Bus	Marginal	
Administrative/Maintenance	Adequate	725-730		BU Bus	Adequate	
Administrative/Maintenance	Adequate	731-737		BU Bus	Good	
Passenger/Parking	Adequate	738-742		BU Bus	Excellent	
ULB = 3.0 average	Adequate	T2-T3		RT Rubber-tired vintage trolley	Poor	
ID#	VEHICLE TYPE:	CONDITION	531-532	MV Minivan	Adequate	
109	Non-Revenue/Service Automobile	Poor	533	VN Van	Adequate	
103	Non-Revenue/Service Automobile	Adequate	534	CU Cutaway	Adequate	
100-101	Non-Revenue/Service Automobile	Adequate	535-537	CU Cutaway	Good	
105	Non-Revenue/Service Automobile	Poor	538-543	VN Van	Good	
112-113	Non-Revenue/Service Automobile	Poor	603-604	VN Van	Poor	
114	Non-Revenue/Service Automobile	Good				
116	Non-Revenue/Service Automobile	Excellent				
117	Non-Revenue/Service Automobile	Adequate				
118-120	Non-Revenue/Service Automobile	Excellent				
121	Non-Revenue/Service Automobile	Adequate				
122-123	Non-Revenue/Service Automobile	Excellent				
124	Non-Revenue/Service Automobile	Good				
125-127	Non-Revenue/Service Automobile	Excellent				
	ULB = 3.6 average	Adequate/Good		UBL = 3.25 average	Adequate	

Public Transportation Agency Safety Plan (PTASP)

- PTASP rule is effective July 19, 2019.
- Transit operators must certify their safety plan meeting requirements by July 20, 2020.

Final Rule: July 19, 2018

The MPO recognizes the continued population growth and the financial constraints of funding resources that are needed to sustain the growth. By continuing to evaluate and monitor the region's

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transportation system using a performance-based planning process, the MPO can ensure that the most beneficial and effective projects and programs are implemented.

1.8 PLANNING HORIZON:

The FY2020-FY2023 TIP is the MPO's short-term programming document that list four years of funded transportation projects. The TIP identifies and tracks federally funded and regionally significant transportation projects over a four-year period. The federal fiscal year is from October 1st through September 30th. The proposed TIP has a time frame from October 1, 2019 through September 30, 2023. The proposed TIP will go into effect once it is adopted by the MPO Executive Board and approved by State and Federal agencies.

The previous TIP had a four year planning horizon from FY2017 through FY2020. It was adopted on October 20, 2016. The next TIP to be developed after the FY2020-FY2023 will have an anticipated planning horizon for four years from FY2023 through FY2026 and will have a development cycle beginning in FY2022 and be completed during the first quarter of FY2023.

The TIP is a necessary link between the planning process and implementation of plans. The 2045 Metropolitan Transportation Plan (MTP) and the TIP are separate documents, but the TIP is the tool by which the plan is implemented. The 2045 MTP has a horizon of 26 years and was adopted on January 17, 2019. The TIP projects come from recommendations in the 2045 MTP. The 2045 MTP is a long-range plan that focuses on multi-modal transportation needs within the MPO area and serves as the basis for the planning needs and decision making guidelines for the MPO Executive Board.

1.9 PLANNING AREA:

The planning area of the Clarksville MPO comprises a total of approximately 574 square miles incorporating the cities of Clarksville, Tennessee and Oak Grove, Kentucky, Montgomery County, portions of Christian County and a portion of the City of Hopkinsville, Kentucky.

Figure 8 - Clarksville MPO Area

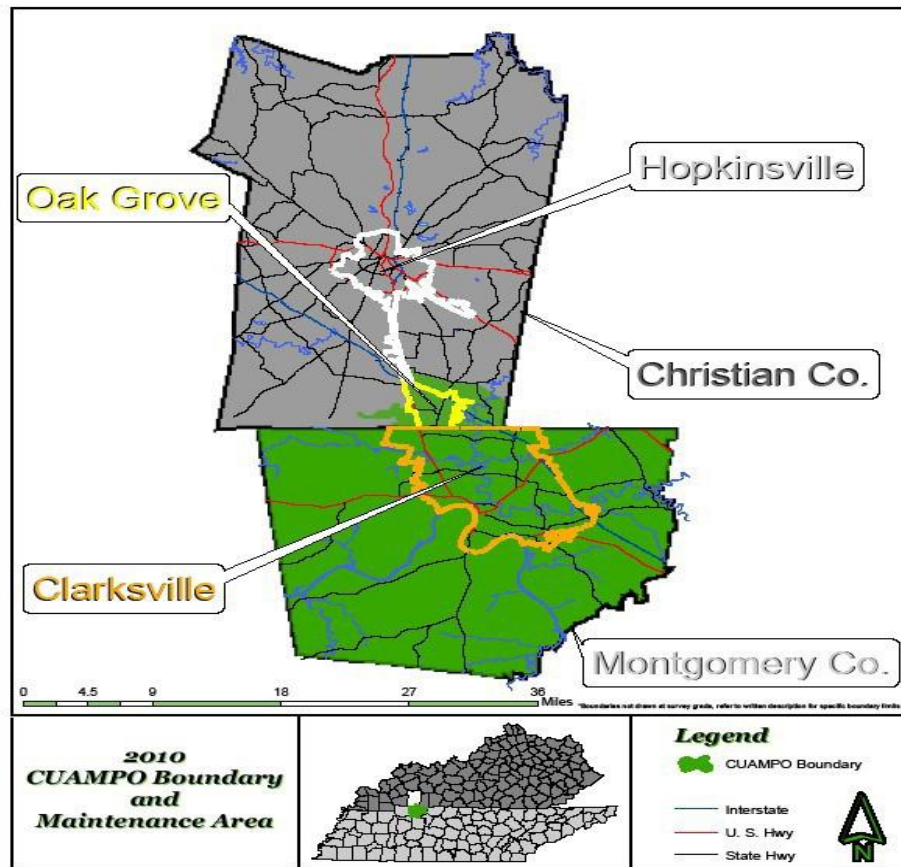


FIGURE 8: Orange Outline Area: Clarksville City Limits Yellow Outline Area: Oak Grove City Limits White Outline Area: Hopkinsville City Limits

1.10a MPO ADJUSTED URBANIZED AREA:

The 2010 Census designated an urbanized area of 109.57 square miles within the MPO planning area. The Clarksville MPO Adjusted Urbanized Boundary has 136 square miles of urbanized area within the MPO planning area, as shown in the map below. The MPO Executive Board adopted the urbanized area adjustments in Tennessee and in Kentucky on April 17, 2014. FHWA-TN approved the adjustment on June 16, 2014 and FHWA-KY approved the adjustment on September 8, 2014. The MPO made a second urbanized area adjustment in the Tennessee portion. It was adopted by the Executive Board on November 6, 2014 and approved by FHWA-TN on February 24, 2015. The MPA was changed in the Kentucky portion only and was adopted by the Executive Board on January 15, 2015 and received the Kentucky Governor's approval on January 29, 2015.

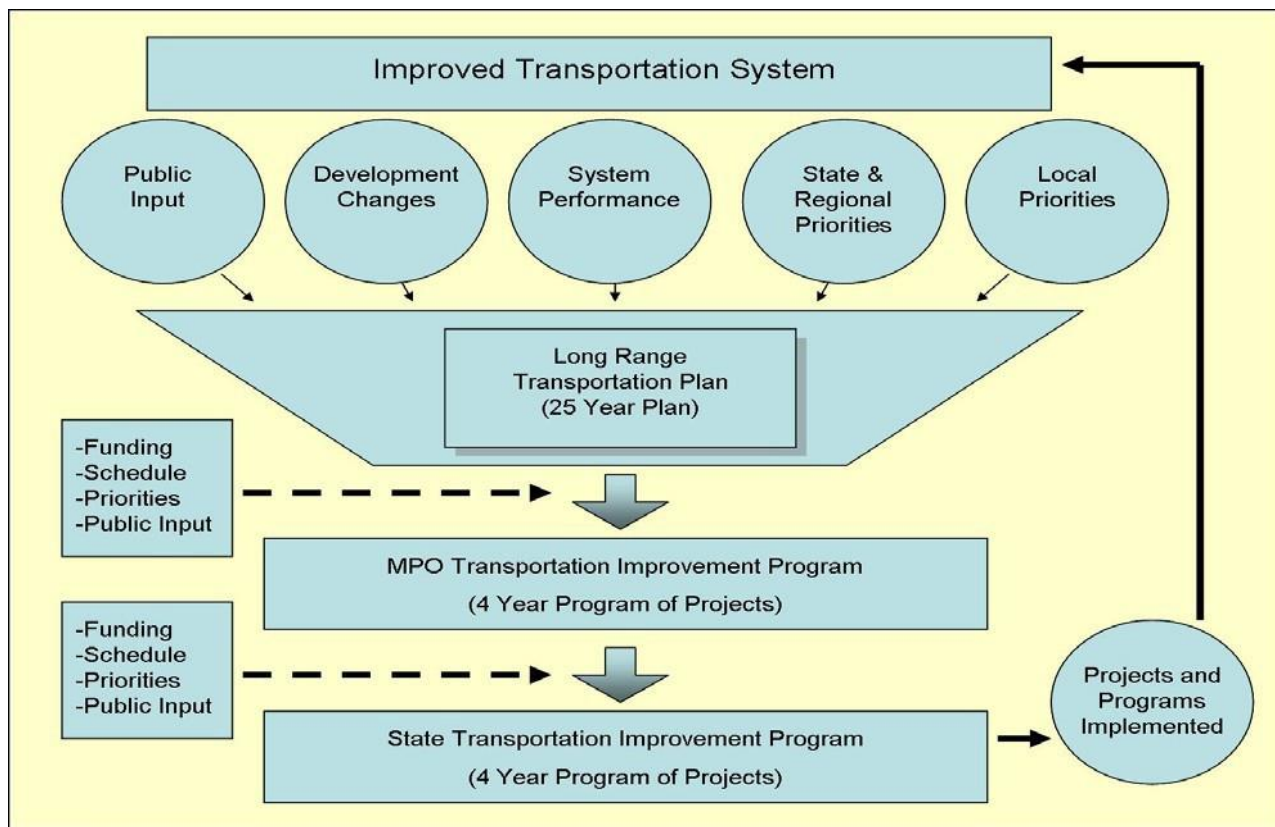
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The TIP is a fiscally constrained programming document that details a 4-year budget of transportation projects, which uses federal, state, and/or local funds. It is developed and adopted at least every four years by the MPO in response to the transportation needs for all modes of transportation (roadways, bikeways, pedestrian facilities and transit) within the Clarksville MPO area. All projects that are funded with federal funds, either under Federal Highway Administration Title 23 U.S.C. or the Federal Transit Act, must be included in the TIP, as well as projects that do not use federal funds but are considered regionally significant.

1.11b MPO TIP and STIP Relationship:

Just as each MPO is required to develop a TIP, each state is required to compile a Statewide Transportation Improvement Plan (STIP) as a requirement of federal regulations. The STIP includes all federally funded transportation projects from throughout the state. In Tennessee and in Kentucky, the MPO TIPs are included in the STIP once adopted by the MPO Executive Board and approved by FHWA and FTA. The Kentucky Transportation Cabinet (KYTC) and Tennessee Department of Transportation (TDOT) STIPs are then submitted to the Federal Highway Administration and the Federal Transit Administration for official approval. Projects must be in the STIP before funding authorities, such as FHWA, FTA, TDOT and KYTC can obligate or commit monies to contracts. Figure 10 illustrates the relationship of the TIP to the overall planning process within the MPO area.

Figure 10 - Transportation Improvement Program Development Process



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1.11c Funding Sources:

FAST Act legislation identifies a number of different funding programs which can be used for various modes, such as highway, transit, pedestrian and bicycle facilities. MAP-21 made bicycle facilities and pedestrian walkways eligible expenses under the National Highway Performance Program, the Surface Transportation Program, the Highway Safety Improvement Program and the Congestion Mitigation Air Quality Improvement Program. These funding programs are listed in Figure 11 and described below.

National Highway Performance Program (NHPP) - provides support for the condition and performance of the National Highway System (NHS), for the construction of new facilities on the NHS, and to ensure that investments of Federal-aid funds in highway construction are directed to support progress toward the achievement of performance targets established in a State's asset management plan for the NHS.

Surface Transportation Block Grant Program (STBG) - remains the federal-aid highway program with the broadest eligibility criteria. Funds are used on any federal-aid highway, on bridge projects on any public road, on transit capital projects on non-motorized paths, and on bridge and tunnel inspection and inspector training. The FAST Act eliminated MAP-21 Transportation Alternative Program (TAP) and replaced it with a set-aside of Surface Transportation Block Grant program funding for transportation alternatives (STBG-TA).

- a. Transportation Alternatives (TA) - provides funding for programs and projects defined as transportation alternatives, including on- and off-road pedestrian and bicycle facilities, infrastructure projects for improving non-driver access to public transportation and enhanced mobility, community improvement activities, and environmental mitigation; recreational trail program projects; safe routes to school projects; and projects for planning, designing, or constructing boulevards and other roadways largely in the right-of-way of former interstate system routes or other divided highways.

Highway Safety Improvement Program (HSIP) – supports projects that improve the safety of road infrastructure by correcting hazardous road locations or feature or address a highway safety problem. This includes: installation of vehicle to infrastructure communication equipment; pedestrian hybrid beacons; roadway improvements that provide separation between pedestrians and motor vehicles, including medians and pedestrian crossing islands and other physical infrastructure projects not specifically enumerated in the list of eligible projects.

- a. Penalty Highway Safety Improvement Program (PHSIP) - are funds that TDOT receives annually for Tennessee not having a conforming Open Container Law. These funds must be used for HSIP eligible activities.

Railway-Highway Crossings Program – This program funds safety improvements to reduce the number of fatalities, injuries, and crashes at public grade crossings. Title 23, Part 924 of the Code of Federal Regulations (23 U.S.C. 130)

Congestion Mitigation and Air Quality Improvement Program (CMAQ) - provides funding for projects and programs in air quality nonattainment and maintenance areas for ozone, carbon monoxide (CO), and particulate matter (PM-10, PM-2.5) which reduce transportation related emissions. [23 U.S.C. 149(a)].

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National Highway Freight Program (NHFP) – improves the efficient movement of freight on the National Highway Freight Network and support several goals.

The Federal Lands Access Program (FLAP) - provides funds for projects on Federal Land's access transportation facilities that are located on or adjacent to, or that provide access to Federal lands. [23 U.S.C. 201, 204]

Highway Infrastructure Program (HIP) – provide flexible funding to address State and Local transportation needs through the construction of highways, bridges, tunnels, including designated routes of the Appalachian development highway system and local access roads under Section 14501 of Title 40.

Federal Transit Administration Section 5307 (5307) - This program makes Federal resources available to urbanized areas and to Governors for transit capital and operating assistance in urbanized areas and for transportation related planning. Eligible purposes include planning, engineering design and evaluation of transit projects and other technical transportation-related studies; capital investments in bus and bus-related activities such as replacement of buses, overhaul of buses, rebuilding of buses, crime prevention and security equipment and construction of maintenance and passenger facilities; and capital investments in new and existing fixed guide way systems including rolling stock, overhaul and rebuilding of vehicles, track, signals, communications, and computer hardware and software. All preventive maintenance and some Americans with Disabilities Act complementary paratransit service costs are considered capital costs.

Federal Transit Administration Section 5339 (5339) - Provides capital funding to replace, rehabilitate and purchase buses and related equipment and to construct bus-related facilities.

Federal Transit Administration Section 5310 (5310) - This program provides formula funding to States for the purpose of assisting private non-profit organizations, governmental authorities that certify to the chief executive officer of a State that no non-profit corporations or associations are readily available in an area to provide the service, and governmental authorities approved by the State to coordinate services for elderly individuals and individuals with disabilities in meeting the transportation needs of the elderly and persons with disabilities when the transportation service provided is unavailable, insufficient, or inappropriate to meeting these needs. Funds are apportioned based on each State's share of population for these groups of people.

Urban Operating Assistance Program (UROP) - This State funded program is intended to supplement other available operating funds for urban transit agencies.

Funds Assigned to Projects under SAFETEA-LU/MAP-21:

Federal High Priority Program (HPP) – This program contains earmarked funds. These projects are detailed in SAFETEA-LU or are specified by Congress. These projects have an HPP or DEMO project number associated with them on the TIP project pages and in the funding tables.

Safe Routes to School (SRTS) – The program provides funds to improve the ability of primary and middle school students to walk and bicycle to school safely. A project in the TIP

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still has SRTS funds assigned. Future projects will be under the Transportation Alternative (STBG-TA) under the FAST Act.

Federally Funded Kentucky Discretionary Program (KYD) – This program represents Congressional earmarks, usually at an 80/20 ratio, for projects identified through the annual federal appropriations process.

Figure 11: Transportation Improvement Program Funding Sources:

Highway System Funding Programs	Project Initiation	Funding Source	Match Ratio
National Highway Performance Program (NHPP)	State DOT/ Cabinet	Federal State	80% 20%
Surface Transportation Block Grant Program (STBG) (State or Local Allocation)	State DOT/ Cabinet or Local Government	Federal State/Local	80% 20%
Surface Transportation Block Grant for Transportation Alternatives (STBG-TA)	Local Government	Federal Local	100%, 80% 0%, 20%
Highway Safety Improvement Project(HSIP)	State DOT/Cabinet or Local Government	Federal Local/State	90% 10%
Railway-Highway Crossing Program (set-aside from HSIP-R)	State DOT/ Cabinet	Federal State	80% 20%
Congestion Mitigation and Air Quality Improvement Program (CMAQ)	Local Government	Federal Local	80% 20%
National Highway Freight Program (NHFP)	State DOT/ Cabinet	Federal State	80% 20%
Federal Land Access Program (FLAP)	State DOT/ Cabinet	Federal State	80% 20%
Highway Infrastructure Program (HIP)	State DOT/Local	Federal State/Local	80% 20%
High Priority Project (HPP)	State DOT/ Cabinet	Federal State	80% 20%
Safe Route to School (SRTS) remaining from MAP-21	Local Government	Federal Local	100% 0%
State Funds	State DOT/ Cabinet	State	100%
Kentucky Discretionary (KYD)	State DOT/ Cabinet	Federal State	80% 20%
Public Transportation Funding Programs	Project Initiation	Funding Source	Match Ratio
Section 5307 Capital, Operations and Planning Assistance Grant Program - The use of 5307 funds for Operating Assistance requires at Least a 50/50 match of federal to non-federal dollars.	Local Government	Federal State Local	80% 10% 10%
Section 5339 – Capital Grant	Local Government	Federal State Local	80% 10% 10%
Section 5310 – Capital Grant Program	Private, Non- Profit Entities	Federal State Local	80% 10% 10%
UROP – Urban Operating Assistance Program	Local Government	TDOT Local TDOT Local	80%<\$400,000 20%<\$400,000 50%>\$400,000 50%>\$400,000

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1.11d Cooperative Funding Process for TIP by States, MPO and Transit:

The following financial requirements for the TIP are based upon the current federal planning regulations and FAST Act requirements.

- a. The TIP must be financially constrained by year and include a financial plan that demonstrates which projects can be implemented using current revenue sources and which projects are to be implemented using proposed revenue sources (while the existing transportation system is being adequately operated and maintained).
- b. In developing the TIP, the MPO, TDOT, KYTC and CTS must cooperatively develop estimates of revenue funds that are reasonably expected to be available to support the TIP implementation. This includes the identification of carryover funds, expected allocations and inflation rates for future year estimates. All revenue and cost estimates use an inflation rate to reflect "year of expenditure dollars" based upon reasonable financial principles. The TIP will include a project or a phase of a project only if full funding can reasonably be anticipated to be available for the project within the time period contemplated for completion of the project.

To develop a financially constrained TIP, the MPO began with the projects committed in the previous TIP. After reviewing the estimates of available state and federal funds and ensuring that the previous committed projects are funded, the MPO will consider new projects for the remaining anticipated funding.

1.11e Project Programming Process for TIP:

TDOT-managed capital and non-capital transportation projects are programmed into the TIP after coordination between the MPO and TDOT. TDOT provides the MPO with a two year list of projects within the MPO to be prioritized. The MPO consults with the City and County officials to review and prioritize projects. The prioritized list of projects is presented to the MPO Executive Board and is submitted to TDOT. TDOT then makes the final selection from the prioritized list of projects to be added into the TIP after analyzing the cost estimation and timing of each phase.

Locally-managed capital and non-capital transportation projects are programmed into the TIP after a lengthy process of review and consultation with local agencies and public participation. All locally-managed TIP projects are in the Tennessee portion of the MPO. The MPO follows the Public Participation Plan (PPP) for solicitation of new projects at public MPO meetings. Each proposed new project for consideration in the TIP is compared to the stated goals and objectives of the MPO's MTP. Additionally, each MPO member jurisdiction is given the opportunity to provide a relative prioritization based on their understanding of current community priorities and development commitments. From this, a prioritization classification is assigned to each project, with an "A" priority being assigned to those projects considered for funding within the FY2020-2023 TIP.

1.11f Evaluation of TIP Project's Consistency with the MTP and Statewide Plan:

Projects that are added to the TIP for funding and implementation must be consistent with the region's Metropolitan Transportation Plan (MTP). The metropolitan transportation

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planning process is consistent with the Strategic Highway Safety Plan as specified in 23 U.S.C. 148 and other transit safety and security planning and review process, and the regional intelligent transportation system (ITS) architecture as defined in 23 CFR part 940. The MTP details a list of all the projects proposed for completion in the MPO region over the next 25-years. Projects in the MPO's MTP are divided into three stages: 1) short-term needs– proposed for completion by 2026, 2) mid-term needs – proposed for completion by 2036, 3) long-term needs proposed for completion by 2045. In order for a project to be included in the TIP, it must be in the short-term or mid-term list of projects in the MTP.

The Statewide Transportation Improvement Program (STIP) is a statewide prioritized listing/program of transportation projects developed by the State in cooperation with the MPO for each designated metropolitan area. The STIP must be consistent with the State long-range transportation plan, MTPs, and TIPs. Each TIP must be included in the STIP after the TIP is approved. Federal regulations require a full update of the TIP and STIP at least every four years. The TIP may be updated more frequently, but the cycle for updating the TIP must be compatible with the STIP development and approval process. The TIP expires when FHWA/FTA approval of the STIP expires.

The MPO consults, as appropriate, with state, local and federal agencies responsible for land use management, natural resources, environmental protection, conservation and historic preservation concerning the development of the MTP and the TIP. Each agency is contacted during the preliminary review by TDOT, FHWA and FTA. The agencies are asked to review the TIP at the MPO website and submit any comments. The TIP consultation involves comparison of the TIP with State conservation plans or maps; and/or comparison of transportation plans to inventories of natural or historic resources, if available.

The MPO has an established detailed set of project selection criteria for STBG and CMAQ, forging a greater linkage between the stated goals of the 2045 MTP and other local emphasis areas. The enhanced selection criteria allow for a more quantitative assessment of project needs and aids in the ultimate prioritization of projects. (*Appendix A*).

After the projects are prioritized based on the selection criteria and performance measures, then the cost estimates must be calculated for the project. Since the TIP has to be financially constrained, the cost estimates of the project must be within the limits of the anticipated revenue for the length of the project for each phase to be selected.

For a Kentucky project to receive funding in the TIP, it must be either in the Kentucky Six Year Plan or have other identified funding. The MPO meets with Kentucky District 2 representatives, Oak Grove officials, Christian County Representatives to review and prioritize projects for consideration into the Kentucky Highway Plan through the SHIFT/CHAF program for the MPO area. Kentucky prioritized projects are submitted by KYTC Planning Department staff for the Six Year Plan consideration.

1.11g Regionally Significant Project:

The process for including all regionally significant projects into the TIP is the same as a locally-managed project. The funding source may be local, state and/or private. Again the estimated required funding must be provided for the TIP to remain financially constrained. All regionally significant projects must follow all the federal and state guidelines throughout the

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planning, programming and implementation of the project. Currently, all of the regionally significant projects in the TIP are federally funded.

While the MPO is responsible for the programming of transportation improvements, the implementation of projects (i.e. construction or service operation) is carried out either by the cities, counties, or state departments of transportation within the region.

1.11h ADA and Transition Plans:

As part of FHWA's regulatory responsibility under Title II of the ADA of 1990 and Section 504 of the Rehabilitation Act of 1973, the FHWA ensures that recipients of Federal aid and State and local entities that are responsible for roadways and pedestrian facilities do not discriminate on the basis of disability in any highway transportation program activity, service, or benefit they provide to the general public; and to ensure that people with disabilities have equitable opportunities to use the public rights-of-way system.

Figure 12 below describes the status of the ADA Transition Plans that are required for cities and counties with 50 or more employees.

Figure 12: Status of ADA Transition Plans

Jurisdictions	ADA Coordinator Identified	ADA Grievance Procedures Developed & Published	Self-Evaluation Completed	ADA Transition Plan Completed
Clarksville, TN	X	X	X	X
Montgomery County, TN	X	X	X	Draft
Oak Grove, KY	X	In Progress	X	Completion estimate Spring 2020
Hopkinsville, KY	X	In Progress	In Progress	Completion estimate Summer 2020
Christian County, KY	X	In Progress	In Progress	Completion estimate Summer 2020

1.11i ADA, Title VI, LEP and EJ:

The ADA, Title VI, LEP, and EJ is covered in the public participation process of TIP development in that the MPO makes an effort to reach those traditionally underserved in the transportation process. Traditionally underserved communities include minorities, transit dependent citizens, low income individuals and families, the elderly and persons with disabilities. The MPO works to accommodate all persons at its public meetings, regardless of any disability. The MPO holds public involvement meetings in close proximity to the transit center. The public notices for the public meetings are placed in each transit bus, advertised in four newspapers: *the Leaf-Chronicle*, *The Eagle Post* and *the Kentucky New Era*, and the *El Crucero*, with two being distributed in the EJ areas and one being translated in the Hispanic paper, along with the notice and document being available in general public places as listed in the Participation Plan (PP).

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1.11j Public Participation and Involvement:

The TIP public participation process follows the process outlined in the adopted Participation Plan (PP). After receiving public input on the TIP, it must be submitted to TDOT and KYTC for inclusion in the respective State Transportation Improvement Plan (STIP).

Public input is a critical element in the development of plans and programs by the MPO. The TIP is a significant document because it provides citizens, the business community, and agencies a comprehensive understanding of the types of transportation projects that will be funded and implemented over the next several years. The public participation process for the TIP is based on the policies and procedures outlined in the MPO's Participation Plan (PP).

The Draft FY2020-FY2023 TIP for the Clarksville Urbanized Area was developed with significant attention to public participation. During the development of the TIP, the MPO and Clarksville Transit System staff met and reviewed projects and budget concerns. CTS staff submitted their projects to the MPO for inclusion into the TIP. The Draft TIP Project List was placed on the MPO website prior to the TDOT initial review and was made available at the Regional Planning Commission Office in hardcopy.

The MPO staff met with city and county personnel including the Mayors, Engineers, and Superintendents/Directors of Highway/Street Departments about their surface transportation needs and concerns for the city, county and regional projects. The City and County continue to work jointly on projects for the betterment of the residents in the city, county and region. During the development of the TIP there was discussion at the Regional Planning Commission, City Council and County Commission meetings on road conditions, congestion and regional priorities and needs. Each of the Councilmen and Commissioners received a letter from the MPO asking for new projects or traffic concerns and were invited to the public meeting on May 16, 2019. The meeting on January 19, 2019, was the first for the call of projects and discussion of estimated allocation and carryover funds. The MPO had four public meetings January 17th, May 16th, August 15th, and October 31th in 2019. Due to funding constraints there were no new projects added to the TIP using the L-STBG funds. The L-STBG funds will be held for any additional amended funding needs and/or overruns with the current projects.

The MPO staff contacted representatives from Ft. Campbell Planning Department to review their concerns and road priorities for projects off post in both Kentucky and Tennessee. The MPO staff also met and had discussions with the Oak Grove, Kentucky City Planner about road project needs and priorities.

Prior to the MPO adopting the TIP, residents and citizens groups, the EJ mailing list, interested parties, and local and regional agencies' consultation groups, stakeholders, and federal and state environmental consulting agency stakeholders were given a 30-day public comment period to review the Draft TIP and provide comments concerning the development of the TIP and the intent to fund specific projects. Currently, there is no Indian Tribal government involvement in the Draft TIP process. Public notices were placed in the local newspapers (*the Leaf-Chronicle*, *The Eagle Post* and *the Kentucky New Era*) as well as the *El Crucero*, a locally distributed Hispanic (written in Spanish) newspaper, notifying the public that the TIP was available for comment.

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The TIP was made available in draft form prior to adoption by the MPO Executive Board. Residents and citizen groups were given a 30-day comment period prior to the MPO adopting the TIP; distributed to EJ areas, newspapers, bus stops and online in English and Spanish. The draft TIP was placed in the following locations to provide citizens' access to the TIP: Regional Planning Commission - 329 Main Street and on-line at the MPO's website (www.cuampo.com). In Kentucky the draft TIP was placed in the following locations: Hopkinsville's City Hall and Oak Grove's City Hall. Notification of the availability of the draft TIP was placed at the following locations, written in English and Spanish:

- Montgomery County Library
- Montgomery County Court House
- City of Clarksville City Hall
- Clarksville Chamber of Commerce
- City of Oak Grove City Hall
- City of Hopkinsville City Hall
- Hopkinsville Chamber of Commerce
- Christian County Court House
- Ft. Campbell Military Installation Library
- Regional Planning Commission/MPO Office
- Clarksville Department of Electricity
- CTS buses and station
- City of Clarksville Housing Authority
- City of Clarksville Human Services
- City of Clarksville Community Centers
- Montgomery County Community Centers

All public comments are considered/addressed by the Executive Board members prior to the final adoption by the MPO Executive Board. A final 30 day public hearing is held prior to the the Executive Board meeting to conclude the public comment period. There were no comments received during this period.

The State and Federal Approval Processes allow for TDOT/KYTC and FHWA/FTA to review the final documents and provide the MPO with comments before the final document is approved. If the CUAMPO staff determines that significant changes were made to the document as a result of the Review Process, then an additional 14 day Public Review Period is required per the Participation Plan. The State and Federal Approval Periods can run concurrently.

There were three public comments received on the TIP. The three comment forms were turned in to the MPO office and Mr. Williams spoke directly to the concerned citizen about their concerns at the May 16th, 2019 MPO meeting. The comments forms submitted are included in *Appendix B* in this document.

1.12 PROJECT PHASES:

Highway Funding Project Phases in the STIP:

The following project phases have been identified and are provided with funding allocations for the aforementioned highway funding programs.

- **CONST (Construction)** - Work by the agency or contractor(s) to construct the project, possibly including utility relocation.
- **ITS (Intelligent Transportation Systems)** - Procuring, developing, or integrating technology to manage transportation facilities, improve safety, or mobility.
- **OPERATIONS or OP** - Operating the transportation system such as incurring costs related to the day-to-day operations or maintenance of transit vehicle systems, traffic signal systems, or intelligent transportation systems.
- **PE-N (Preliminary Engineering – NEPA)** - Includes activities from the inception of the project, fulfilling the requirements of the National Environmental Policy Act of 1969 and all applicable legislation, regulations, executive orders, and directives, up to the approval of the environmental document.
- **PE-D (Preliminary Engineering – Design)** - Preliminary engineering design work, according to accepted engineering practices, after approval of the environmental document.
- **PURCHASE/ACQUIRE** - Procuring equipment, software, or vehicles.
- **ROW (Right-of-Way)** - Work from the distribution of ROW plans up to advertising for bids or commencement of work by the Agency, dealing with real property acquisition, temporary and permanent easements, and utility relocation.
- **TRAINING** – Training activities.
- **Utilities** – Work pertaining to the relocation of the utilities within the ROW. (This is only for KYTC projects. TDOT projects will use ROW for utility relocation).

The state funded projects are selected in cooperation with the MPO through prioritization of projects based on performance measures, regional significance and need to improve the transportation system in the MPO's area. The locally funded projects are selected through a prioritization of projects based on the CMAQ and STBG criteria in Appendix A, performance measures, regional significance and need in order to sustain and/or improve the transportation system. The majority of the roadway projects currently in the TIP are funded by STBG funds for the PE, ROW, and CONST phases. The MPO area has been fortunate to receive a CMAQ grant for an ITS project and Transit Bus purchase awarded in 2018; FLAP funding for a road project that extends past a gate into the military installation; SRTS for connectivity for the students between a high school and middle school; TAP for a river trail grant and pedestrian bridge; 5307, 5339, and 5310 for Transit projects.

1.13 PROJECT GROUPINGS:

The use of project groupings is permitted under 23 CFR 450.324 (f) for projects in an MPO's TIP. Projects that are funded by such groupings are to be of a scale small enough not to warrant individual identification and may be grouped by function, work type, and/or geographic area using

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the applicable classifications under 23 CFR 771.117(c) and (d) and/or 40 CFR part 93. Project groupings may only include projects that meet the following conditions: located in metropolitan areas, not considered to be of appropriate scale for individual identification in a given program year, non-regionally significant, environmentally neutral, and exempt from air quality conformity.

The TIP will include a description of all grouping categories, eligible activities, and sufficient financial information to demonstrate the projects that are to be implemented are using current and/or reasonably available revenues. All projects located within an MPO area must be included in the MPO TIP, including those projects that are eligible for grouping. Therefore, projects eligible for groupings that are located within the MPO planning area, may be grouped within the MPO TIP or listed individually in the MPO TIP, but may not be included in the Rural STIP. All projects whether included in a grouping or not that cross the MPO boundary and include an area outside of the MPO boundary will be listed in the STIP only.

1.13a TDOT Grouping:

There are four groupings programmed by TDOT into the FY2020-FY2023 TIP. Each grouping has its own project sheet that summarizes the range of project activities that take place. The Penalty Highway Safety Improvement Program (PHSIP) is part of the Highway Safety Improvement Program (HSIP) Grouping. The PHSIP and HSIP funding is for any strategy, activity or project on a public road that is consistent with the Strategic Highway Safety Plan (SHSP) and corrects or improves a hazardous road location or feature or addresses a highway safety problem. The SHSP process depends upon collaboration among engineers, law enforcement, emergency responders and other safety stakeholders to work together to set collective goals, agree on key priority emphasis areas, implement safety investments through current plans and programs and consistently monitor the results of these investments over time. The National Highway System Preservation and Operation with (NHPP) funding is for projects for the preservation and improvement of the conditions and performance of the National Highway System (NHS). The Surface Transportation System Preservation and Operation with (STBG) funding is for projects for the preservation and improvement of the conditions and performance of Federal-aid highways and public roads. Both of these groupings are based more on traffic operations and/or maintenance functions. Appendix C provides additional details on the allowable types of projects under each funding program.

1.13b KYTC Grouping:

For the reasons noted above, KYTC and the Clarksville MPO have developed streamlined procedures for incorporating such projects into the TIP. Instead of being identified individually, these projects are grouped into project categories. By listing these grouped projects in the TIP, planning process stakeholders and the general public are informed of the types of potential projects that may be implemented in the Kentucky portion of the Metropolitan Planning Area without modifying the TIP to individually identify such projects. With respect to fiscal constraint for Kentucky grouped projects, it should be noted that dollar amounts do not reflect actual funding levels, but are intended only to provide an illustrative estimate of the amount of funds that might be spent in each grouped projects category on an annual basis. Fiscal constraint for Kentucky grouped projects is maintained by KYTC on a statewide level and is demonstrated on an annual basis for the Statewide Transportation Improvement Program.

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Individual projects from grouped project categories will be incorporated into the MTP and/or TIP by Administrative Modification as they are defined (in terms of project description, scope, and cost) and approved. Allowing such MTP and TIP changes to be made by Administrative Modification, rather than Amendment (and the corresponding requirement for public review), simplifies and streamlines MTP/TIP maintenance and project approval processes.

Grouped project categories utilized by the Clarksville Urbanized Area MPO for KYTC are shown below in Figure 12. The list of grouped projects utilized here is recommended by KYTC. By listing these project types in the TIP, planning process stakeholders and the general public are informed of the types of potential projects that may be added to the TIP in the future via streamlined procedures. TIP actions for these projects will not require additional public review, demonstration of fiscal constraint, or a conformity determination (if applicable).

Figure 13. Clarksville MPO Kentucky Grouped Projects List

Description (All projects are located in Christian County)	Illustrative Annual Amount
Pavement resurfacing/rehabilitation projects	\$100,000.00
Pavement widening with no additional travel lanes	\$50,000.00
Shoulder improvements	\$50,000.00
Slope stabilization/landslide repairs	\$50,000.00
Drainage improvements	\$50,000.00
Bridge replacement/rehabilitation projects with no additional travel lanes	\$500,000.00
Bridge painting	\$50,000.00
Bridge inspections	\$25,000.00
Repair of damage caused by natural disasters, civil unrest, or terrorist acts with no substantial changes in function, location, or capacity	\$50,000.00
Traffic signal maintenance and operations	\$25,000.00
Highway signage	\$25,000.00
Lighting improvements	\$25,000.00
Skid treatments	\$100,000.00
Sight distance improvements	\$100,000.00
Curve realignment projects	\$100,000.00
Median installation	\$50,000.00
Fencing	\$25,000.00
Guardrail/median barriers/crash cushions	\$100,000.00
Pavement markers and markings	\$100,000.00
Railroad/highway crossing safety improvements and warning devices	\$75,000.00
Highway Safety Improvement Program projects	\$100,000.00
Driver education programs	\$75,000.00
Bicycle/pedestrian facilities, including pedestrian facility improvements identified in local public agencies' Transition Plans to meet requirements of the Americans with Disabilities Act	\$400,000.00

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Operating assistance to transit agencies	\$125,000.00
Purchase of new buses to replace existing vehicles or for minor expansion	\$100,000.00
Rehabilitation of transit vehicles	\$25,000.00
Construction of transit passenger shelters and information kiosks	\$10,000.00
Transportation enhancement activities including street-scaping, landscaping, plantings, and informational signs	\$100,000.00

With respect to financial constraint for grouped projects, it should be understood that the dollar amounts shown in the KYTC Grouped Projects in Figure 12 are illustrative (and minimal) project cost amounts based on past experience and reasonableness. These numbers are included per recommended guidance and should not be interpreted as expected project awards or expenditures for any particular year. Rather than future commitments of funding, these numbers are illustrative of a reasonable level of total funding for the various types of grouped projects that, potentially, could be approved within a particular year. When projects are identified, with estimated costs, and funding decisions (type of funds and year) are made by the Transportation Cabinet (on an annual or ongoing basis), the Cabinet will forward the project to the MPO for inclusion in the TIP and MTP (if applicable) - with a commitment of additional funding within financially constrained balances available on a statewide level. Financial constraint for grouped projects is maintained by the Cabinet on a statewide level and is demonstrated on an annual basis for the Statewide Transportation Improvement Program.

1.14 AIR QUALITY CONFORMITY:

In April 2004, Christian and Montgomery Counties were designated non-attainment by the U.S. EPA for failure to meet the recently revised 1997 National Ambient Air Quality Standard (NAAQS) for ozone. On November 21, 2005 Montgomery County was designated maintenance by the EPA for the 1997 ozone standard. On February 24, 2006 Christian County was designated maintenance by the EPA for the 1997 ozone standard. Based on 2006-2008 PM2.5 air quality monitoring data for the 2006 24 hour PM2.5 NAAQS, Montgomery County was determined by the EPA to be in attainment for that standard. The limited revocation by EPA of the 1997 ozone NAAQS on July 20, 2013 applied to transportation conformity; therefore, no conformity determination was performed in conjunction with the 2040 MTP. The court ruled to vacate EPA's decision to revoke the transportation conformity requirements for the 1997 ozone standard on December 23, 2014. On February 13, 2015, the EPA Administrator signed the final 2008 ozone NAAQS State Implementation Plan (SIP) requirements rule. The final rule revoked the 1997 ozone NAAQS and the associated transportation conformity requirement. On February 16, 2018, the US Court of Appeals for the District of Columbia Circuit issued a decision on South Coast Air Quality Management District versus the US Environmental Protection Agency, which related to the Implementation rule for the 2008 National Ambient Air Quality Standards for Ozone. The court's ruling requires the MPO to demonstrate transportation conformity for the 1997 Ozone NAAQS. The MPO adopted the associated Conformity Determination Report (CDR) at the same time with the adoption of the 2045 MTP on January 17, 2019 and is in attainment for the 1997 8-hour ozone standard. The MPO has submitted the draft TIP projects to the IAC for their review and a draft conformity report for the TIP. The MPO is involved with the IAC through conference calls in addressing any issues related to the

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TIP projects in helping determine their non-exempt/exempt status and regional significance to conformity for each project in the 2045 MTP and FY2020-FY2023 TIP. When EPA made designations they found the MPO in attainment for the 2008 and the 2015 ozone standards. Both the 2008 and 2015 ozone standard was more restrictive than the 1997 ozone standard. The MPO is in attainment for both.

1.15 CONNECTIONS TO OTHER DOCUMENTS AND PROGRAMS:

Just as the TIP is a short-term implementation vehicle for the 2045 Metropolitan Transportation Plan (MTP), it is connected to other documents through the state and metropolitan planning process and development. TDOT has developed the "25-Year Long-Range Transportation Policy Plan", which provides guidance in planning for multimodal transportation and prioritizes transportation investments with local community priorities. TDOT works with the community and the MPO to fund TIP projects that are the priorities of the community to achieve increased efficiency and mobility choices, and enhance economic development and growth.

- a. Through the findings and reviews of corridor studies, sub-area plans and model plans, new projects are recommended for the TIP. These studies and plans show the most desired transportation projects addressing the anticipated future growth within the area.
- b. The ADA transition plan identifies the transportation system's accessibility improvement needs and integrates them into the planning process. These identified needs are integrated into the TIP. The MPO tries to incorporate accessibility improvements into the transportation program.
- c. The MPO's safety goals address regional safety issues. The results of the MPO safety planning process should, as appropriate, be consistent with and reflect the goals and objectives of the State's Strategic Highway Safety Plans process. The MPO continues to develop strategies to incorporate safety in the transportation planning process and TIP development.
- d. The Clarksville Regional ITS Architecture allows stakeholders to plan how they would like their system to operate in the future and then breaks the system into smaller projects that can be implemented over time as funding permits. As projects are submitted for inclusion in the TIP, each project should be evaluated to determine if the project includes any ITS elements. If the project contains any ITS elements, then the project needs to be reviewed to determine if the ITS elements are in conformance with the Regional ITS Architecture.
- e. The Coordinated Public Transit-Human Services Transportation Plan is a unified comprehensive strategy for public transportation service delivery that identifies the transportation needs to individuals with disabilities, older adults, and individuals with limited incomes; lays out strategies for meeting those needs; and prioritizes services. Projects identified in the coordinated planning process and selected for FTA funding are incorporated in to the TIP.
- f. The Congestion Management Processes (CMP) is an objectives-driven, performance-based approach to planning for congestion management. CMP provides a mechanism for identifying short, medium, and long-term strategies for addressing congestion on a system-wide, corridor-

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level, and site-specific basis. By providing information on system performance and the effectiveness of potential solutions and implemented strategies, alternatives to major capital investments can be identified and considered along with the need for infrastructure improvement. This comparison between alternatives and major capital investments is a more effective allocation process of limited funds when reviewing projects for the TIP.

- g. Transportation Systems Management and Operations (TSM&O) Plans provide input to the overall plan in terms of operations goals, objectives, performance measures, strategies, and projects or programs. The Plan defines a common vision for transportation system operations in the region, develop operations objectives to guide the selection of M&O strategies, and identify performance measures that will enable them to track progress toward their objectives. Strategies and potential projects or programs are developed to reach those objectives. These identified projects with funding sources can be selected for inclusion into the TIP.
- h. The Unified Planning Work Programs (UPWPs) provides planning and administrative support to the metropolitan transportation planning process of the MPO. Many of the tasks are required by state or federal law such as the preparation of the TIP.
- i. State Planning and Research (SPR) Work Programs provides technical assistance through socioeconomic data and traffic count collection that aids in project development and selection for the TIP.

1.16 ADVANCE CONSTRUCTION:

Advance Construction (AC) is a technique which allows a state to initiate a project using non-federal funds while preserving eligibility for future federal-aid funds. Eligibility means that FHWA has determined that the project technically qualifies for federal-aid; however, no present or future federal funds are committed to the project. After an AC project is authorized, the state may convert the project to regular federal-aid funding provided federal funds are made available for the project.

An AC project must meet the same requirements and be processed in the same manner as a regular federal-aid project. All phases of a project must meet federal requirements for the National Environmental Policy Act (NEPA), Uniform Relocation Assistance and Real Property Acquisition Policies Act (Uniform Act), etc., when any phase is implemented with federal-aid funds.

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STATUS OF AUTHORIZED PROJECTS FROM THE FY2017-FY2020 TIP

STATUS OF FY2017-FY2020 TIP PROJECTS (E+C on page 4-10, Table 4-3; T projects on page 4-23, Table 4-8)						
TIP ID#	2040 MTP	Project Title	Project Description (State Projects)	Sponsor Agency	Length	Action Taken
2	T-41	SR-374 from south of Dunbar Cave Rd to West of Stokes Rd	Widen from 2 lane to 5 lane section	TDOT	1.7 miles	Completed
3	E+C 14	SR-112 at SR-76	Intersection improvements (a subset of TIP#1 widening project)	TDOT	0.0 miles	ROW completed
4	T-43	SR-149 from River Rd to SR13; SR13 from SR-149 to Zinc Plant Rd	Widen 2 lane to 5 lane curb and gutter section	TDOT	3.0 miles	Const in progress
5	T-43 T-42	SR-149/SR-374; SR-149 from SR-374 to River Rd; SR-374 from SR-149 to Dotsonville Rd	Construct new 4 and 4/5-lane roadway	TDOT	5.3 miles	SR-149 ROW in progress; SR-374 PE in progress
6	E+C 19	SR-374 from Dotsonville Rd to SR-76	Construct new 2-lane roadway	TDOT	2.9 miles	PE in progress
9	E+C 37	SR-237 from West of I-24 to International Blvd	Widen from 2 to 5 lanes with Exit 8 ramp modifications at I-24	TDOT	0.80	Completed
10	T-33	SR-13 (US-79) from Cracker Barrel Dr. to International Blvd	Widen from 2 lanes to 4 lanes with a continuous turn lane	TDOT	1.4 miles	Completed
12	T-05A	SR-48, from near SR374 to near I-24	Widen from 2 lanes to 5 lanes along existing alignment	TDOT	3.70	PE-N in progress
13	E+C 21	KY-911 from US41A to KY-115	Widening from 2 to 5 lanes	KYTC	1.8 miles	ROW/ Const in progress
TIP ID#	2040 MTP ID#	Project Title	Project Description (Local-STP Projects, Local Regional Projects)	Sponsor Agency	Length	Action Taken
65	E+C 35	Oakland Rd from US Hwy 79 to 0.5 miles on Oakland Rd	Realignment of Oakland Rd 1000 ft. N on US Hwy 79 and 0.5 miles on Oakland Rd for safety and sight distance concerns	Montgomery County	0.5 miles	Completed
66	E+C 34	Dunbar Cave Rd/ Rossvie Rd	Rossvie Rd widen to 5 lanes from I-24, 3 lanes from Cardinal Lane, transition to 2 after Keysburg Rd; realign Dunbar Cave Rd.	Clarksville	1.5 miles	ROW in progress

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70	T-29	Lafayette Rd	Reconstruction and widening of approximately 1,940 ft. of Lafayette Rd. Widening will consist of four 12' lanes with variable width, flush median, and 12' shoulders.	Montgomery County	0.4 miles	Const in progress
75	T-16	Northeast Connector, from Ted Crozier to Trenton Rd	Construct a new 4/5-lane roadway	Clarksville	3.6 miles	PE in progress
TIP ID#	2040 MTP	Project Title	Project Description (HPP, Enhancement, TAP Projects)	Sponsor Agency	Length	Action Taken
74	Table 4-16, Page 4-48	Clarksville River Trail (Red River Segment)	Pedestrian and Bicycle facilities consisting of 1,500 linear feet of trail/path based on AASHTO Path Standards. The project is not location dependent	Clarksville	0.3 miles	Completed
76	Fig. 4-21 Page 4-50,51	Red River East Trail – Phase 1	Construction of a 3200 linear foot multimodal facility; also includes landscaping, signage, benches and trash receptacles.	Clarksville	0.61 miles	Construction
57	Table 5-1 Page 5-2	Safe Route to School (SRTS)	SRTS awarded for Kenwood Middle School and to connect to High School	Clarksville	0.0 miles	Construction
TIP ID#	2040 MTP	Project Title	Project Description (CMAQ Projects)	Sponsor Agency	Length	Action Taken
50	Table 5-1, 5-11	Wilma Rudolph Blvd Adaptive Signal System (ITS)	Implement adaptive signal system for 10 signals along Wilma Rudolph Corridor; detour flush plans for I24 with DSRC equip, 2 CCTB cameras, 8 message signs	Clarksville	2.46	PE-N
72	Table 4-15, Page 4-44	Transit Buses	Purchase of hybrid transit buses to replace older diesel buses	Clarksville	0.0	Funds flexed to FTA/buses purchased
73	Table 5-6, Page 5-10	Express Bus Service route from Clarksville to Nashville	Bus service includes 4 morning and evening round trips from CTS Center to Park & Ride lot at I-24	Clarksville	0.0	Funds flexed to FTA in 2017/ funding through RTA
TIP ID#	2040 MTP	Project Title	Project Description (TDOT Grouping Projects)	Sponsor Agency	Length	Action Taken
37	Table 5-14, page 5-16	National Highway Performance Program (NHPP)	Projects for the preservation and improvement of the conditions and performance of the National Highway System.	TDOT		Completed

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38	Table 5-14, page 5-16	Highway Safety Improvement Program (HSIP) Grouping	Any strategy, activity or project on a public road that is consistent with the data driven State Strategic Hwy Safety Plan and corrects or improves a hazardous road location or highway safety problem.	TDOT		Completed
39	Table 5-14, page 5-16	Surface Transportation Program (STP) Grouping	Projects for the preservation and improvement of the conditions and performance of Federal-aid highways and public roads.	TDOT		Completed
40	Table 5-14, page 5-16	PM 2.5 Emission Reductions Strategies	Projects to reduce PM2.5 emissions from on-road heavy-duty diesel engines and non-road construction equipment.	TDOT		Completed
All Transit Projects were completed in FY2017-FY2020 TIP.						

1.18 ANNUAL LISTING OF OBLIGATED PROJECTS:

The annual listing of obligated projects is compiled by the Clarksville MPO through the assistance and review of TDOT, KYTC and CTS. The obligated project list shows the funding amounts that were obligated by each project for the completed fiscal year and added to the MPO website below:
<http://www.cuampo.com/files/Clarksville%20Obligation%20Report%202018.pdf>.

Information on the obligated project list is added to the public notice advertisement in five newspapers for the MPO meeting with its website link; put on the agenda for the MPO meeting and presented to the MPO's TCC and Executive Board.

1.19 AMENDMENTS AND ADMINISTRATIVE MODIFICATIONS:

1.19a STIP/TIP Amendment:

An amendment is a revision to the TIP that involves major changes to a project or the overall program and must meet the requirements of 23 CFR 450.216 and 450.326 regarding public review and comment, re-demonstration of fiscal constraint, and transportation conformity. An amendment is required when changes to the STIP/TIP include:

- A major change in the total project cost (excluding groupings); or
- Adding a new project or deleting a project from the TIP; or
- A major change of project scope; examples include, but are not limited to, changing the number of through-lanes, adding/deleting non-motorized facilities, changing mode (e.g., rolling stock or facility type for transit), changing capital category (i.e., transit funding), or changing termini; or
- Any change requiring a new regional air quality conformity finding, where applicable (including a grouping);

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1.19b Amendment Procedures:

The TIP may be amended at any time, but amendments require federal approval and re-determination of TIP fiscal constraint and air quality conformity, where applicable. The MPO is required to show conformity for each project being amended. If the project was modeled in the 2045 MTP then the MPO works with the IAC and submits a short conformity report with the amendment. If the project is a new project it must first be amended into the 2045 MTP with the review and assistance of the IAC, before being amended into the TIP.

Before submitting the TIP amendment for federal and state review, the MPO has a fourteen (14) day public review period prior to the adoption of the amendment at the MPO Executive Board meeting. At the beginning of the public review the TIP amendment and the MPO meeting is advertised in four newspapers, placed on the MPO website, advertised in the CTS buses and facilities and made available at the MPO office. Any public comments received are addressed and sent with the amendment for the federal and state review. TDOT or KYTC will review each amendment and submit the amendment to the appropriate federal agency. The federal agencies will review and respond to a formal written request for amendment approval from TDOT or KYTC within 10 business days of receipt.

For financial transactions, the MPO must identify in the documentation the origin and destination of the funds being moved.

1.19c TIP Administrative Modification:

A TIP administrative modification is a minor change from the approved TIP. Administrative modification must be consistent with 23 CFR 450.104, but they do not require public review and comment, re-demonstration of fiscal constraint, or a conformity determination in nonattainment or maintenance areas. TIP administrative modifications are defined as follows:

- A minor change in the total project cost (see Project Cost Change Thresholds, below)
- A minor change in project description that does not change the air quality conformity finding in maintenance and/or non-attainment areas; or
- A minor change in project description/termini that is for clarification and does not change the project scope; or
- Shifting funds between projects within a TIP (i.e., funding sources and projects already identified in the TIP) if the change does not result in a cost increase greater than the amendment threshold (see Project Cost Change Thresholds, below) for the total project cost of all phases shown within the approved TIP; or
- Adding an amount of funds already identified in the STIP/TIP for the current or previous year(s) if:
 - The funds are currently identified in the STIP/TIP either in an existing project or as available funds and
 - The change does not result in a cost increase greater than the amendment threshold (see Project Cost Change Thresholds, on page 13) for the total project cost of all phases shown within the approved TIP; or
- Moving projects from year to year within an approved TIP, except those that cross air quality horizon years; or

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- Adding a prior phase, such as environmental or location study, preliminary engineering or right-of-way, to a project in the TIP so long as such a change does not result in a cost increase greater than the amendment threshold (see Project Cost Change Thresholds, below) for the total project cost of all phases shown within the approved TIP; or
- Changes required to follow FHWA or FTA instructions as to the withdrawal of funds or re-establishment of funds withdrawn at the request of FHWA or FTA; or
- Moving funds between similarly labeled groupings, regardless of percent of change; or
- Administrative modifications in revenue to match actual revenue receipts.

1.19d Administrative Modification Authorization Procedures:

Administrative modifications do not require federal approval. Administrative modification made to TDOT or KYTC sponsored projects in the TIP will be made by TDOT or KYTC with notification to the MPO upon submission of the administrative modification to FHWA/FTA. The MPO will make the changes to funding tables, and project sheets as needed without the need for distribution.

1.19e Project Cost Change Thresholds:

For changes to the cost of projects (excluding groupings), a sliding scale is outlined to determine which category of revision is required. All measurements for these cost changes will be made from the last approved TIP or TIP amendment/administrative modification to account for incremental changes.

Figure 14. Project Cost Change Thresholds

Total Project Cost of All Phases Shown Within the Approved TIP	Amendment	Administrative Modification
Up to \$2 million	≥75%	< 75%
\$2 million to \$15 million	≥50%	< 50%
\$15 million to \$75 million	≥40%	<40%
\$75 million and above	≥30%	<30%

SECTION 2. FINANCIAL PLAN

The TIP is required to include a financial plan that demonstrates how the program of projects can be implemented. TDOT, the KYTC, local jurisdictions and transit operators and agencies with projects in the TIP have indicated that they have the financial resources to provide the necessary matching funds to complete their projects. In addition, these agencies have determined that funding is available for the maintenance of all existing transportation systems.

Detailed financial breakdowns are included in Table 2.1, Table 2.2 and Table 2.3 below in this section. The funding tables are tabulated from the funding amounts given on the individual TIP sheets for each project. The total amount of money available in each funding category is shown, as well as the total amount programmed for various projects. These tables indicate available funds, programmed funds, and remaining funds by funding source by year. The tables show that programmed expenditures are within the balance of expected fund allocations and therefore demonstrate fiscal constraint.

The projects included in this TIP are funded in accordance with current and proposed revenue sources. All revenue and cost estimates use an inflation rate to reflect "year of expenditure dollars" based upon reasonable financial principles. The inflation rate of 3.0% for TN and 4.0% for KY projects was used to project expenditure dollars for each future year in the development of the 2045 MTP and for the TIP. There are no new State funded projects in the TIP, except those awarded through a competitive grant process. The funding for TDOT and KYTC projects is a continuation of existing projects. Each project listed in the TIP has an estimated cost assigned to it. These cost estimates were derived through consultation with TDOT, KYTC, consultants, local governments, the MPO staff and CTS. The estimated cost for each project is in line with the estimates in the 2045 MTP for that project. Annual federal allocations and adopted state and local budgets substantiates that anticipated funding will be available to implement the projects in the TIP. The same inflation rates were used for future year revenues by the MPO staff to estimate anticipated L- STBG annual allocations and by the CTS staff to estimate the Section 5307, 5339, 5310 and UROP annual allocations. If the appropriated funds are less than the authorized amounts or there is a significant shift of projects within the years, then the MPO will develop a revised list in coordination with the State and CTS staff.

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21 REASONABLY AVAILABLE L-STBG FUNDS: (Allocated through TDOT)

Table 1		
Summary of L-STBG Funds		New
Federal Share Only		as of 9/30/2019
L-STBG Funding Table (TDOT)		
Balance 9-30-19		\$17,202,044
FY2020 Allocation	+	\$2,000,000
Available to Spend	=	\$19,202,044
Projects Programmed	-	\$8,800,000
Remaining 2020	=	\$10,402,044
2021		
FY2021 Allocation	+	\$2,100,000
Available to Spend	=	\$12,502,044
Projects Programmed	-	\$0
Remaining 2021	=	\$12,502,044
2022		
FY2022 Allocation	+	\$2,200,000
Available to Spend	=	\$14,702,044
Projects Programmed	-	\$0
Remaining 2022	=	\$14,702,044
2023		
FY2023 Allocation	+	\$2,300,000
Available to Spend	=	\$17,002,044
Projects Programmed	-	\$16,500,000
Remaining 2023	=	\$502,044

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FISCALLY CONSTRAINED PROGRAMMED REVENUE AND COSTS:

Kentucky Funding Table 2				
As of 10/1/2019 (By Year of Expenditure)				
Funding Source	FY2020	FY2021	FY2022	FY2023
	Available	Available	Available	Available
National Highway Performance (NHPP)	\$ -	\$ -	\$ -	\$ -
State Surface Transportation Block Grant(STBG)	\$ 2,530,000.00	\$ 5,910,000.00	\$ -	\$ -
Transportation Alternatives (TAP)	\$ -	\$ -	\$ -	\$ -
Congestion Mitigation & Air Quality Improvement (CMAQ)	\$ -	\$ -	\$ -	\$ -
Highway Safety Improvement Project (HSIP)	\$ -	\$ -	\$ -	\$ -
KYD (Kentucky Discretionary)	\$ -	\$ -	\$ -	\$ -
Local Match	\$ -	\$ -	\$ -	\$ -
SPB	\$ -	\$ -	\$ -	\$ -
SPP (State Construction - KY)	\$ -	\$ -	\$ -	\$ -
Toll Credits utilized for State Match	\$ -	\$ -	\$ -	\$ -
Total	\$ 2,530,000.00	\$ 5,910,000.00	\$ -	\$ -
Amount Programmed to be Spent				
National Highway Performance (NHPP)	\$ -	\$ -	\$ -	\$ -
State Surface Transportation Block Grant(STBG)	\$ 2,530,000.00	\$ 5,910,000.00	\$ -	\$ -
Transportation Alternatives (TAP)	\$ -	\$ -	\$ -	\$ -
Congestion Mitigation & Air Quality Improvement (CMAQ)	\$ -	\$ -	\$ -	\$ -
Highway Safety Improvement Project (HSIP)	\$ -	\$ -	\$ -	\$ -
KYD (Kentucky Discretionary)	\$ -	\$ -	\$ -	\$ -
Local Match	\$ -	\$ -	\$ -	\$ -
SPB	\$ -	\$ -	\$ -	\$ -
SPP (State Construction - KY)	\$ -	\$ -	\$ -	\$ -
Toll Credits utilized for State Match	\$ -	\$ -	\$ -	\$ -
Total Programmed	\$ 2,530,000.00	\$ 5,910,000.00	\$ -	\$ -
Amount Remaining				
National Highway Performance (NHPP)	\$ -	\$ -	\$ -	\$ -
State Surface Transportation Block Grant(STBG)	\$ -	\$ -	\$ -	\$ -
Transportation Alternatives (TAP)	\$ -	\$ -	\$ -	\$ -
Congestion Mitigation & Air Quality Improvement (CMAQ)	\$ -	\$ -	\$ -	\$ -
Highway Safety Improvement Project (HSIP)	\$ -	\$ -	\$ -	\$ -
KYD (Kentucky Discretionary)	\$ -	\$ -	\$ -	\$ -
Local Match	\$ -	\$ -	\$ -	\$ -
SPB	\$ -	\$ -	\$ -	\$ -
SPP (State Construction - KY)	\$ -	\$ -	\$ -	\$ -
Toll Credits utilized for State Match	\$ -	\$ -	\$ -	\$ -
Total Remaining	\$ -	\$ -	\$ -	\$ -

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Tennessee Funding Table 3				
(By Year of Expenditure)				
Funding Source	As of 10/1/2019			
	FY2020	FY2021	FY2022	FY2023
	Available	Available	Available	Available
Federal Land Access Program (FLAP)	\$ 1,664,000.00	\$ -	\$ -	\$ -
National Highway Performance (NHPP)	\$ 140,000.00	\$ 120,000.00	\$ 80,000.00	\$ 60,000.00
State Surface Transportation Block Grant (S-STBG)	\$ 6,898,000.00	\$ 84,000.00	\$ 7,824,000.00	\$ 5,242,000.00
Rural Surface Transportation Block Grant (R-STBG)	\$ -	\$ -	\$ -	\$ -
Transportation Alternatives (STBG-TA)	\$ 3,171,030.00	\$ -	\$ -	\$ -
Safe Route to School (SRTS)	\$ 319,464.00	\$ -	\$ -	\$ -
Local Surface Transportation Block Grant (L-STBG)	\$ 19,202,044.00	\$ 12,502,044.00	\$ 14,702,044.00	\$17,002,044.00
Congestion Mitigation&Air Quality Imprvmt(CMAQ)	\$ 210,000.00	\$ 985,440.00	\$ -	\$ -
Highway Safety Improvement Project (HSIP) [HSIP-R, PHSIP]	\$ 676,148.00	\$ 563,445.00	\$ 337,905.00	\$ 225,203.00
HPP	\$ -	\$ -	\$ 1,920,000.00	\$ -
Advance Construction (AC)	\$ -	\$ -	\$ -	\$ -
State Match	\$ 1,834,628.00	\$ 113,605.00	\$ 2,493,545.00	\$ 1,350,523.00
Local Match	\$ 16,229,399.00	\$ 3,125,511.00	\$ 3,675,511.00	\$ 4,250,511.00
Total	\$ 50,344,713.00	\$17,494,045.00	\$ 31,033,005.00	\$28,130,281.00
Amount Programmed to be Spent				
Federal Land Access Program (FLAP)	\$ 1,664,000.00	\$ -	\$ -	\$ -
National Highway Performance (NHPP)	\$ 140,000.00	\$ 120,000.00	\$ 80,000.00	\$ 60,000.00
State Surface Transportation Block Grant (S-STBG)	\$ 6,898,000.00	\$ 84,000.00	\$ 7,824,000.00	\$ 5,242,000.00
Rural Surface Transportation Block Grant (R-STBG)	\$ -	\$ -	\$ -	\$ -
Transportation Alternatives (STBG-TA)	\$ 3,171,030.00	\$ -	\$ -	\$ -
Safe Route to School (SRTS)	\$ 319,464.00	\$ -	\$ -	\$ -
Local Surface Transportation Block Grant (L-STBG)	\$ 8,800,000.00	\$ -	\$ -	\$16,500,000.00
Congestion Mitigation&Air Quality Imprvmt (CMAQ)	\$ 210,000.00	\$ 985,440.00	\$ -	\$ -
Highway Safety Improvement Project (HSIP) [HSIP-R, PHSIP]	\$ 676,148.00	\$ 563,445.00	\$ 337,905.00	\$ 225,203.00
HPP	\$ -	\$ -	\$ 1,920,000.00	\$ -
Advance Construction (AC)	\$ -	\$ -	\$ -	\$ -
State Match	\$ 1,834,628.00	\$ 113,605.00	\$ 2,493,545.00	\$ 1,350,523.00
Local Match	\$ 13,628,888.00	\$ -	\$ -	\$ 4,125,000.00
Total	\$ 37,342,158.00	\$ 1,866,490.00	\$ 12,655,450.00	\$27,502,726.00
Amount Remaining				
Federal Land Access Program (FLAP)	\$ -	\$ -	\$ -	\$ -
National Highway Performance (NHPP)	\$ -	\$ -	\$ -	\$ -
State Surface Transportation Block Grant (S-STBG)	\$ -	\$ -	\$ -	\$ -
Rural Surface Transportation Block Grant (R-STBG)	\$ -	\$ -	\$ -	\$ -
Transportation Alternatives (STBG-TA)	\$ -	\$ -	\$ -	\$ -
Safe Route to School (SRTS)	\$ -	\$ -	\$ -	\$ -
Local Surface Transportation Block Grant (L-STBG)	\$ 10,402,044.00	\$ 12,502,044.00	\$ 14,702,044.00	\$ 502,044.00
Congestion Mitigation&Air Quality Imprvmt(CMAQ)	\$ -	\$ -	\$ -	\$ -
Highway Safety Improvement Project (HSIP) [HSIP-R, PHSIP]	\$ -	\$ -	\$ -	\$ -
HPP	\$ -	\$ -	\$ -	\$ -
Advance Construction (AC)	\$ -	\$ -	\$ -	\$ -
State Match	\$ -	\$ -	\$ -	\$ -
Local Match	\$ 2,600,511.00	\$ 3,125,511.00	\$ 3,675,511.00	\$ 125,511.00
Total	\$ 13,002,555.00	\$15,627,555.00	\$ 18,377,555.00	\$ 627,555.00

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Clarksville Transit System	Table 4		New - 10/1/2019	
Funding Source	FY2020	FY2021	FY2022	FY2023
	Available	Available	Available	Available
FTA-5307(KY)Operating Assistance*	\$ 308,226.00	\$ 308,226.00	\$ 308,226.00	\$ 308,226.00
FTA-5307(TN)Operating Assistance	\$ 1,923,888.00	\$ 1,962,366.00	\$ 2,001,614.00	\$ 2,041,646.00
FTA-5307(TN) Capital	\$ 2,654,997.00	\$ 1,138,210.00	\$ 1,106,830.00	\$ 1,113,235.00
FTA-5307 / CMAQ flexed	\$ 1,584,000.00	\$ -	\$ -	\$ -
FTA-5339	\$ 682,916.00	\$ 751,534.00	\$ 80,000.00	\$ 80,000.00
FTA-5310	\$ 168,000.00	\$ -	\$ -	\$ -
State Operating	\$ 960,100.00	\$ 981,183.00	\$ 1,000,806.00	\$ 1,020,823.00
State 5307 Capital Match	\$ 331,875.00	\$ 142,275.00	\$ 138,352.00	\$ 139,153.00
State 5307 / CMAQ flexed	\$ 198,000.00	\$ -	\$ -	\$ -
State 5339 Match	\$ 85,364.00	\$ 93,941.00	\$ 10,000.00	\$ 10,000.00
State 5310 Match	\$ 21,000.00	\$ -	\$ -	\$ -
Local Operating	\$ 1,272,014.00	\$ 1,289,409.00	\$ 1,309,033.00	\$ 1,329,049.00
Local 5307 Capital Match	\$ 331,874.00	\$ 142,278.00	\$ 138,356.00	\$ 139,156.00
Local 5307 / CMAQ flexed	\$ 198,000.00	\$ -	\$ -	\$ -
Local 5339 Match	\$ 85,365.00	\$ 93,942.00	\$ 10,000.00	\$ 10,000.00
Local 5310 Match	\$ 21,000.00	\$ -	\$ -	\$ -
Total	\$ 10,826,619.00	\$ 6,903,364.00	\$ 6,103,217.00	\$ 6,191,288.00
Amount Programmed to be Spent				
FTA-5307(KY)Operating Assistance*	\$ 308,226.00	\$ 308,226.00	\$ 308,226.00	\$ 308,226.00
FTA-5307(TN)Operating Assistance	\$ 1,923,888.00	\$ 1,962,366.00	\$ 2,001,614.00	\$ 2,041,646.00
FTA-5307(TN) Capital	\$ 2,654,997.00	\$ 1,138,210.00	\$ 1,106,830.00	\$ 1,113,235.00
FTA-5307 / CMAQ flexed	\$ 1,584,000.00	\$ -	\$ -	\$ -
FTA-5339	\$ 682,916.00	\$ 751,534.00	\$ 80,000.00	\$ 80,000.00
FTA-5310	\$ 168,000.00	\$ -	\$ -	\$ -
State Operating	\$ 960,100.00	\$ 981,183.00	\$ 1,000,806.00	\$ 1,020,823.00
State 5307 Capital Match	\$ 331,875.00	\$ 142,275.00	\$ 138,352.00	\$ 139,153.00
State 5307 / CMAQ flexed	\$ 198,000.00	\$ -	\$ -	\$ -
State 5339 Match	\$ 85,364.00	\$ 93,941.00	\$ 10,000.00	\$ 10,000.00
State 5310 Match	\$ 21,000.00	\$ -	\$ -	\$ -
Local Operating	\$ 1,272,014.00	\$ 1,289,409.00	\$ 1,309,033.00	\$ 1,329,049.00
Local 5307 Capital Match	\$ 331,874.00	\$ 142,278.00	\$ 138,356.00	\$ 139,156.00
Local 5307 / CMAQ flexed	\$ 198,000.00	\$ -	\$ -	\$ -
Local 5339 Match	\$ 85,365.00	\$ 93,942.00	\$ 10,000.00	\$ 10,000.00
Local 5310 Match	\$ 21,000.00	\$ -	\$ -	\$ -
Total	\$ 10,826,619.00	\$ 6,903,364.00	\$ 6,103,217.00	\$ 6,191,288.00
Amount Remaining				
FTA-5307 (KY) Operating Assistance*	\$ -	\$ -	\$ -	\$ -
FTA-5307(TN) Operating Assistance	\$ -	\$ -	\$ -	\$ -
FTA-5307(TN) Capital	\$ -	\$ -	\$ -	\$ -
FTA-5307 / CMAQ flexed	\$ -	\$ -	\$ -	\$ -
FTA-5339	\$ -	\$ -	\$ -	\$ -

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FTA-5310	\$ -	\$ -	\$ -	\$ -
State Operating	\$ -	\$ -	\$ -	\$ -
State 5307 Capital Match	\$ -	\$ -	\$ -	\$ -
State 5307 / CMAQ flexed	\$ -	\$ -	\$ -	\$ -
State 5339 Match	\$ -	\$ -	\$ -	\$ -
State 5310 Match	\$ -	\$ -	\$ -	\$ -
Local Operating	\$ -	\$ -	\$ -	\$ -
Local 5307 Capital Match	\$ -	\$ -	\$ -	\$ -
Local 5307 / CMAQ flexed	\$ -	\$ -	\$ -	\$ -
Local 5339 Match	\$ -	\$ -	\$ -	\$ -
Local 5310 Match	\$ -	\$ -	\$ -	\$ -
Total	\$ -	\$ -	\$ -	\$ -

* 5307 for Kentucky is Operating Assistance Only

23 MAINTENANCE AND OPERATIONS:

The Clarksville MPO and its member jurisdictions must assure the maintenance and efficient operation of existing transportation infrastructure. Maintenance activities are those that occur primarily in reaction to situations that have an immediate or imminent adverse impact on the safety or availability of transportation facilities, such as pavement resurfacing and markings, street lighting, sidewalk repair, sinkhole repair, bridge repair, guardrail and sign replacement, and traffic signal maintenance. Operations may include more routine items such as painting and right-of-way maintenance. While these annual activities are not scheduled or funded in the TIP, they are included in Figure 15 to demonstrate that jurisdictions have the resources to operate and maintain the new or improved facilities, equipment, and services programmed in the TIP for FY2020. These numbers are based on expected continual economic growth. Actual numbers may change.

The Clarksville Transit System (CTS) provides fixed route and paratransit service in the urbanized area. Funds for transit operations and maintenance are provided through FTA Section 5307 funds from TN and KY for operating assistance, and through TDOT and local funds contributed by the City of Clarksville. These funds are spent on daily operations activities, and maintenance of vehicles and equipment, which are principal components in sustaining a safe and efficient public transportation infrastructure.

Montgomery County, Tennessee expends approximately \$5.2 million annually to operate and maintain existing roadways. Annual funds in the form of state-shared revenue sources and property taxes provide funding for Montgomery County's operations and maintenance expenditures.

The City of Clarksville, Tennessee expends approximately \$14.6 million annually to operate and maintain the existing road network. State-shared revenue sources, sales taxes and property taxes provide funding for the City of Clarksville's operations and maintenance expenditures.

The City of Oak Grove, Kentucky expends approximately \$209,550 annually to operate and maintain the existing road network. State-shared revenue sources, payroll taxes, sales taxes and property taxes provide funding for the City of Oak Grove's operations and maintenance expenditures.

Christian County, Kentucky expends approximately \$124,922 annually to operate and maintain the existing roadways. Annual funds in the form of state-shared revenue sources and payroll taxes, sales taxes and property taxes provide funding for Christian County's operations and maintenance expenditures.

For future years, an estimate of a three(3) percent increase in the budget is used as shown in Figure 16. In the event federal transportation funds are made available for maintenance and operations projects, it will be identified in the TIP.

FY2020-FY2023 Transportation Improvement Program

Figure 15. Highway Operations and Maintenance Budgets – FY2020

Maintenance and Operations	Estimated Annual Revenues	Estimated Annual Cost
City of Clarksville, TN	\$14,600,000.00	\$ 14,600,000.00
Montgomery County, TN	\$ 5,200,000.00	\$ 5,200,000.00
City of Oak Grove, KY	\$ 209,550.00	\$ 209,550.00
City of Hopkinsville, KY	\$ 624,000.00	\$ 624,000.00
Christian County, KY*	\$ 124,922.00	\$ 124,922.00
Clarksville Transit System (CTS) – FTA 5307 Operating Funding with State and Local Match	\$ 4,156,002.00	\$ 4,156,002.00
Total Maintenance and Operations	24,290,474.00	\$ 24,290,712.00

*The local match to the KYTC maintenance funds for 25% of the Christian County area that is within the MPO area. KYTC provided \$499,668.00 in Transportation maintenance funds for Christian County.

Figure 16. Future Operations and Maintenance Budgets FY2021-FY2023

Maintenance and Operations	FY2021	FY2022	FY2023
City of Clarksville, TN	\$15,038,000	\$15,489,140	\$ 15,953,814
Montgomery County, TN	\$ 5,356,000	\$5,516,680	\$ 5,682,180
City of Oak Grove, KY	\$ 215,837	\$ 222,312	\$ 228,981
City of Hopkinsville, KY	\$ 642,720	\$ 662,002	\$ 681,862
Christian County, KY	\$ 128,670	\$ 132,530	\$ 136,506
Clarksville Transit System (CTS) – FTA 5307 Operating Funding with State and Local Match	\$ 4,366,296	\$4,497,285	\$ 4,632,203
Total Maintenance and Operations	\$ 25,412,763	\$ 25,921,019	\$ 26,439,440

SECTION 3. PROJECT PAGES

The project sheets that follow show specific details and information for each project in the TIP.

The top portion of the project sheets gives the following information:

1. TIP # of the project assigned by the MPO;
2. TDOT PIN# or KYTC ID # assigned by the state agency;
3. Priority of the project;
4. Agency responsible for implementation of the project;
5. County in which the project is located;
6. Length of the project when applicable;
7. Reference to the project number assigned in the Metropolitan Transportation Plan 2040; (E+C is defined as an existing project with committed funding)
8. Conformity status;
9. Project name;
10. Estimated total cost for all phases of the project;
11. Termini / location of the project;
12. Project description is the type of improvement to be made, or services to be operated.

The middle portion displays:

1. The cost per phase (type of work being done) per federal fiscal year by funding source.
2. The funding is shown as total funds and broken down into each agency's responsibility (federal, state, local) to be obligated in each fiscal year.

TIP # 1	TDOT/KYTC PIN# or KYTCT#	Priority (A,B, or C)	Lead Agency KYTC,TDOT,MPO, City or Co			
County Montgomery or Christian	Length in miles	MTP# page# and Table project can be found	Conformity Status Exempt or Non Exempt			
Route/Project Name	Location of project		Total Project Cost \$ amount of the project			
Termini or Intersection	What portion of the route or the roadway the route intersects					
Project Description	The description of improvement to be made					

Fiscal Year	Phase	Funding Type	Total Funds	Fed Funds	State Funds	Local Funds
2000	PE/N	STBG	\$10,000	\$8,000	\$2,000	0
2021	PE/D	STBG	\$10,000	\$8,000	\$2,000	0
2022	ROW	STBG	100,000	80,000	20,000	0
2023	CONST	STBG	1,000,000	800,000	200,000	0

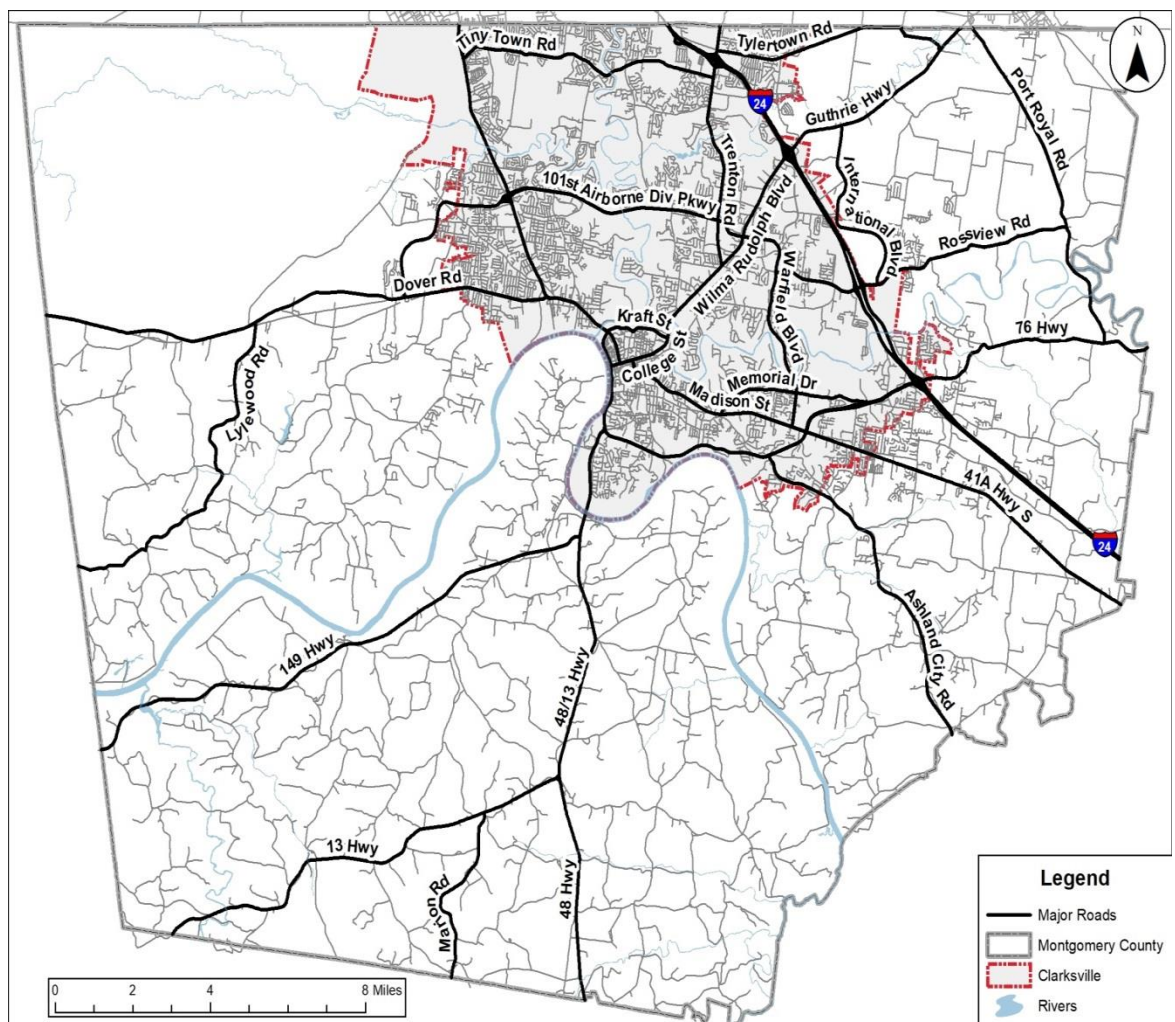
FY2020-FY2023 Transportation Improvement Program

The lower portion shows:

1. Any amendments or adjustments made to the project throughout the TIP time frame and remarks on any changes to the project.

Amendment Number	Modification Number
0	
Remarks:	

2. A map of the project's location or a picture of a transit project is provided.



FY2020-FY2023 Transportation Improvement Program

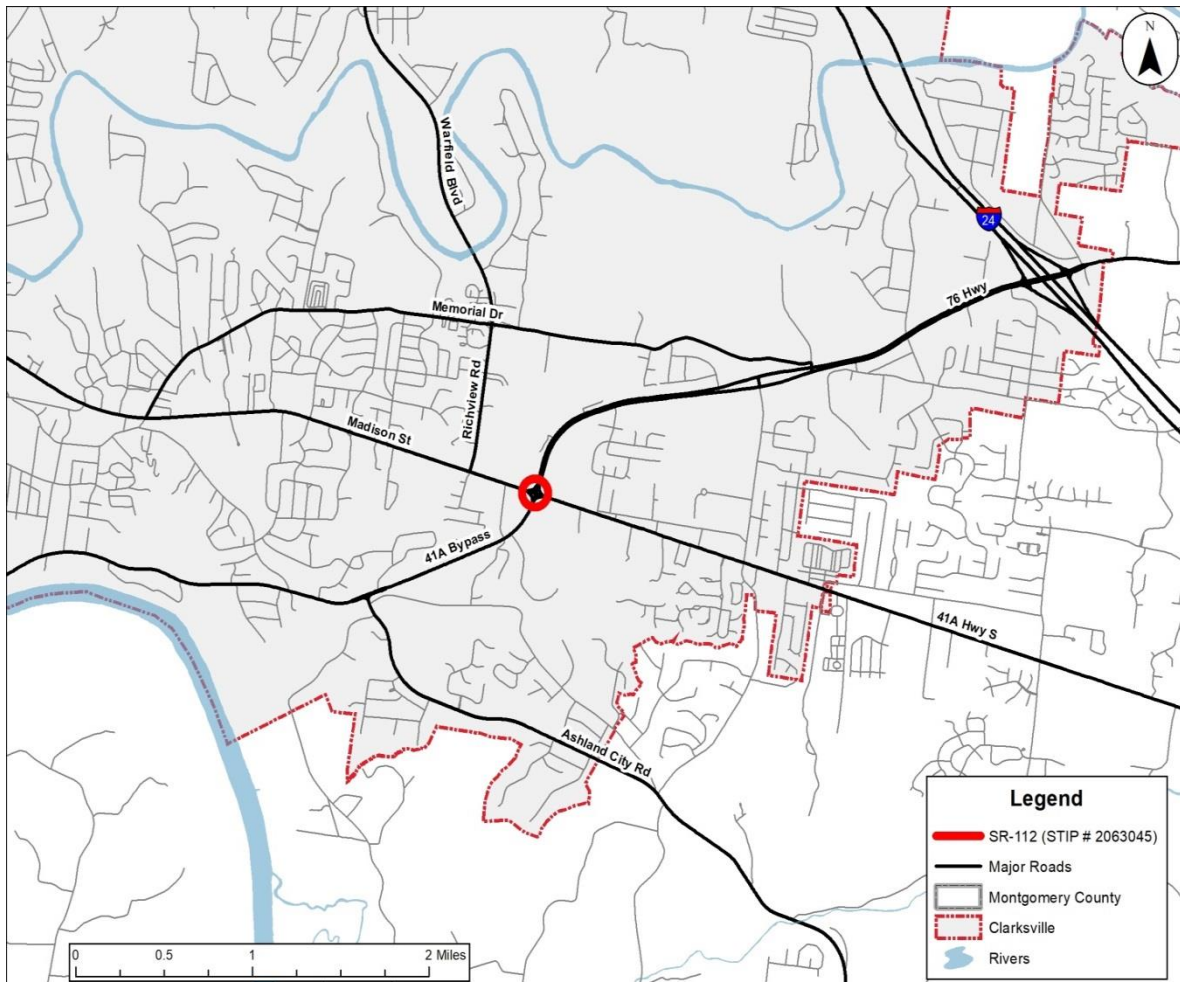
TIP # 3	TDOT/KYTC 101285.02	Priority A	Lead Agency TDOT
County Montgomery	Length 0.0 mi	MTP# E+C 5; Table 10.7; pg 10-20	Conformity Status Non Exempt
Route/Project Name SR-112 (STIP # 2063045)		Total Project Cost \$8,500,000	
Termini or Intersection Intersection at SR-76, LM 9.19 in Clarksville			
Project Description		Intersection Improvements	

Fiscal Year	Phase	Funding Type	Total Funds	Fed Funds	State Funds	Local Funds
2020	CONST	STBG	8,500,000	6,800,000	1,700,000	0
2021			0	0	0	0
2022			0	0	0	0
2023			0	0	0	0

Amendment Number Modification Number

0

Remarks: Subset of larger SR112 widening project E+C 5: Table 7.2 page 7-12, which included the ROW and PE*



FY2020-FY2023 Transportation Improvement Program

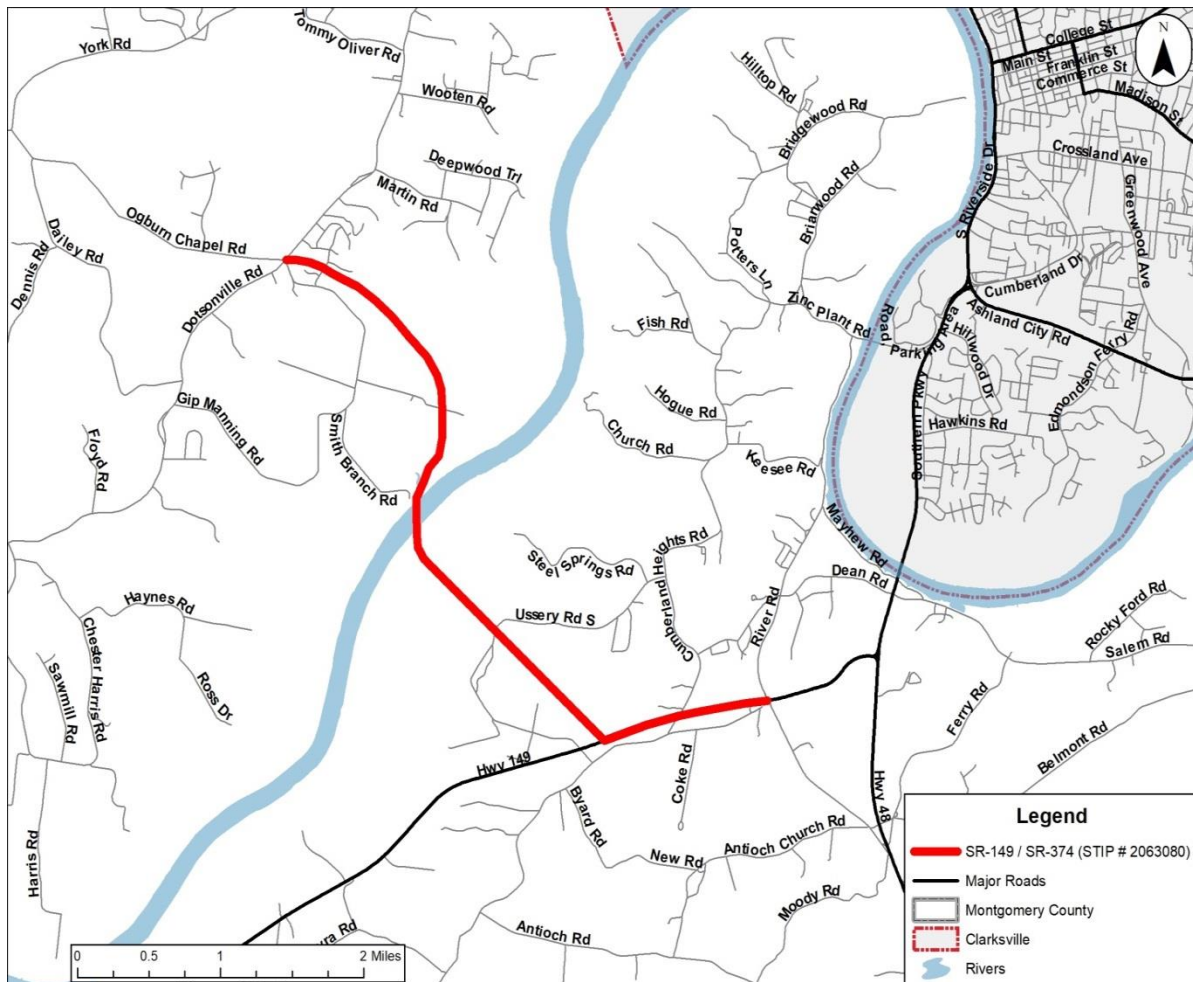
TIP # 5	TDOT/KYTC 101463.02 Priority A	Lead Agency TDOT
County Montgomery	Length 5.2 mi MTP# E+C 2; Table 11-3; pg 11-5	Conformity Status Non Exempt
Route/Project Name	SR-149 / SR-374 (STIP# 2063080)	Total Project Cost \$112,922,516
Termini or Intersection	SR-149: From SR-374 to River Rd; SR-374; from SR-149 to Dotsonville Rd in Clarksville Re-budgeted ROW (IA)	
Project Description	Construct four 12-foot lane and 10-foot shoulders on four-lane divided ROW	

Fiscal Year	Phase	Funding Type	Total Funds	Fed Funds	State Funds	Local Funds
2020			0	0	0	0
2021			0	0	0	0
2022	ROW	STBG	7,710,000	6,168,000	1,542,000	0
2023			0	0	0	0

Amendment Number
Modification Number

0

Remarks: Project began in 1997 - Contact Brian Hurst, TDOT, for further information. HPP ID #TN046 (Section 1602 TEA 21)
 *Projected 2025 Const estimated \$100,000,000 total funds; PE-N from previous TIP \$3,000,000; PE-D from previous TIP \$2,212,516 *



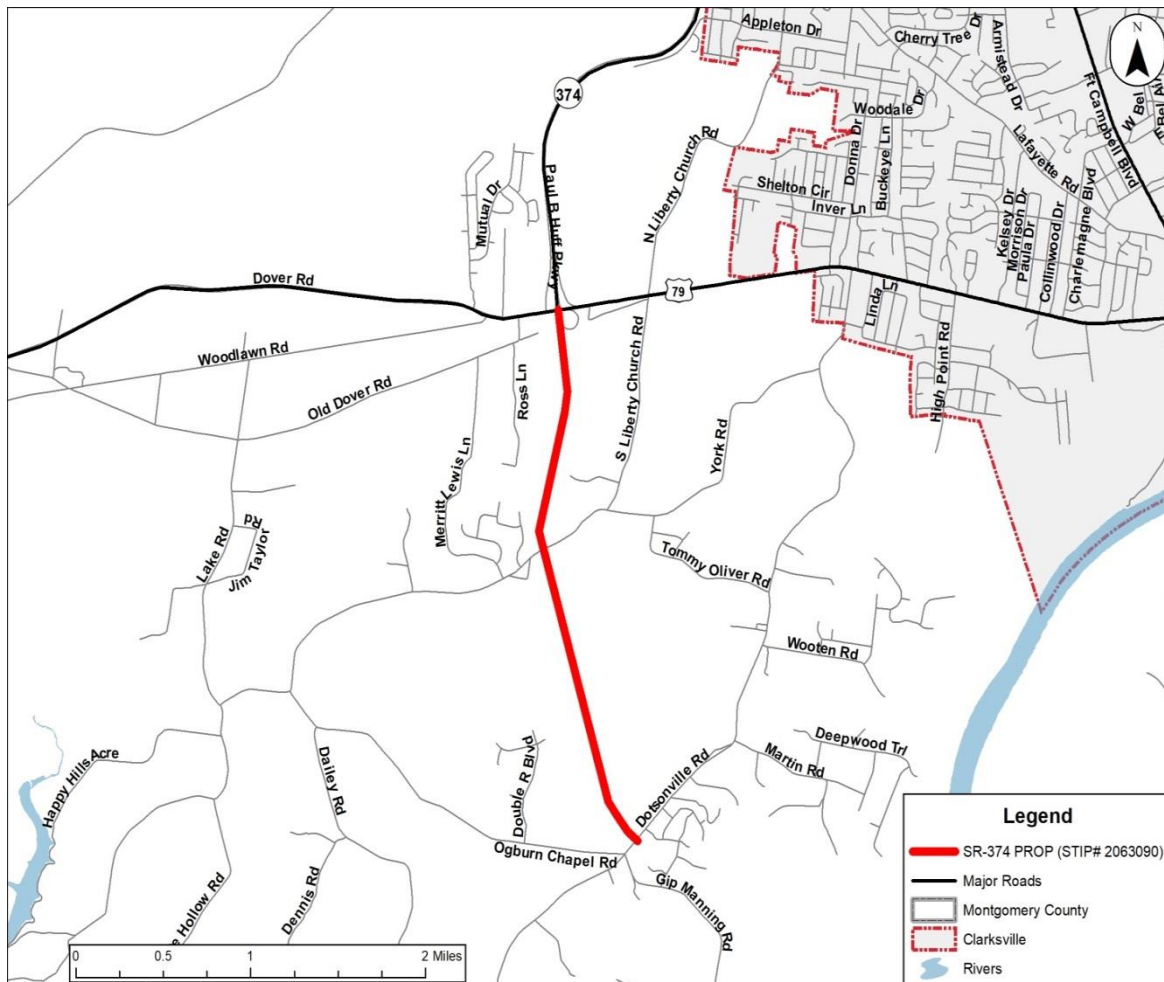
FY2020-FY2023 Transportation Improvement Program

TIP # 6	TDOT/KYTC 101463.03	Priority A	Lead Agency TDOT			
County Montgomery	Length 2.9 mi	MTP# E+C 1; Table 11-3; pg 11-5 SR-	Conformity Status Non-Exempt			
Route/Project Name	374 Prop (STIP# 2063090)		Total Project Cost \$42,200,000			
Termini or Intersection	From SR-76 (US-79) to South of Dotsonville Road (Re-budgeted ROW & Stage Const) (IA)					
Project Description	Construct four 12-foot lane and 10-foot shoulders on four-lane divided ROW					

Fiscal Year	Phase	Funding Type	Total Funds	Fed Funds	State Funds	Local Funds
2020			0	0	0	0
2021			0	0	0	0
2022	ROW	HPP	2,400,000	1,920,000	480,000	0
2022	ROW	STBG	800,000	640,000	160,000	0

Remarks: _____ Amendment Number: Modification Number:

HPP ID# TN046(TEA 21)
 Projected 2027 Const estimate \$39,000,000 total funds PE was done under TIP #5. These projects were combined during PE.



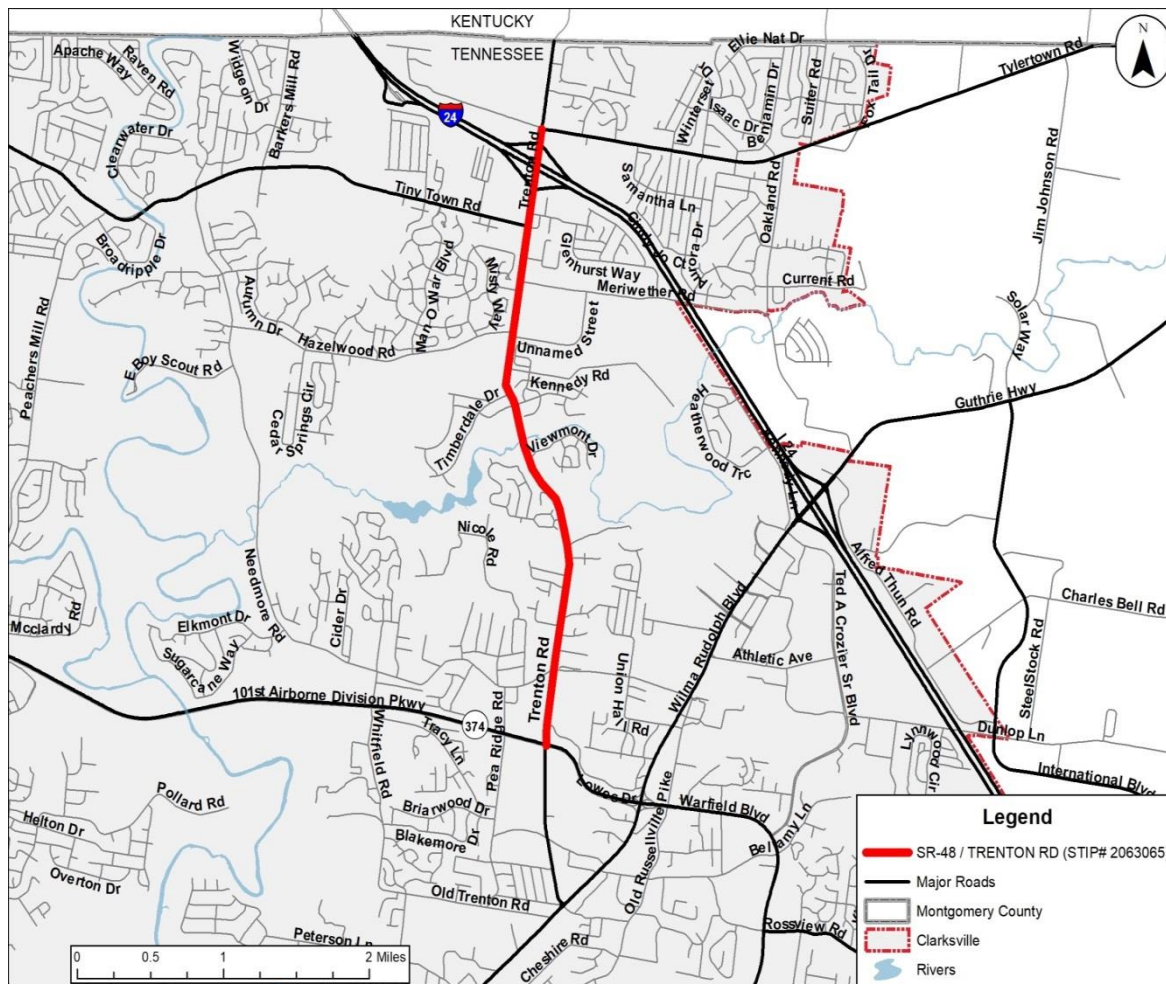
FY2020-FY2023 Transportation Improvement Program

TIP # 12	TDOT/KYTC 123071.00	Priority A	Lead Agency TDOT
County Montgomery	Length 3.7 mi	MTP# E+C 7; Table 11-3; pg 11-5	Conformity Status Non Exempt
Route/Project Name	SR-48/Trenton Road (STIP # 2063065)		
Termini or Intersection	From near SR-374 to near I-24		
Project Description	Widen from 2 lanes to 5 lanes along existing alignment		
Total Project Cost	\$47,400,000		

Fiscal Year	Phase	Funding Type	Total Funds	Fed Funds	State Funds	Local Funds
2020			0	0	0	0
2021			0	0	0	0
2022	PE-D	S-STBG	1,200,000	960,000	240,000	0
2023	ROW	S-STBG	6,500,000	5,200,000	1,300,000	0

0

Remarks: PE-N previous TIP \$1,200,000



FY2020-FY2023 Transportation Improvement Program

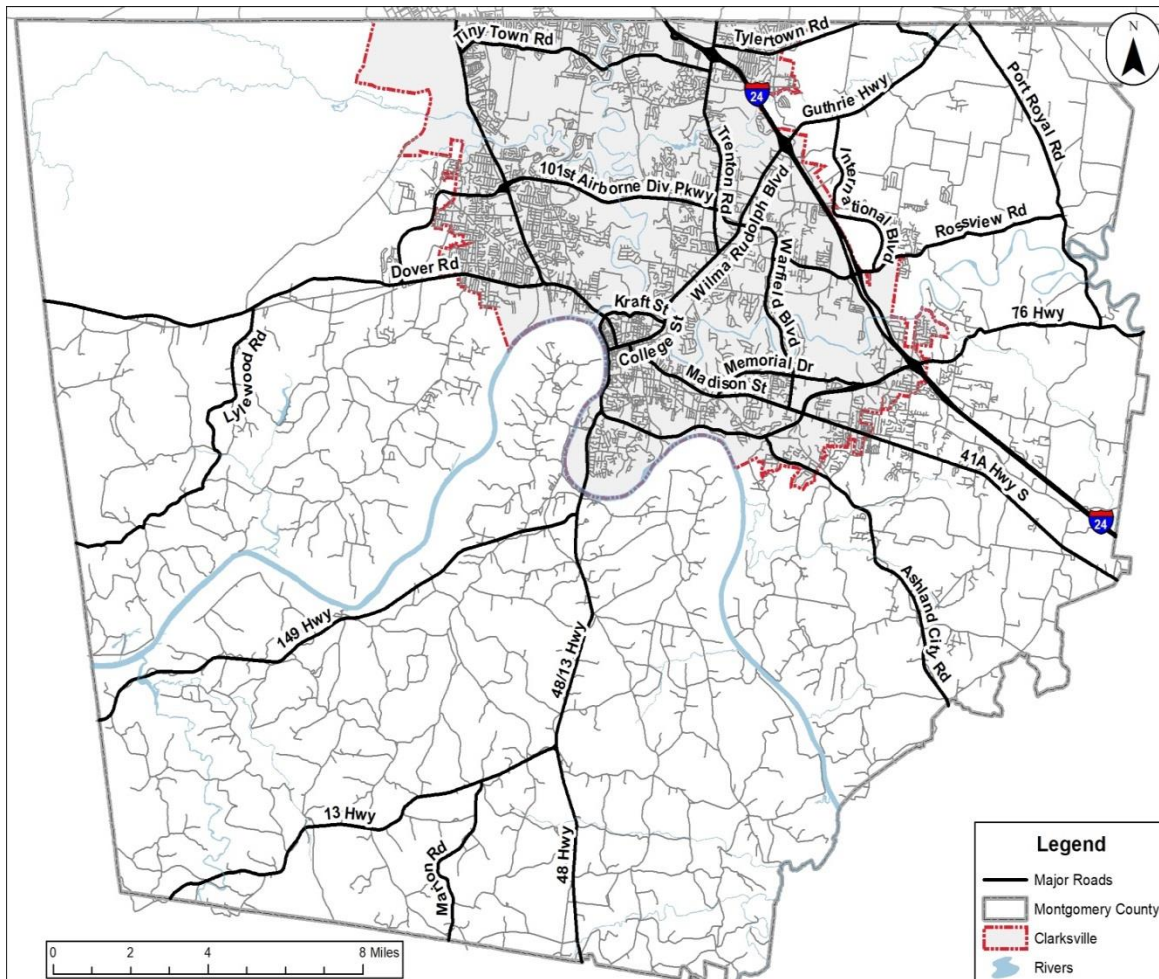
TIP # 37	TDOT/KYTC 126803.00	Priority A	Lead Agency TDOT
County Montgomery	Length	MTP# Section 9.1, pg 9.1	Conformity Status Exempt
Route/Project Name	National Highway System Preservation & Operations (NHPP) Grouping		Total Project Cost \$500,000
Termini or Intersection	Clarksville MPO		
Project Description	See Appendix C and TIP Grouping Description for a comprehensive list of activities included but not limited for eligibility.		

Fiscal Year	Phase	Funding Type	Total Funds	Fed Funds	State Funds	Local Funds
2020	PE, ROW, CONST	NHPP	175,000	140,000	35,000	0
2021	PE, ROW, CONST	NHPP	150,000	120,000	30,000	0
2022	PE, ROW, CONST	NHPP	100,000	80,000	20,000	0
2023	PE, ROW, CONST	NHPP	75,000	60,000	15,000	0

Remarks _____ Amendment Number _____ Modification Number _____

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(STIP# 2063110)

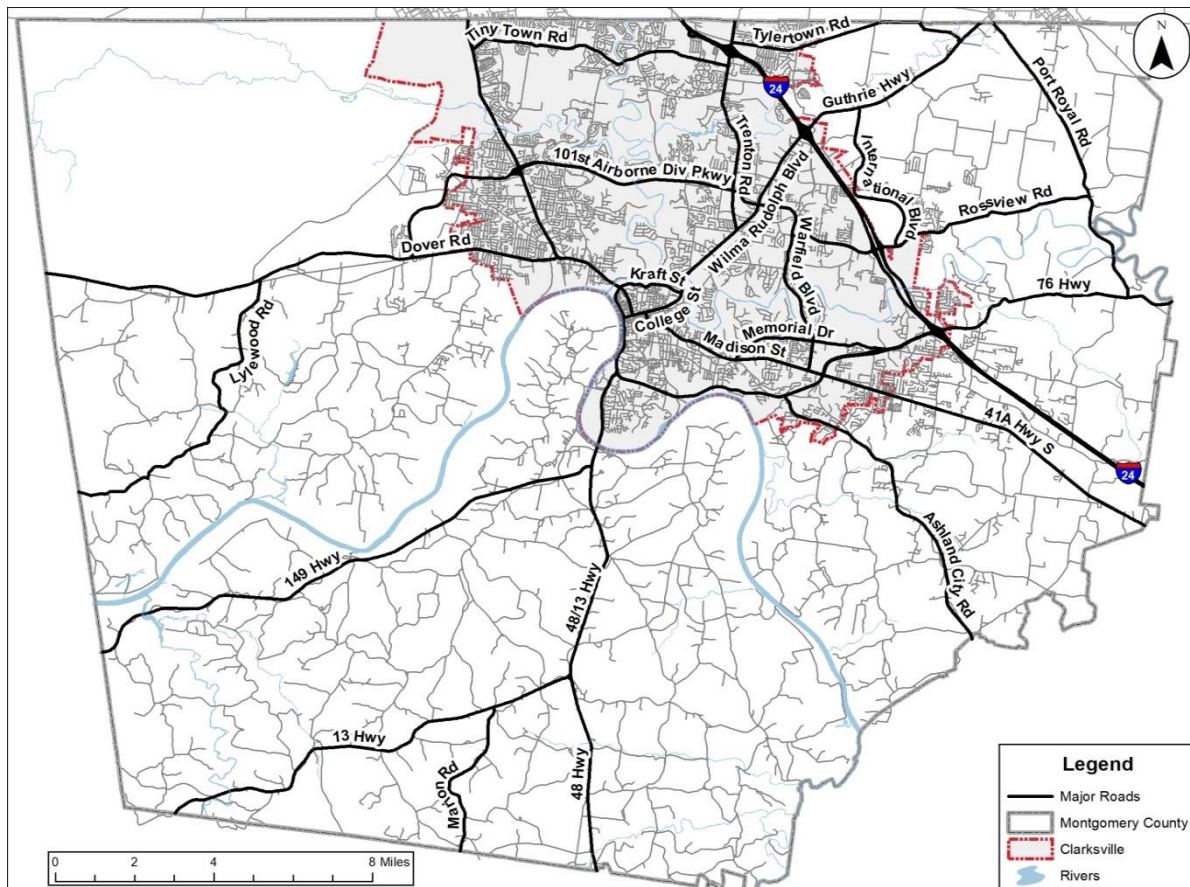


FY2020-FY2023 Transportation Improvement Program

TIP # 38	TDOT/KYTC 126804.00	Priority A	Lead Agency TDOT
County Montgomery	Length 0.0 mi	MTP# pg 9-4, Table 11.3, 11-6	Conformity Status Exempt
Route/Project Name	Safety (Highway Hazard Elimination) (STIP# 2063112)		Total Project Cost \$2,003,000
Termini or Intersection	Clarksville MPO		
Project Description	See Appendix C- TIP Grouping Description for a comprehensive list of activities included but not limited for eligibility.		

Fiscal Year	Phase	Funding Type	Total Funds	Fed Funds	State Funds	Local Funds
2020	PE, ROW, CONST	HSIP	750,000	675,000	75,000	0
2020	PE, ROW, CONST	PHSIP	0	0	0	0
2020	PE, ROW, CONST	HSIP-R	1,275	1,148	128	0
2021	PE, ROW, CONST	HSIP	625,000	562,500	62,500	0
2021	PE, ROW, CONST	HSIP-R	1,050	945	105	0
2021	PE, ROW, CONST	PHSIP	0	0	0	0

Remarks: Continued on next TIP sheet for 2022 and 2023*



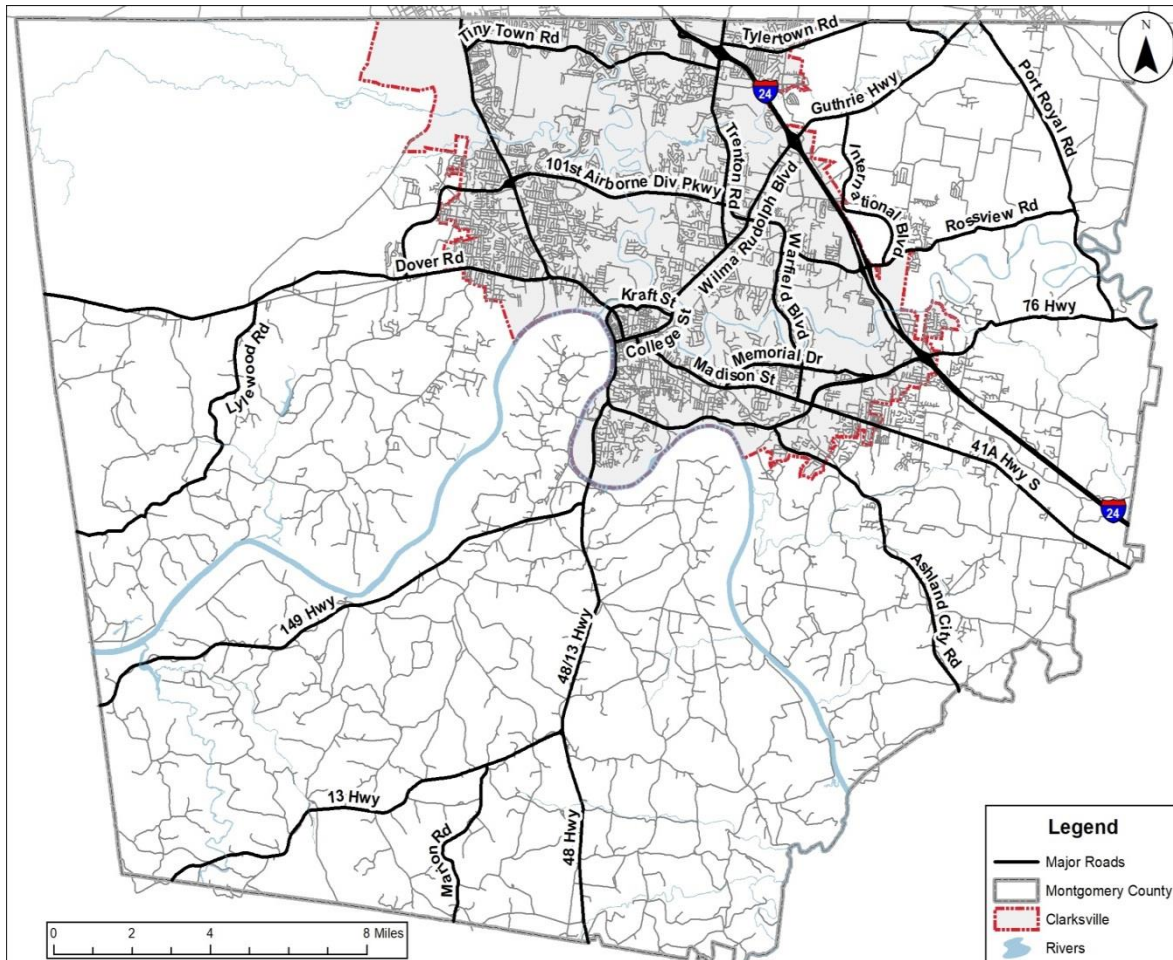
FY2020-FY2023 Transportation Improvement Program

TIP # 38	TDOT/KYTC 126804.00 Priority A	Lead Agency TDOT
County Montgomery	Length mi MTP# pg 9-4, Table 11.3, 11-6	Conformity Status Exempt
Route/Project Name	Safety (Highway Hazard Elimination) (STIP# 2063112)	Total Project Cost \$2,003,000
Termini or Intersection	Clarksville MPO	
Project Description	See Appendix C -TIP Grouping Description for a comprehensive list of activities included but not limited for eligibility.	

Fiscal Year	Phase	Funding Type	Total Funds	Fed Funds	State Funds	Local Funds
2022	PE, ROW, CONST	HSIP	375,000	337,500	37,500	0
2022	PE, ROW, CONST	PHSIP	0	0	0	0
2022	PE, ROW, CONST	HSIP-R	450	405	45	0
2023	PE, ROW, CONST	HSIP	250,000	225,000	25,000	0
2023	PE, ROW, CONST	HSIP-R	225	203	23	0
2023	PE, ROW, CONST	PHSIP	0	0	0	0

Remarks
Amendment Number
Modification Number

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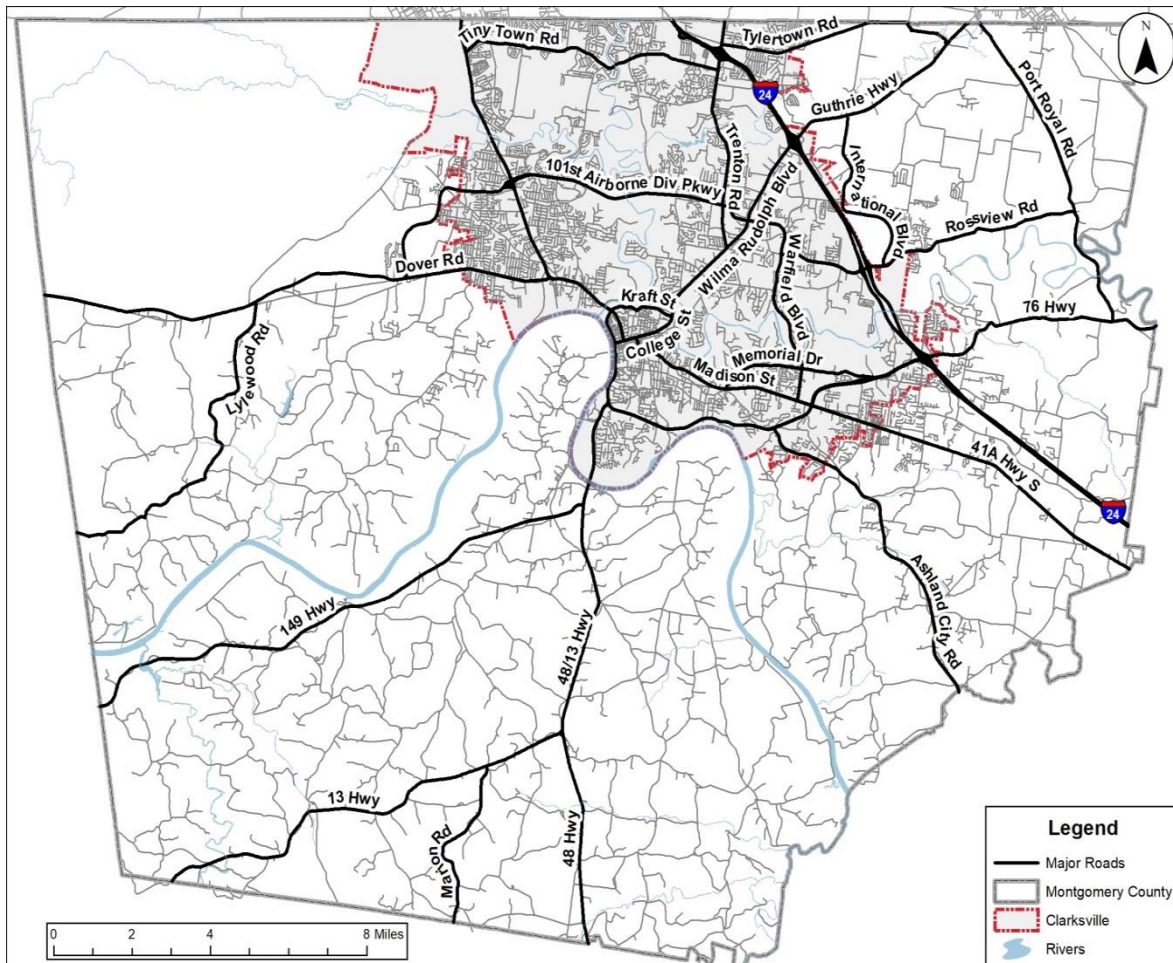


FY2020-FY2023 Transportation Improvement Program

TIP # 40		TDOT/KYTC 126805.00 Priority A		Lead Agency TDOT	
County Montgomery		Length mi		MTP# Section 9.1, page 9-2	
Route/Project Name		Surface Transportation Sys. Preservation & Operation (STBG) Grouping		Conformity Status Exempt	
Termini or Intersection		Clarksville MPO(STIP# 2063115)		Total Project Cost \$350,000	
Project Description		See Appendix C -TIP Grouping Description for a comprehensive list of activities included but not limited for eligibility.			

Fiscal Year	Phase	Funding Type	Total Funds	Fed Funds	State Funds	Local Funds
2020	PE, ROW, CONST	STBG	122,500	98,000	24,500	0
2021	PE, ROW, CONST	STBG	105,000	84,000	21,000	0
2022	PE, ROW, CONST	STBG	70,000	56,000	14,000	0
2023	PE, ROW, CONST	STBG	52,500	42,000	10,500	0

Remarks	Amendment Number	Modification Number
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FY2020-FY2023 Transportation Improvement Program

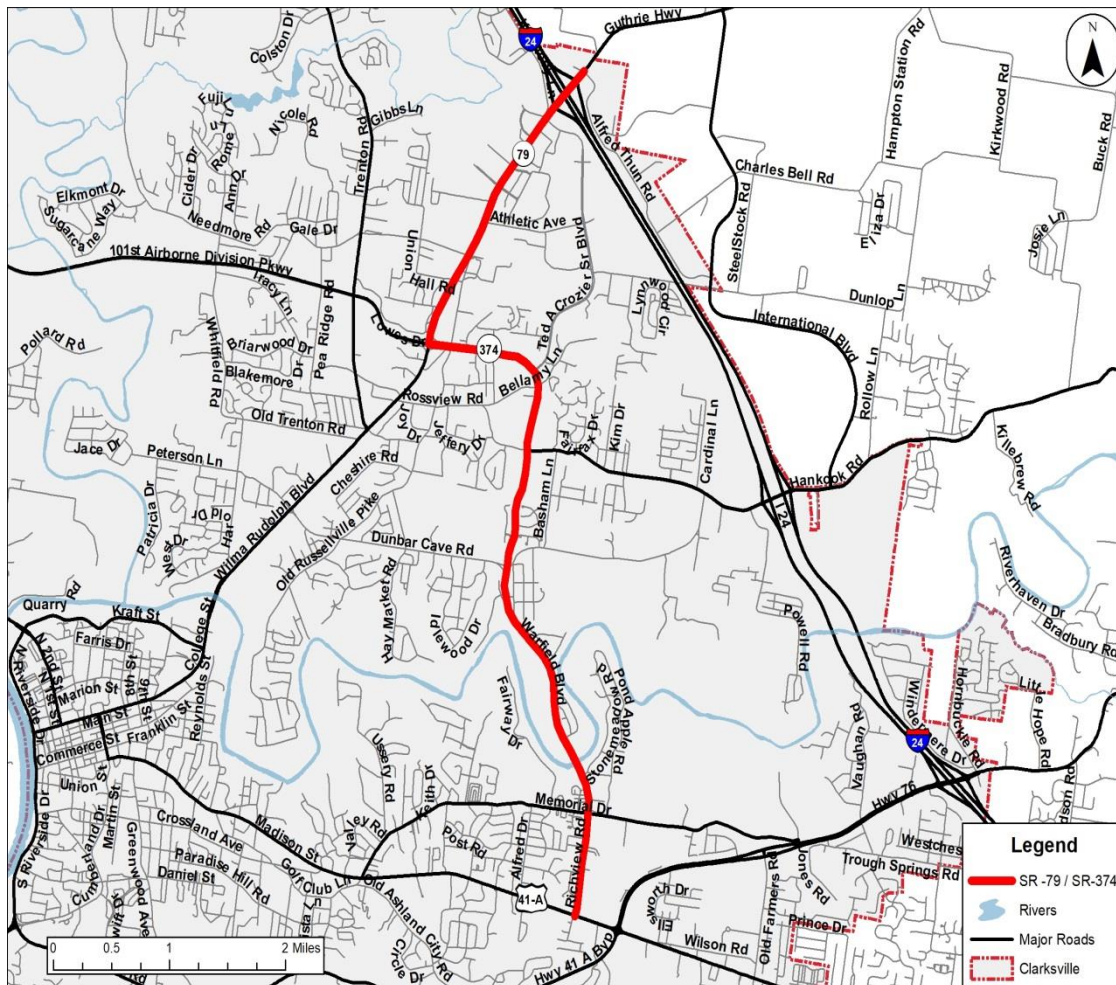
TIP # 50	TDOT/KYTC # 127899.00	Priority A	Lead Agency Clarksville
County Montgomery	Length 2.5 mi	MTP# pg8-46; Table 11-11, pg11-29	Conformity Status Exempt
Route/Project Name	Wilma Rudolph Blvd Adaptive Signal System(ITS)		Total Project Cost \$1,195,440
Termini or Intersection	Wilma Rudolph Blvd corridor from Industrial I lPark Access Rd/Alfred Thun Rd to SR-374		
Project Description	Implement an adaptive signal system for 10 signals along the Wilma Rudolph Blvd corridor; develop detour flush plans for I-24 along SR-374/Warfield Blvd, from Wilma Rudolph Blvd to Madison St; DSRC equip; addition of 2 CCTV cameras installed along both.		

Fiscal Year	Phase	Funding Type	Total Funds	Fed Funds	State Funds	Local Funds
2020	PE-N	CMAQ	10,000	10,000	0	0
2020	PE-D	CMAQ	200,000	200,000	0	0
2021	CONST	CMAQ	985,440	985,440	0	0

Remarks: _____ Amendment Number _____ Modification Number _____

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Project is in the CRITS in Appendix A under ATMS01, ATMS03, ATMS08, ATIS10; It is in the Statewide ITS



FY2020-FY2023 Transportation Improvement Program

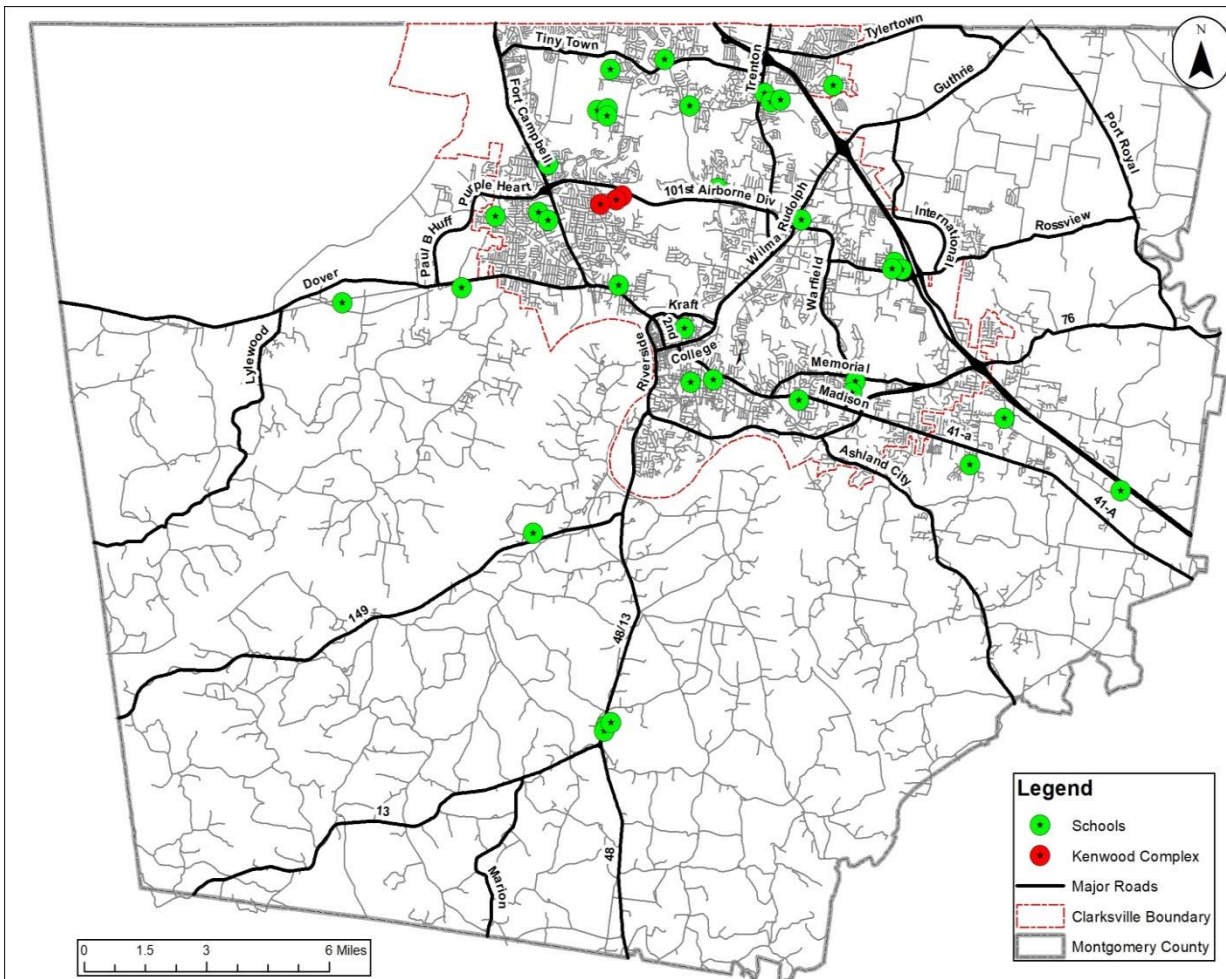
TIP # 57	TDOT/KYTC 123747.00	Priority A	Lead Agency Clarksville			
County Montgomery	Length 0.0 mi MTP#	Table 8.6; page	Conformity Status Exempt			
Route/Project Name	Safe Routes to School Grouping	8.22	Total Project Cost \$344,684			
Termini or Intersection	Connect Kenwood Middle to Kenwood High School					
Project Description	Grant funding awarded at 100% federal					

Fiscal Year	Phase	Funding Type	Total Funds	Fed Funds	State Funds	Local Funds
2020	PE, ROW, CONST	SRTS	319,464	319,464	0	0
2021						
2022						
2023						

Remarks:
Amendment Number
Modification Number

0

*SRTS awarded for Kenwood Middle school 2017 and awarded to connect middle school to high school 2019 (these funds are old SRTS awarded by TDOT not TA funds per Lisa Dunn, TDOT)



FY2020-FY2023 Transportation Improvement Program

TIP # 66	TDOT/KYTC 112874.00	Priority A	Lead Agency Clarksville
County Montgomery	Length 1.5 mi	MTP# E+C 3; Table 11-3; pg 11-5	Conformity Status Non Exempt
Route/Project Name	Dunbar Cave Road/Rossvie Road		Total Project Cost \$13,800,000
Termini or Intersection	Rossvie Rd from I-24 to 400' West of Keysburg Road; Realignment of Dunbar Cave Rd with Cardinal Lane		
Project Description	Rossvie Rd-widen from 2 lanes to 5 lanes from I-24 to Cardinal Lane w/signal; 3 lane from Cardinal Lane to Keysburg Rd-transition to 2 lane. Dunbar Cave Rd realign from E of John Ross Rd to Cardinal Lane; Cul-de-sac N end of former Dunbar Cave Rd.		

Fiscal Year	Phase	Funding Type	Total Funds	Fed Funds	State Funds	Local Funds
2020	ROW	L-STBG	1,500,000	1,200,000	0	300,000
2020	CONST	L-STBG	9,500,000	7,600,000	0	1,900,000

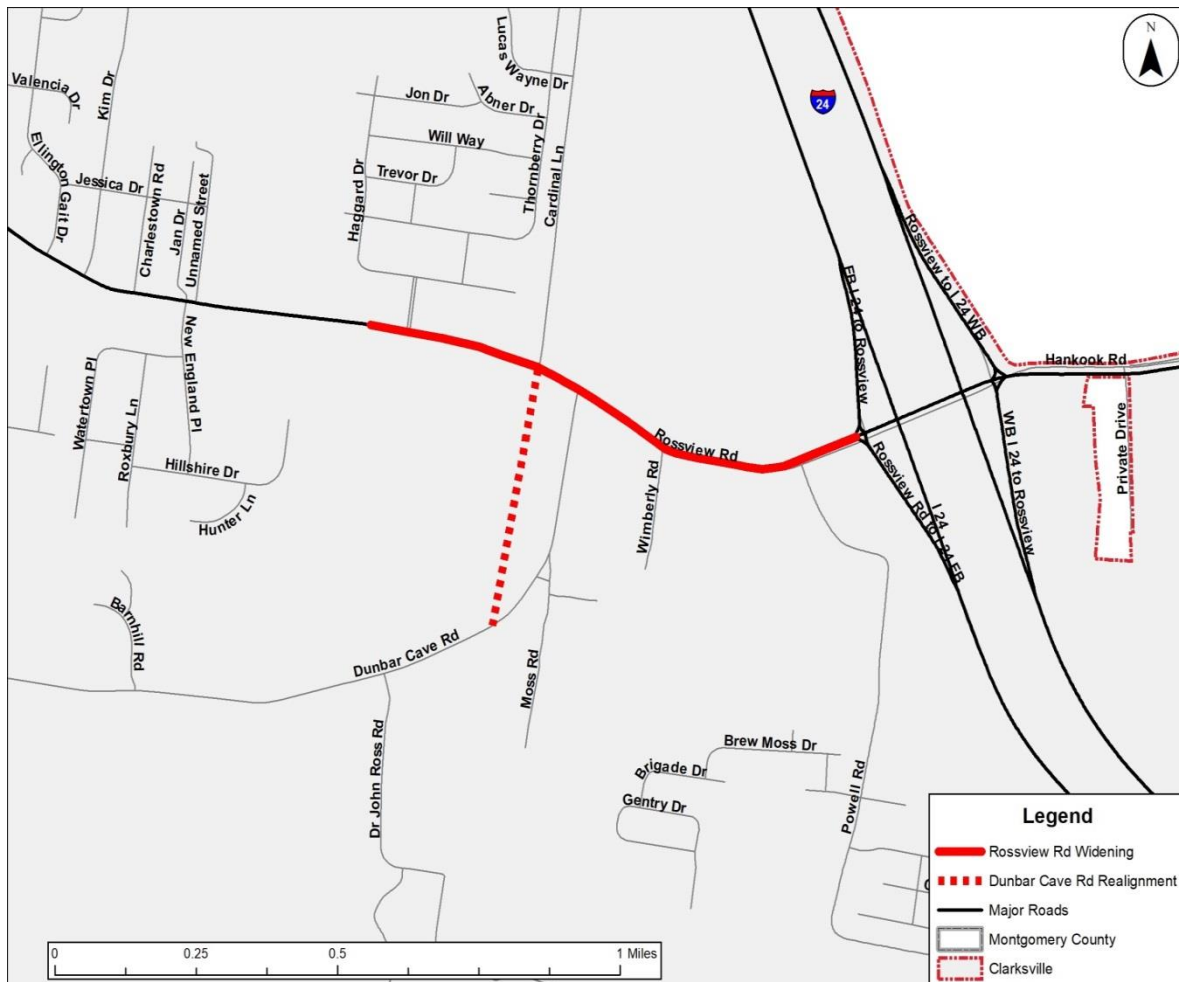
Remarks:

Amendment Number

Modification Number

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*TIP #66 in Previous TIP FY2009, FY2011 \$800,000 PE, FY2014 ROW 2,000,000



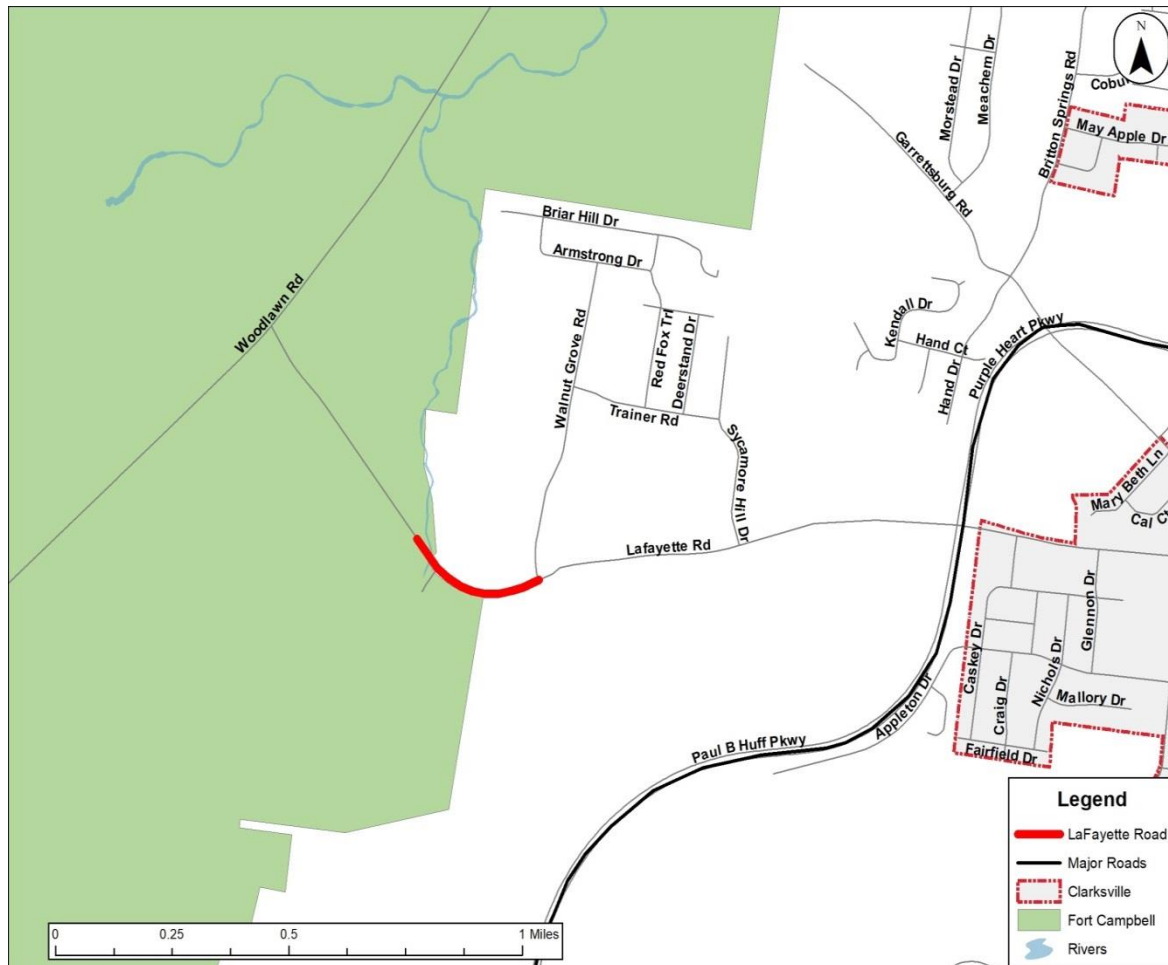
FY2020-FY2023 Transportation Improvement Program

TIP # 70	TDOT/KYTC 121387.00	Priority A	Lead Agency	Montgomery Co		
County Montgomery	Length 0.4 mi	MTP# ID#106; Table 11.3; pg 11-5	Conformity Status	Non-Exempt		
Route/Project Name:	LaFayette Road		Total Project Cost	\$2,438,000		
Termini or Intersection:	from Walnut Grove Road 1,940 feet to/ thru Ft. Campbell Gate					
Project Description	Reconstruction and widening of approximately 1,940 feet of Lafayette Rd. The widening will consist of four 12' lanes with paved shoulders that transition from 10' wide to a 2.5' curb and gutter on both sides of the roadway.(cont. in Remarks)*					
Fiscal Year	Phase	Funding Type	Total Funds	Fed Funds	State Funds	Local Funds
2020	CONST	FLAP	2,080,000	1,664,000	0	416,000

Remarks:

The center lane will be tapered from 5 lane into a 4 lane section for entry into the gate.

EFL Proj Mgmt phase, FLAP funding \$38,000.00



FY2020-FY2023 Transportation Improvement Program

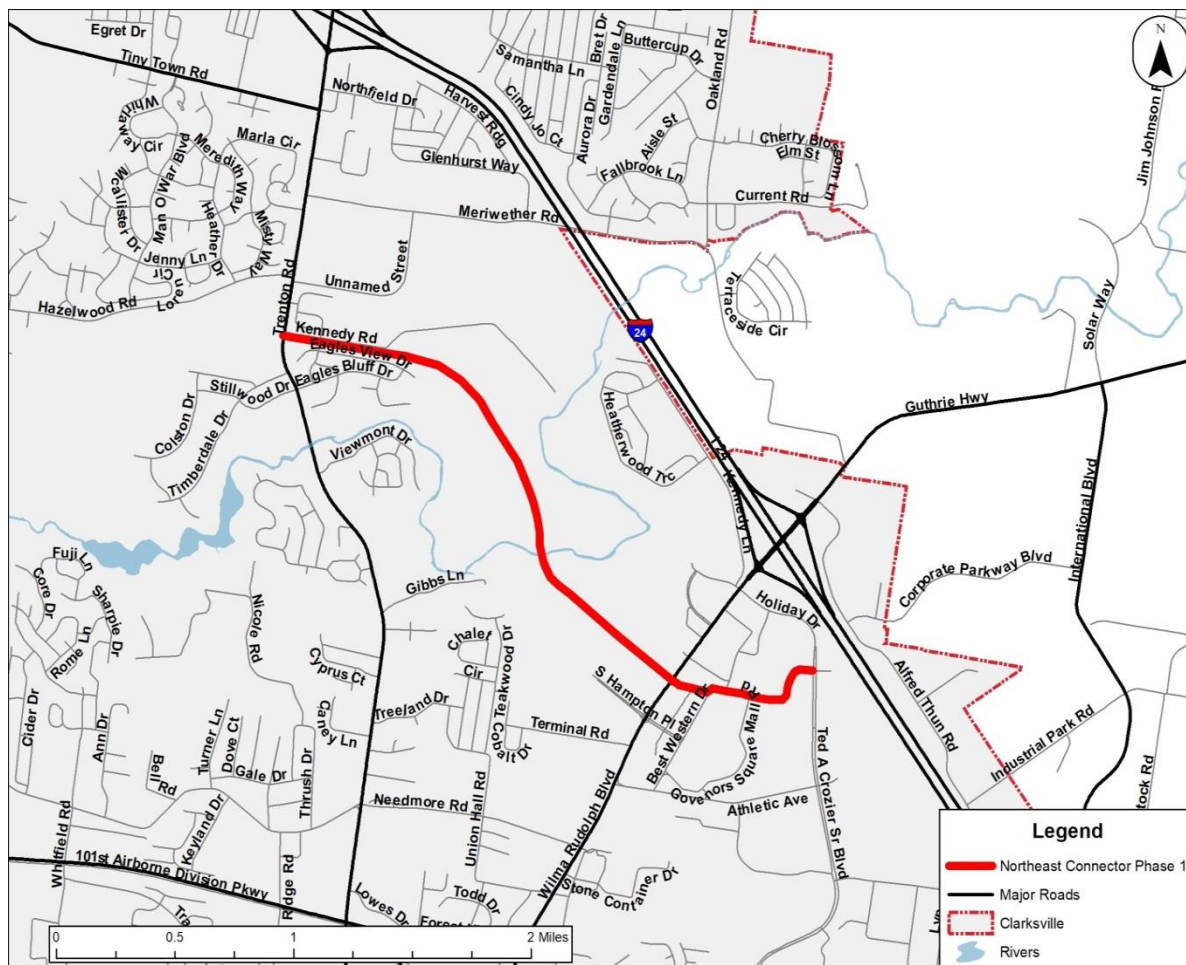
TIP # 75	TDOT/KYTC	Priority A	Lead Agency Clarksville
County Montgomery	Length 3.6 mi	MTP# ID#104; Table 11.3; pg 11-5	Conformity Status Non Exempt
Route/Project Name	Northeast Connector - Phase 1		Total Project Cost \$31,825,000
Termini or Intersection	From Ted Crozier Blvd to Trenton Road/SR-48		
Project Description	Construct a new 4/5-lane roadway		

Fiscal Year	Phase	Funding Type	Total Funds	Fed Funds	State Funds	Local Funds
2020	PE-D	LOCAL	800,000	0	0	800,000
2020	ROW	Local	10,000,000	0	0	10,000,000
2021-22			0	0	0	0
2023	CONST	L-STBG	20,625,000	16,500,000	0	4,125,000

Remarks: _____ Amendment Number _____ Modification Number _____

0

\$400,000 local - performed in previous TIP; No funding for 2021, 2022*



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TIP # 76	TDOT/KYTC 118505.02	Priority A	Lead Agency	Clarksville
County Montgomery	Length 0.9 mi	MTP# pg 6-32 ; fig 6-14 pg 6-43	Conformity Status	Exempt
Route/Project Name Red River East Trail - Phase 1			Total Project Cost	\$1,840,996
Termini or Intersection Beginning at a vehicular/pedestrian bridge on US Hwy 41A and terminating at a proposed trailhead				
Project Description Construction of a 3,200 linear foot multi-modal facility. Project also includes landscaping, signage, benches and trash receptacles.				

Fiscal Year	Phase	Funding Type	Total Funds	Fed Funds	State Funds	Local Funds
2020	CONST	STBG-TA	1,690,996	1,352,797	0	338,199

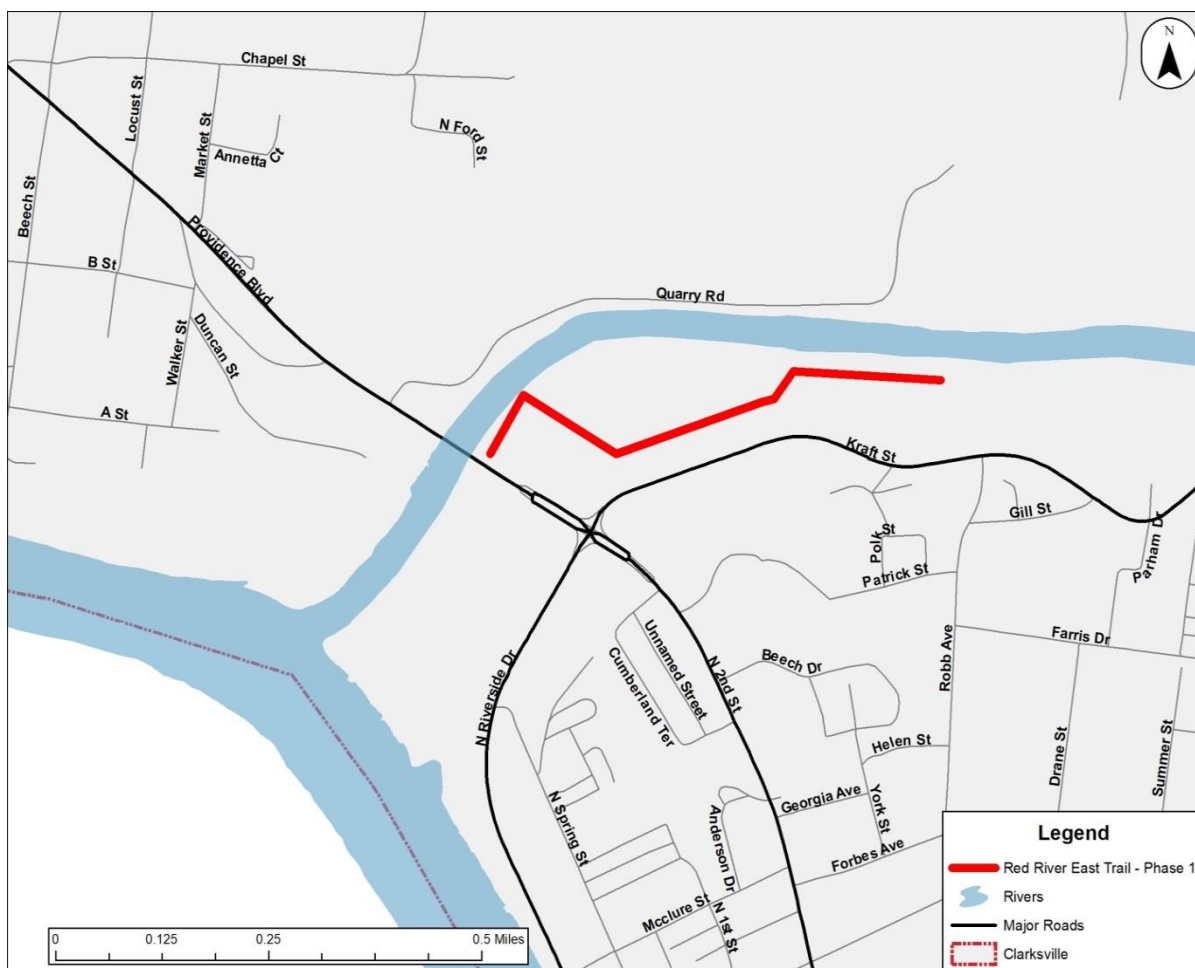
Remarks:

Amendment Number

Modification Number

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*Local Gov't performed PE at \$150,000; ROW belonged to the City.

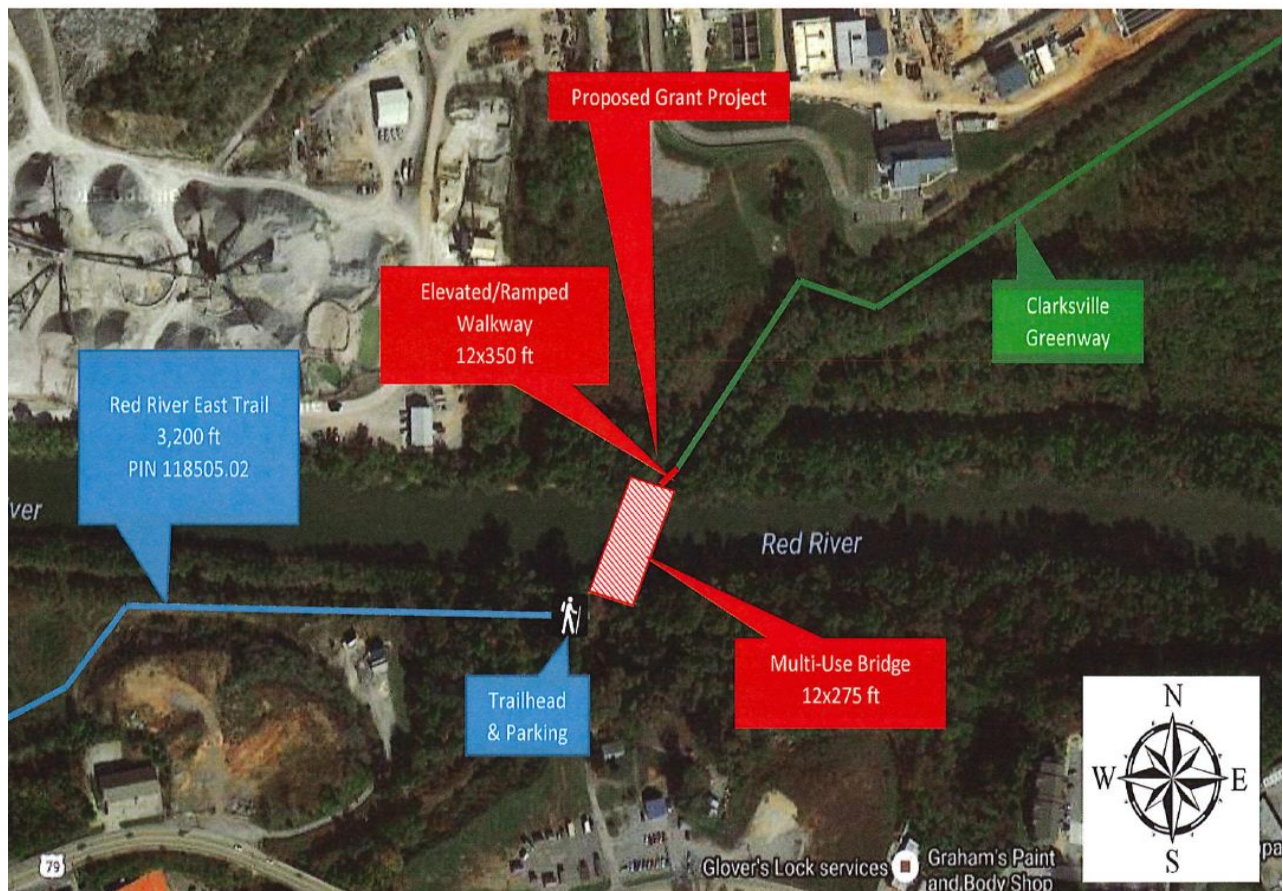


FY2020-FY2023 Transportation Improvement Program

TIP #	56	TDOT/KYTC	123122.03	Priority	A	Lead Agency	Clarksville
County	Montgomery	Length	0.2 mi	MTP#	pages 6-32, 8-26	Conformity Status	Exempt
Route/Project Name	Red River Pedestrian Bridge					Total Project Cost	\$2,692,922
Termini or Intersection	near SR-13/US-79 (Kraft Street) in Clarksville						
Project Description	Construct a multi-modal greenway connector and pedestrian bridge from a trailhead on southside of Red River to an existing greenway on the north. Includes landscaping, signage, fencing pedestrian lighting and pedestrian amenities.						

Fiscal Year	Phase	Funding Type	Total Funds	Fed Funds	State Funds	Local Funds
2020	CONST	STBG-TA	2,272,791	1,818,233	0	454,558
2020	CONST	LOCAL	220,131	0	0	220,131

Remarks	Amendment Number	Adjustment Number
PE and ROW funded by City - \$200,000		



FY2020-FY2023 Transportation Improvement Program

TIP # 13	TDOT/KYTC 02-180.00	Priority A	Lead Agency KYTC
County Christian	Length 1.8 mi	MTP# E+C 4; Table 11-3; page 11-5	Conformity Status Non Exempt
Route/Project Name	KY-911		
Termini or Intersection	KY-911 from US-41A to KY-115 [Oak Grove. (12CCR)]		
Project Description	Improve KY-911 from US-41A to Oak Grove (purpose and need: reliability/major widening (O)) Milepoints: from 0 to 1.835		

Fiscal Year	Phase	Funding Type	Total Funds	Fed Funds	State Funds	Local Funds
2020	ROW	STBG	2,530,000	2,530,000	0	0
2021	CONST	STBG	5,910,000	5,910,000	0	0
2022			0	0	0	0
2023			0	0	0	0

Remarks: _____ Amendment Number: Modification Number:

Toll Credits utilized for state match.



FY2020-FY2023 Transportation Improvement Program

TIP # 20		TDOT/KYTC		Priority A		Lead Agency CTS	
County Montgomery		Length 0.0 mi		MTP# Figure 10.1; pg 10-4		Conformity Status Exempt	
Route/Project Name		Bus Stop Shelters				Total Project Cost \$310,850	
Termini or Intersection		System-wide as needed					
Project Description		Install passenger shelters at major stops					

Fiscal Year	Phase	Funding Type	Total Funds	Fed Funds	State Funds	Local Funds
2020	ACQUIRE	5307	100,000	80,000	10,000	10,000
2021	ACQUIRE	5307	100,000	80,000	10,000	10,000
2022	ACQUIRE	5307	55,425	44,340	5,542	5,543
2023	ACQUIRE	5307	55,425	44,340	5,542	5,543

Remarks: Amendment Number Modification Number



FY2020-FY2023 Transportation Improvement Program

TIP # 22		TDOT/KYTC		Priority A		Lead Agency CTS	
County Montgomery		Length 0.0 mi		MTP# Figure 10.1; pg 10-4		Conformity Status Exempt	
Route/Project Name		Bus Stop Benches		Total Project Cost		\$5,000	
Termini or Intersection		System-wide as needed					
Project Description		Install benches where shelters are not available					

Fiscal Year	Phase	Funding Type	Total Funds	Fed Funds	State Funds	Local Funds
2020	ACQUIRE	5307	2,500	2,000	250	250
2021	ACQUIRE	5307	2,500	2,000	250	250
2022			0	0	0	0
2023			0	0	0	0

Remarks: Amendment Number Modification Number



FY2020-FY2023 Transportation Improvement Program

TIP # 24		TDOT/KYTC Priority A		Lead Agency CTS		
County Montgomery		Length 0.0 mi		MTP# Figure 10.1; pg 10-4		Conformity Status Exempt
Route/Project Name		Support Facilities & Equipment		Total Project Cost \$60,000		
Termini or Intersection		Administration Building and Transit Centers				
Project Description		Support Equipment, Electronic Farebox System and Vehicle Locator Equipment and Miscellaneous Support Equipment/Components and Parts				

Fiscal Year	Phase	Funding Type	Total Funds	Fed Funds	State Funds	Local Funds
2020	ACQUIRE	5307	15,000	12,000	1,500	1,500
2021	ACQUIRE	5307	15,000	12,000	1,500	1,500
2022	ACQUIRE	5307	15,000	12,000	1,500	1,500
2023	ACQUIRE	5307	15,000	12,000	1,500	1,500

Remarks: Amendment Number 0 Modification Number



FY2020-FY2023 Transportation Improvement Program

TIP # 25	TDOT/KYTC	Priority A	Lead Agency CTS			
County Montgomery	Length 0.0 mi	MTP#	Figure 10.1; pg 10-4		Conformity Status Exempt	
Route/Project Name Associated Capital Maintenance			Total Project Cost \$235,000			
Termini or Intersection Maintenance Building						
Project Description			Major replacement parts for buses such as engines, transmissions, alternators, tires, etc.			

Fiscal Year	Phase	Funding Type	Total Funds	Fed Funds	State Funds	Local Funds
2020	ACQUIRE	5307	55,000	44,000	5,500	5,500
2021	ACQUIRE	5307	60,000	48,000	6,000	6,000
2022	ACQUIRE	5307	60,000	48,000	6,000	6,000
2023	ACQUIRE	5307	60,000	48,000	6,000	6,000

Remarks: Amendment Number 0 Modification Number



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TIP # 26		TDOT/KYTC		Priority A	Lead Agency CTS	
County Montgomery		Length 0.0 mi	MTP# Figure 10.1; pg 10-4		Conformity Status Exempt	
Route/Project Name		Support Vehicles			Total Project Cost \$120,000	
Termini or Intersection		System-wide				
Project Description		Purchase replacement support vehicles				

Fiscal Year	Phase	Funding Type	Total Funds	Fed Funds	State Funds	Local Funds
2020	ACQUIRE	5307	30,000	24,000	3,000	3,000
2021	ACQUIRE	5307	30,000	24,000	3,000	3,000
2022	ACQUIRE	5307	30,000	24,000	3,000	3,000
2023	ACQUIRE	5307	30,000	24,000	3,000	3,000

Remarks:
Amendment Number
Modification Number

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TIP # 27	TDOT/KYTC	Priority A	Lead Agency CTS
County Montgomery	Length 0.0 mi	MTP# Figure 10.1; pg 10-4	Conformity Status Exempt
Route/Project Name	Shop Equipment		Total Project Cost \$25,000
Termini or Intersection	Maintenance Building		
Project Description	Purchase New and Replacement Shop Equipment		

Fiscal Year	Phase	Funding Type	Total Funds	Fed Funds	State Funds	Local Funds
2020	ACQUIRE	5307	10,000	8,000	1,000	1,000
2021	ACQUIRE	5307	5,000	4,000	500	500
2022	ACQUIRE	5307	5,000	4,000	500	500
2023	ACQUIRE	5307	5,000	4,000	500	500

Remarks:

Amendment Number

Modification Number

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TIP # 28	TDOT/KYTC	Priority A	Lead Agency CTS			
County Montgomery	Length 0.0 mi	MTP# Figure 10.1; pg 10-4	Conformity Status Exempt			
Route/Project Name		Facility Renovation & Rehabilitation & New		Total Project Cost \$1,443,645		
Termini or Intersection		Administration-Maintenance Building Area/New Facilities				
Project Description		Renovations and Rehab and New Construction (2023 funding shown under Remarks below*)				

Fiscal Year	Phase	Funding Type	Total Funds	Fed Funds	State Funds	Local Funds
2020	ACQUIRE	5307	450,000	360,000	45,000	45,000
2020	ACQUIRE	5339	743,645	594,916	74,364	74,365
2021	ACQUIRE	5339	150,000	120,000	15,000	15,000
2022	ACQUIRE	5339	50,000	40,000	5,000	5,000

Remarks:
Amendment Number
Modification Number

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* 2023 - 5339 \$50,000 total; \$40,000 fed; \$5,000 state; \$5,000 local.

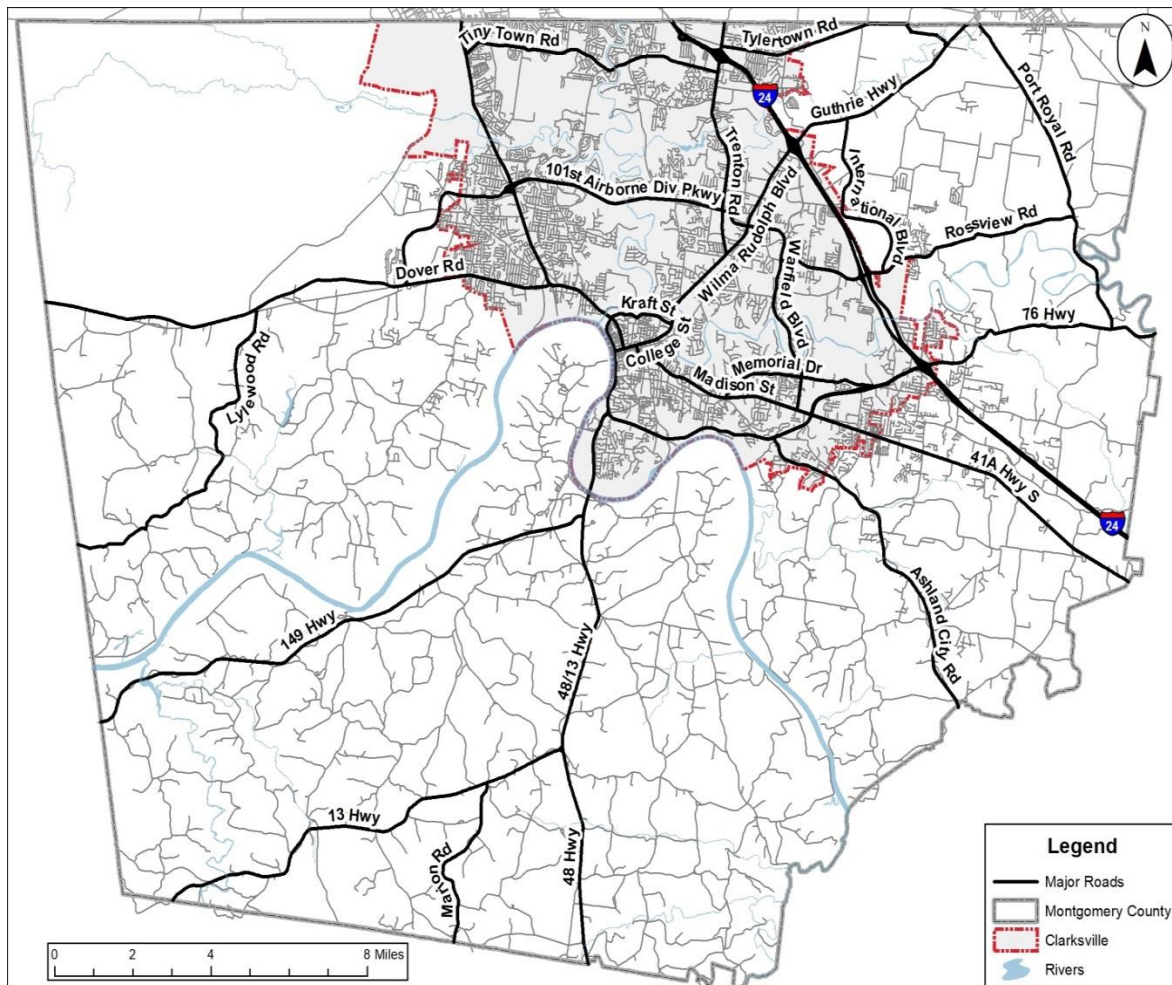


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TIP # 30	TDOT/KYTC	Priority A	Lead Agency CTS
County Montgomery	Length 0.0 mi	MTP# Figure 10.1; pg 10-4	Conformity Status Exempt
Route/Project Name	Surveillance/Security Equipment		Total Project Cost \$60,000
Termini or Intersection	System-wide as needed		
Project Description	Digital mobile surveillance equipment and other needed surveillance/security equipment		

Fiscal Year	Phase	Funding Type	Total Funds	Fed Funds	State Funds	Local Funds
2020	ACQUIRE	5339	60,000	48,000	6,000	6,000
2021	ACQUIRE	5307	0	0	0	0
2022	ACQUIRE	5307	0	0	0	0
2023	ACQUIRE	5307	0	0	0	0

Remarks:	Amendment Number	Modification Number
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TIP # 32		TDOT/KYTC		Priority A	Lead Agency CTS	
County Montgomery		Length 0.0 mi	MTP# Figure 10.1; pg 10-4		Conformity Status Exempt	
Route/Project Name		Computer Hardware			Total Project Cost \$20,000	
Termini or Intersection		Administration/Maintenance & Transit Center				
Project Description		Purchase new and replacement computers and hardware				

Fiscal Year	Phase	Funding Type	Total Funds	Fed Funds	State Funds	Local Funds
2020	ACQUIRE	5307	5,000	4,000	500	500
2021	ACQUIRE	5307	5,000	4,000	500	500
2022	ACQUIRE	5307	5,000	4,000	500	500
2023	ACQUIRE	5307	5,000	4,000	500	500

Remarks:
Amendment Number
Modification Number

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TIP # 33		TDOT/KYTC Priority A		Lead Agency CTS		
County Montgomery		Length 0.0 mi	MTP# Figure 10.1; pg 10-4	Conformity Status Exempt		
Route/Project Name		Computer Software		Total Project Cost \$600,000		
Termini or Intersection		Administration/Maintenance & Transit Center				
Project Description		Software support, upgrades and customizations (2020 funding shown under Remarks below**)				

Fiscal Year	Phase	Funding Type	Total Funds	Fed Funds	State Funds	Local Funds
2020	ACQUIRE		0	0	0	0
2021	ACQUIRE	5339	500,000	400,000	50,000	50,000
2022	ACQUIRE	5339	50,000	40,000	5,000	5,000
2023	ACQUIRE	5339	50,000	40,000	5,000	5,000

Remarks:
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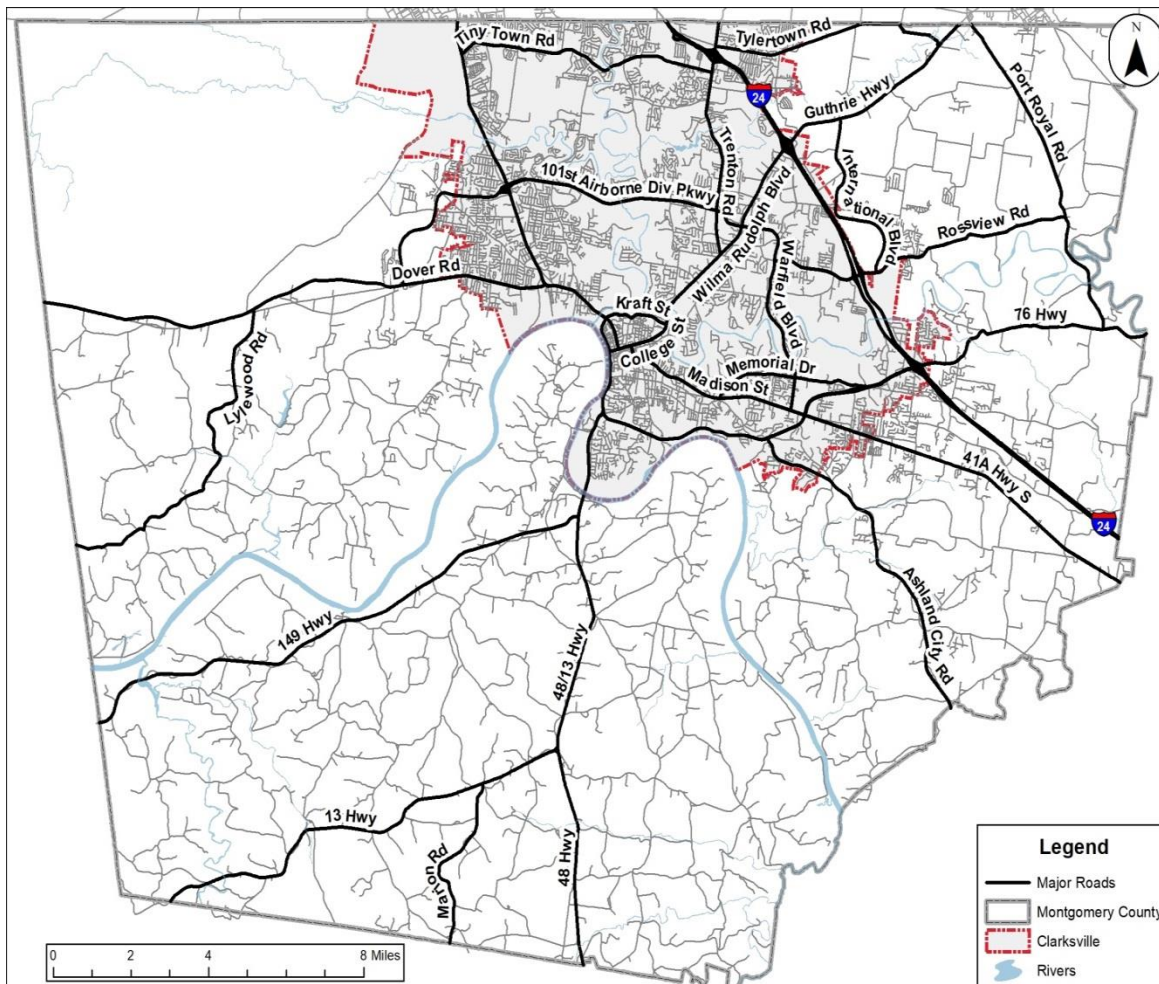


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TIP # 35		TDOT/KYTC		Priority A Lead Agency CTS		
County Montgomery	Length 0.0	mi	MTP# Figure 10.1; pg 10-4	Conformity Status Exempt		
Route/Project Name		Operating Assistance (Tennessee) Total Project Cost \$15,859,027				
Termini or Intersection						
Project Description		Operating Assistance (Tennessee)				

Fiscal Year	Phase	Funding Type	Total Funds	Fed Funds	State UROP Funds	Local Funds
2020	OPERATIONS	5307	3,536,000	1,923,888	960,100	963,788
2021	OPERATIONS	5307	3,924,732	1,962,366	981,183	981,183
2022	OPERATIONS	5307	4,003,227	2,001,614	1,000,806	1,000,807
2023	OPERATIONS	5307	4,083,292	2,041,646	1,020,823	1,020,823

Remarks:	Amendment Number	Modification Number
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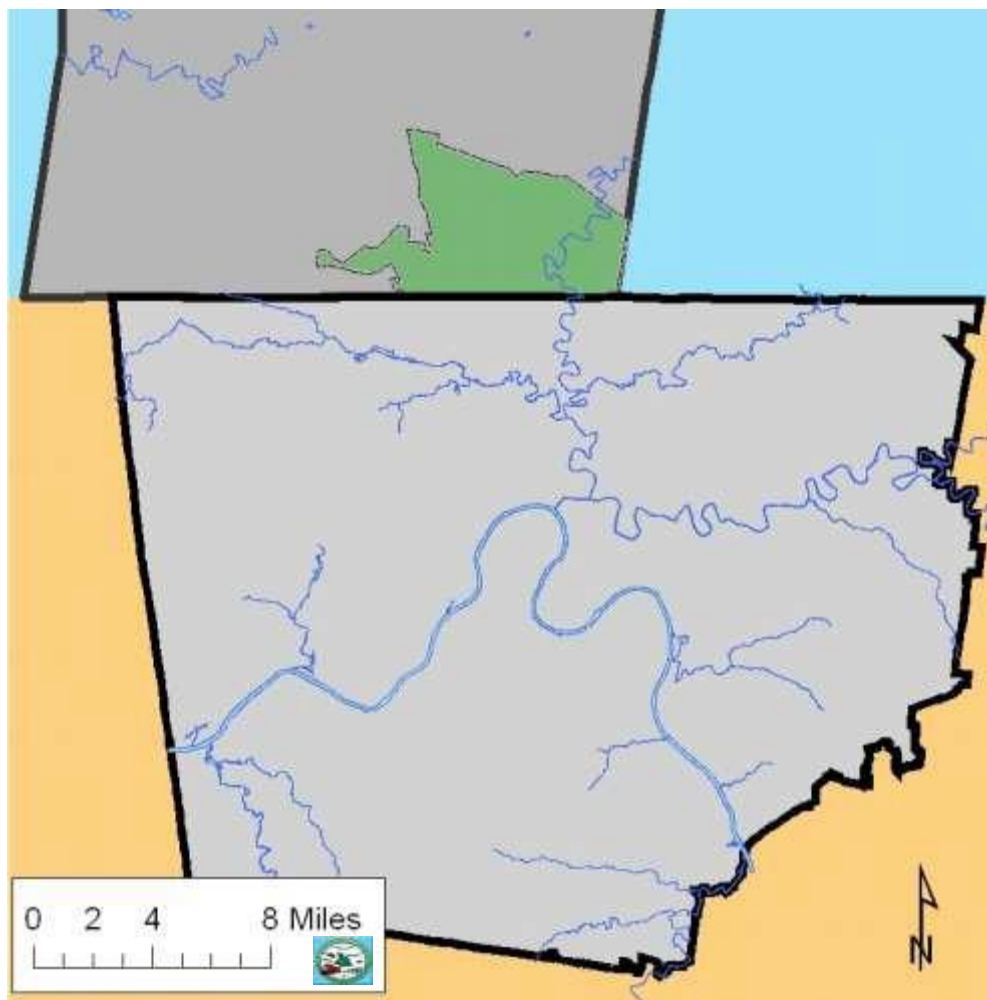
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TIP # 36	TDOT/KYTC	Priority A	Lead Agency CTS
County Christian	Length 0.0 mi	MTP# Figure 10.1; pg 10-4	Conformity Status Exempt
Route/Project Name	Operating Assistance (Kentucky)		Total Project Cost \$2,465,808
Termini or Intersection			
Project Description Operating Assistance (Kentucky)			

Fiscal Year	Phase	Funding Type	Total Funds	Fed Funds	State Funds	Local Funds
2020	OPERATIONS	5307	616,452	308,226	0	308,226
2021	OPERATIONS	5307	616,452	308,226	0	308,226
2022	OPERATIONS	5307	616,452	308,226	0	308,226
2023	OPERATIONS	5307	616,452	308,226	0	308,226

Remarks: _____ Amendment Number _____ Modification Number _____

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TIP # 58	TDOT/KYTC	Priority A	Lead Agency CTS
County Montgomery	Length 0.0 mi	MTP# Figure 10.1; pg 10-4	Conformity Status Exempt
Route/Project Name	Non Fixed Route ADA Paratransit Service		Total Project Cost \$1,556,736
Termini or Intersection	System wide as needed		
Project Description	Paratransit Services available system wide		

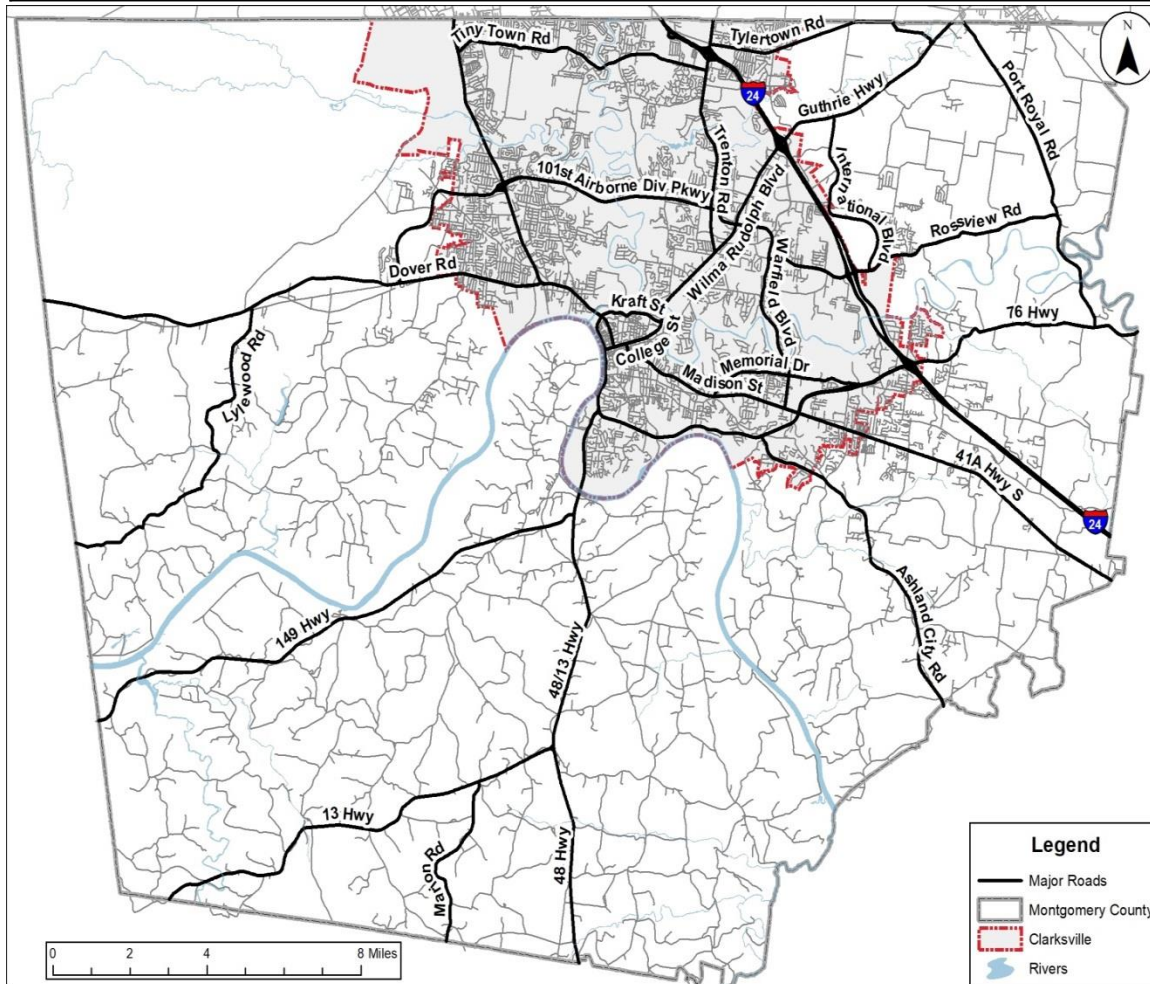
Fiscal Year	Phase	Funding Type	Total Funds	Fed Funds	State Funds	Local Funds
2020	OPERATIONS	5307	355,611	284,489	35,561	35,561
2021	OPERATIONS	5307	392,473	313,978	39,247	39,248
2022	OPERATIONS	5307	400,323	320,258	40,032	40,033
2023	OPERATIONS	5307	408,329	326,663	40,833	40,833

Remarks:

Amendment Number

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TIP # 59		TDOT/KYTC		Priority A		Lead Agency CTS	
County Montgomery		Length 0.0 mi		MTP# Figure 10.1; pg 10-4		Conformity Status Exempt	
Route/Project Name		Engineering and Design				Total Project Cost \$101,465	
Termini or Intersection		System wide					
Project Description		Engineering and Design work as needed					

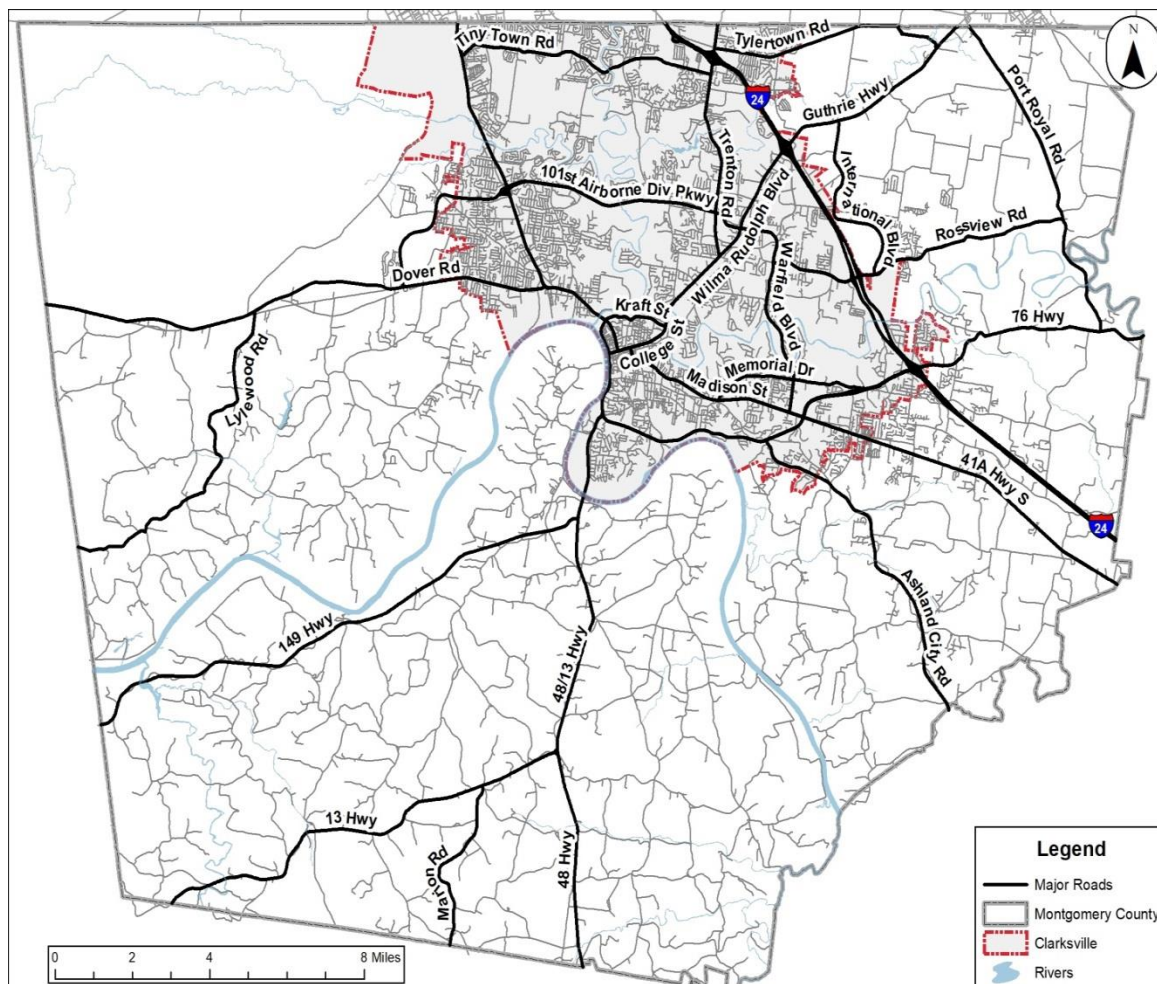
Fiscal Year	Phase	Funding Type	Total Funds	Fed Funds	State Funds	Local Funds
2020	PE-D	5339	50,000	40,000	5,000	5,000
2021	PE-D	5307	17,155	13,724	1,715	1,716
2022	PE-D	5307	17,155	13,724	1,715	1,716
2023	PE-D	5307	17,155	13,724	1,715	1,716

Remarks:

Amendment Number

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TIP # 62		TDOT/KYTC		Priority A		Lead Agency CTS	
County Montgomery		Length 0.0 mi		MTP# Figure 10.1; pg 10-4		Conformity Status Exempt	
Route/Project Name		Preventive Maintenance				Total Project Cost \$3,182,540	
Termini or Intersection		System wide					
Project Description		Preventive Maintenance Work					

Fiscal Year	Phase	Funding Type	Total Funds	Fed Funds	State Funds	Local Funds
2020	Capital	5307	795,635	636,508	79,563	79,564
2021	Capital	5307	795,635	636,508	79,563	79,564
2022	Capital	5307	795,635	636,508	79,563	79,564
2023	Capital	5307	795,635	636,508	79,563	79,564

Remarks:
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TIP # 63		TDOT/KYTC Priority A		Lead Agency CTS		
County Montgomery		Length 0.0 mi		MTP# Figure 10.1; pg 10-4		Conformity Status Exempt
Route/Project Name		Paratransit Vehicles		Total Project Cost \$210,000		
Termini or Intersection		Paratransit Purchases System wide as needed				
Project Description		Purchase Replacement and Expansion ADA Paratransit Vehicles (Diesel and Hybrid)				

Fiscal Year	Phase	Funding Type	Total Funds	Fed Funds	State Funds	Local Funds
2020	ACQUIRE	5310	210,000	168,000	21,000	21,000
2021	ACQUIRE	5310	0	0	0	0
2022	ACQUIRE	5310	0	0	0	0
2023	ACQUIRE	5310	0	0	0	0

Remarks:
Amendment Number
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TIP # 72	TDOT/KYTC	Priority A	Lead Agency Clarksville			
County Montgomery	Length 0.0 mi	MTP# Figure 10.1; pg 10-4	Conformity Status Exempt			
Route/Project Name	Transit Buses		Total Project Cost	\$9,391,412		
Termini or Intersection	System-wide as needed					
Project Description	Purchase replacement and expansion fixed route buses (hybrid or diesel)					

Fiscal Year	Phase	Funding Type	Total Funds	Fed Funds	State Funds	Local Funds
2020	ACQUIRE	5307/flexed CMAQ	1,980,000	1,584,000	198,000	198,000
2020	ACQUIRE	5307	1,500,000	1,200,000	150,000	150,000
2021	ACQUIRE	5339	289,417	231,534	28,941	28,942
2022						

Remarks:
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SECTION 4: ANTICIPATED PERFORMANCE MEASURE EFFECTS

Ten projects designated in the Clarksville Urbanized Area MPO's 2020-2023 TIP address these performance measures. They are presented in Table 5 on Page 85.

All ten have safety aspects to them, but only two classify as safety-related projects — that contribute toward the goal of reducing deaths and serious injuries resulting from accidents on the nation's roads.

- Addressing pedestrian safety is the Safe Routes to School Project that connects the Kenwood High School to the Middle School;
- Addressing road safety is the SR-112 Intersection Improvement, which will improve the safety surrounding the intersection with improved alignment with proposed access roads.

These projects carry an estimated combined total cost of \$8,844,684 from PE/N to the completion of the Construction phase.

The TIP contains four projects that address the System Performance measure targets with relations to the truck travel time reliability and peak hour excessive delay. These projects, carry a combined estimated total cost of \$182,930,440. These projects would bolster efforts to improve travel time and relieve congestion.

These projects are:

- Addressing truck travel time and peak hour delays is SR-149/SR-374, which would pull truck traffic away from downtown and reduce the congestion on Riverside Drive during peak hours;
- Addressing the truck travel time is SR-374, which would connect the SR-149/SR-374 to the outer route around Clarksville.
- Addressing congestion on Wilma Rudolph Blvd and I-24 ramps at Exit 4 is the implementation of the Adaptive Signal System along the Wilma Rudolph Blvd corridor.
- Addressing congestion and truck travel time is the construction of a new road, the Northeast Connector, to improve congestion in the Wilma Rudolph Blvd corridor and the SR-374/101st Blvd.

The TIP contains eight projects that address the pavement performance aspect of the asset management measure. These projects address the goal of increasing the percentage of roadway rated as being in "good" condition, and have a combined total estimated cost of \$263,002,000.

These projects are:

- SR-112 at the intersection with SR-76
- SR-149/SR-374
- SR-374
- SR-48/Trenton Rd
- Dunbar Cave Road/Rossvie Road
- Lafayette Road
- Northeast Connector
- KY-911

The TIP contains one project that addresses the bridge performance aspect of the asset management measure. This project would bolster efforts to increase the percentage of bridge decking rated as being in "good" condition and has a total estimated cost of \$ 107,710,000.

The SR-149/SR-374 project addresses the bridge decking with a new bridge proposed over the Cumberland River.

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Table 5: Projects Contributing to the Achievement of Performance Measures

Route	TDOT/KYTC ID	Description	Cost	Performance Measure
SR-112	PIN 101285.02	Intersection Improvements	\$8,500,000.00	Safety and Pavement
SR-149/SR-374	PIN 101463.02	Construct new 2 lane on 4 lane divided ROW	\$107,710,000.00	Pavement, Bridge, and System Performance
SR-374 Prop	PIN 101463.03	Construct new 2 lane on 4 lane divided ROW	\$42,200,000.00	Pavement, and System Performance
SR-48/Trenton Road	PIN 123071.00	Widen from 2 to 5 lanes along existing alignment	\$47,400,000.00	Pavement
Wilma Rudolph Blvd Adaptive Signal System	TDOT PIN not assigned	Implement adaptive signal system along Wilma Rudolph Blvd corridor	\$1,195,440.00	System Performance
Safe Routes to School	PIN 123747.00	Connect Kenwood Middle School to High School	\$344,684.00	Safety
Dunbar Cave Road/Rossvie Road	PIN 112874.00	Realignment of Dunbar Cave Rd with Cardinal Lane and Rossvie Rd widening from 2 to 5 lanes	\$13,800,000.00	Pavement
Lafayette Road	PIN 121387.00	Reconstruction and widening of approximately 1,940' of Lafayette Rd thru Ft. Campbell gate	\$2,438,000.00	Pavement
Northeast Connector – Phase 1	TDOT PIN not assigned	Construct a new 4/5 lane roadway	\$31,825,000.00	Pavement, and System Performance
KY-911	IP20060084	Major Widening	\$9,129,000.00	Pavement

The MPO staff used the CTS TAM targets as their targets, and agreed to plan and program projects that contribute toward the accomplishment of the transit agency's targets. Fourteen (14) of the CTS projects listed in the TIP assist in achieving the Transit Asset Management targets. Each project directly aids in maintaining or improving the state of good repair for CTS assets to meet the TAM targets.

There is \$9,721,412.00 in total funding for the purchase of new support vehicles, paratransit vehicles, and transit buses. These purchases should improve the support vehicles target, which was the only one that was not reached, and keep the paratransit vehicles and transit buses maintaining their target.

The bus stop benches, shelters, facility renovation/rehab/new, and the engineering and design work all pertain to CTS assets that are stationary structures. The funding to purchase and maintain these facilities total \$1,860,960.00.

The remaining projects support or maintain the CTS assets. These include TIP#: 24-Support Facilities & Equipment, 25-Associated Capital Maintenance Building, 27-Shop Equipment, 30-Surveillance/Security

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Equipment, 32-Computer Hardware, 33-Computer Software, and 62-Preventive Maintenance; shown in Table 6 with a total funding amount of \$4,182,540.00.

The fourteen (14) CTS projects are presented below in Table 6. The three (3) other CTS projects in the TIP were funded for operation and maintenance budgets, which is discussed on pages 48 and 49.

Table 6: Projects Contributing to the Achievement of CTS TAM Targets

Transit Project	TIP #.	Description	Cost
Bus Stop Shelters	20	Install passenger shelters at major stops	\$310,850.00
Bus Stop Benches	22	Install benches where shelters are not available	\$5,000.00
Support Facilities & Equipment	24	Support equipment, electronic farebox system and vehicle locator equipment and miscellaneous support equipment/components and parts	\$60,000
Associated Capital Maintenance Building	25	Major replacement parts for buses such as engines, transmissions, alternators, tires, etc	\$235,000
Support Vehicles	26	Purchase replacement support vehicles	\$120,000
Shop Equipment	27	Purchase new and replacement shop equipment	\$25,000
Facility Renovation & Rehabilitation & New	28	Renovations, rehab and/or new construction	\$1,443,645
Surveillance/ Security Equipment	30	Digital mobile surveillance equipment and other needed surveillance/security equipment	\$60,000
Computer Hardware	32	Purchase new and replacement computers and hardware	\$20,000
Computer Software	33	Software support, upgrades and customizations	\$600,000
Engineering and Design	59	Engineering and design work as needed	\$101,465
Preventive Maintenance	62	Preventive Maintenance work	\$3,182,540
Paratransit Vehicles	63	Purchase replacement and expansion ADA paratransit vehicles	\$210,000
Transit Buses	72	Purchase replacement and expansion fixed route buses	\$9,391,412

SECTION 5: MPO WEBSITE

5.1 The MPO Website:

The MPO website is www.cuampo.com.

5.1 **TIP Documents and Technical Information on Website:**

The "STIP/TIP Reports" section is located on the MPO home page or found at: www.cuampo.com/STIP.php. Under this section the draft and final documents for the TIP are fully searchable and available; along with the past FY2017-FY2020 TIP and FY2014-FY2017 TIP, and corresponding amendments and adjustments.

5.2 **Historic Archive of Technical Information on Website:**

The "Plans, Reports & Studies" section is located on the MPO home page or found at: www.cuampo.com/plansReports.php. The annual listings of obligated projects can be found there, along with the current UPWP, the 2045 MTP, PPP and other important documents and reports.

APPENDIX A: PROJECT SELECTION CRITERIA

Local STBG and CMAQ projects will be submitted to the MPO for project consideration. Projects using L-STBG funds will then be selected using the adopted criteria and will be made part of the TIP. CMAQ projects will be applied for through TDOT and KYTC competitive grant application process. The Selection Criteria Review for L-STBG and CMAQ projects is below.

Figure 16. Local Surface Transportation Block Grant (L-STBG) Criteria for TIP Evaluation:

Criteria	Points	Standards
Safety	0-2	The safety criterion is intended to measure the potential improvements to public safety that the proposed project will provide. Information required for scoring projects under this criterion includes crash rates, crash severity, safety design, pedestrians and bicycle safety, and other general safety problems in accordance with TDOT and KYTC policies and procedures. The greater the potential improvement to overall transportation safety is, the higher the score for the potential project.
Congestion and Air Quality	0-2	The congestion criterion quantifies the predicted improvements in the level of service and access. Other factors that contribute to improvements to congestion include quality of life and the economic costs of congestion. Air Quality evaluates the need to improved air quality in the region. In most cases, as congestion is decreased the air quality score will increase. A high score should be given to projects that give the better congestion relief compared to current conditions.
Land Use Impact	0-2	The land use impact evaluation takes into consideration issues such as the promotion of higher quality of life in neighborhoods, commercial areas and employment centers. It also seeks to determine whether or not other infrastructure elements exist where the project is planned within the allotted construction time frame. Projects that serve existing development should score higher than those that may be considered premature for the development pattern.
Network Continuity	0-2	The network continuity criterion considers the need for overall system efficiency for each evaluated project. Higher scores should be given to projects that increase the efficiency for the overall transportation system.

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Environmental/Quality of Life	0-2	Environmental/quality of life evaluates the impact of a project and the mitigation of impacts on the physical environment (such as wetlands and cultural resources) and the human environment/displacement (such as sustainability and livability; incorporating pedestrian sidewalks/crosswalks, bike lanes and transit routes/stops) If a project will benefit either of these environments, a higher score should be assigned and if the project will damage the environment, a lower score should be assigned.
Security	0-2	The security criterion is intended to measure the potential improvements to public security that a proposed project will provide. It applies to both motorized and non-motorized users of the transportation system. Examples of security considerations are improved lighting, presence of cameras, improved evacuation routes, improved emergency services access, threat warning devices, etc.

Figure 17: Congestion Mitigation and Air Quality (CMAQ) Criteria for TIP Evaluation

Criteria	Points	Standards
QUANTIFIABLE REDUCTION OF AIR POLLUTANTS PER DOLLAR REQUESTED	0-4	<p><u>Knowledge of current emissions from activity or location to be impacted</u> – The more current knowledge available, the higher the potential score. Knowledge of current conditions allows the TCC to better evaluate program or project effectiveness, increasing the likelihood a project can be used in the State Implementation Plan (SIP) to demonstrate emission reductions. It also allows better understanding of the need for a project that is proposed.</p> <p><u>Method of quantifying reductions</u> - More points should be awarded projects with well-defined and defensible methods for quantifying reductions as this can increase their SIP impact.</p> <p><u>Does measure provide efficient use of CMAQ funds on a dollar per ton reduced?</u> – Due to limited funds and the need to maximize project return, some evaluation of the cost per ton of emissions reduced is a useful measure to prioritize projects. Consideration should also be given to which pollutants are being reduced with priority given first to pollutants affecting a maintenance &/or non-attainment area (NOx and VOC's for ozone).</p>

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SCOPE	0-2	<p><u>Does Project have area-wide or local impact?</u> – The TCC finds that projects with the potential to address air pollution on a regional level should receive preference over those that only addressed a smaller area. But this element can also be used to give higher rankings for projects that address both pollution and congestion in one of the identified corridors of congestion.</p> <p><u>Does it enhance or augment CMAQ projects in surrounding areas?</u> - In its evaluation of a project, the MPO should prioritize projects that augment projects in surrounding jurisdictions. Such augmentation allows for effective public outreach and better coordination in the regional management of air pollution. It also can enhance the effectiveness of existing control programs or projects. This will become an increasingly important element if additional areas within the planning area are designated maintenance &/or non-attainment.</p>
MANDATED PROJECT	0- 5	<p><u>Is the project contained in an approved State Implementation Plan or EPA Rule?</u> – Preference should be given for measures mandated by the SIP. A Transportation Control Measure contained in an approved SIP or EPA rule may be mandated to have priority over other CMAQ projects. No preference exists for projects already meeting their SIP required reductions.</p> <p><u>Does the Project enhance or augment a federally mandated transportation emissions reduction effort?</u> – Where a local project could tie into or enhance a federally mandated control measure, some preference should be given. This could be in the area of cleaner fuels, anti-idling, or transit fleet alternative fuel conversion to name a few potentials. The MPO is determined to support such programs at the local level by allowing more points for a local program that would further the use or scope of such a federally mandated requirement.</p> <p><u>Is the project one of the transportation control measures (TCM) recommended for evaluation and which has been found to be appropriate for the local transportation system?</u> – Goals of the LRTP can help recommend TCM’s contained in the Clean Air Act for potential benefit in our local planning area. The MPO finds that in order to implement the plan’s programs and federal guidance, a TCM measure found appropriate in the plan should receive a higher point total in this category.</p> <p><u>Does project have outside financial support or partnership to increase reduction per public dollar expended?</u> – In an effort to leverage public funding and encourage broad community involvement in these programs, projects that received funding or significant support from non-federal agencies should receive additional points for their potential promotion.</p>

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DURATION/TIMING OF REDUCTIONS	0-2	<p><u>Are reductions permanent or seasonal and if seasonal, do they occur when needed?</u> – The ability to credit reduction in the SIP depends, to some extent, on their timing and enforceability. This part of the element was intended to address both the timing of the reductions from a project as well as their permanence. A higher ranking is given to projects that produced appropriate pollutant reductions during the period most likely to need them and permanent reductions are favored over seasonal or temporary reduction efforts.</p> <p><u>When will the reductions be credited against transportation emissions budget in SIP?</u> – Not all projects would produce emission reductions in time to be of benefit to attainment deadlines. The often-lengthy approval and construction time for major projects could result in obtaining pollution reductions only after certain attainment dates are set. Under this element, priority was given to projects that produced reductions sooner in the planning cycle.</p>
CONGESTION REDUCTION	0-3	<p><u>Will project help to achieve goal(s) of the LRTP as a high priority congestion corridor or location?</u> CMAQ is more than just air quality (AQ) improvements. Projects that have significant congestion relief outcomes and goals are therefore appropriately evaluated for funding prioritization. Projects that fulfill goals in the LRTP receive higher rankings in this element than those outside the goals of the LRTP or relate only to air quality issues.</p> <p><u>What is the level of congestion reduction achieved by the project?</u> – Much in the same way the initial criteria looked at the tons of reduction, this element hopes to better quantify the congestion reduction achievable by a project or program. It reinforces some of the air quality goals as is appropriate, but allows projects which are more localized to also be recognized for their unique problems.</p> <p><u>Does the project provide trip reduction improvement or only improved function of the congested area?</u> – This element looks at the potential for the project to solve the congestion throughout the network by reducing trips rather than by simply speeding the trips along a particular corridor or in a particular intersection.</p>
Project Grouping	0-1	<p><u>Is the project part of a package of several projects?</u> – This element shows that projects combined show greater improvement than each part of the project alone when comparing to other proposed projects.</p>
Continuation	0-1	<p><u>Has a similar project been done in the State or MPO?</u> – This element reflects on past results and experiences. Was the project viewed as successful or disastrous?</p>

APPENDIX B: PUBLIC COMMENTS



CLARKSVILLE URBANIZED AREA METROPOLITAN PLANNING ORGANIZATION

Stan Williams
MPO Coordinator
stanwilliams@cityofclarksville.com

329 MAIN STREET
CLARKSVILLE, TN 37040
PHONE: (931) 645-7448
www.cuampro.com

Jill Hall
Transportation Planner
jhall@cityofclarksville.com

Call for Transportation Improvement Program (TIP) Projects for development and addition to the FY2020-FY2023 TIP:
Please provide the following information:

Name: Michael R Tindzley
Address: 1082 Meshaw Trail Clarksville Tn. 37040
Email Address: tinmantindzley187@yahoo.com

Call for projects:

The Clarksville MPO is now in the process of developing a new Transportation Improvement Program (TIP) for fiscal years 2020-2023. The TIP is a four-year financially constrained priority list of projects within the MPO planning area funded with federal, state, and local dollars.

Please accept this notice as your opportunity to submit potential projects to be funded with Federal Surface Transportation Block Grant (STBG) funds. Most projects require a 20 percent local match and must be sponsored by a governmental entity that can demonstrate a financial commitment to the project. Projects on residential streets do not qualify for federal transportation funds and cannot be considered for the TIP.

Please list any problems or concerns within the project area and any benefits toward air quality, safety, congestion with the addition of your recommended project. Completed applications must be received by the MPO no later than May 17, 2019.

2019 Traffic Safety Issue. A traffic signal is much needed at the I-24 Southbound Exit 1.

Traffic attempting to make a left turn is extremely dangerous once they have exited,

I-24 traffic must wait for clearance from traffic going east and west on Trenton Road.

The wait for clearance often produces traffic backups for individuals exiting the expressway.

In turn drivers (Especially Tractor Trailers) will intentionally block traffic traveling east

and west on Trenton Road. Impatient drivers increase the possibilities of accidents

by simply driving into traffic without proper clearance. Regulation of traffic is needed for

individuals attempting to make a left turn on Trenton Road (East bound Traffic).

Please Return:

Call for Project Form by May 17, 2019
Mail, fax or email Call for Project Form to:
Clarksville Area MPO
329 Main Street
Clarksville, TN 37040
Fax: 931-645-7481
Email: Stan.Williams@cityofclarksville.com

FY2020-FY2023 Transportation Improvement Program



CLARKSVILLE URBANIZED AREA METROPOLITAN PLANNING ORGANIZATION

Stan Williams
MPO Coordinator
stanwilliams@cityofclarksville.com

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Jill Hall
Transportation Planner
jhall@cityofclarksville.com

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Name: Michael R. Tindzley
Address: 1082 Meshaw Trail Clarksville, Tn 37040
Email Address: tinmantindzley187@yahoo.com

Call for projects:

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Please accept this notice as your opportunity to submit potential projects to be funded with Federal Surface Transportation Block Grant (STBG) funds. Most projects require a 20 percent local match and must be sponsored by a governmental entity that can demonstrate a financial commitment to the project. Projects on residential streets do not qualify for federal transportation funds and cannot be considered for the TIP.

Please list any problems or concerns within the project area and any benefits toward air quality, safety, congestion with the addition of your recommended project. Completed applications must be received by the MPO no later than May 17, 2019.

Traffic Safety Issue: Bikers (non-motorized), motorized/non motorized wheel
chair users, should be required to display pole flags that will be visible in the day
and reflective at night. Their visibility reduces the likelihood of vehicles crashes.

Please Return:
Call for Project Form by **May 17, 2019**
Mail, fax or email Call for Project Form to:
Clarksville Area MPO
329 Main Street
Clarksville, TN 37040
Fax: 931-645-7481
Email: Stan.Williams@cityofclarksville.com

FY2020-FY2023 Transportation Improvement Program



CLARKSVILLE URBANIZED AREA METROPOLITAN PLANNING ORGANIZATION

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stanwilliams@cityofclarksville.com

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Jill Hall
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jhall@cityofclarksville.com

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Please list any problems or concerns within the project area and any benefits toward air quality, safety, congestion with the addition of your recommended project. Completed applications must be received by the MPO no later than May 17, 2019.

Traffic Safety Issue. A traffic signal is much needed at the I-24 Southbound Exit 4.

Traffic attempting to make a left turn is extremely dangerous once they have exited,

I-24 traffic must wait for clearance from traffic going east and west on Wilma Rudolph.

The wait for clearance often produces traffic backups for individuals exiting the expressway.

In turn drivers (Especially Tractor Trailers) will intentionally block traffic traveling east

and west on Wilma Rudolph. Impatient drivers increase the possibilities of accidents

by simply driving into traffic without proper clearance. Regulation of traffic is needed for

individuals attempting to make a left turn on Wilma Rudolph (East bound Traffic).



Necessity for Pedestrian Cassman Jr. Marking
on Wilma Rudolph.

Please Return:
Call for Project Form by **May 17, 2019**
Mail, fax or email Call for Project Form to:
Clarksville Area MPO
329 Main Street
Clarksville, TN 37040
Fax: 931-645-7481
Email: Stan.Williams@cityofclarksville.com

Mr. Williams discussed each of Mr. Tindzley's concerns at the MPO meeting on May 16th, 2019. Mr. Tindzley is a concern citizen that is active in pedestrian safety and transit concerns within the MPO area.

APPENDIX C: TDOT GROUPINGS - PROJECT
DESCRIPTIONS

Statewide Grouping Descriptions

Activities delivered from TDOT's statewide groupings are limited to work types that are:

1. Located in non-metropolitan or rural areas – any located in a metropolitan area must be programmed in the MPO's TIP,
2. Not considered to be of appropriate scale for individual identification in a given program year,
3. Environmentally-neutral as categorical exclusions under 23 CFR 771.117(c) and (d),
4. Non-regionally significant, in non-attainment and maintenance areas, and
5. Exempt as defined in the EPA's transportation conformity regulations in 40 CFR Part 93, in non-attainment and maintenance areas.

Activities that do not meet these requirements must be individually identified in the STIP or respective MPO's TIP. The following tables elaborate on the allowable work types for the statewide groupings.

FY2020-FY2023 Transportation Improvement Program

Grouping Category	Function of Grouping Activities	Allowable Work Types
<p>Highway Safety Improvement Program (HSIP) Grouping</p> <p>Adjusted Page</p> <p>TIP #38</p> <p>STIP# 2063112</p>	<p>Any strategy, activity or project on a public road that is consistent with the data-driven State Strategic Highway Safety Plan (SHSP) and corrects or improves a hazardous road location or feature or addresses a highway safety problem, including workforce development, training and education activities.</p> <p>Eligibility of specific projects, strategies, and activities is generally based on:</p> <ul style="list-style-type: none"> • Consistency with SHSP, • Crash experience, crash potential, or other data-supported means, • Compliance with the requirements of Title 23 of the USC, and • State's strategic or performance-based safety goals to reduce fatalities and serious injuries on all public roads. • Projects to upgrade railway-highway grade crossings by eliminating hazards and installing protective devices. 	<ul style="list-style-type: none"> ○ Intersection safety improvements ○ Pavement and shoulder widening (including a passing lane to remedy an unsafe condition) ○ Installation of rumble strips or another warning devices, if they do not adversely affect the safety or mobility of bicyclists and pedestrians ○ Installation of skid-resistant surface at intersections or locations with high crash frequencies ○ Improvements for pedestrian or bicyclist safety ○ Construction and improvement of a railway-highway grade crossing safety feature, including installation of protective devices ○ The conduct of a model traffic enforcement activity at a railway-highway crossing ○ Construction of a traffic calming feature ○ Elimination of a roadside hazard ○ Installation, replacement, and other improvements of highway signage and pavement markings, or a project to maintain minimum levels of retro-reflectivity that addresses a highway safety problem consistent with the SHSP ○ Installation of emergency vehicle priority control systems at signalized intersections ○ Installation of traffic control or other warning devices at locations with high crash potential ○ Transportation safety planning ○ Collection, analysis, and improvement of safety data ○ Planning integrated interoperable emergency communications equipment or operational or traffic enforcement activities (including police assistance) related to work zone safety ○ Installation of guardrails, barriers (including barriers between construction work zones and traffic lanes), and crash attenuators ○ The addition or retrofitting of structures or other measures to eliminate or reduce crashes involving vehicles and wildlife ○ Installation of yellow-green signs and signals at pedestrian and bicycle crossings and in school zones ○ Construction and operational improvements on high risk rural roads ○ Geometric improvements to a road for safety purposes that improves safety ○ Road safety audits ○ Roadway safety infrastructure improvements consistent with FHWA's "Handbook for Designing Roadways for the Aging Population" (FHWA-SA-14-105) ○ Truck parking facilities eligible for funding under Section 1401 of MAP-21 ○ Systemic safety improvements ○ Installation of vehicle-to-infrastructure communication equipment. ○ Pedestrian hybrid beacons. ○ Roadway improvements that provide separation between pedestrians and motor vehicles, including medians and pedestrian crossing islands. ○ Other physical infrastructure projects not specifically enumerated in the list of eligible projects. ○ Workforce development, training, and education activities

FY2020-FY2023 Transportation Improvement Program

Grouping Category	Function of Grouping Activities	Allowable Work Types
Highway Safety Improvement Program (HSIP) Grouping (continued) Adjusted Page TIP #38 STIP# 2063112		Activities included as part of the Highway Railroad Grade Crossing program: <ul style="list-style-type: none">• Elimination of hazards of railway-highway crossings, including the separation or protection of grades at crossings• Reconstruction of existing railroad grade crossing structures• Relocation of highways to eliminate grade crossings• Installation of protective devices• Projects authorized from this grouping may be authorized with a different federal percentage than shown in the grid based on one or more of the following:<ul style="list-style-type: none">○ 90% for certain Interstate projects under <u>23 U.S.C. 120(a)</u>;○ 100% for certain safety items under <u>23 U.S.C. 120(c)</u>; or○ 100% for Appalachian Development Highway System (ADHS) projects under <u>MAP-21 1528</u> and <u>40 U.S.C. 14501.</u>)

FY2020-FY2023 Transportation Improvement Program

Grouping Category	Function of Grouping Activities	Allowable Work Types
<p>National Highway System Preservation & Operation (NHPP) Grouping</p> <p>Adjusted Page</p> <p>TIP #37</p> <p>STIP# 2063110</p>	<p>Projects for the preservation and improvement of the conditions and performance of the National Highway System (NHS), including</p> <ul style="list-style-type: none"> • Rehabilitation, resurfacing, restoration, preservation, and operational improvements, • Traffic operations, • Bridge and tunnel improvements, • Safety improvements, • Bicycle and pedestrian improvements, and • Environmental mitigation. 	<ul style="list-style-type: none"> • Minor rehabilitation, pavement resurfacing, preventative maintenance, restoration, and pavement preservation treatments to extend the service life of highway infrastructure, including pavement markings and improvements to roadside hardware or sight distance • Highway improvement work including slide repair, rock fall mitigation, drainage repairs, or other preventative work necessary to maintain or extend the service life of the existing infrastructure in a good operational condition • Minor operational and safety improvements to intersections and interchanges such as adding turn lanes, addressing existing geometric deficiencies, and extending on/off ramps • Capital and operating costs for intelligent transportation systems (ITS) and traffic monitoring, management, and control facilities and programs: <ul style="list-style-type: none"> ○ Infrastructure-based intelligent transportation systems (ITS) capital improvements ○ Traffic Management Center (TMC) operations and utilities ○ Freeway service patrols ○ Traveler information • Bridge and tunnel construction (no additional travel lanes), replacement, rehabilitation, preservation, protection, inspection, evaluation, and inspector training and inspection and evaluation of other infrastructure assets, such as signs, walls, and drainage structures • Development and implementation of a State Asset Management Plan including data collection, maintenance and integration, software costs, and equipment costs that support the development of performance-based management systems for infrastructure • Rail-highway grade crossing improvements • Highway safety improvements: <ul style="list-style-type: none"> ○ Installation of new or improvement of existing guardrail ○ Installation of traffic signs and signals/lights ○ Spot safety improvements • Sidewalk improvements • Pedestrian and/or bicycle facilities • Traffic calming and traffic diversion improvements • Noise walls • Wetland and/or stream mitigation • Environmental restoration and pollution abatement • Control of noxious weeds and establishment of native species • Projects authorized from this grouping may be authorized with a different federal percentage than shown in the grid based on one or more of the following: <ul style="list-style-type: none"> ○ 90% for certain Interstate projects under <u>23 U.S.C. 120(a)</u>; ○ 100% for certain safety items under <u>23 U.S.C. 120(c)</u>; or ○ 100% for Appalachian Development Highway System (ADHS) projects under <u>MAP-21 1528</u> and <u>40 U.S.C. 14501.</u>)

FY2020-FY2023 Transportation Improvement Program

Grouping Category	Function of Grouping Activities	Allowable Work Types
<p>Surface Transportation System Preservation & Operation (STBG) Grouping</p> <p>Adjusted Page</p> <p>TIP #40</p> <p>STIP# 2063115</p>	<p>Projects and programs for the preservation and improvement of the conditions and performance of Federal-aid highways and public roads, including:</p> <ul style="list-style-type: none"> Rehabilitation, resurfacing, restoration, preservation, and operational improvements on Federal-aid highways and designated routes of the Appalachian Development Highway System (ADHS) and local access roads under 40 USC 14501, Traffic operations on Federal-aid highways, Bridge and tunnel improvements on public roads, Safety improvements on public roads, Environmental mitigation Scenic and historic highway programs, Landscaping and scenic beautification, 	<p>Activities previously authorized under the Surface Transportation Program (STP):</p> <ul style="list-style-type: none"> Minor rehabilitation, pavement resurfacing, preventative maintenance, restoration, and pavement preservation treatments to extend the service life of highway infrastructure, including pavement markings and improvements to roadside hardware or sight distance Highway improvement work including slide repair, rock fall mitigation, drainage repairs, or other preventative work necessary to maintain or extend the service life of the existing infrastructure in a good operational condition Minor operational and safety improvements to intersections and interchanges such as adding turn lanes, addressing existing geometric deficiencies, and extending on/off ramps Capital and operating costs for intelligent transportation systems (ITS) and traffic monitoring, management, and control facilities and programs: <ul style="list-style-type: none"> Infrastructure-based intelligent transportation systems (ITS) capital improvements Traffic Management Center (TMC) operations and utilities Freeway service patrols Traveler information Bridge and tunnel construction (no additional travel lanes), replacement, rehabilitation, preservation, protection, inspection, evaluation, and inspector training and inspection and evaluation of other infrastructure assets, such as signs, walls, and drainage structures Development and implementation of a State Asset Management Plan including data collection, maintenance and integration, software costs, and equipment costs that support the development of performance-based management systems for infrastructure Rail-highway grade crossing improvements Highway safety improvements: <ul style="list-style-type: none"> Installation of new or improvement of existing guardrail Installation of traffic signs and signals/lights Spot safety improvements Sidewalk improvements Pedestrian and/or bicycle facilities Traffic calming and traffic diversion improvements Transportation Alternatives as defined by 23 USC 213(B), 23 USC. 101(A)(29), and Section 1122 of MAP-21 Noise walls Wetland and/or stream mitigation Environmental restoration and pollution abatement Control of noxious weeds and establishment of native species

FY2020-FY2023 Transportation Improvement Program

Grouping Category	Function of Grouping Activities	Allowable Work Types
<p>Surface Transportation System Preservation & Operation (STBG) Grouping</p> <p>(continued)</p> <p>Adjusted Page</p> <p>TIP #40</p> <p>STIP# 2063115</p>	<ul style="list-style-type: none"> • Historic preservation, • On- and off-road pedestrian and bicycle facilities, • Infrastructure projects for improving non-driver access to public transportation and enhanced mobility, • Community improvement activities, • Recreational Trail Program projects, • Safe Routes to School (SRTS) projects, • Transportation Enhancement projects, • Transportation Alternatives projects, • Projects for the creation, rehabilitation, and maintenance of multi-use recreational trails. 	<p>Activities previously authorized under the Transportation Enhancement Program:</p> <ul style="list-style-type: none"> ○ Pedestrian and bicycle facilities, safety, and educational activities ○ Acquisition of scenic easements and scenic or historic sites ○ Scenic or historic highway programs ○ Landscaping and other scenic beautification activities ○ Historic preservation ○ Rehabilitation and operation of historic transportation buildings, structures, or facilities ○ Preservation of abandoned railway corridors ○ Inventory, control, and removal of outdoor advertising ○ Archaeological planning and research ○ Environmental mitigation to address water pollution due to highway runoff or reduce vehicle-caused wildlife mortality while maintaining habitat connectivity ○ Establishment of transportation museums ○ Activities under the Tennessee Roadscapes grant program, including landscaping, irrigation, benches, trashcans, paths, and signage <p>Activities previously authorized under the Safe Routes to School Program (SRTS):</p> <ul style="list-style-type: none"> • 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 • Traffic diversion improvements approximately within 2 miles of a school location • Non-infrastructure related activities: <ul style="list-style-type: none"> ○ Public awareness campaigns and outreach to press and community leaders ○ Traffic education and enforcement in the vicinity of schools <ul style="list-style-type: none"> • Student sessions on bicycle and pedestrian safety, health, and environment • Funding for training, volunteers, and managers of safe routes to school program <p>Activities previously authorized under the Transportation Alternatives Program (TAP):</p> <ul style="list-style-type: none"> • Construction, planning, and design of on-road and off-road trail facilities for pedestrians, bicyclists, and other non-motorized forms of transportation, including: <ul style="list-style-type: none"> ○ Sidewalk improvements ○ Bicycle infrastructure ○ Pedestrian and bicycle signals ○ Traffic calming techniques ○ Lighting and other safety-related infrastructure ○ Transportation projects to achieve compliance with the Americans with Disabilities Act of 1990

FY2020-FY2023 Transportation Improvement Program

Grouping Category	Function of Grouping Activities	Allowable Work Types
Surface Transportation System Preservation & Operation (STBG) Grouping (continued) Adjusted Page TIP #40 STIP# 2063115	<ul style="list-style-type: none"> Projects for the planning, design or construction of boulevards and other roadways largely in the right- of-way of former Interstate System routes or other divided highways. 	<ul style="list-style-type: none"> 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 non-motorized transportation users Construction of turnouts, overlooks, and viewing areas Community improvement activities, which include but are not limited to: <ul style="list-style-type: none"> Inventory, control, or removal of outdoor advertising Historic preservation and rehabilitation of historic transportation facilities Vegetation management in transportation rights-of-way to improve roadway safety, prevent invasive species, and provide erosion control Archaeological activities relating to impacts from implementation of a transportation project eligible under Title 23 of the USC Any environmental mitigation activity, including pollution prevention and pollution abatement activities and mitigation to: <ul style="list-style-type: none"> Address stormwater management, control, and water pollution prevention or abatement related to highway construction or due to highway runoff Reduce vehicle-caused wildlife mortality or to restore and maintain connectivity among terrestrial or aquatic habitats Recreational Trails Program activities under 23 USC 206 SRTS Program infrastructure-related projects, non-infrastructure-related activities (such as pedestrian and bicycle safety and educational activities advanced under the SRTS program), and SRTS Coordinator positions. Planning, designing, or constructing boulevards and other roadways largely in the right-of-way of former Interstate System routes or other divided highways <p>Activities previously authorized under the Recreational Trails Program (RTP):</p> <ul style="list-style-type: none"> Maintenance and restoration of existing recreational trails Development and rehabilitation of trailside and trailhead facilities and trail linkages for recreational trails Purchase and lease of recreational trail construction and maintenance equipment Construction of new recreational trails Acquisition of easements and fee simple title to property for recreational trails or recreational trail corridors Assessment of trail conditions for accessibility and maintenance Development and dissemination of publications and operation of educational programs to promote safety and environmental protection Payment of costs to the State incurred in administering the program Projects authorized from this grouping may be authorized with a different federal percentage than shown in the grid based on one or more of the following: <ul style="list-style-type: none"> 90% for certain Interstate projects under <u>23 U.S.C. 120(a)</u>; 100% for certain safety items under <u>23 U.S.C. 120(c)</u>; or 100% for Appalachian Development Highway System (ADHS) projects under <u>MAP-21 1528</u> and <u>40 U.S.C. 14501.</u>)

FY2020-FY2023 Transportation Improvement Program

Grouping Category	Function of Grouping Activities	Allowable Work Types
Workforce Development, Training, and Education Grouping STIP# 2099700	Surface transportation workforce development, training, and education activities.	<ul style="list-style-type: none">• Direct educational expenses (not including salaries) in connection with the education and training of transportation employees• National Highway Institute (NHI) course participation• College and University cooperative education programs relating to surface transportation including student internships, outreach to develop interest and promote participation in transportation careers, or activities that will help students prepare for a career in transportation• Local technical assistance programs (LTAP)