



**tpo**

KNOXVILLE REGIONAL

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**TRANSPORTATION PLANNING WORK PROGRAM  
Fiscal Year 2020-2021  
AMENDED**

Adopted by the TPO Executive Board  
April 28, 2021

This report was funded in part through grants from the Federal Highway Administration, Federal Transit Administration, U.S. Department of Transportation, and the Tennessee Department of Transportation. The views and opinions of the Knoxville Regional Transportation Planning Organization expressed herein do not necessarily state or reflect those of the U. S. Department of Transportation and Tennessee Department of Transportation.



### **Title VI Nondiscrimination Statement**

The Knoxville Regional Transportation Planning Organization ensures compliance with Title VI of the Civil Rights Act of 1964; 49 CFR, part 26; related statutes and regulations to the end that no person shall be excluded from participation in or be denied the benefits of, or be subjected to discrimination under any program or activity receiving federal assistance from the U.S. Department of Transportation on the grounds of race, color, sex, or national origin.

For additional information on Title VI and Environmental Justice, please contact the TPO or see the information on our website at [www.knoxtpo.org](http://www.knoxtpo.org). Any person who believes he or she has been discriminated against should contact:

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**A RESOLUTION BY THE EXECUTIVE BOARD  
OF THE KNOXVILLE REGIONAL  
TRANSPORTATION PLANNING ORGANIZATION  
ADOPTING  
THE FISCAL YEAR (FY) 2020 and 2021  
TRANSPORTATION PLANNING WORK PROGRAM**

WHEREAS, in accordance with the requirements of the US Department of Transportation, Title 23 Code of Federal Regulations (C.F.R.) Section 450.308 of the Metropolitan Planning Regulations, no planning activities can be funded by federal sources until they have been included in the Transportation Planning Work Program; and

WHEREAS, the required planning factors to be considered by Transportation Planning Organizations (TPO) in developing transportation plans and programs, were used in the development of this Transportation Planning Work Program; and

WHEREAS, Federal Transit Administration (FTA) 5303 planning funds shall be designated to the TPO for transit planning purposes as outlined in the Work Program; and

WHEREAS, the TPO has been designated the recipient of FTA 5310 funds and will be responsible for administering the grant program; and

WHEREAS, the TPO Technical Committee has endorsed this FY 2020 and FY 2021 Transportation Planning Work Program as the first step in achieving a coordinated transportation system; and

WHEREAS, the elements of the Transportation Planning Work Program are to receive final approval from the Executive Board of the Transportation Planning Organization,

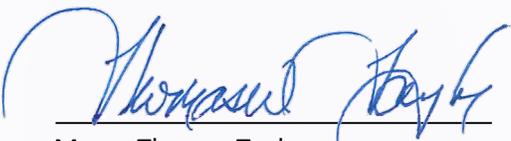
WHEREAS, the public was afforded an opportunity to comment on the Transportation Planning Work Program,

NOW, THEREFORE, BE IT RESOLVED BY THE KNOXVILLE REGIONAL TRANSPORTATION PLANNING ORGANIZATION EXECUTIVE BOARD:

that the FY 2020 through FY 2021 Transportation Planning Work Program be adopted.

September 25, 2019

Date



\_\_\_\_\_  
Mayor Thomas Taylor  
City of Maryville  
TPO Executive Board Chair



\_\_\_\_\_  
Jeffrey A. Welch, AICP  
Director  
Knoxville Regional TPO

**A RESOLUTION BY THE EXECUTIVE BOARD  
OF THE KNOXVILLE REGIONAL  
TRANSPORTATION PLANNING ORGANIZATION  
ADOPTING  
THE FISCAL YEAR (FY) 2020 and 2021  
TRANSPORTATION PLANNING WORK PROGRAM UPDATE**

WHEREAS, in accordance with the requirements of the US Department of Transportation, Title 23 Code of Federal Regulations (C.F.R.) Section 450.308 of the Metropolitan Planning Regulations, no planning activities can be funded by federal sources until they have been included in the Transportation Planning Work Program; and

WHEREAS, the required planning factors to be considered by Transportation Planning Organizations (TPO) in developing transportation plans and programs, were used in the development of this Transportation Planning Work Program Update; and

WHEREAS, Federal Transit Administration (FTA) 5303 planning funds shall be designated to the TPO for transit planning purposes as outlined in the Work Program; and

WHEREAS, the TPO has been designated the recipient of FTA 5310 funds and will be responsible for administering the grant program; and

WHEREAS, the TPO Technical Committee has endorsed this FY 2020 and FY 2021 Transportation Planning Work Program Update as the first step in achieving a coordinated transportation system; and

WHEREAS, the elements of the Transportation Planning Work Program Update are to receive final approval from the Executive Board of the Transportation Planning Organization,

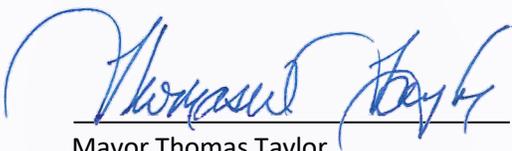
WHEREAS, the public was afforded an opportunity to comment on the Transportation Planning Work Program Update,

NOW, THEREFORE, BE IT RESOLVED BY THE KNOXVILLE REGIONAL TRANSPORTATION PLANNING ORGANIZATION EXECUTIVE BOARD:

that the FY 2020 through FY 2021 Transportation Planning Work Program Update be adopted.

November 25, 2020

Date



Mayor Thomas Taylor  
City of Maryville  
TPO Executive Board Chair



Jeffrey A. Welch, AICP  
Director  
Knoxville Regional TPO

**A RESOLUTION BY THE EXECUTIVE BOARD  
OF THE KNOXVILLE REGIONAL  
TRANSPORTATION PLANNING ORGANIZATION  
ADOPTING AMENDMENT NO. 2 OF THE  
THE FISCAL YEAR (FY) 2020 and 2021  
TRANSPORTATION PLANNING WORK PROGRAM**

WHEREAS, in accordance with the requirements of the US Department of Transportation, Title 23 Code of Federal Regulations (C.F.R.) Section 450.308 of the Metropolitan Planning Regulations, no planning activities can be funded by federal sources until they have been included in the Transportation Planning Work Program; and

WHEREAS, the required planning factors to be considered by Transportation Planning Organizations (TPO) in developing transportation plans and programs, were used in the development of this Transportation Planning Work Program Amendment; and

WHEREAS, Federal Transit Administration (FTA) 5303 planning funds shall be designated to the TPO for transit planning purposes as outlined in the Work Program; and

WHEREAS, the TPO has been designated the recipient of FTA 5310 funds and will be responsible for administering the grant program; and

WHEREAS, the TPO Technical Committee has endorsed this FY 2020 and FY 2021 Transportation Planning Work Program Amendment as the first step in achieving a coordinated transportation system; and

WHEREAS, the elements of the Transportation Planning Work Program Amendment are to receive final approval from the Executive Board of the Transportation Planning Organization,

WHEREAS, the public was afforded an opportunity to comment on the Transportation Planning Work Program Amendment,

NOW, THEREFORE, BE IT RESOLVED BY THE KNOXVILLE REGIONAL TRANSPORTATION PLANNING ORGANIZATION EXECUTIVE BOARD:

that Amendment No. 2 of the FY 2020 through FY 2021 Transportation Planning Work Program be adopted.

December 16, 2020

Date



Mayor Terry Frank  
Anderson County  
TPO Executive Board Vice Chair



Jeffrey A. Welch, AICP  
Director  
Knoxville Regional TPO

**A RESOLUTION BY THE EXECUTIVE BOARD OF THE KNOXVILLE REGIONAL  
TRANSPORTATION PLANNING ORGANIZATION ADOPTING AMENDMENT NO. 3 OF THE  
THE FISCAL YEAR (FY) 2020 and 2021 TRANSPORTATION PLANNING WORK PROGRAM**

WHEREAS, in accordance with the requirements of the US Department of Transportation, Title 23 Code of Federal Regulations (C.F.R.) Section 450.308 of the Metropolitan Planning Regulations, no planning activities can be funded by federal sources until they have been included in the Transportation Planning Work Program; and

WHEREAS, the required planning factors to be considered by Transportation Planning Organizations (TPO) in developing transportation plans and programs, were used in the development of the Transportation Planning Work Program Amendment; and

WHEREAS, Federal Transit Administration (FTA) 5303 planning funds are designated to the TPO for transit planning purposes as outlined in the Work Program; and

WHEREAS, Tennessee Department of Transportation has awarded the TPO grant funds to conduct three special transit planning studies; and

WHEREAS, the TPO Technical Committee has endorsed this FY 2020 and FY 2021 Transportation Planning Work Program Amendment; and

WHEREAS, the elements of the Transportation Planning Work Program Amendment are to receive final approval from the Executive Board of the Transportation Planning Organization; and

WHEREAS, the public was afforded an opportunity to comment on the Transportation Planning Work Program Amendment.

NOW, THEREFORE, BE IT RESOLVED BY THE KNOXVILLE REGIONAL TRANSPORTATION PLANNING ORGANIZATION EXECUTIVE BOARD:

that Amendment No. 3 of the FY 2020 through FY 2021 Transportation Planning Work Program be adopted as outlined in the attachment(s).

April 28, 2021

Date



Mayor Terry Frank  
Anderson County  
TPO Executive Board Chair



Jeffrey A. Welch, AICP  
Director  
Knoxville Regional TPO

# **I. INTRODUCTION**

## **A. OVERVIEW**

The Knoxville Regional Transportation Planning Organization (TPO), the Metropolitan Planning Organization (MPO) for the Knoxville urban area, faces several challenges over the next several years. These include rapidly changing technology that will impact mobility, continued deteriorating infrastructure and demographic shifts that will challenge the delivery of transportation services. Therefore, the basic challenge of integrating transportation planning with land use planning remains.

Federal transportation legislation has set in place the requirement to develop a performance-based approach to transportation operations and management. This is creating the need to rethink the planning process for states and metropolitan planning organizations.

Members of the TPO Board include the Cities of Alcoa, Clinton, Knoxville, Lenoir City, Loudon, Maryville, Oak Ridge, and the Town of Farragut, and the Counties of Anderson, Blount, Knox, Loudon, Sevier, the Knoxville Area Transit (KAT), the State of Tennessee and the Tennessee County Highway Officials Association. The Federal Highway Administration and Federal Transit Administration are also participants.

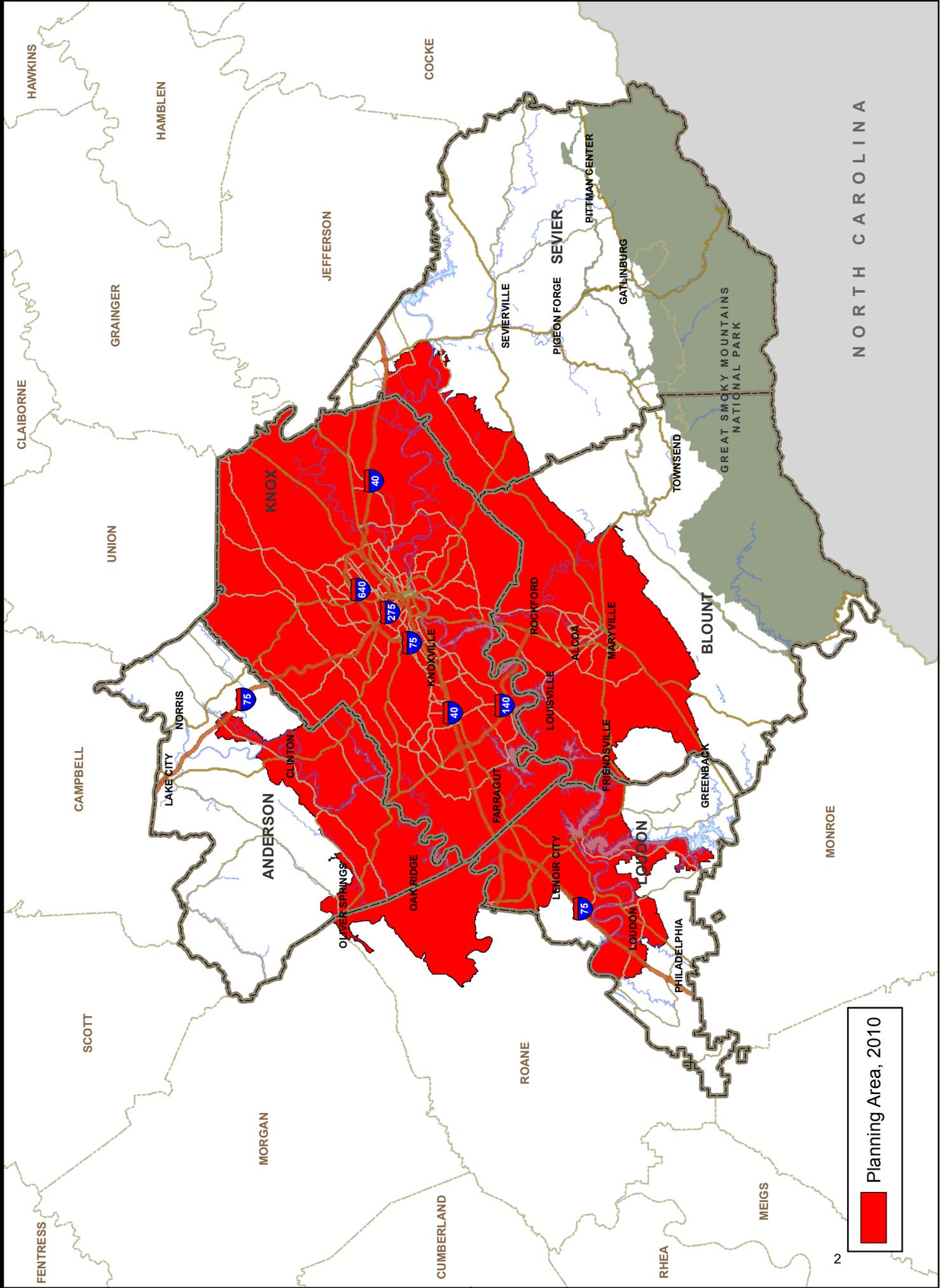
The TPO is responsible for developing a long-range mobility plan and a Transportation Improvement Program (TIP) for the metropolitan planning area, in cooperation with the state, affected transit operators, and the public. The long-range mobility plan includes long-and short-range actions the region will take to invest in its transportation system, including roadways, transit, bikeways, walkways and connections between modes. The transportation improvement program is a short-range, four year list of priority transportation projects that are drawn from the long range mobility plan and help the region achieve its goals and targets. The planning horizon for the metropolitan planning area must be at least 20 years. Therefore, the metropolitan planning study boundary must extend to the area forecasted to become urbanized in the next 20 to 25 years. The most recent long-range plan is called the Mobility Plan 2040: Connecting People and Places, adopted in April 2017. With the adoption of the Mobility Plan came a major amendment of the FY 2017-2020 Transportation Improvement Program.

The TPO continues to contract with the Tennessee Department of Transportation (TDOT) for the TPO to be responsible for conducting regional transportation planning for the entire ozone and Particulate Matter (PM) 2.5 air quality nonattainment/maintenance areas. The nonattainment/maintenance area counties include Anderson, Blount, Knox, Loudon and part of Roane County.

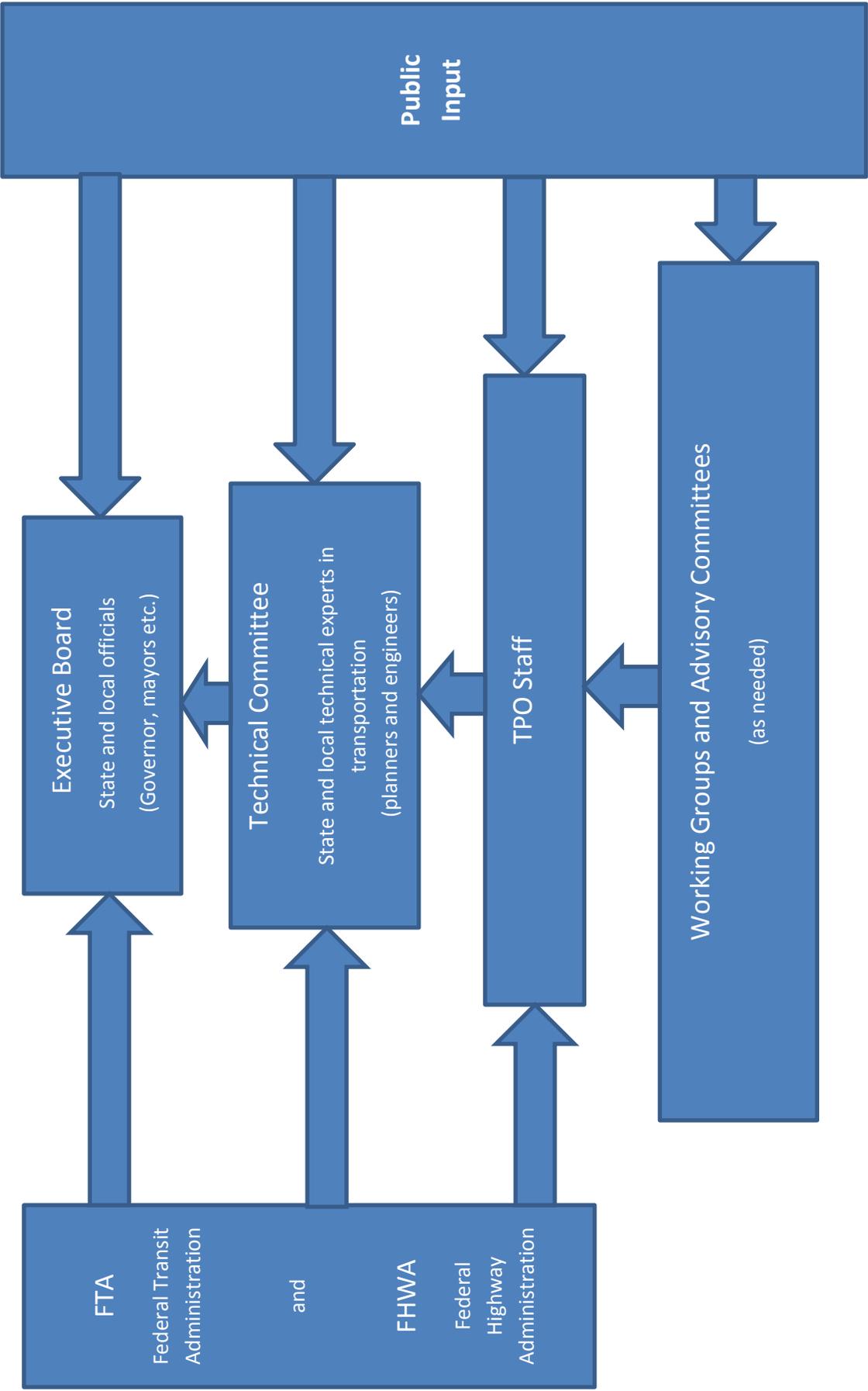
TDOT has created Rural Planning Organizations (RPO), managed by the Development Districts, to help address rural transportation needs regionally. The East Tennessee South RPO is involved with the TPO in addressing transportation and related issues to improve air quality for the nonattainment area.

The Transportation Planning Work Program (TPWP) identifies the metropolitan, regional transportation, and transportation-related air quality planning activities anticipated within the area during Fiscal Years (FY) 2020 and 2021. FY 2020 begins October 1, 2019. FY 2021 begins October 1, 2020.

# KNOXVILLE TPO PLANNING AREA, 2010



Planning Area, 2010



## **B. TPO EXECUTIVE BOARD AND TECHNICAL COMMITTEE MEMBERSHIP**

The current members of the Knoxville Regional Transportation Planning Organization are as follows:

### Members of the TPO Executive Board

Representative of the Governor, State of Tennessee  
Anderson County Mayor  
Blount County Mayor  
Knox County Mayor  
Chair of the Knox County Commission  
City of Alcoa Mayor  
City of Knoxville Mayor  
City of Maryville Mayor  
Town of Farragut Mayor  
Representative, East Tennessee Development District  
Loudon County Mayor  
City of Lenoir City Mayor  
City of Loudon Mayor  
City of Clinton Mayor  
Sevier County Mayor  
City of Oak Ridge Mayor  
City of Knoxville Vice-Mayor  
Public Transit Representative - City of Knoxville Transit Director  
Representative of the Tennessee County Highway Officials Association

### *Non-voting participants:*

Federal Highway Administration – TN Division (FHWA)  
Federal Transit Administration (FTA) – Region 4

Members of the TPO Technical Committee

Public Works and Engineering Department, City of Alcoa  
Anderson County  
Blount County Regional Planning Commission (BCPC)  
Department Engineering, City of Knoxville  
Department of Engineering and Public Works, Knox County  
East Tennessee Development District (ETDD)  
Knoxville Commuter Pool (KCP)  
Knoxville-Knox County Planning Commission  
Knoxville Area Transit (KAT)  
Engineering and Public Works Department, City of Maryville  
Department of Engineering, Town of Farragut Planning Division  
Region 1, Tennessee Department of Transportation  
Lakeway Area Metropolitan Transportation Planning Organization  
Sevier County  
Loudon County  
City of Lenoir City  
East Tennessee Human Resource Agency (ETHRA)  
Knoxville-Knox County Community Action Committee (CAC)  
Metropolitan Knoxville Airport Authority  
City of Oak Ridge  
City of Loudon  
City of Clinton

*Non-voting participants:*

Federal Highway Administration – TN Division (FHWA)  
Federal Transit Administration (FTA)– Region 4

### C. COMMONLY USED ACRONYMS GLOSSARY

ADA	Americans with Disabilities Act of 1990
AV	Autonomous Vehicle
CAC	Knox County Community Action Committee Transit
CMAQ	Congestion Mitigation and Air Quality Improvement Program
CMP	Congestion Management Process
CPG	Consolidated Planning Grant
CV	Connected Vehicle
EPA	Environmental Protection Agency
ETDD	East Tennessee Development District
FAST Act	Fixing America's Surface Transportation Act
FHWA	Federal Highway Administration
FTA	Federal Transit Administration
FY	Fiscal Year
GIS	Geographical Information Systems
HUD	Housing and Urban Development
ITS	Intelligent Transportation System
KAT	Knoxville Area Transit
L-STBG	Local Surface Transportation Block Grant
MOVES	Motor Vehicle Emissions Simulator
MPO	Metropolitan Planning Organization
NAAQS	National Ambient Air Quality Standard
NEPA	National Environmental Policy Act
NOx	Nitrogen Oxides
PlanET	Plan East Tennessee
PM2.5	Fine Particulate Matter (2.5 microns)
RPO	Rural Planning Organization
ETHRA	East Tennessee Human Resources Agency
SR	State Route
TDEC	Tennessee Department of Environment and Conservation
TDM	Travel Demand Management
TDOT	Tennessee Department of Transportation
TIP	Transportation Improvement Program
TNSHPO	Tennessee State Historic Preservation Office
TPO	Transportation Planning Organization
TPWP	Transportation Planning Work Program
UTK	University of Tennessee at Knoxville
UZA	Urbanized Area
VMT	Vehicle Miles Traveled
VOC	Volatile Organic Compounds
V2V	Vehicle to Vehicle

## II. ABOUT THE TRANSPORTATION PLANNING WORK PROGRAM

### A. FAST ACT PLANNING FACTORS

Through implementation of the work program, the TPO will meet federal transportation planning mandates and address local transportation challenges such as providing stronger linkages between land-use and transportation planning.

The Fixing America's Surface Transportation (FAST) Act identified ten planning factors that must be considered when developing transportation plans and programs. How the TPO Work Program addresses the planning factors is described below:

1. Support the economic vitality of the metropolitan area, especially by enabling global competitiveness, productivity, and efficiency. *Through the development of the Long-Range Mobility Plan and programming of projects in the TIP are the primary work tasks to address this factor.*
2. Increase the safety of the transportation system for motorized and nonmotorized users. *The TPO has initiated a very robust process to identify bike and pedestrian crashes in the region. This is in response to the dramatic increase in pedestrian related deaths in the past few years. Transportation projects considered to be included in the Mobility plan and TIP are evaluated from a safety perspective.*
3. Increase the accessibility and mobility options available to people and for freight. *The Knoxville region is not a major generator of freight. Truck traffic is mainly through trips. That said the work program will address freight issues through the development of the Mobility Plan, programming of projects in the TIP, update of the ITS plan and TDOT's two major interstate corridor studies. The work program identifies a number of tasks that seek to improve mobility for people through Human Services Transportation Plan and Bicycle and Pedestrian Plans.*
4. Protect and enhance the environment, promote energy conservation, and improve quality of life and promote consistency between transportation improvements and state and local planned growth economic development patterns. *The development and maintenance of the Mobility plan is the primary product that the TPO prepares that addresses this issue. The TPO also manages a rideshare program called Smart Trips that seeks to encourage fewer trips and a cleaner environment. The TPO also works to collaborate with local partners to increase conversations and information around complete streets, place making and safety issues.*
5. Enhance the integration and connectivity of the transportation system, across and between modes, for people and freight. *This factor is addressed through the development of the Mobility Plan, implementation of projects from the TIP, corridor and special planning studies.*
6. Promote efficient system management and operation. *The development of the Intelligent Transportation System and Congestion Management Process are the primary means to address this factor.*
7. Emphasize the preservation of the existing transportation system. *This past year TPO staff began an initiative to improve pavement management for local jurisdictions. This resulted in the proposed funding of a pavement program being made available to TPO members and funded with L-STBG and local funds.*
8. Increase the security of the transportation system for motorized and nonmotorized users. *The TPO attempts to address this issue through the development of the Mobility Plan, the TIP and ITS projects.*
9. Improve resiliency and reliability of the transportation system and reduce or mitigate stormwater impacts on surface transportation. *This factor is addressed via the Mobility Plan, the TIP, and ITS.*

10. Enhance travel and tourism. *This region is the major gateway to the Great Smoky Mountains National Park and other major tourist attractions. The TPO has worked cooperatively with local and state partners to support improved traffic through the CMAQ program and a major Sevier County highway (SR 66) is included in the ITS plan.*

## **B. WORK PROGRAM OBJECTIVES**

The objectives of the TPWP are as follows:

1. To maintain and strengthen the cooperative, comprehensive, and continuous transportation planning process of the Knoxville Regional Transportation Planning Organization and the East Tennessee South Regional Planning Organization.
2. To provide for land use and transportation planning data with special consideration to providing stronger linkages between land use and transportation planning. Integrate strategies from the PlanET process into the TPO planning process and Plans.
3. To assist each agency involved in the transportation planning process to develop a coordinated planning program that allows the most efficient use of available personnel and monies.
4. To identify needed transportation planning activities in the study area based on comprehensive transportation planning and transportation system performance analysis and to provide for the funding, agency coordination, and eventual implementation of those activities.
5. To involve affected parties in the TPO transportation planning process. A special emphasis will be placed on engaging members of low income and minority groups early on in the planning process.

A certification of the TPO's transportation planning process was finalized in April 2020. Results from the federal review identified no corrective actions. There were 4 recommendations and the TPO will consider these items as the work program is implemented. (Appendix D: Recommendations from 2020 Certification Report).

## **C. PREVIOUS WORK PROGRAM ACCOMPLISHMENTS**

During the FY 2018-2019 Work Program there were several accomplishments. Some of these include:

- Adoption of Amendments to the Regional Mobility Plan 2040: Connecting People and Places and corresponding Air Quality Conformity Analysis.
- Call For Projects for an update of the FY 2017-2020 Transportation Improvement Program and Major Amendment to coincide with the Mobility Plan Update.
- Continued Community Engagement with community partners such as the Knox County Health Department, East Tennessee Community Design Center and East Tennessee Quality Growth.
- Adopted FAST Act required Performance Measures including PM-1 Safety, PM-2 Pavement and Bridge Infrastructure Condition and PM-3 System Performance and Transit Asset Management Standards.
- Prepared and Adopted FY 2020-2021 Transportation Planning Work Program.
- Prepared and Adopted a new Transportation Improvement Program for FY 2020-2023.
- Completed a multi-year Pedestrian / Bicycle Crashes Analysis for the Metropolitan Planning Area.

- Completed two Planning Studies; one for the City of Maryville and one for the City of Alcoa.
- Initiated two Planning Studies; Chapman Highway Corridor Study and Hardin Valley Mobility Study.

#### D. WORK PROGRAM PRIORITIES

Work program priorities are identified based collaboration with our federal, state and local partners and projects schedules. A major initiative for FY 2020 and FY 2021 is to continue to implement strategies from the Mobility Plan that address local, regional and national planning factors. Performance management and planning for operations will be a key effort.

Several major products will be completed this work program period. A new four year TIP will be adopted in early FY 2020. The update to the Mobility Plan 2040 will begin in FY 2020 and completed in FY 2021. The ITS architecture plan will be updated in FY2020 also.

PlanET, a five-county regional sustainability planning effort supported by the Department of Housing and Urban Development (HUD) was completed in May 2014. This effort allowed the region to address critical issues such as air and water quality, economic development, housing, livable communities and mobility access from a local and regional perspective. TPO staff will continue to be involved in the issues surrounding the outcome of PlanET as this region addresses these critical issues.

MAP-21 and FAST Act provide a framework for measuring and improving transportation systems performance. The U.S. Department of Transportation and state DOTs will take the lead in this effort. This past year the TPO adopted the required Performance Factors as well as PM1 - Safety, PM2 - Infrastructure Condition, PM3 - System Performance and Transit Asset Management Standards. The TPO continues to coordinate with TDOT and public transportation service providers on performance-based planning and management.

Air quality continues to be a major concern in the Knoxville Urban Area as well as in several adjoining counties. The U.S. Environmental Protection Agency (EPA) regulates air quality by setting allowable limits of air pollution of various types through National Ambient Air Quality Standards (NAAQS) under the Clean Air Act. Areas that fail to meet the NAAQS may be designated as a “Nonattainment Area” and are subject to additional requirements in the transportation planning process through a mechanism known as Transportation Conformity.

The Knoxville Region is currently designated as a Nonattainment/Maintenance Area for three separate NAAQS:

- Nonattainment for **1997 Annual PM2.5 Standard** – Anderson, Blount, Knox, Loudon, and part of Roane counties
- Nonattainment for **2006 Daily PM2.5 Standard** – same area as Annual PM2.5 Standard
- Maintenance for 2008 Ozone Standard – Blount, Knox and part of Anderson counties

The TPO must ensure its current plans and programs meet transportation conformity requirements and any amendments or updates to projects or plans that are undertaken must be found to conform before federal funds can be authorized. Most recently the TPO Executive Board adopted the Mobility Plan 2040 in April of 2017 and FHWA and FTA issued a determination of conformity on May 31, 2017.

## **E. WORK PROGRAM STRUCTURE**

Tasks required by the metropolitan planning regulations, which impact the TPO planning boundary for the 20- to 25 year study area, are grouped by program area. These include administration for the TPO meetings and management of grant programs, data collection and monitoring, public participation, long range planning, managing the transportation improvement program, intermodal planning, planning for operations/systems management planning, and air quality conformity analysis. After each task, the responsible agency(s) for implementation is noted in parenthesis. These tasks address the TPO priorities identified through the Mobility Plan Update and the PlanET process. The tasks also address the FAST Act Planning Factors, U.S. DOT Planning Emphasis Areas and Federal initiatives. These efforts will help meet the objectives of the Work Program and the purpose of the TPO.

Unprogrammed funds are listed in the TPWP under Contingency. These funds are available for special projects, which arise after the adoption of the TPWP. Reprogramming Contingency Funds requires an Amendment to the Work Program approved by the Executive Board. Direct charges are also presented.

This document represents a two-year work program. Therefore, two funding tables are shown for each task. The first table shows the funding associated with FY 2020 and the second table shows funding for FY 2021. All of the funding is summarized in tables in Appendix A.

## **F. PUBLIC PARTICIPATION**

The TPO website, [www.knoxtpo.org](http://www.knoxtpo.org), provides information on public meetings, opportunities for public participation, agendas and minutes from TPO meetings, and documents prepared by the TPO. The website also accepts public comments and questions via e-mail, as well as by providing the TPO phone number and mailing address.

Prior to developing the TPWP staff alerts the TPO Technical Committee and Executive Board that it is beginning the process and solicits any comments, work tasks, or project ideas. This early input is sought over the course of several Technical Committee and Executive Board meetings. Staff makes themselves available to individually meet with any of the TPO's members or jurisdictions. Also, in the early development stages, staff meets with a variety of agencies and organizations such as Bike/Walk Knoxville, Great Smoky Mountain Regional Greenway Council, and other interested groups. Staff also meets directly with the urban area public transit providers to discuss planning needs and to develop work items for the TPWP. Once a complete work item list is developed it is circulated back to the transit agencies for further comment or changes. Planning needs were also discussed throughout the development of the FY 2020 - 2023 TIP. Several planning study ideas came to fruition out of this process. The outcome of the HUD sponsored planning process, Plan East Tennessee, also outlines strategies that are incorporated by the TPO in the development of the TPWP. All of this input helps shape the draft TPWP.

The draft TPWP was discussed with the TPO Technical Committee and Executive Board at three separate meetings. Members of the TPO Technical Committee include the public transit providers and TDOT. The Executive Board also has a public transit and a TDOT representative. A final draft of the TPWP is circulated to TDOT, FTA, and FHWA for additional comments. Details on the TPWP public involvement and approval process are listed below.

The public was solicited for comment on the development of the FY 2020 and FY 2021 TPWP in the following manner:

The initial TPWP was discussed at TPO Technical Committee and Executive Board meetings throughout the spring and summer of 2019. The Technical Committee recommended adoption of the FY 2020 - 2021 Transportation Planning Work Program at a publicly advertised meeting on September 10, 2019. The TPO Executive Board adopted the FY 2020 - 2021 Transportation Planning Work Program at a publicly advertised meeting on September 25, 2019.

- Scheduled Meetings. The Executive Board meets on the fourth Wednesday of each month. The Technical Committee meets monthly on the second Tuesday. Occasionally meetings will be cancelled. The meeting locations are ADA compliant and are accessible by transit.
- Notices of TPO meetings are published in the legal ads of the *Knoxville News Sentinel*, *the Knoxville Knox County Focus*, *The Enlightener*, *The Daily Times* (Maryville) and the *Oak Ridger* at least 14 days prior to the meeting. Meeting notices are also published on the Mundo Hispano Tennessee website at least 14 days prior to the meeting.

#### **G. AMENDMENTS TO THE WORK PROGRAM**

There may be an occasion to modify this Work Program by adding or deleting a project or adding funds. The criteria for amending the Work Program is a budget threshold of 25 percent or more by task item or the addition of a major task or study. On such occasion, an amendment to the Work Program must be recommended by the Technical Committee and approved by the Executive Board. All meetings of the Technical Committee and Executive Board are publicly advertised meetings. The Work Program Update was adopted at the TPO Executive Board meeting on November 25, 2020.

#### **H. APPENDICES**

- Appendix A includes the FY 2020 and FY 2021 Budget Tables.
- Appendix B includes Financial Summary with Carryover Funds
- Appendix C includes resources produced from the PlanET process.
- Appendix D includes Recommendations from the 2020 Certification Report.
- Appendix E includes CPG Funded Planning Studies-Draft Scope of Work

### **III. THE TRANSPORTATION PLANNING WORK PROGRAM**

#### **A. METROPOLITAN PLANNING**

This section addresses those transportation planning work tasks, which are required for the Knoxville Regional Transportation Planning Organization to have a certified transportation planning process and to maintain continued federal funding for transportation projects and programs.

##### **1. Management and Coordination**

Purpose: To manage and administer the transportation planning program and ensure the participation and cooperation of all involved agencies, citizen groups, and individuals. To maintain a continuous, cooperative, and comprehensive transportation planning process consistent with the area's general plans and to ensure that transportation planning projects meet federal and state requirements.

Tasks:

- a. Develop and oversee work schedules and agreements/contracts, coordinate activities of the TPO Executive Board and Technical Committee and other committees of the TPO. (TPO) Status: continuing
- b. Develop and maintain agreements with appropriate parties involved in the planning process. Update the Bylaws as necessary. (TPO) Status: continuing
- c. Update the TPWP for FY 2021. Develop the TPWP for FY 2022 and FY 2023 for the TPO Executive Board adoption and submittal to TDOT, FHWA, and FTA. (TPO, TDOT, KAT) Status: continuing
- d. Develop education and information sharing opportunities for members of the TPO and the public. (TPO, Active Knox, Bike Walk Knoxville, Knoxville APA and Tn ITE) Status: continuing
- e. Participate in the Association of Metropolitan Planning Organizations and Tennessee MPO Coordinators Meetings and other organizations' regional and national meetings. (TPO) Status: continuing
- f. Participate in TDOT and FHWA initiatives work groups/committees. (TPO, TDOT) Status: continuing
- g. The Long Range Planning Division, Tennessee Department of Transportation, will work jointly with the Transportation Planning Organization (TPO) to establish the required administrative and technical procedures and prepare contractual agreements. In addition, the Long Range Planning Division will attend technical and policy board meetings, distribute information on Federal transportation planning guidelines and requirements, conduct seminars and work sessions, review the TPO's transportation planning studies and reports, and undertake general administrative activities. (TDOT – Long Range Planning Division) Status: continuing
- h. The Multimodal Transportation Resources Division, Tennessee Department of Transportation, will administer State and Federal programs regarding river transportation, urban public transportation, rail service, ride-sharing, and transportation systems management. Representatives of this office will participate in TPO meetings, distribute Federal transit guidelines and requirements, conduct seminars and work sessions, and review TPO studies and reports. (TDOT – Multimodal Transportation Resources Division) Status: continuing

<b>FY 2020 WORK PROGRAM</b>	
<b>Knoxville-Knox County Planning</b>	<i>FHWA (Sec112)</i>
Federal	\$120,000
State	
Local	\$30,000
<b>TOTAL</b>	<b>\$150,000</b>

<b>Product</b>	<b>Schedule</b>
FY 2021 Work Program update	Spring/Summer 2020
Quarterly Invoices and Reports	Quarterly
Administration and Coordination	Ongoing
Education and Training for Committees	Ongoing

<b>FY 2021 WORK PROGRAM</b>	
<b>Knoxville-Knox County Planning</b>	<i>FHWA (Sec112)</i>
Federal	\$120,000
State	
Local	\$30,000
<b>TOTAL</b>	<b>\$150,000</b>

<b>Product</b>	<b>Schedule</b>
FY 2022/2023 Work Program	Spring/Summer 2021
Quarterly Invoices and Reports	Quarterly
Administration and Coordination	Ongoing
Education and Training for Committees	Ongoing

## 2. Data Collection, Analysis and Monitoring

Purpose: To maintain an inventory of data needed for long range planning and for continued validation of the travel demand forecasting model. This data will be collected for a variety of geographical areas.

### Tasks:

- a. Continue urban area traffic count program to support the long-range mobility planning process. This data will help ensure that the travel demand model used for the Regional Mobility Plan and corridor studies reflect the most up to date traffic conditions in the urban area. (TPO) Status: continuing
- b. Collect land use and roadway network attribute data necessary to maintain the regional (ten - county) TPO travel demand forecasting model. (TPO, Lakeway MTPO) Status: continuing
- c. Continue to review and compile updated U.S. Census data (both American Community Survey and Decennial 2020 Census) as it is released. Participate in tasks related to the upcoming 2020 US Census such as the following:
  - New Construction Program – from Fall 2019 to January 2021, provide address and unit type for all newly constructed residential housing units completed since the LUCA program was completed.
  - Complete Count Committee - work with local stakeholders (city and county officials, citizen groups) tasked with community outreach and promotion of Census to ensure 100% participation, especially among hard to reach communities.
  - Compile Census 2020 data (to be released by April, 2021) for the region's geographic areas (counties, cities, census tracts, planning sectors) and disseminate to the public, elected officials, boards/commissions, and other departments.

This effort will include the Lakeway MTPO area. (TPO, Lakeway MTPO) Status: carrying-over

- d. Monitor changes in land use development activities affecting the transportation systems for the entire planning area, including the Lakeway MTPO. Maintaining land use data by traffic analysis zone helps support the travel demand forecasting model. (TPO, Lakeway MTPO and Local Governments, TDOT) Status: continuing
- e. Conduct pedestrian and bicyclist counts at targeted locations to assess use of non-motorized modes. These counts are typically done every spring and fall, although additional counts can be added as requested.

Locations are selected based on high pedestrian and bicyclist usage, and consistent locations are used in order to gauge trends over years. (TPO and Local Governments) Status: continuing

- f. Collect other data that will provide information on the performance of the transportation system throughout the study area. Consider acquiring travel time data for the Knoxville UZA through a vendor or other methods. (TPO lead, all jurisdictions) Status: continuing
- g. Collect and maintain data on transit performance, including ridership, to help keep inputs into the travel demand forecasting model up-to-date. (TPO) Status: continuing
- h. Collect traffic count data. Traffic count data is collected at three permanent stations, 499 annual cycle stations, and 200 Interstate ramps. TDOT will conduct special traffic counts as needed for planning and design projects. Maintain crash file and furnish high hazard listings and other safety data as required. Travel time studies will be conducted if needed for special studies. (TDOT: Project Planning Division) Status: continuing
- i. Update State of Transportation Report every two years. (TPO) Status: continuing
- j. Update Technical Reports as data becomes available from ACS or Census, including topics such as: a) Status of Senior Population and Mobility, b) Regional Commuter Patterns, c) Prevalence of Disabilities in the Region and Mobility, and d) Traffic Trends. (TPO)

<b>FY 2020 WORK PROGRAM</b>	
<b>Knoxville-Knox County Planning</b>	<i>FHWA (Sec112)</i>
Federal	\$40,000
State	
Local	\$10,000
<b>TOTAL</b>	<b>\$50,000</b>

<b>Product</b>	<b>Schedule</b>
Traffic Count Updates	Fall 2019 and Spring 2020
State of Transportation in East TN	Spring 2020/21
Bicycle and Pedestrian Count	Fall 2019 and Spring 2020
Crash Data / Collision Diagrams	Updated annually
Development Related Data	Ongoing
Travel Time Data	As needed
Transit Data	Ongoing
Technical Reports	Ongoing

<b>FY 2021 WORK PROGRAM</b>	
<b>Knoxville-Knox County Planning</b>	<i>FHWA (Sec112)</i>
Federal	\$40,000
State	
Local	\$10,000
<b>TOTAL</b>	<b>\$50,000</b>

Product	Schedule
Traffic Count Updates	Fall 2021 and Spring 2022
ETIndex Livability Report Card	Spring 2020
Bicycle and Pedestrian Count	Fall 2021 and Spring 2022
Travel Time Data	As needed
Transit Data	Ongoing
Technical Reports	Ongoing

### 3. Communication and Engagement

Purpose: To provide resources and information to ensure public awareness and participation in the regional transportation planning process. To provide opportunities for the public to attend public meetings and stakeholder events to understand and share concerns about mobility issues, projects, plans and developments.

Tasks:

- a. Maintain the Public Outreach Plan as adopted by the TPO and as required by planning regulations. (TPO)
- b. Determine effectiveness of outreach methods by measuring visibility, participation opportunities and public interest and feedback as outlined in the Public Outreach Plan. (TPO)
- c. Maintain a proactive communication strategy that informs the membership and public on local, state, and national transportation issues, challenges, and opportunities. (TPO) Status: continuing
- d. Host public forums/speakers series on relevant topics such as: accessibility, land use, traffic safety, walkability, public transit, and autonomous vehicles. The primary funding partner for the Active Knox speaker series has been the Knox County Health Department, using grant funds from the Tennessee Department of Health. Speakers and topics are chosen in collaboration with Active Knox, a coalition that promotes healthy communities by design. (TPO and local partners) Status: continuing
- e. Ensure that the transportation planning process and related plans are consistent with Title VI requirements and principles of environmental justice. Prepare required Title VI Annual report for TDOT. Use the PlanET generated Equity Analysis to support the TPO planning efforts to engage traditionally underserved populations. (TPO) Status: continuing
- f. Increase and track outreach efforts with members of the urban and metropolitan area, including minorities that traditionally have participated less in the transportation planning process. Maintain open communication with federal, state, and local elected officials. (TPO) Status: continuing
- g. Maintain and update transportation-related maps, update and maintain website, and other resources for use by the TPO membership, special projects and the public. (TPO) Status: continuing
- h. Attend and participate in land use and transportation-related public meetings sponsored by TPO participants and the community. (TPO) Status: continuing

<b>FY 2020 WORK PROGRAM</b>	
<b>Knoxville-Knox County Planning</b>	<i>FHWA (Sec112)</i>
Federal	\$40,000
State	
Local	\$10,000
<b>TOTAL</b>	<b>\$50,000</b>

<b>Product</b>	<b>Schedule</b>
Title VI Report	May 2020
Meetings, Outreach & Public Participation	Ongoing
Maintain Contact Lists	Ongoing
Speaker Series/Forums	2 to 4 times per year

<b>FY 2021 WORK PROGRAM</b>	
<b>Knoxville-Knox County Planning</b>	<i>FHWA (Sec112)</i>
Federal	\$44,000
State	
Local	\$11,000
<b>TOTAL</b>	<b>\$55,000</b>

<b>Product</b>	<b>Schedule</b>
Title VI Report	Spring 2021
Maintain Website	Ongoing
Meetings, Outreach & Public Participation	Ongoing
Maintain Contact Lists	Ongoing
Speaker Series/Forums	2 to 4 times per year

#### **4. Long Range Planning**

Purpose: Maintain and enhance the travel demand forecasting model for the region. Continue to address national/regional issues such as aging population, resiliency, healthy environment/people, mobility choices, and livable communities.

Tasks:

- a. Develop an update to the current Metropolitan Transportation Plan (MTP) known as the 2040 Regional Mobility Plan and extend the horizon to year 2045. The MTP is required to be updated on a 4-year cycle and adoption is required by/before May 2021. A minor update to the TPO Travel Demand Model will be included in this process to ensure that latest planning assumptions are incorporated with which to forecast future transportation demand and to conduct a regional emissions analysis for all affected air quality maintenance areas. A professional services contract will be utilized to develop the MTP update and associated technical tools/studies. An overview of the tasks that will be conducted and general time frames are as follows:

- Evaluate Data Needs and Establish Baseline Year – This task will determine the latest year of available socio-economic and transportation data with which to calibrate the travel demand model and establish latest planning assumptions for purposes of the air quality conformity determination process. This will occur in Fall 2019.
- Develop Public Involvement Strategy – A public involvement strategy will be developed that will incorporate traditional community meetings and as well as a substantial online presence through surveys and social media tools. Creation of a steering committee/stakeholder group will also be considered. This will occur in Fall/Winter 2019
- Establish Vision and Goals – This effort will involve revisiting the current MTP’s vision and goals as well as establishing future-year population and socio-economic control totals that will form the basis of how the Region will look in 2045. This will occur in Winter 2019.
- Establish Transportation System Evaluation Criteria, Methods and Performance Measures – This task will address the minimum required FHWA Performance Measures established by MAP-21 and the FAST Act as well as other factors deemed locally important to measure the multi-modal transportation system performance. The primary tool used to measure the transportation system is the regional travel demand forecasting model and this task includes the effort involved to update the model to a more current base year and incorporate the latest planning assumptions. This will occur in Winter/Spring 2019 and 2020.
- Determine Transportation System Deficiencies – Using the criteria and methods established in the previous task a set of needs and deficiencies will be established. A sub-task of this includes an update of the TPO’s Congestion Management Process (CMP) plan. This will occur in Spring/Summer 2020.
- Determine Strategies – This task identifies specific projects and strategies to address the deficiencies identified in the previous task leading up to issuance of a formal call for projects. A sub-task of this effort involves an update to the Regional ITS Architecture which will be used to specifically identify ITS applications/projects. This will occur in Fall 2020.
- Development of Financial Plan and Funding Forecasts – A revenue forecast will be developed and estimated costs for all projects submitted as a result of the previous task will be compared to establish financial constraint parameters. This will occur in Winter 2020.
- Project Selection – Specific projects will be selected and prioritized by horizon year which can meet financial constraint requirements. This task may involve a scenario planning exercise to evaluate different mixes of projects that can best satisfy the previously established criteria and performance measures. This will occur in Winter/early Spring 2020/2021
- Air Quality Conformity – The final project list will be modeled for total emissions in order to demonstrate air quality conformity. This task will overlap previous tasks in terms of establishing model assumptions and involvement of the Knoxville Air Quality Interagency Consultation group throughout the Plan update process. Final approval of the conformity determination by U.S. DOT is required by no later than May 31, 2021.

(TPO, TDOT and East Tennessee South RPO) Status: continuing

- b. Maintain the travel demand model for the 10-county area. The travel demand model includes the entire planning region of the Lakeway Metropolitan Transportation Planning Organization. A separate sub-area model for the Lakeway MTPO area will be maintained that will be able to be run independently of the larger regional travel model. (TPO, Lakeway MTPO) Status: continuing

- c. Continue to explore the use of a scenario planning tool to inform long range planning in the region. (TPO)
  - Utilize the travel demand model to evaluate various development scenarios for the study area. (TPO) As a result of COVID-19 vehicle miles traveled has been down throughout the country. The TPO will utilize the travel demand model to evaluate both short and long term Vehicle Miles of Travel scenarios (trip reductions).
  - TPO staff will consider using , as appropriate, FHWA’s INVEST (Infrastructure Voluntary Evaluation Sustainability Tool) in evaluating our progress towards meeting Mobility Plan goals. (TPO)
  - The TPO will continue to address resiliency, livability, health impacts and changing demographics in all, relevant planning process. (TPO)
- d. Utilize the travel demand forecasting model for regional transportation corridor studies and scenario planning. Linkage to the NEPA process will be encouraged. (TPO)
- e. Evaluate state and local planned growth and economic development patterns for consistency with the 2040 Regional Mobility Plan and updates. (TPO, ETDD)
- f. Develop a technical assistance program to assist local jurisdictions working on creative, forward-thinking plans and projects that align with the 2040 Mobility Plan goals. (TPO and local Jurisdictions)
- g. Provide assistance to the TPO on model development, scenario planning, ITS architecture, and freight planning. (TDOT)

<b>FY 2020 WORK PROGRAM</b>	
<b>Knoxville-Knox County Planning</b>	<i>FHWA (Sec112)</i>
Federal	\$150,000
State	
Local	\$37,000
<b>TOTAL</b>	<b>\$187,000</b>

<b>Product</b>	<b>Schedule</b>
Update Regional Mobility Plan	Spring 2021
Maintain and Enhance Travel Demand Model	Ongoing
Maintain and Enhance Land Use Model	Ongoing
Technical Reports	As Needed
Amendments to Mobility Plan	As needed

<b>FY 2021 WORK PROGRAM</b>	
<b>Knoxville-Knox County Planning</b>	<i>FHWA (Sec112)</i>
Federal	\$150,000
State	
Local	\$37,500
<b>TOTAL</b>	<b>\$187,500</b>

Product	Schedule
Approve Regional Mobility Plan Update	Ongoing
Maintain and Enhance Travel Demand Model	Ongoing
Maintain and Enhance Land Use Model	Ongoing
Technical Reports	As Needed

## 5. Intermodal Planning

Purpose: To ensure that transportation plans and programs result in an integrated, intermodal transportation system that facilitates the safe, efficient, and economic movement of people and goods. Provide opportunities for increased mobility options in plans and projects. Integrate intermodal planning efforts with the outcomes of PlanET planning effort to promote mobility choices, healthy community and people, economic prosperity, and regional linkages. Provide staff support to studies and projects including analysis and reports as necessary.

### Tasks:

- a. Participate in the development and monitoring of regional plans and programs for sidewalks, bike facilities, and greenways including the Safe Routes to School Program. Assist TPO participants in further identifying and creating pedestrian/bicycle linkages to major generators such as parks and schools and between cities and counties. Also, assist TPO participants in finding funding sources for repair and construction of bicycle and pedestrian facilities. (TPO) Status: continuing
- b. TPO Staff and local partners and as appropriate, consultants, will develop sub area plans/sub components of the regional mobility plan to create greater choices and access to transportation facilities. All planning studies and needs assessments will be consistent with the 2040 Regional Mobility Plan's goals and objectives. As potential studies and needs assessments are identified, they will be discussed with the Technical Committee and Executive Board and, if approved, amended into this Work Program, along with details about their scope of work and schedule. (TPO and local Jurisdictions)
- c. Staff will assist with implementation of plans that have been developed, including the City of Knoxville Bicycle Facilities Plan, Oak Ridge Bicycle and Pedestrian Plan and the Maryville Pedestrian/Greenways Plan. (TPO participants)
- d. Incorporate freight-related issues into the transportation planning process by participating in meetings of the State Freight Advisory Committee. (TPO)
- e. Stay involved with ongoing freight planning activities such as the I-81 Corridor Coalition, Norfolk Southern Crescent Corridor Plans, McGhee Tyson Airport Master Plan, East Tennessee Freight Advisory Committee, and other efforts. (TPO, TDOT) Status: continuing
- f. A Bicycle Parking Grant Program (purchase of bicycle racks) will continue to be funded with Congestion Mitigation and Air Quality (CMAQ) funds. TPO staff will implement this program by working with businesses and agencies interested in bike parking facilities. (TPO) Status: continuing
- g. Identify opportunities to implement Complete Street strategies throughout the urban area. Work with member jurisdictions on development and implementation of Complete Streets policies. (TPO)
- h. Continue to partner with community and regional partners on how the transportation system can better address the public health of our community. (TPO and partners) Status: continuing
- i. Continue to provide staff assistance by providing technical support/best practices in the implementation of an Oak Ridge Rails to Trails Program. (TPO, Oak Ridge)

- j. Continue to provide staff assistance by providing technical support/best practices in the development of a Knox County Greenway Corridor Studies. (TPO, Knox County)

<b>FY 2020 WORK PROGRAM</b>	
<b>Knoxville-Knox County Planning</b>	<i>FHWA (Sec112)</i>
Federal	\$110,000
State	
Local	\$27,500
<b>TOTAL</b>	<b>\$137,500</b>

<b>Product</b>	<b>Schedule</b>
Knoxville Bicycle Facilities Plan implementation & Technical Assistance	Ongoing
Oak Ridge Rails to Trails Planning	Ongoing
Technical Reports	Ongoing
Knox County Greenway Study	Ongoing

<b>FY 2021 WORK PROGRAM</b>	
<b>Knoxville-Knox County Planning</b>	<i>FHWA (Sec112)</i>
Federal	\$110,000
State	
Local	\$27,500
<b>TOTAL</b>	<b>\$137,500</b>

<b>Product</b>	<b>Schedule</b>
Maintain Bicycle Facilities Plan	Ongoing
Technical Reports	Ongoing
Knox County Greenway Study	Summer 2020/21

## 6. Transportation Management and Operations

Purpose: To improve air quality, reduce congestion, increase safety, and enhance operating efficiency of the regional transportation system. Integrate this effort with strategies identified in the PlanET Playbook to promote a more efficient transportation system, promote mobility choices, and create economic development opportunities. As appropriate assist in preparing plans and programs for severe weather and other disasters.

### Tasks:

- a. Maintain the Congestion Management Process (CMP) Plan. The CMP is used by TPO participants to select projects to be programmed in the Transportation Improvement Program (TIP) and listed in the Regional Mobility Plan. Monitor the effectiveness of the CMP. Improve access of congestion related information to TPO partners and the public. (TPO) Status: continuing

- b. Acquire and analyze travel time data to measure the performance of the system. (TPO)
- c. Review and evaluate projects submitted for Congestion Mitigation and Air Quality Improvement (CMAQ) program funding to ensure maximum benefit to the urban area. FHWA requires that annual reports of CMAQ projects be submitted by March of each year for any that had a funding obligation made in the prior fiscal year. These reports are entered into an online database in the Federal "UPACS" system by either the TPO staff or TDOT staff. The TPO staff will coordinate with TDOT to review project submittals and ensure accurate emission reporting is provided. Review CMAQ annual report. (TPO, TDOT)
- d. Develop and maintain safety-related information and assessments to assist in project selection for the Regional Mobility Plan, TIP, or CMP Plan. (TPO, TDOT, KAT, FHWA)
- e. Continue to manage and expand the Knoxville Regional Smart Trips Program to improve air quality, reduce parking requirements, and reduce traffic congestion. The purpose of Smart Trips is to promote and encourage the use of transit, carpooling, vanpooling, bicycling, walking, and telecommuting. (This task is funded with CMAQ grants and other funding as available.) (TPO) Status: continuing
- f. Update and maintain the Knoxville Regional Intelligent Transportation Systems (ITS) architecture. A complete update of the Regional ITS Architecture will occur in conjunction with the MTP update (refer to Task 4A above). This update will address a performance-based planning and programming approach focusing on Transportation Systems Management and Operations (TSMO) strategies that can be implemented to address identified system deficiencies. It is envisioned that this will result in a continuing regional forum of local operations and management staff that will meet periodically to discuss current and future TSMO issues. (TPO) Update of Regional ITS Architecture to be completed in Fall 2020.
- g. The TPO will continue to participate on an Incident Management Task Force created by TDOT for the urban area. The TPO will encourage this group to develop more specific plans related to natural and manmade disasters. As part of this effort the resiliency of the transportation system will be continually assessed. (TPO, TDOT) Status: continuing
- h. Map-21/FAST Act requires the establishment of a Transportation Performance Management (TPM) system for states and MPO's. TPO will work with TDOT in reviewing and maintaining the TPM. This task also includes monitoring of federal PM requirements, coordination with TDOT and local partners on the development Performance Measure Targets, and the development a transportation system performance report card. (TPO, TDOT, local partners)
  - PM1 (Safety): Annual Update
  - PM2 (Infrastructure): 4-Year Target next due 2022
  - PM3: (System Performance): 4-Year Target next due 2022
  - TAM: (Transit Asset Management): Periodic Update
- i. Participate with state and local partners in management and operations studies of regional transportation corridors/locations. (TPO, state and local partners)
- j. Specifically conduct a Northshore Drive (SR 332) Corridor Study to identify operational and safety improvements. L-STBG funds will be used to retain a consultant in cooperation with Knox County and TDOT. (TPO, TDOT and Knox County)

<b>FY 2020 WORK PROGRAM</b>		
<b>Knoxville-Knox County Planning</b>	<i>FHWA</i>	<i>CMAQ</i>
Federal	\$40,000	
State		
Local	\$10,000	
<b>Smart Trips (Task e)</b>		
Federal		\$250,000
State		
Local		\$25,000
<b>TOTAL</b>		<b>\$325,000</b>

<b>Product</b>	<b>Schedule</b>
Smart Trips TDM program	Ongoing
CMAQ Annual Report	January 2020
ITS Architecture Updates	Fall 2020
Update CMP Plan	Ongoing
Travel Time Studies/Analysis	As needed
Northshore Drive Corridor Study	Spring 2021
Transportation Performance Measures Updates	As required
System Performance Report Card	Fall 2020

<b>FY 2021 WORK PROGRAM</b>		
<b>Knoxville-Knox County Planning</b>	<i>FHWA</i>	<i>CMAQ</i>
Federal	\$40,000	
State		
Local	\$10,000	
<b>Smart Trips (Task e)</b>		
Federal		\$180,000
State		
Local		\$20,000
<b>TOTAL</b>		<b>\$250,000</b>

<b>Product</b>	<b>Schedule</b>
Smart Trips TDM Program	Ongoing
CMAQ Annual Report	January 2021
Incident Management Meetings	Ongoing
Travel Time Studies	As needed
CMPU Update	Spring 2021
Transportation Performance Measures Review	As required

## 7. Air Quality and Climate Planning

Purpose: To fulfill the requirements of the Clean Air Act Amendments of 1990 (and its successor) and MAP-21 /Fast Act as related to nonattainment in coordination with the Knox County Air Pollution Control Board, Tennessee Department of Environment and Conservation (TDEC), and TDOT. Air quality continues to improve in the Knoxville Metropolitan Area. The severity of the changing climate has an impact on the region's air quality and the resiliency of the transportation system.

Tasks:

- a. Assess the impact of new air quality standards and area designations (both Ozone and PM2.5) as they are released from both an urban and regional perspective. Participate in the Knox County Air Quality Board and other regional air quality initiatives. (TPO)
- b. Participate in statewide interagency conference calls organized by FHWA, EPA and TDEC. (TPO)  
Status: continuing
- c. The TPO will work with its state and regional partners to maintain the air quality modeling software MOVES. Ongoing training will be included. (TPO)
- d. Coordinate an interagency consultation process to review transportation conformity determinations on an as needed basis for amendments and updates to the Regional Mobility Plan and the TIP. (TPO)
- e. Participate with TDEC, TDOT, and local jurisdictions in maintaining a motor vehicle emissions budget as part of the State Implementation Plan for the Knoxville PM2.5 nonattainment area. (TPO)

<b>FY 2020 WORK PROGRAM</b>	
<b>Knoxville-Knox County Planning</b>	<i>FHWA (Sec112)</i>
Federal	\$30,000
State	
Local	\$7,500
<b>TOTAL</b>	<b>\$37,500</b>

<b>Product</b>	<b>Schedule</b>
Air Quality Conformity Updates	Ongoing

<b>FY 2021 WORK PROGRAM</b>	
<b>Knoxville-Knox County Planning</b>	<i>FHWA (Sec112)</i>
Federal	\$30,000
State	
Local	\$7,500
<b>TOTAL</b>	<b>\$37,500</b>

<b>Product</b>	<b>Schedule</b>
Air Quality Conformity Updates	Ongoing

## 8. Transportation Programming

Purpose: To maintain the Transportation Improvement Program (TIP), monitor projects, and establish priorities and funding options for regional transportation needs.

Tasks:

- a. Maintain 2020-2023 TIP, which is scheduled to be finalized/approved in the first quarter of FY 2020, in coordination with TDOT and local implementing agencies. Develop annual TPO priority list of projects to be submitted to TDOT. (TPO) Status: continuing
- b. Prepare and make available to the public the annual listing of obligated projects. (TPO, TDOT)
- c. Monitor projects that are listed in the TIP to ensure proper funding and priorities are being met, and to facilitate timely project delivery. Project monitoring includes continued quarterly project review meetings with implementing agencies and summary reporting to TDOT. Implement TIP business policies that promote efficient and transparent administration. Also, continue to track L-STBG funding balance. (TPO, TDOT)
- d. The TPO will consider the use of the FHWA INVEST (Infrastructure Voluntary Evaluation Sustainability Tool) in future updates of the TIP. (TPO)
- e. Implement TIP tools, including web-based e-TIP to prepare, administer, and communicate the TIP. (TPO)

<b>FY 2020 WORK PROGRAM</b>	
<b>Knoxville-Knox County Planning</b>	<i>FHWA (Sec112)</i>
Federal	\$78,400
State	
Local	\$19,600
<b>TOTAL</b>	<b>\$98,000</b>

<b>Product</b>	<b>Schedule</b>
Listing of Obligated Projects	January 2020
TPO Project Priority List	December 2019
Project Tracking System	Ongoing
Maintain the TIP	Ongoing
Web-based e-TIP	Winter/Spring 2019
2020-2023 TIP	Fall 2019

<b>FY 2021 WORK PROGRAM</b>	
<b>Knoxville-Knox County Planning</b>	<i>FHWA (Sec112)</i>
Federal	\$78,400
State	
Local	\$19,600
<b>TOTAL</b>	<b>\$98,000</b>

Product	Schedule
Listing of Obligated Projects	January 2021
TPO Project Priority List	December 2020
Project Tracking System	Ongoing
Maintain the 2020-2023 TIP	Ongoing

## B. COMMUNITY PLANNING/STUDIES

This section identifies projects to address sub-regional transportation planning needs through the evaluation of alternative development and mobility concepts. All projects will be in concert with the goals and objectives of the Regional Mobility Plan. It is the intent of the TPO that the products of these planning efforts will help facilitate a more informed decision-making process in the implementation of the Regional Mobility Plan, TIP, or CMP Plan, their subsequent updates and the HUD livability planning effort (PlanET) for the metropolitan area. The PlanET effort resulted in the completion of several plans, studies and resource documents. These reports will serve as the basis of follow up studies on the part of the TPO. See Appendix C for a complete list of PlanET reports.

Purpose: To carry out planning studies related to proposed changes in land use and transportation plans. The outcomes from some of the studies can provide linkages to the NEPA process of that particular project.

### Tasks:

- a. Evaluate changes in general land use plans, growth management plans, and major thoroughfare plans for the region. The results of these efforts are key inputs into maintaining an accurate regional travel demand forecasting model which is a major tool used by the TPO in developing and maintaining the Regional Mobility Plan. (TPO)
- b. Undertake transportation planning studies and needs assessments in conjunction with land use studies of regional corridors and places. All planning studies and needs assessments will be consistent with the 2040 Regional Mobility Plan's goals and objectives. As potential studies and needs assessments are identified, they will be discussed with the Technical Committee and Executive Board and, if approved, amended into this Work Program, along with details about their scope of work and schedule. Products will help facilitate the long-range transportation decision-making process and be inputs into the Regional Mobility Plan, TIP, CMP Plan, or their subsequent updates and ADA requirements/transition plans. (TPO, TDOT and local governments)
- c. Participate in Environmental Assessments (EA), Environmental Impact studies (EIS), planning studies, and alternative analysis of proposed projects in the urban area to ensure that they are consistent with the plans of the TPO including the Regional Mobility Plan, TIP, and CMP. (TPO, TDOT)
- d. Undertake studies and plans that begin to address regional and community planning strategies. Some of the issues that will be addressed include: access to goods and services, public and community health, environment, economic prosperity, housing and mobility options. All planning studies will be consistent with the Regional Mobility Plan's goals and objectives. As potential studies and plans are identified, they will be discussed with the Technical Committee and Executive Board and, if approved, amended into this Work Program, along with details about their scope of work and schedule. Products will help facilitate the long-range transportation decision-making process and be inputs into the Regional Mobility Plan, TIP, CMP Plan, and their subsequent updates. (TPO, TDOT and local governments)

- e. Extension of Corridor Study I-40, I-81: Through the analysis conducted as part of TDOT’s I-40/81 Multimodal Corridor Study, it has been determined that the Watt Road (Exit 369) and Campbell Station Road (Exit 373) interchanges along I-40 in Region 1 are deficient from an operational, capacity, and safety perspective. The proposed scope of work below is an extension of the ongoing efforts and work associated with the I-40/81 Corridor Study and will further evaluate the issues associated with these two interchanges. The analysis will produce a technical report for each interchange for Watt Road and Campbell Station Road. This task will be supported by 80% PL funding (\$190,400) /20% State (\$47,600) for a total budget of \$238,000. Schedule: January 1, 2021 – December 31, 2021. (TPO, TDOT and local governments)

<b>FY 2020 WORK PROGRAM</b>	
<b>Knoxville-Knox County Planning</b>	<i>FHWA (Sec112)</i>
Federal	\$140,000
State	
Local	\$35,000
<b>TOTAL</b>	<b>\$175,000</b>

<b>Product</b>	<b>Schedule</b>
Oak Ridge Main Street Study	Winter/Spring 2020
Regional/Community Planning Studies	Varies

<b>FY 2021 WORK PROGRAM</b>			
<b>Knoxville-Knox County Planning</b>	<i>FHWA (Sec112)</i>	<i>L-STBG</i>	<b>TOTAL</b>
Federal	\$140,000	\$1, 704, 000	<b>\$1, 844,000</b>
State			
Local	\$35,000	\$426,000	<b>\$461,000</b>
<b>TOTAL</b>	<b>\$175,000</b>	<b>\$2,130,000</b>	<b>\$2,305,000</b>

<b>Grantee</b>	<b>Product Funded by L-STBG</b>	<b>Schedule</b>	<b>Federal Funds</b>	<b>Local Funds</b>	<b>Total</b>
Town of Farragut	Jamestowne Boulevard Study	Fall 2021	\$64,000	\$16,000	<b>\$80,000</b>
City of Knoxville	Safer and Complete Streets Study	Winter 2021	\$200,000	\$50,000	<b>\$250,000</b>
City of Knoxville	Broadway Avenue Corridor Study	Spring 2022	\$160,000	\$40,000	<b>\$200,000</b>
City of Knoxville	James White Parkway / Urban Wilderness Corridor Study	Summer 2021	\$200,000	\$50,000	<b>\$250,000</b>
City of Knoxville	Papermill Drive Corridor Study	Fall 2021	\$80,000	\$20,000	<b>\$100,000</b>
Knox County	County-wide Transportation Study	2022	\$500,000	\$125,000	<b>\$625,000</b>
Knoxville Planning	Region Wide Pavement Management Analysis	2021	\$500,000	\$125,000	<b>\$625,000</b>
<b>TOTAL</b>			<b>\$1,704,000</b>	<b>\$426,000</b>	<b>\$2,130,000</b>

Grantee	Product Funded by Consolidated Planning Grant*	Schedule
Varies	Regional/Community Planning Studies	Varies
TPO**	Northshore Drive Corridor Study	Summer 2021
TPO	Mobility Plan / ITS Architecture Update	Summer 2021
City of Alcoa**	Alcoa Highway Study	Summer 2021
Sevier County**	Boyd's Creek Highway Phase 1 Study	Summer 2021
Sevier County**	Boyd's Creek Highway Phase 2 Study	Summer 2021

\*Funding for studies using CPG dollars are programmed in Task E. Direct Charges

\*\* See Appendix E for Draft Scope of work for these studies

### C. MULTIMODAL PLANNING

This section identifies the transportation activities that are focused on public transit and ridesharing including land use and community planning. Providing mobility access to essential services to an ever-growing population that cannot or choose not to drive is an important issue facing our region.

Having a lack of mobility options available to individuals was one of the top five priority needs identified in regional statistically valid surveys conducted by the University of Tennessee - Knoxville as part of the PlanET process.

Purpose: To provide technical planning assistance related to transit and ridesharing to meet local and regional needs with a growing and diverse population. Addressing components of land use and transportation that impact multimodal considerations now and in the future. All planning studies and needs assessments will be consistent with the 2040 Regional Mobility Plan's goals and objectives. Title VI Plans and the Human Services Transportation Coordination Plan are directly required by FTA. As potential other studies and needs assessments are identified, they will be discussed with the Technical Committee and Executive Board and, if approved, amended into this Work Program, along with details about their scope of work and schedule.

#### Tasks:

- a. Respond to compliance issues and provide required documentation for the FTA and TDOT, including Transit Asset Management (TAM) Plans, Disadvantaged Business Enterprise (DBE), Title VI, Americans with Disabilities Act (ADA), and National Transit Data reporting. (TPO, KAT, CAC, ETHRA) Status: continuing.
- b. Title VI planning, monitoring, surveying, service evaluation, and reporting. Status: Continuing. TPO's FTA Title VI report will be updated. (TPO, KAT, CAC, ETHRA)
- c. Collect and prepare data to support transit planning, modeling, and mode split calculations. Acquire and maintain planning tools, including transit routing and corridor analysis software. Status: Continuing. (TPO, KAT, Smart Trips, ETHRA, CAC).
- d. Provide travel in relation to participation in FTA training sessions and workshops and training related to capital purchases, this can include national and state conferences and training sessions that FTA holds on topics, such as: TRAMS, Title VI, Asset Management, National Transit Database, etc. Travel for capital purchases is often required to inspect vehicles being built or to train mechanics. (TPO, KAT, CAC, ETHRA)
- e. Develop plans, services, and programs to meet the mobility needs and improve air quality of the TPO planning area, especially in congested corridors.

This includes studying and promoting a variety of alternative forms of transportation including, walking, biking, carpooling, vanpooling, express services, flexible transit services, and fixed-route services. (KAT, TPO, CAC, KCP, Smart Trips, Alcoa, Maryville)

- f. Provide geographic information system technology support to assist in Title VI reporting, route planning, scheduling, demand response services, and public information. Status: Continuing. (KAT, TPO)
- g. Provide technical assistance and support for downtown Knoxville mobility issues, including trolley routing, parking, bicycle, and pedestrian planning. (TPO, KAT)
- h. Provide planning assistance to improve transportation services for seniors. Status: Continuing. Study the impact of the increasing number of elderly on the transportation system. (KAT, CAC, ETHRA, KCP, TPO)
- i. Evaluate and monitor transit system safety programs to include emergency preparedness, crash investigation, driver training, and drug and alcohol abuse prevention. Implement and update, as necessary, a security plan for KAT. Status: Continuing. (KAT, CAC, ETHRA)
- j. Investigate opportunities for regional coordination of transit services. Investigate the need for expanded regional transit services, including park-and-rides, providing transit services to industrial parks, and update the Transit Service to Airport Study. (TPO, KAT, CAC, ETHRA, TDOT, Smart Trips)
- k. Assist KAT, CAC, and ETHRA with planning, assessing, and deploying ITS, including updating the regional ITS Architecture as necessary. (KAT, City of Knoxville, CAC, ETHRA, TPO)
- l. Update the Human Services Transportation Coordination Plan (HSTC Plan). As necessary, coordinate the strategies recommended by the HSTC Plan. Continue to seek ways to improve coordination between KAT, CAC, and ETHRA and non-profit service providers. (TPO, KAT, CAC, ETHRA, KCP, City of Knoxville, TDOT) Status: continuing
- m. Continue to offer assistance to improve routes and services, with fixed-route and demand response service analysis and technology assessment. (TPO, KAT, CAC, ETHRA) Status: continuing
- n. Administer the FTA Section 5310 – Enhanced Mobility of Seniors and Persons with Disability program. Administration includes call for projects, submitting grants to FTA for approval, FTA quarterly reports, and being sure sub-recipients are meeting FTA requirements (TPO - Designated Recipient task utilizes 5310 funds).
- o. Multimodal transportation planning efforts required to fulfill the commitments of the work program, including land use and community planning. (TPO) Status: continuing
- p. Conduct a Transit Planning Study. TPO will administer a special TDOT Section 5303/5304 grant and hire a consultant to prepare a three-part study, which includes: (1) a Comprehensive Operational Analysis (COA) of KAT, (2) a coordination study of CAC, ETHRA, and KAT, and (3) an assessment of the urban area examining places that might support an increase in transit services in the future. (TPO, KAT, CAC, ETHRA) Status: work will start in FY 2021 and finish in FY 2022.

<b>FY 2020 WORK PROGRAM</b>	
<b>Knoxville-Knox County Planning</b>	CPG (Sec 5303)
Federal	\$203,709
State	\$25,464
Local	\$25,464
<b>Knoxville-Knox County Planning</b>	FTA (Sec 5310)
Federal	\$45,000
State	
Local	
<b>KAT</b>	FTA (Sec 5307)
Federal	\$180,000

State	\$22,500
Local	\$22,500
<b>TOTAL</b>	<b>\$ 520,000</b>

<b>Product</b>	<b>Schedule</b>
National Transit Database (Annual)	Fall 2019
DBE Reports (Semi-Annual )	Fall/Spring
Safety Report	Fall 2019
Human Services Coordination Plan Update	Spring 2020
KAT Title VI Program	Winter 2020
Technical Assistance and Workshops	Ongoing
Smart Trips (Alternative Modes Program)	Ongoing
Technical Assistance/Planning For Seniors	Ongoing
Human Service Transportation Coordination	Ongoing
Airport Transit Study (Corridor)	Fall 2019
Transit Planning Software Implementation	Ongoing
Title VI Planning	Ongoing
Regional Coordination Initiatives	Ongoing

<b>FY 2021 WORK PROGRAM</b>	
<b>Knoxville-Knox County Planning</b>	CPG (Sec 5303)
Federal	\$480,000
State	\$60,000
Local	\$60,000
<b>Knoxville-Knox County Planning</b>	FTA (Sec 5310)
Federal	\$45,000
State	
Local	
<b>KAT</b>	FTA (Sec 5307)
Federal	\$180,000
State	\$22,500
Local	\$22,500
<b>TOTAL</b>	<b>\$870,000</b>

<b>Product</b>	<b>Schedule</b>
National Transit Database (Annual)	Fall 2020
DBE Reports (Semi-Annual)	Fall/Spring
Safety Report	Fall 2020
KAT DBE Goal Assessment	Fall 2020
Technical Assistance and Workshops	Ongoing
TPO Title VI Assessment	Fall 2020
Smart Trips (Alternative Modes Program)	Ongoing
Technical Assistance/Planning For Seniors	Ongoing
Title VI Planning	Ongoing
Human Service Transportation Coordination	Ongoing
Regional Coordination Initiatives	Ongoing
Transit Planning Software Implementation	Ongoing
Transit Planning Study (finalized in 2022)	Start 2021

#### **D. REGIONAL TRANSPORTATION PLANNING**

Purpose: To assist the efforts of federal, state, and local agencies in addressing regional transportation planning issues. This includes mobility and air quality issues from a regional perspective and the impact that the Great Smoky Mountains National Park and other tourism attractions in the area have on traffic in the region. A regional consortium, including the public and private sector and many participants of the TPO, recently completed a HUD/EPA/USDOT funded regional sustainability planning study. This effort allowed the region to address critical issues such as air and water quality, economic development, housing, livable communities and mobility access from a broad perspective.

TPO staff will assist in a variety of ways including public participation, scenario planning, and technical assistance. This effort will transect most of the planning work program activities identified below.

Tasks:

- a. Participate in the Great Smoky Mountains Regional Greenway Council by serving on the council and providing technical assistance. Assist jurisdictions in the development of pedestrian, bicycle, and greenway plans that offer regional connectivity. (TPO and local jurisdictions) Status: continuing
- b. Participate in regional transportation issues such as regional corridor studies (I-75 and I-40), regional rail planning, the I-81 Corridor Coalition to assess impacts on the long range mobility plan development, safety, and air quality. (TPO)
- c. Amend the Regional Mobility Plan and air quality conformity analysis as necessary. This task will be conducted in coordination with TDOT, the East Tennessee South RPO and the affected local governments. (TPO, TDOT, ETDD, Lakeway MTPO)
- d. Significant regional data are required to maintain and enhance the regional travel demand forecasting model and land use models. TPO staff will work with local, regional, and state agencies to maintain land use and socio-economic data in order to do land use and transportation planning at the regional and sub-regional level. (TPO, state and local governments)
- e. As part of the regional travel demand model update, the TPO, at TDOT's request, will develop and maintain a travel demand model for Sevierville and Pigeon Forge. (TPO, TDOT and local governments)
- f. TPO staff will assist TDOT and local governments in conducting regional corridor studies. All planning studies will be consistent with the Regional Mobility Plan's goals and objectives. Products will help facilitate the long-range transportation decision-making process and be inputs into the Regional Mobility Plan, TIP, CMP Plan, or their subsequent updates. (TPO, TDOT, and local governments)
- g. TPO staff will provide technical transportation planning support to the East Tennessee South Rural Planning Organization. This support will consist of assisting in identifying regional transportation project priorities, assessment of tourist related traffic impacts, determining consistency of transportation projects to the adopted and conforming Regional Mobility Plan and studies required to meet federal and state requirements and local/regional needs. Regional bicycle, transit, and pedestrian/greenway assessments and needs analysis will be conducted as necessary. (TPO, ETDD, TDOT and local governments)
- h. In cooperation with the Lakeway Area Metropolitan TPO and TDOT, the Knoxville TPO staff will maintain and enhance as necessary the travel demand model for the Lakeway area. (TPO, Lakeway MTPO and TDOT) Status: continuing
- i. The TPO will continue to serve as a convener for a regional Mayors Caucus where regional mobility and development issues are discussed. Status: continuing

<b>FY 2020 WORK PROGRAM</b>		
<b>Knoxville-Knox County Planning</b>	<i>FHWA (Sec112)</i>	<i>FHWA (SPR)</i>
Federal	\$20,000	\$12,000
State		\$3,000
Local	\$5,000	
<b>TOTAL</b>		<b>\$40,000</b>

<b>Product</b>	<b>Schedule</b>
Regional Air Quality Conformity Analysis Amendments	As needed
Travel Demand Model Enhancements (Lakeway)	As needed
Technical Support and Planning	Ongoing
Regional Corridor Studies	As needed
Regional Pedestrian, Greenway and Bicycle Plans	Ongoing

<b>FY 2021 WORK PROGRAM</b>			
<b>Knoxville-Knox County Planning</b>	<i>FHWA</i>	<i>FHWA (SPR)</i>	<b>TOTAL</b>
Federal	\$20,000	\$16,000	\$36,000
State		\$4,000	\$4,000
Local	\$5,000		\$5,000
<b>TOTAL</b>	<b>\$25,000</b>	<b>\$20,000</b>	<b>\$45,000</b>

<b>Product</b>	<b>Schedule</b>
Regional Air Quality Conformity Analysis Amendments	As needed
Travel Demand Model Enhancements (with Lakeway)	As needed
Technical Support and Planning	Ongoing
Freight Advisory Committee	Ongoing
Regional Pedestrian, Greenway, and Bicycle Plans	Ongoing

Consultant charges covered under Direct Charges

#### **E. DIRECT CHARGES**

1. Travel to workshops, seminars, and conferences as required to receive training in federal and state regulations and for information exchange, professional development, and continuing education. (TPO)
2. Purchase computers, software licensing fees and related equipment. (TPO)
3. Included in this task are charges related meeting expenses, subscriptions, professional dues/organizational memberships, publication costs, and related office materials. (TPO)
4. Professional consulting services as follows: (TPO)

<b>FY 2020 WORK PROGRAM</b>				
<b>Knoxville-Knox County Planning</b>	<i>FHWA</i>	<i>CPG (Sec5303)</i>	<i>FHWA (SPR)</i>	<b>Total</b>
Federal	\$258,000	\$40,000		\$298,000
State		\$5,000	\$ 96,000	\$101,000
Local	\$64,500	\$5,000	\$24,000	\$93,500
<b>TOTAL</b>	<b>\$322,500</b>	<b>\$50,000</b>	<b>\$120,000</b>	<b>\$492,500</b>

<b>Studies/Software</b>	<b>Task</b>	<b>FHWA</b>	<b>KAT/ CPG</b>	<b>SPR</b>	<b>Total</b>
Traffic Counting	I.B.	\$20,000			\$20,000
Consultants for Planning Studies, model data updates and travel	Any	\$272,500		\$120,000	\$392,500
Transit Software	C		\$22,000		\$22,000
<b>TOTAL</b>		<b>\$292,500</b>	<b>\$22,000</b>	<b>\$120,000</b>	<b>\$434,500</b>

<b>Breakdown of non-consultant expenditures:</b>	
Computers, printers and related hardware	\$7,000
Pedestrian/bike/traffic counters	
Training and travel	\$25,000
Meeting expenses	\$11,000
Reference materials, licensing fees, software, memberships	\$15,000
<b>TOTAL</b>	<b>\$58,000</b>

All planning studies and needs assessments will be consistent with the 2040 Regional Mobility Plan’s goals and objectives. As potential studies and needs assessments are identified, they will be discussed with the Technical Committee and Executive Board and, if approved, amended into this Work Program, along with details about their scope of work and schedule.

The equipment, computers, and software will be used to support the metropolitan transportation planning processes in completing the tasks of the adopted TPO work program. For FY 2020, equipment includes up to 4 computers and monitors as well as related equipment such as a printer or video equipment. Web hosting, software purchasing and licensing, network devices and other communication equipment are included as part of this task. Meeting expenses will include events, symposiums, speaker series, and forums etc. that are relevant to transportation planning for our region. Inclusion of equipment purchases in this TPWP constitutes needed state approval for equipment purchases. Meeting expenses include: room rental, supplies, food, materials, speaker fees and other expenses.

Examples of conferences or training that the TPO staff could attend are as follows: National and State Annual Planning Association conferences, National and State MPO conferences, State, Regional and National Bicycle and Pedestrian conferences, US Census conferences, State, Regional and National ITE conferences, State and Regional Air Quality conferences and Technical Training courses.

<b>Product</b>	<b>Schedule</b>
Traffic Count Data	Fall/Spring
Workshops and Conferences	As needed
Purchase of Computers and Related Equipment	As needed

<b>FY 2021 WORK PROGRAM</b>				
<b>Knoxville-Knox County Planning</b>	<i>FHWA (Sec112)</i>	<i>CPG (Sec5303)</i>	<i>FHWA (SPR)</i>	<b>Total</b>
Federal	\$256,602	\$40,000	\$40,000	\$336,602
State		\$5,000		\$5,000
Local	\$64,151	\$5,000		\$69,151
<b>TOTAL</b>	<b>\$320,753</b>	<b>\$50,000</b>	<b>\$40,000</b>	<b>\$410,753</b>

<b>Studies/Software</b>	<b>Task</b>	<b>FHWA</b>	<b>KAT/ CPG</b>	<b>SPR</b>	<b>Total</b>
Traffic Counting Contractor	I.B.	\$20,000			\$20,000
Consultants for Planning Studies	Any	\$300,000		\$40,000	\$340,000
Transit Software as a Service	C		\$30,000		\$30,000
<b>TOTAL</b>		<b>\$320,000</b>	<b>\$30,000</b>	<b>\$40,000</b>	<b>\$390,000</b>

<b>Breakdown of non-consultant expenditures:</b>	
Computers, printers and related hardware	\$6,000
Pedestrian/bike/traffic counters	\$1,000
Training and travel	\$13,000
Meeting expenses	\$10,000
Reference materials, licensing fees, software, memberships	\$15,000
<b>TOTAL</b>	<b>\$45,000</b>

All planning studies and needs assessments will be consistent with the 2040 Regional Mobility Plan's goals and objectives. As potential studies and needs assessments are identified, they will be discussed with the Technical Committee and Executive Board and, if approved, amended into this Work Program, along with details about their scope of work and schedule.

The equipment, computers, and software will be used to support the metropolitan transportation planning processes in completing the tasks of the adopted TPO work program. For FY 2021, equipment includes up to 4 computers and monitors as well as related equipment such as a printer or video equipment. Web hosting, software purchasing and licensing, network devices and other communication equipment are included as part of this task. Meeting expenses will include events, symposiums, speaker series, and forums etc. that are relevant to transportation planning for our region. Inclusion of equipment purchases in this TPWP constitutes needed state approval for equipment purchases. Meeting expenses include: room rental, supplies, food, materials, speaker fees and other expenses.

Examples of conferences or training that the TPO staff could attend are as follows: National and State Annual Planning Association conferences, National and State MPO conferences, State, Regional and National Bicycle and Pedestrian conferences, US Census conferences, State, Regional and National ITE conferences, State and Regional Air Quality conferences and Technical Training courses.

<b>Product</b>	<b>Schedule</b>
Traffic Count Data	Fall/Spring
Workshops and Conferences	As needed
Purchase of Computers and Related Equipment	As needed

## **APPENDIX A:**

### **FUNDING SOURCES FOR PLANNING ACTIVITIES**

Following are the major funding sources that were used for planning activities in this work program:

#### **STATE PLANNING AND RESEARCH (SPR) Funds:**

This is another source of federal funds that are allocated under the FHWA's State Planning & Research Program; and these funds are administered by the Tennessee Departments of Transportation (TDOT). This fund requires a 20% match that may be provided either by the state DOT or by local jurisdictions.

#### **CONSOLIDATED PLANNING GRANT FUNDS:**

Metropolitan Planning Funds (FHWA PL-Section 112):

The Federal Highway Administration (FHWA) annually allocates PL funding to the all the MPO's in the nation for MPO's planning related activities. These federal planning funds require local matching funds of 20%, which is typically provided by local governments. The PL funds are used for paying MPO staff salaries, fringe benefits, overhead and various plans and studies.

FTA Section 5303:

These are federal transit funds designated for multimodal transportation planning activities that support the metropolitan transportation planning process. These funds require a 20% match which is typically divided between state and local government, with each contributing 10%.

#### **FEDERAL TRANSIT ADMINISTRATION (FTA) FUNDS:**

Section 5307:

These are federal funds designated for transit planning, capital and operating for transit systems serving the urbanized area. Planning activities under this program are treated as a capital item and require a 20% match which is typically divided between state and local government, with each contributing 10%.

#### **FEDERAL TRANSIT ADMINISTRATION (FTA) FUNDS:**

Section 5310:

These are federal formula grant funds to urbanized areas to provide transportation services to the elderly and disabled. A small portion of these funds can be used for planning and grant administration purposes. No local match is required for planning and administrative activities.

#### **CONGESTION MITIGATION AIR QUALITY (CMAQ) FUNDS:**

This program supports surface transportation projects, programs and other related efforts that contribute to improved air quality and provide congestion relief. (Local match varies from 20% to 0%)

**Table 1. FUNDING SOURCES by TASK**  
**KNOXVILLE REGIONAL TRANSPORTATION PLANNING ORGANIZATION**  
**FISCAL YEAR 2020 TPWP**  
**ADOPTION DATE: November 25, 2020**

Task by Funding Source	Federal Highway Administration				Federal Transit Administration					CMAQ	Local	TOTAL
	SPR	SS	CPG Sec 112 PL	LS	CPG Sec 5303	SLS	Sec 5310	Sec 5307	SLS	Smart Trips	Smart Trips	
<b>A. Metropolitan Planning</b>												
1. Management and Coordination			\$120,000	\$30,000								\$150,000
2. Data Collection, Analysis and Monitoring			\$40,000	\$10,000								\$50,000
3. Communication and Engagement			\$40,000	\$10,000								\$50,000
4. Long Range Planning			\$150,000	\$37,500								\$187,500
5. Intermodal Planning			\$110,000	\$27,500								\$137,500
6. Transportation Management and Operations			\$40,000	\$10,000						\$250,000	\$25,000	\$325,000
7. Air Quality and Climate Planning			\$30,000	\$7,500								\$37,500
8. Transportation Programming			\$78,400	\$19,600								\$98,000
<b>B. Community Planning/Studies</b>			\$140,000	\$35,000								\$175,000
<b>C. Multimodal Planning</b>					\$203,709	\$50,928	\$45,000	\$180,000	\$45,000			\$524,637
<b>D. Regional Transportation Planning</b>	\$12,000	\$3,000	\$20,000	\$5,000								\$40,000
<b>E. Direct Charges</b>	\$96,000	\$24,000	\$258,000	\$64,500	\$40,000	\$10,000						\$492,500
<b>TOTAL</b>	<b>\$108,000</b>	<b>\$27,000</b>	<b>\$1,026,400</b>	<b>\$256,600</b>	<b>\$243,709</b>	<b>\$60,928</b>	<b>\$45,000</b>	<b>\$180,000</b>	<b>\$45,000</b>	<b>\$250,000</b>	<b>\$25,000</b>	<b>\$2,267,637</b>

Contributor by Funding Source												
Local				\$256,600		\$30,464			\$22,500		\$40,000	\$349,564
State		\$27,000				\$30,464			\$22,500			\$79,964
Federal	\$108,000		\$1,026,400		\$243,709		\$45,000	\$180,000		\$250,000		\$1,853,109
<b>TOTAL</b>	<b>\$108,000</b>	<b>\$27,000</b>	<b>\$1,026,400</b>	<b>\$256,600</b>	<b>\$243,709</b>	<b>\$60,928</b>	<b>\$45,000</b>	<b>\$180,000</b>	<b>\$45,000</b>	<b>\$250,000</b>	<b>\$25,000</b>	<b>\$2,267,637</b>

Table 1 of 4

SS=State Share, LS= Local Share, SLS=State and Local Share, CPG - Consolidated Planning Grant

**Table 2. AGENCY PARTICIPATION**  
**KNOXVILLE REGIONAL TRANSPORTATION PLANNING ORGANIZATION**  
**FISCAL YEAR 2020 TPWP**  
**ADOPTION DATE: November 25, 2020**

<b>Task by Agency Participation</b>	<b>CPG MPC Sec 112 (PL)</b>	<b>MPC/CPG Sec 5303</b>	<b>CPG MPC Sec 5310</b>	<b>MPC Smart Trips</b>	<b>MPC SPR</b>	<b>MPC TOTAL</b>	<b>KAT Sec 5307</b>	<b>TDOT SPR</b>	<b>TOTAL</b>
<b>A. Metropolitan Planning</b>									
1. Management and Coordination	\$150,000					\$150,000		\$0	\$150,000
2. Data Collection, Analysis and Monitoring	\$50,000					\$50,000		\$0	\$50,000
3. Communication and Engagement	\$50,000					\$50,000			\$50,000
4. Long Range Planning	\$187,500					\$187,500		\$0	\$187,500
5. Intermodal Planning	\$137,500					\$137,500			\$137,500
6. Transportation Management and Operations	\$50,000			\$275,000		\$325,000			\$325,000
7. Air Quality and Climate Planning	\$37,500					\$37,500			\$37,500
8. Transportation Programming	\$98,000					\$98,000			\$98,000
<b>B. Community Planning/Studies</b>	\$175,000					\$175,000			\$175,000
<b>C. Multimodal Planning</b>		\$254,637	\$45,000			\$299,637	\$225,000		\$524,637
<b>D. Regional Transportation Planning</b>	\$25,000				\$15,000	\$40,000			\$40,000
<b>E. Direct Charges</b>	\$322,500	\$50,000			\$120,000	\$492,500			\$492,500
<b>TOTAL</b>	<b>\$1,283,000</b>	<b>\$304,637</b>	<b>\$45,000</b>	<b>\$275,000</b>	<b>\$135,000</b>	<b>\$2,042,637</b>	<b>\$225,000</b>	<b>\$0</b>	<b>\$2,267,637</b>

<b>Contributor by Funding Source</b>									
Local	\$256,600	\$30,464				\$287,064	\$22,500		\$309,564
State		\$30,464			\$27,000	\$57,464	\$22,500	\$0	\$79,964
Federal	\$1,026,400	\$243,710	\$45,000	\$275,000	\$108,000	\$1,698,110	\$180,000	\$0	\$1,878,110
<b>TOTAL</b>	<b>\$1,283,000</b>	<b>\$304,637</b>	<b>\$45,000</b>	<b>\$275,000</b>	<b>\$135,000</b>	<b>\$2,042,637</b>	<b>\$225,000</b>	<b>\$0</b>	<b>\$2,267,637</b>

Table 2 of 4

**Table 3. FUNDING SOURCES by TASK**  
**KNOXVILLE REGIONAL TRANSPORTATION PLANNING ORGANIZATION**  
**FISCAL YEAR 2021 TPWP**  
**ADOPTION DATE:--April 28, 2021**

Task by Funding Source	Federal Highway Administration					Federal Transit Administration					CMAQ	Local	TOTAL
	SPR	SS	CPG Sec 112 PL	L-STBG	LS	CPC Sec 5303	SLS	Sec 5310	Sec 5307	SLS	Smart Trips	Smart Trips	
<b>A. Metropolitan Planning</b>													
1. Management and Coordination			\$120,000		\$30,000								\$150,000
2. Data Collection, Analysis and Monitoring			\$40,000		\$10,000								\$50,000
3. Communication and Engagement			\$44,000		\$11,000								\$55,000
4. Long Range Planning			\$150,000		\$37,500								\$187,500
5. Intermodal Planning			\$110,000		\$27,500								\$137,500
6. Transportation Management and Operations			\$40,000		\$10,000						\$180,000	\$20,000	\$250,000
7. Air Quality and Climate Planning			\$30,000		\$7,500								\$37,500
8. Transportation Programming			\$78,400		\$19,600								\$98,000
<b>B. Community Planning/Studies</b>			\$140,000	\$1,704,000	\$461,000								\$2,305,000
<b>C. Multimodal Planning</b>						\$480,000	\$120,000	\$45,000	\$180,000	\$45,000			\$870,000
<b>D. Regional Transportation Planning</b>	\$16,000	\$4,000	\$20,000		\$5,000								\$45,000
<b>E. Direct Charges</b>	\$40,000		\$256,602		\$64,151	\$40,000	\$10,000						\$410,753
<b>TOTAL</b>	<b>\$56,000</b>	<b>\$4,000</b>	<b>\$1,029,002</b>	<b>\$1,704,000</b>	<b>\$683,251</b>	<b>\$520,000</b>	<b>\$130,000</b>	<b>\$45,000</b>	<b>\$180,000</b>	<b>\$45,000</b>	<b>\$180,000</b>	<b>\$20,000</b>	<b>\$4,596,253</b>

Contributor by Funding Source													
Local					\$683,251		\$65,000			\$22,500		\$20,000	\$790,751
State		\$4,000					\$65,000			\$22,500			\$91,500
Federal	\$56,000		\$1,029,002	\$1,704,000		\$520,000		\$45,000	\$180,000		\$180,000		\$3,714,002
<b>TOTAL</b>	<b>\$56,000</b>	<b>\$4,000</b>	<b>\$1,029,002</b>	<b>\$1,704,000</b>	<b>\$683,251</b>	<b>\$520,000</b>	<b>\$130,000</b>	<b>\$45,000</b>	<b>\$180,000</b>	<b>\$45,000</b>	<b>\$180,000</b>	<b>\$20,000</b>	<b>\$4,596,253</b>

Table 3 of 4

SS=State Share, LS= Local Share, SLS=State and Local Share, CPG - Consolidated Planning Grant

**Table 4. AGENCY PARTICIPATION**  
**KNOXVILLE REGIONAL TRANSPORTATION PLANNING ORGANIZATION**  
**FISCAL YEAR 2021 TPWP**  
**ADOPTION DATE: -April 28, 2021**

<b>Task by Agency Participation</b>	<b>MPC Sec 112 (PL)</b>	<b>MPC/CPG Sec 5303</b>	<b>CPG MPC Sec 5310</b>	<b>MPC Smart Trips</b>	<b>MPC SPR</b>	<b>MPC TOTAL</b>	<b>KAT Sec 5307</b>	<b>TDOT SPR</b>	<b>L-STBG</b>	<b>TOTAL</b>
<b>A. Metropolitan Planning</b>										
1. Management and Coordination	\$150,000					\$150,000		\$0		\$150,000
2. Data Collection, Analysis and Monitoring	\$50,000					\$50,000		\$0		\$50,000
3. Communication and Engagement	\$55,000					\$55,000				\$55,000
4. Long Range Planning	\$187,500					\$187,500		\$0		\$187,500
5. Intermodal Planning	\$137,500					\$137,500				\$137,500
6. Transportation Management and Operations	\$50,000			\$200,000		\$250,000				\$250,000
7. Air Quality and Climate Planning	\$37,500					\$37,500				\$37,500
8. Transportation Programming	\$98,000					\$98,000				\$98,000
<b>B. Community Planning/Studies</b>	\$175,000					\$175,000			\$2,130,000	\$2,305,000
<b>C. Multimodal Planning</b>		\$600,000	\$45,000			\$645,000	\$225,000			\$870,000
<b>D. Regional Transportation Planning</b>	\$25,000					\$25,000		\$20,000		\$45,000
<b>E. Direct Charges</b>	\$320,753	\$50,000			\$40,000	\$410,753				\$410,753
<b>TOTAL</b>	<b>\$1,286,253</b>	<b>\$650,000</b>	<b>\$45,000</b>	<b>\$200,000</b>	<b>\$40,000</b>	<b>\$2,221,253</b>	<b>\$225,000</b>	<b>\$20,000</b>	<b>\$2,130,000</b>	<b>\$4,596,253</b>

<b>Contributor by Funding Source</b>										
Local	\$257,251	\$65,000				\$322,251	\$22,500		\$426,000	\$770,751
State		\$65,000			\$8,000	\$73,000	\$22,500	\$4,000		\$99,500
Federal	\$1,029,002	\$520,000	\$45,000	\$200,000	\$32,000	\$1,826,002	\$180,000	\$16,000	\$1,704,000	\$3,726,002
<b>TOTAL</b>	<b>\$1,286,253</b>	<b>\$650,000</b>	<b>\$45,000</b>	<b>\$200,000</b>	<b>\$40,000</b>	<b>\$2,221,253</b>	<b>\$225,000</b>	<b>\$20,000</b>	<b>\$2,130,000</b>	<b>\$4,596,253</b>

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APPENDIX B: FINANCIAL SUMMARY WITH CARRYOVER FUNDS

FINANCIAL SUMMARY with CARRYOVER FUNDS KNOXVILLE REGIONAL TRANSPORTATION PLANNING ORGANIZATION FISCAL YEAR 2020 & FISCAL YEAR 2021 TPWP			
FUNDING YEAR	FUNDING SOURCE		
	FHWA PL	Sec 5303 and state match	SPR
<i>Estimated Carryover</i>	\$ 548,000	\$ 0	\$ 135,000
FY20 Allocation	\$ 753,701	\$ 274,173	
FY21 Allocation	\$ 753,701	\$ 274,173	
<b>TOTAL</b>	\$ 2,055,402	\$ 548,346	\$ 135,000

**NOTE: All numbers are estimated**

## **APPENDIX C: PlanET RESOURCE DOCUMENTS**

Where We Are Now: Evaluating Existing Conditions

Benchmarks of Progressive Zoning Regulations Community Survey 1

Community Survey 2 Equity Profile

Existing Conditions Memo Impacts of Economic Stresses Livability Report Card 1 Livability Report Card 2

State of the Region

The PlanET Playbook

Growth Concepts for East Tennessee Preferred Growth Concept Implementation Strategies

Planning Across The Region: Demonstration Projects

Alcoa and Maryville Redevelopment Centers and Corridors

Downtown Lake City Revitalization Downtown Lenoir City Revitalization Downtown Maynardville Revitalization

Greenway Guidelines for East Tennessee (poster)

Greenway Guidelines for the East Tennessee Region (report)

Halls Crossroads in Knox County

Historic Downtown Loudon

Knoxville 2040: Centers and Corridors

Lenoir City Broadway Street Road Diet Proposal Low Impact Development (poster)

Low Impact Development Opportunities (report)

Oak Ridge Original Town Site

Regional Greenway Corridors

Road Diets in the PlanET Region

Seven Islands State Birding Park

SR 61 Corridor in E Anderson County

Townsend Corridor Revitalization

PlanET Partners in Action

Farragut Town Hall Energy Assessment Report

Health Impact Assessment

Knoxville Regional Foodshed Assessment

Knoxville Regional Inclusive Transportation Planning Report

Local Food Guide

Navigating Our Future

Regional Transit Authority Analysis

***The PlanET Resource Documents can be found at [www.planeasttn.org](http://www.planeasttn.org) by searching the drop down menus located at the top of the home page.***



## EXECUTIVE SUMMARY

On April 8, 2020, the Federal Highway Administration (FHWA) Tennessee Division and the Federal Transit Administration (FTA) Region IV completed the Federal certification review of the metropolitan transportation planning and programming process being carried out in the Knoxville, Tennessee urbanized area. This review was performed in accordance with 23 Code of Federal Regulations (CFR) 450.336, which requires FHWA and FTA to jointly review and evaluate the transportation planning process for each urbanized area over 200,000 in population at least every four years to determine if the process meets the Federal planning requirements.

**Based on this review and evaluation, FHWA and FTA find that the planning process being carried out in the Knoxville urbanized area meets the requirements of applicable Federal law and 23 CFR 450. Accordingly, FHWA and FTA jointly certify the transportation planning process. This certification will remain in effect until April 8, 2024.**

This review report provides a series of findings identified by the FHWA and FTA through this review. These findings are summarized below and throughout the report.

### Summary of Findings

In conducting the Federal Certification Review, the FHWA and FTA identified a series of findings related to the planning process being carried out in the Knoxville urbanized area. These findings take the form of commendations, which represent areas where the planning process is being carried out to a high level of performance, and recommendations, which represent opportunity areas where the planning process could be strengthened. There were no corrective actions identified through this review.

#### Commendations

- **Metropolitan Transportation Plan – Interactive Map:** The Knoxville TPO is commended for its use of an interactive mapping tool to allow the public to review proposed MTP projects, provide feedback, and virtually engage in the planning process.
- **Air Quality & Transportation Conformity – IAC Engagement:** The Knoxville TPO is commended for its effective Interagency Consultation (IAC) process which results in a highly engaged IAC group that is used as a resource by the TPO in efficiently meeting all transportation conformity requirements. Because of the TPO's expertise in this area and their engagement with the IAC, the TPO was able to proactively and comprehensively address unexpected transportation conformity requirements resulting from the South Coast II court decision.



- **Public Outreach & Civil Rights – Active Knox Speaker Series:** The Knoxville TPO and its planning partners are commended for institutionalization of the Active Knox Speaker Series, a targeted forum for public discussion of best practices in transportation planning, urban development, and public health, informing the region’s vision and priorities.
- **Transit & Multimodal Planning – Transit Coordination:** The Knoxville TPO, KAT, ETHRA, and the CAC are commended for continued support in the implementation of the Section 5310 program, allowing extended services for seniors and disabled persons and relieving pressure on the urban area’s public transit demand-response providers; efforts in the implementation of CAC’s Volunteer Assisted Transportation Program and the Blount County SMILES volunteer assisted transportation program that have been recognized statewide and nationally; and regional leadership in the implementation of Transit Asset Management, including the formation of a local TAM working group to develop and adopt regional TAM targets.
- **Transportation Safety Planning – Bicycle and Pedestrian Crash Analysis:** The Knoxville TPO is commended for its very comprehensive and continuing analysis of bicycle and pedestrian crashes across the region, and for demonstrating this data and analysis in a visual format which can inform priorities of the TPO’s partners, stakeholders, and the public.

### Recommendations

- **Performance-Based Planning & Programming – Next Steps:** The Knoxville TPO, TDOT, and the transit partners in the Knoxville region are recommended to work with FHWA and FTA to expand the performance-based planning and programming process. Example opportunity areas include the assessment of project impacts towards achievement of performance targets, the reflection of targets in project prioritization, and developing an inventory of data needs to support the planning process.
- **Public Outreach & Civil Rights – Disadvantaged Population Outreach:** The Knoxville TPO and its planning partners are recommended to use the extensive Title VI data held by the TPO to target and adapt outreach efforts to better link engagement with disadvantaged populations across the region.
- **Congestion Management Process – CMP Update:** In the next CMP update, the TPO should continue to closely follow FHWA’s Congestion Management Process Guidebook and engage FHWA and TDOT staff early and often to identify and consider opportunity



areas which support enhanced application of the CMP. Example areas to grow the CMP might include the use of SMART objectives, providing a more explicit connection between congestion objectives and congestion performance measures, and more regularly tracking and reporting performance of congestion performance measures.

- **Intelligent Transportation Systems – RITSA Update:** The 2012 Regional ITS Architecture is due for a major update according to the schedule adopted by the TPO. The TPO has committed to completing a major update to the Regional ITS Architecture no later than May 30, 2021. FHWA and FTA strongly recommend that the TPO keep to this schedule to ensure that the architecture is made current and is providing value to the ITS planning and project development process in the region.

Additional details of these findings are provided in this report.

**APPENDIX E: CPG FUNDED PLANNING STUDIES - DRAFT SCOPE OF WORK**

**Northshore Drive Corridor Study**

Northshore Drive from Lyons View Pike to the Knox County line in West Knoxville/Town of Farragut. This 11-mile section of Northshore Drive is predominately a 2-lane arterial roadway except in the vicinity of Pellissippi Parkway. The average daily traffic on the two-lane cross sections of Northshore range between 12,000 to 16,000 vehicles per day. Traffic near Pellissippi Parkway is over 24,000 vehicles per day.

This section of Southwest Knox County continues to be one of the fastest growing sectors of the urban planning area. Most new development in this section of the County only has access to Northshore Drive as the major transportation facility. A recent development has been approved for over 600 dwelling units that all of the traffic generated from the residents have to use Northshore Drive to connect to other parts of the urban area.

Sections of Northshore Drive have been identified in our long range Mobility Plan in the horizon years of 2030 and 2040 for operational and selective widening of turn lanes and bicycle/pedestrian improvements. This corridor study will evaluate key intersections and congested and safety areas to identify safety and operational improvements.

Project Cost: Approximately \$100,000

***Alcoa Highway (US 129/SR 115) Existing Alignment Planning Study – From Future Interchange Serving McGhee Tyson Airport to Pellissippi Parkway (SR 162)***

**Proposal:**

Study the existing Alcoa Highway alignment based on future needs due the Relocated Alcoa Highway.

**Purpose and Need:**

A road corridor development plan assessing existing infrastructure conditions, examining the size of right-of-way and potentially creating an urban (smaller) cross section to encompass all users, i.e. bicycle, pedestrians and vehicles, while enhancing corridor aesthetics for current and future economic development. The study would also consider drainage, pavement, and roadside maintenance as well as other long term care needs along the existing alignment that would be incurred in the future.

Due to the future construction of the relocated Alcoa Highway the existing alignment of US 129/SR 115 between Pellissippi Parkway and the future interchange serving McGhee Tyson Airport will change in character when the majority of traffic shifts to the relocated Alcoa Highway. The City envisions redevelopment of this corridor as an urban cross section with vehicular, pedestrian and bicycle traffic together as a City entrance concept as allowed by ADT projections and future use.

**Timeline: Six to Eight Months**

Cost: \$36,000 Federal and \$4,000 local. Following TPO approval, a contract between the MPC and the City of Alcoa must be agreed upon.

# APPLICATION

## Transportation Planning Grant

To

**Knoxville Knox County Transportation Planning Organization**

From

**Sevier County, Tennessee**

Project

## **Boyd's Creek Highway (SR 338) From Chapman Highway (SR 71) to Old Knoxville Highway**

---

### **Introduction**

Sevier County through its Sevier Transportation Board (STB) has historically maintained a strong interest in monitoring, maintaining, and improving traffic flow throughout the county. As all are aware, high quality traffic operation is the lifeblood of Sevier County's tourism-based economy.

Under the guidance of the STB, the *Sevier County Transportation Plan* was published in 1994. That plan provided analysis and recommendations for improving existing and building new roadways to meet the then current and future County-wide traffic demands. The result was significant improvements in the County's infrastructure, an accomplishment highlighted by unprecedented cooperation and coordination among the local governments and with the Tennessee Department of Transportation.

The *Sevier County Long Range Transportation Plan Update* was then published in 2014-15. The STB concluded that all major recommendations of the 1994 plan had been implemented by a combination of the Sevier County local governments, a few private developers and TDOT at a total documented approximate investment of \$418M.

The 2014-15 *Update* did not include an updated traffic model, rather it projected future traffic volume based on historical ADT information which yielded an average annual growth rate of 1.29% that was applied county-wide. Based on that analysis, the *Update* recommended major improvement of several additional roadways and construction of a few new roadways to meet future needs. The *Update* recommendations are divided into three Groups:

Group 1; 0-5 Years with Projects in advanced Levels of Development

Group 2; 5-10 Years with New Major Projects

Group 3; 10-15 Years with New Major Projects

As of 2020, all seven Group 1 projects are under development in the planning, design or right-of-way acquisition phase.

## **Purpose and Need**

Boyd's Creek Highway was not documented in the *1994 Transportation Plan* as a priority improvement project. Recommendations for this roadway which extends from Chapman Highway (SR 71) to Winfield Dunn Parkway (SR 66) are included in the 2014-15 *Update* as a Group 2 project. Specifically, the recommendation is for a "...better two-lane road from SR 66 to Shiloh Road and multi-lane from Shiloh Road to Chapman Highway". It should be noted that the reconstruction of Old Knoxville Highway which is a Group 1 project encompasses much of the Boyd's Creek Highway section east of the current Old Knoxville Highway intersection as it follows the Boyd's Creek alignment on its approach to SR 66.

The section of Boyd's Creek Highway west of Old Knoxville Highway which lies within the Knoxville TPO boundary was recommended for improvement as noted above. The 2014-15 *Update* report indicates that the base recommendation is for an upgrade to a better two-lane roadway for Boyd's Creek Highway and several other routes where the Level of Service was determined to be "E" or "F". Quoting from the report; "...A better two-lane roadway would typically include left turn lanes at key locations, new traffic signals at key locations, adding shoulders, widening lanes, adding sidewalks or greenways where none exist, improving drainage, and some vertical and horizontal changes. A byproduct of these types of improvements is improved safety". The multi-lane recommendation for the two miles of Boyd's Creek Highway approaching Chapman Highway is in response to a higher level of traffic generation from adjacent neighborhoods, commercial development, and five schools that are essentially co-located near the mid-point.

Boyd's Creek Highway (SR 338) is located near the Sevier/Knox County Line. The roadway is approximately 11.9 miles in length (10.5 within the TPO boundary), roughly paralleling the Sevier/Knox County Line between Chapman Highway in Seymour (at the SR 71/SR 35 intersection) and SR 66. Historically, Boyd's Creek Highway has not been a focus of tourism based traffic given its geographic location relative to tourist venues. Rather it has and continues to serve the local populous as an alternative to the more heavily traveled routes as well as providing access to a significant land base that is best suited for agricultural use, residential development, schools, and neighborhood commercial development.

In recent years, the Boyd's Creek area has begun to experience a significant transformation in land use. A significant number of large subdivisions now dot the landscape along the Highway on land that was historically used for farming. In response to the substantial residential growth, Sevier County has progressively constructed four schools in Seymour from the mid-'90's through 2019 I: Primary- 715 students, Intermediate- 568 students, Junior High School- 789 students, and High School- 725 students which are essentially co-located near Pitner Road about one mile east of Chapman Highway. A private boarding school with 425 students is also close by.

The impact of this evolution in land use on Boyd's Creek Highway in terms of traffic operations and safety has begun to be a cause for concern to the Sevier County Planning Department and the Sevier County Transportation Planning Board. It has been discussed at several recent Board meetings with the conclusion being that it is time to move beyond the *2014-15 Transportation Plan Update* general recommendation and initiate a planning study with the purpose of developing more detailed data and analysis to substantiate specific concerns, traffic operations problems, and safety issues along the route. Results and conclusions would be documented along with short- and long-term priority improvement recommendations.

## **Scope of Work**

Sections of Boyds Creek Highway exhibit substantially different environments, suggesting the need for different approaches to data acquisition and analysis. Two rather distinct sections are involved:

Section 1 – Chapman Highway to North Shiloh Road

Section 2 – North Shiloh Road to Old Knoxville Highway

Section 1 is more urban in nature but more importantly includes the direct influence of four Sevier County schools plus a private school that are essentially co-located about midway of the section. Section 2 is a more typical rural area with traffic influence primarily from a large and growing residential environment.

There is an immediate need to mitigate traffic, safety, and mobility issues in both corridors, so the planning study should focus more on these existing needs than long term future corridor needs. Immediate solutions are likely to focus on hotspots and spot improvements whereas the long-term recommendations will likely concentrate on the ultimate typical sections of the corridor. An appropriate horizon year should be selected with consultation from the TPO, TDOT, and Sevier County leaders.

Thus, this grant request as proposed includes two applications that are distinct and stand alone but related and included under a single purpose and need. Scopes of work and proposed budget for each of these applications – Section 1 and Section 2 – are detailed below.

## Grant 1

### **West Section from Chapman Highway (SR 71) to North Shiloh Road with a Concentration on School Traffic**

There are several schools in the vicinity of Pinter Road that contribute to traffic congestion and impair mobility. This study should focus on mitigating traffic issues related to the schools but should not ignore other non-school traffic issues.

Key intersections (11 total) in the west section include:

- Boyds Creek Highway at Chapman Highway
- Boyds Creek Highway at Pinter Road
- Boyds Creek Highway at the three school access roads immediately east of Pinter Road
- Boyds Creek Highway at Old Sevierville Pike
- Boyds Creek Highway at North Shiloh Road
- Pinter Road at the three school access roads, two north and one south of Boyds Creek Highway
- Pinter Road at Old Sevierville Pike

The following tasks should be performed:

#### Engagement

- Meet with stakeholders 2 times to discuss the project
- Participate in 1 public meeting arranged by local stakeholders
- Hold monthly meetings with the Sevier County Planner and update the Sevier County Transportation Board at key milestones

#### Data Collection

- Collect 24-hour segment count data at 2 locations along Boyds Creek Highway.
- Collect turning movement count data at the study intersections in the morning, school, and afternoon peak periods. The counts shall be conducted while schools are in session.
- Collect data regarding the physical characteristics along Boyds Creek Highway such as lane width, shoulders, traffic control devices, and pavement markings.
- Obtain 3-years of crash data from TDOT, geocode it, and display the information on GIS maps.

#### Analysis

- Project horizon year traffic on Boyds Creek Highway using historical traffic volumes and anticipated developments.
- Conduct existing and horizon year level of service analysis at the 11 study intersections.
- Conduct planning-level daily existing and horizon year segment level of service analysis on Boyds Creek Highway.
- Perform a high-level environmental overview of the study area.
- Analyze the crash data and look for causative factors that can be mitigated.

- Provide an overview of bike and pedestrian needs in the corridor primarily through a review of bike and pedestrian crash data housed within the Knoxville TPO organization.
- Consider how the schools interact and address specific issues they create.

#### Documentation and Recommendations

- Make recommendations for an improved typical section
- Make recommendations for operational and safety improvements
- Make recommendations specifically related to school access
- Note potential environmental issues
- Make recommendations for intersection improvements
- Produce a report documenting findings and conclusions.

ESTIMATED BUDGET: \$68,000

#### **Timeframe**

The timeframe for this review will be driven in large measure by the need for data acquisition while the schools are in normal operation. As such, the bulk of data acquisition is expected to begin in the Fall of 2020. The review should be completed in 6-9 months thereafter.

## Grant 2

### **East Section from North Shiloh Road to Old Knoxville Highway**

Key intersections (4 total) in the east section include:

- Boyds Creek Highway at Porterfield Gap Road
- Boyds Creek Highway at Hodges Bend Road
- Boyds Creek Highway at Korey Boulevard
- Boyds Creek Highway at Old Knoxville Highway

The following tasks should be performed:

#### Engagement

- All engagement for the east section is included in the west section's task descriptions; engagement of both the east and west sections should be conducted at the same time.

#### Data Collection

- Collect 24-hour segment count data at 2 locations along Boyds Creek Highway.
- Collect turning movement count data at the study intersections in the morning, school, and afternoon peak periods. The counts shall be conducted while schools are in session.
- Collect data regarding the physical characteristics along Boyds Creek Highway such as width, shoulders, traffic control devices, and pavement markings.
- Obtain 3-years of crash data from TDOT, geocode it, and display the information on GIS maps.

#### Analysis

- Project horizon year traffic on Boyds Creek Highway using historical traffic volumes and anticipated developments.
- Conduct existing and horizon year level of service analysis at the 10 study intersections.
- Conduct planning-level daily existing and horizon year segment level of service analysis on Boyds Creek Highway.
- Perform a high-level environmental overview of the study area.
- Analyze the crash data and look for causative factors that can be mitigated.
- Review bike and pedestrian needs in the corridor.
- Review the bike and pedestrian crash data housed within the Knoxville TPO organization.

#### Documentation and Recommendations

- Make recommendations for an improved typical section
- Make recommendations for safety improvements
- Note potential environmental issues
- Make recommendations for intersection improvements
- Produce a report documenting findings and conclusions.

ESTIMATED BUDGET: \$37,000

## **Timeframe**

The timeframe for this review will be driven in large measure by the need for data acquisition while the schools are in normal operation. As such, the bulk of data acquisition is expected to begin in the Fall of 2020. The review should be completed in 6-9 months thereafter.

## SCOPE OF WORK

### Development of Technical Planning Reports Along I-40/75 in West Knox County

#### I. PURPOSE

To identify feasible solutions for issues identified at both the I-40/Watt Road interchange and the I-40/Campbell Station Road interchange. The study will also address issues at the I-40/75 Interchange and the main line of I-40/75.

#### II. PLANNING ASSUMPTIONS

The Tennessee Department of Transportation (TDOT) recently completed an I-40 Corridor study for the entire state of Tennessee. The Existing and Future Conditions Technical Memorandum of the I-40 Corridor Study identified the following issues in West Knox County:

##### I-40/I-75 Junction

- Left hand entrances and exits create significant weave issues on the I-40 mainline, which directly impacts the operations of the Watt Road interchange

##### Watt Road Interchange

- Close proximity of this interchange to the I-40/I-75 junction (roughly 0.6-mile distance between the two interchanges)
- Weaving movements along I-40 in both directions, in particular traffic entering I-40 westbound from the interchange which has a very short weaving distance in order to access I-75 southbound
- Heavy truck traffic within this area due to truck-oriented services and facilities located at the interchange
- Current topography of the mainline which makes it difficult for traffic to achieve posted speed limit

##### Campbell Station Road Interchange

- Geometric deficiencies/sight distance limitations
- Capacity concerns along Campbell Station Road, in particular the section that passes underneath the I-40 bridge, and entrance and exit ramps
- Difficulty in developing additional lanes to meet capacity needs along adjacent sections of Campbell Station Road due to the physical constraints of the section passing under I-40

#### III. PRODUCT

Technical Planning Reports for the following interchanges: I-40/75 junction, I-40/75 at Watt, Road, I-40/75 at Campbell Station Road and the I-40/75 Main line in this area to address above issues.

#### IV. PROJECTED BUDGET

FY 2020	Federal	State	FY 2021	Federal	State	Total FY 20/21
\$0.00	\$0.00	\$0.00	\$238,000.00	\$190,400.00	\$47,600.00	\$238,000.00



Knoxville Regional Transportation Planning Organization